epigenomics

Prospectus

for the public offering in Germany

of

10,806,462 ordinary registered shares with no par value (*Stückaktien*), from a capital increase with subscription rights for the Company's shareholders against contributions in cash, with such capital increase of up to 10,806,462 ordinary registered shares resolved by the Executive Board on October 17, 2019, with approval of the Supervisory Board on October 17, 2019, in accordance with the Authorized Capital 2019/II

and

for the admission to trading to the regulated market segment (*regulierter Markt*) of the Frankfurt Stock Exchange (*Frankfurter Wertpapierbörse*) with simultaneous admission to the sub-segment of the regulated market with additional post-admission obligations (Prime Standard) of the Frankfurt Stock Exchange (*Frankfurter Wertpapierbörse*)

of

up to 10,806,462 ordinary registered shares with no par value (*Stückaktien*), from such a capital increase,

each such share with a notional value of EUR 1.00 in the share capital
and full dividend rights as from January 1, 2019

of

Epigenomics AG
Berlin, Germany

International Securities Identification Number (ISIN): DE000A11QW50

German Securities Code (Wertpapier-Kenn-Nummer) (WKN): A11QW5

Common Code: 019606805

Trading Symbol: ECX

Underwriter

M.M.Warburg & CO (AG & Co.) Kommanditgesellschaft auf Aktien, Hamburg, Germany

The issuer's securities have been admitted to trading on a regulated market continuously for at least the last 18 months and the issuer will issue securities fungible with existing securities pursuant Art. 14 para. 1 lit. a) of Regulation (EU) 2017/1129. The disclosures made in this prospectus are in accordance with the simplified disclosure regime for secondary issuances pursuant to Art. 14 of Regulation (EU) 2017/1129 and Annex 3 and Annex 12 of Delegated Regulation (EU) 2019/980.

The date of this prospectus is October 18, 2019.

This page has been left blank intentionally

TABLE OF CONTENTS

I. SUMMARY OF THE PROSPECTUS

A. Introduction and Warnings

This prospectus (the "**Prospectus**") relates to the public offering in the Federal Republic of Germany ("**Germany**") and the admission to trading on the regulated market of the Frankfurt Stock Exchange with the simultaneous admission to the sub-segment of the regulated market with additional post-admission obligations (Prime Standard) of the Frankfurt Stock Exchange of 10,806,462 ordinary registered shares with no par value (*Stückaktien*) (the "**Offering**"), each such share with a notional value of EUR 1.00 in the share capital and full dividend rights as of January 1, 2019 (the "**New Shares**") of Epigenomics AG, Berlin, Germany (the "**Company**" or "**Epigenomics**" and, together with its consolidated subsidiary, the "**Epigenomics Group**", the "**Group**" or "**we**", "**our**" and "**us**"). The Offering consists of (i) a public offering in Germany, (ii) private placements in certain jurisdictions outside the United States of America ("**United States**" or "**U.S.**"), including in Germany, in reliance on Regulation S under the U.S. Securities Act of 1933, as amended (the "**Securities Act**"), and (iii) private placements within the United States to certain qualified institutional buyers (as defined in Rule 144A under the Securities Act, the "**QIBs**") and directors and executive officers of the Company resident in the United States pursuant to the relevant exemptions from the registration requirements under the Securities Act. The New Shares will result from a capital increase against cash contributions from the Company's authorized capital.

The International Securities Identification Number ("**ISIN**") of the New Shares is DE000A11QW50. Subscription rights for the New Shares have the ISIN: DE000A255FM4. Epigenomics can be contacted at its business address: Geneststraße 5, 10829 Berlin, Germany, by telephone: +49-30-24345-0, or via its website: www.epigenomics.com. Epigenomics' Legal Entity Identifier (LEI) is 549300X1C4U862NDLN97.

The Offering will be made by Epigenomics, together with M.M.Warburg & CO (AG & Co.) Kommanditgesellschaft auf Aktien, Ferdinandstraße 75, 20095 Hamburg, Germany (telephone +49 40 3282-0; www.mmwarburg.com) (the "**Underwriter**").

The Prospectus is dated October 18, 2019 and has been approved by the German Federal Financial Supervisory Authority (*Bundesanstalt für Finanzdienstleistungsaufsicht*, "**BaFin**") on October 18, 2019. BaFin can be contacted at Marie-Curie-Str. 24–28, 60439 Frankfurt am Main, Germany, by telephone +49 228 4108-0, or via its website: www.bafin.de.

This summary should be read as an introduction to the Prospectus. Any decision to invest in the New Shares should be based on consideration of the Prospectus as a whole by the investor. Investors could lose all or part of their invested capital.

Where a claim relating to the information contained in the Prospectus is brought before a court, the plaintiff investor might, under national law, have to bear the costs of translating the Prospectus before the legal proceedings are initiated. Civil liability attaches only to those persons who have tabled the summary including any translation thereof, but only where the summary is misleading, inaccurate or inconsistent, when read together with the other parts of the Prospectus, or where it does not provide, when read together with the other parts of the Prospectus, key information in order to aid investors when considering whether to invest in the New Shares.

B. Key Information on the Issuer

(i) Who is the issuer of the securities?

Epigenomics is incorporated as a stock corporation (*Aktiengesellschaft*) under the laws of Germany. The Company's domicile is Berlin, Germany and it is registered with the commercial register of the local court (*Amtsgericht*) Charlottenburg, Germany, under HRB 75861. The Company can be contacted at its business address: Geneststraße 5, 10829 Berlin, Germany, by telephone: +49-30-24345-0, or via its website: www.epigenomics.com. Epigenomics' Legal Entity Identifier (LEI) is 549300X1C4U862NDLN97.

a. Principal activities

We are a commercial-stage molecular diagnostics company focused on patient-friendly, blood-based in vitro diagnostic tests for the screening and diagnosis of cancer. We develop cancer diagnostic tests, mainly in the colorectal cancer, liver and lung cancer fields.

Our key product, Epi proColon, is, to our knowledge, the first and currently only blood-based screening product for the early detection of colorectal cancer approved by the U.S. Food and Drug Administration. We are currently focused on the commercialization of Epi proColon In the United States. In particular, we are working on achieving reimbursement coverage by healthcare payors for the test, specifically by Medicare, a U.S. national health insurance program.

In addition to the U.S. version of Epi proColon, we market a slightly modified version of the product under the name Epi proColon 2.0 CE directly or through distributors in countries with established screening policies, including select European and Southeast Asian markets. Furthermore, based on promising results from clinical studies, we plan to take the next steps towards marketing a blood-based screening test, the HCCBloodTest, for the identification of liver cancer in patients suffering from cirrhosis. We also achieved a CE mark for our product Epi proLung in 2017. This product is a blood-based test for the detection of lung cancer in blood plasma.

b. Major shareholders

The Company has no controlling shareholder. Based on notifications which the Company received in accordance with the German Securities Trading Act (*Wertpapierhandelsgesetz*, "**WpHG**"), as of the date of the Prospectus, the following shareholders held notifiable holdings in the Company:

	Major Shareholdings in %[1]		
Name of shareholder (ultimate controlling person)	**Shareholdings[2]**	**Instruments[3]**	**Total**
Wilhelm K. T. Zours[4]	13.57%	–	13.57%
Shaoqing Zhang[5]	5.53%	–	5.53%
Yong Yu[6]	4.84%	–	4.84%
Ari Zweiman[7]	3.74%	0.01%	3.75%
Roberto Mignone[8]	3.75%	–	3.75%

1 The percentage of voting rights has been calculated on the basis of the Company's total number of voting rights (as published pursuant to Section 41 WpHG) on the date of the respective shareholding notification.

2 Based on the respective shareholding notifications, all listed shareholdings are indirect shareholdings pursuant to Sections 33, 34 WpHG.

3 Includes directly and indirectly held instruments pursuant to Section 38 WpHG.

4 Including attributed shareholdings held by Heidelberger Beteiligungsholding AG (4.37%) and ABC Beteiligungen AG (5.86%). Based on the respective shareholding notification, the remaining 3.34% are also indirect shareholdings and are attributed to Wilhelm K. T. Zours via his controlled undertakings.

5 Including attributed shareholdings held by Can Reach International Limited (5.53%).

6 Including attributed shareholdings held by Cathay Fortune International Company Limited (4.84%).

7 Including attributed shareholdings held by 683 Capital Partners, LP (3.74%).

8 Including attributed shareholdings held by Bridger Healthcare Ltd (3.75%).

c. Key managing directors

The Company's Executive Board (*Vorstand*) consists of three members: Gregory Hamilton is the chief executive officer (CEO), Jorge Garces, Ph.D., is president and chief scientific officer (CSO) and Albert Weber is executive vice president finance.

d. Statutory auditors

For the financial years ended December 31, 2017 and December 31, 2018, Baker Tilly GmbH & Co. KG Wirtschaftsprüfungsgesellschaft, Cecilienallee 6-7, 40474 Düsseldorf, Germany, branch office Nymphenburger Straße 3b, 80335 Munich, Germany ("**Baker Tilly**") was appointed as auditor of the Company.

(ii) What is the key financial information regarding the Issuer?

The audited consolidated financial statements of the Company as of and for the financial years ended December 31, 2018 (the "**Audited Consolidated Financial Statements 2018**") and 2017 (the "**Audited Consolidated Financial Statements 2017**" and, together with the Audited Consolidated Financial Statements 2018, the "**Audited Consolidated Financial Statements**") were prepared by the Company in accordance with the International Financial Reporting Standards as adopted by the European Union ("**IFRS**") and the additional requirements of German commercial law pursuant to Section 315a German Commercial Code (*Handelsgesetzbuch*). The unaudited consolidated interim financial statements of the Company as of and for the six-month period ended June 30, 2019 (the "**Unaudited Consolidated Interim Financial Statements**") were prepared by the Company in accordance with International Accounting Standard 34: Interim Financial Reporting (IAS 34).

The audits of the Audited Consolidated Financial Statements were conducted in accordance with Section 317 German Commercial Code (*Handelsgesetzbuch*) and German Generally Accepted Standards for Financial Statements Audits, which are promulgated by the Institute of Public Auditors in Germany (*Institut der Wirtschaftsprüfer*), by Baker Tilly. The Unaudited Consolidated Interim Financial Statements have not been audited, but reviewed (*prüferisch durchgesehen*) in accordance with the German Securities Trading Act (*Wertpapierhandelsgesetz*) and German Generally Accepted Standards for the Review of Financial Statements, which are promulgated by the Institute of Public Auditors in Germany (*Institut der Wirtschaftsprüfer*), by Baker Tilly.

In the Prospectus, where financial information for the Group is labeled "audited" in tables, this information was taken from the Audited Consolidated Financial Statements. The label "unaudited" is used in tables in the Prospectus to indicate financial information that was taken from the Unaudited Consolidated Interim Financial Statements, or from the Company's accounting records or internal management reporting systems, or which is based on calculations of these figures.

a. Key financial information from the consolidated income statements

	Six–month periods ended June 30,		**Financial Year ended December 31,**	
	2019	**2018**	**2018**	**2017**
(EUR thousand)	**(unaudited)**		**(audited, unless indicated otherwise)**	
Revenue	679	771	1,533	1,864
thereof: Europe	139	128	296	280
thereof: North America	504	247	637	943
thereof: Rest of the world	36	396	600*	641*
Period-on-Period Revenue change (in %) (unaudited)	(11.9)	N/A	(17.8)	N/A
Gross margin (in %)	75.7	79.2	71.3	86.8
Operating result/Earnings before interest and taxes (EBIT)[1]	**(7,980)**	**(5,829)**	**(12,895)**	**(10,289)**
Depreciation and amortization	240	151	308	343
EBIT before depreciation and amortization (EBITDA)[2]	**(7,740)**	**(5,678)**	**(12,587)**	**(9,946)**
Share-based payment expenses[3]	494	293	1,151	577
EBITDA before share-based payment expenses[4]	**(7,246)**	**(5,385)**	**(11,436)**	**(9,369)**
Net loss	**(7,416)**	**(5,774)**	**(12,692)**	**(10,235)**
Earnings per share (basic and diluted)[5]	**(0.21)**	**(0.24)**	**(0.47)**	**(0.44)**

* Unaudited.

[1] Operating result/Earnings before interest and taxes (EBIT) is defined as total comprehensive income for the year/period before other comprehensive income for the year/period, taxes on income, other financial result, interest expenses and interest income. Operating result/Earnings before interest and taxes (EBIT) is a non-IFRS measure defined by us and may not be comparable to similarly titled or other similar measures used by other companies, have limitations as analytical tool and should not be considered in isolation or as a substitute for analysis of our operating results as reported under IFRS.

[2] EBIT before depreciation and amortization (EBITDA) is defined as total comprehensive income for the year/period before other comprehensive income for the year/period, taxes on income, other financial result, interest expenses, interest income, depreciation and amortization. EBIT before depreciation and amortization (EBITDA) is a non-IFRS measure defined by us and may not be comparable to similarly titled or other similar measures used by other companies, have limitations as analytical tool and should not be considered in isolation or as a substitute for analysis of our operating results as reported under IFRS.

[3] Share-based payment expenses are defined as the change in the total fair value of all granted stock options and phantom stock rights over the financial year/period. The fair value of granted stock options is determined in accordance with IFRS 2 (Share-based Payment) by simulation of the future movement in the Company's share capital on the basis of market parameters (*e.g.*, volatility and risk free rate) and normal distributed random numbers (Monte Carlo simulation). The fair value of the stock options is expensed over the expected option term of up to four years against the capital reserve. The valuation date is the grant date. The fair value of phantom stock rights granted in previous years is calculated using the binomial model based on the Cox-Ross-Rubinstein model in accordance with IFRS 2 (Share-based Payment), and recognized *pro rata temporis* as expenses and as a provision due to the obligation of the Company for a cash settlement in the future. If phantom stock rights are held by current employees of the Group, the related expenses are recorded as personnel costs and included in the payroll provisions. If phantom stock rights are held by former employees of the Group, the related expenses are recorded as other costs and included in other provisions.

[4] EBITDA before share-based payment expenses is defined as EBITDA (as defined above) adjusted for the line item share-based payment expenses. EBITDA before share-based payment expenses is a non-IFRS measure defined by us and may not be comparable to similarly titled or other similar measures used by other companies, have limitations as analytical tool and should not be considered in isolation or as a substitute for analysis of our operating results as reported under IFRS.

[5] Earnings per share (basic) are calculated by dividing the net loss for the year by the weighted average number of Shares issued. The outstanding stock options granted by the Company are antidilutive in accordance with IAS 33.41 and 33.43 *Earnings per Share*. Therefore, the earnings per share (diluted) equal the earnings per share (basic).

b. Key financial information from the consolidated statements of financial position

	As of June 30,	As of December 31,	
	2019	2018	2017
(EUR thousand)	**(unaudited)**	**(audited)**	
Total assets	**15,547**	**21,827**	**19,773**
Total equity	**11,703**	**18,613**	**10,577**

c. Key financial information from the consolidated statements of cash flows

	Six-month period ended June 30,		Financial Year ended December 31,	
	2019	2018	2018	2017
(EUR thousand)	**(unaudited)**		**(audited)**	
Cash flow from operating activities	(7,773)	(4,147)	(10,351)	(9,576)
Cash flow from investing activities	(44)	(33)	724	(548)
Cash flow from financing activities	(268)	(73)	13,274	11,499
Total net cash flow	(8,085)	(4,253)	3,647	1,375
Currency translation effects	35	6	14	(80)

(iii) What are the key risks that are specific to the issuer?

An investment in the Company's shares or subscription rights is subject to a number of risks, some of which are presented in this section and under section "C.*(iii) What are the key risks that are specific to the securities?*" of this summary. The occurrence of any of the following or other risks, individually or together with other circumstances and uncertainties currently unknown to the Company or deemed immaterial by the Company, could have a material adverse affect on the Group's business, results of operations, financial position, and cash flows.

The following risks are key risks specific to the Company:

- We have a history of losses, expect to incur increasing costs in the future in connection with the commercialization of Epi proColon, and may never achieve or maintain profitability.
- Our commercial progress depends primarily on the sales of our Epi proColon test and we will need to generate significant revenue from this test.
- The success of Epi proColon depends on its market acceptance by physicians, payors, laboratory customers, patients and others in the medical community.
- The successful commercialization of Epi proColon and other products will depend, in part, on our and our customers' ability to secure adequate and timely reimbursement from government and health administration authorities, such as Medicare, private health insurers and other third-party payors.
- We operate in a highly competitive and rapidly changing industry, which may result in others creating more reliable diagnostic applications or more attractively priced products.
- Acceptance of our products depends on the willingness of patients to be screened, which is outside of our control.
- Demand for cancer molecular in vitro diagnostic tests may not grow or may fail to grow significantly.
- Our products HCCBloodTest and Epi proLung and our product candidates are still under development, and if clinical trials are prolonged, delayed or unsuccessful, we may be unable to commercialize these and future products and product candidates on a timely basis or at all.
- We might not be successful in commercializing blood-based Septin9 testing in certain markets, in particular, China.
- If we are unable to protect our intellectual property rights, we may not be able to compete effectively.
- Our products, product candidates and the Group are subject to continuing regulatory review and regulatory requirements such as post-approval studies.
- We may require additional capital after the capital increase to finance our business operations, and if we cannot raise sufficient capital with the capital increase or additional capital when needed, we may have to curtail or cease operations and/or file for insolvency proceedings.

C. Key Information on the Securities

(i) What are the main features of the securities?

The New Shares are new, ordinary registered shares with no par value (*Stückaktien*), each such share with a notional value of EUR 1.00 in the share capital and full dividend rights as from January 1, 2019, with the ISIN: DE000A11QW50. Subscription rights for the New Shares have the ISIN: DE000A255FM4. All shares of the Company, including the New Shares offered, are shares of the same class. Each of the shares of the Company, including each of the New Shares, entitles the shareholder to one vote at the general shareholders' meeting of the Company. There are no restrictions on voting rights. Voting rights are the same for all of the Company's shareholders. The Company's shares are freely transferable in accordance with the legal requirements for registered shares. The New Shares will be entitled to a share of any liquidation proceeds or insolvency surpluses at the ratio of their notional share in the share capital. The Company's ability and intention to pay dividends in the future will depend on its financial position, results of operations, capital requirements, investment alternatives and other factors. The Company can provide no assurance that it will pay dividends in future years, and at this time does not intend to pay dividends in the future.

(ii) Where will the securities be traded?

The New Shares will be traded on the regulated market of the Frankfurt Stock Exchange with simultaneous admission to the sub-segment of the regulated market with additional post-admission obligations (Prime Standard), in which the shares of the Company are already traded.

(iii) What are the key risks that are specific to the securities?

The following risks are key risks specific to the New Shares:

- The market price and trading volume of the Company's shares could fluctuate significantly and investors could lose all or part of their investment.
- Future offerings of debt or equity securities by us could adversely affect the market price of the Company's shares, and future capitalization measures could substantially dilute our shareholders' interests in the Company.
- The Company does not intend to pay dividends in the future.

D. Key Information on the Offer of Securities to the Public and Admission to Trading on a Regulated Market

(i) Under which conditions and timetable can I invest in this security?

The Company's Executive Board resolved on October 17, 2019, and the Supervisory Board approved on October 17, 2019, to increase the Company's share capital from EUR 36,021,540.00 by up to EUR 10,806,462.00 to up to EUR 46,828,002.00 by issuing up to 10,806,462 New Shares against cash contributions at a Subscription Price (as defined below) (the "**Capital Increase**"). The shareholders of the Company will be granted an indirect Subscription Right (as defined below) against contribution in cash in this process. The New Shares will be offered to the shareholders of the Company at a subscription ratio of 10:3, *i.e.,* three New Shares may be acquired at the Subscription Price for every ten existing shares in the Company (the "**Subscription Ratio**").

The subscription price to be paid by the shareholders per New Share shall at a minimum be equal to EUR 1.05 and at a maximum to EUR 3.50 and is expected to be determined on or about six calendar days before the end of the Subscription Period (as defined below), *i.e.*, on or about October 31, 2019, and to be published on or about that date by way of an ad hoc announcement pursuant to Article 17 of the EU Market Abuse Regulation ((EU) No. 596/2014 of the European Parliament and of the Council of April 16, 2014 as amended by Regulations (EU) No. 1011/2016 of June 8, 2016 and 1033/2016 of June 23, 2016), on the Company's website (http://www.epigenomics.com/news-investors/capital-increase) and in the German Federal Gazette (*Bundesanzeiger*) ("**Subscription Price**"). Each existing share of the Company (ISIN: DE000A11QW50; WKN: A11QW5) entitles the holder to one subscription right (the "**Subscription Right**").

Subscription Rights must be exercised during the period from and including October 24, 2019 up to and including November 6, 2019 (the "**Subscription Period**"). Instructions by investors regarding the exercise of Subscription Rights have to be addressed to their respective depository banks. Investors are recommended to follow the instructions by their depository banks.

The Subscription Rights are freely transferable and can be traded during the period from and including October 24, 2019 up to and including November 4, 2019 at the Frankfurt Stock Exchange. The admission of the Subscription Rights to trading at the Frankfurt Stock Exchange is expected to occur on October 23, 2019.

Subscription Rights which remain unexercised will expire and become worthless. Following the end of the Subscription Period, New Shares not subscribed for, if any, and any residual amounts resulting from the Subscription Ratio shall be placed as part of the rump placement to selected qualified investors in certain jurisdictions outside the United States, Canada, Australia and Japan pursuant to the exemption from registration requirements under Regulation S under the Securities Act, as well as inside the United States to certain QIBs and directors and executive officers of the Company resident in the United States pursuant to the relevant exemptions from registration requirements under the Securities Act.

The shareholder's percentage ownership in the Company's share capital and its voting rights will be diluted by an amount of EUR 0.23 per share or 23% if such shareholder does not exercise any of its Subscription Rights, and assuming that all New Shares will be issued.

The costs of the Company related to the Offering are expected to total approximately EUR 1,300,000.00, assuming a full implementation of the Capital Increase. The Company, the Underwriter in its capacity as Underwriter, and Raymond James & Associates, Inc., 880 Carillon Parkway, St. Petersburg, FL 33716, United States, acting as

placement agent (the "**U.S. Placement Agent**") for the private placements in the United States, will charge no expenses to investors. However, investors will themselves be required to bear the fees charged by their brokers or other financial institutions for the purchase and holding of securities.

(ii) Who is the offeror and/or the person asking for admission to trading?

M.M.Warburg & CO (AG & Co.) Kommanditgesellschaft auf Aktien, a limited partnership on shares with its registered seat at Ferdinandstraße 75, 20095 Hamburg, Germany, incorporated in and operating under the laws of Germany, is the offeror and is acting as listing agent for the Company's application for the admission to trading.

(iii) Why is this prospectus being produced?

a. Use and estimated net amount of proceeds

The Company intends to use the net proceeds totaling approximately EUR 20.3 million (assuming a full implementation of the Capital Increase at a Supcription Price of EUR 2.00) primarily to (i) execute its commercialization strategy for Epi proColon in the United States subsequently to a positive reimbursement decision, (ii) continue the post-approval study for Epi proColon in the United States and further enhance our HCCBloodTest, (iii) continue improving the Epi proColon test with a particular focus on developing automated versions, (iv) continue its research activities with regard to biomarker discovery and analysis, and (v) maintain and potentially expand its intellectual property portfolio, and in addition, to satisfy all other payment obligations that will fall due within the next twelve months for general business purposes.

b. Underwriting Agreement

Based on the underwriting agreement entered into on October 18, 2019 among, *inter alios*, the Company and the Underwriter (the "**Underwriting Agreement**"), the Underwriter has agreed, subject to certain conditions, to subscribe for the New Shares and to offer such shares in the Offering to the Company's shareholders, thereby granting the Company's shareholders an indirect Subscription Right at the Subscription Ratio and at the Subscription Price against contribution in cash.

c. Material conflicts of interest pertaining to the offer

Under the Underwriting Agreement, the Underwriter will receive a commission from the Company upon successful completion of the Offering. The Company therefore assumes that the Underwriter has a financial interest in the successful completion of the transaction.

In addition, all members of our Executive Board and our Supervisory Board (except for Prof. Dr. Günther Reiter) directly or indirectly hold shares, stock option rights, or phantom stock rights of the Company, and as a result, they may, separately from their positions in the respective governing body, have financial and economic interests that diverge from the Company's.

II. ZUSAMMENFASSUNG DES PROSPEKTS (GERMAN TRANSLATION OF SUMMARY OF PROSPECTUS)

A. Einleitung und Warnhinweise

Dieser Prospekt (der „**Prospekt**“) bezieht sich auf das öffentliche Angebot in Deutschland und die Zulassung zum regulierten Markt an der Frankfurter Wertpapierbörse bei gleichzeitiger Zulassung im Teilbereich des regulierten Marktes mit weiteren Zulassungsfolgepflichten (*Prime Standard*) an der Frankfurter Wertpapierbörse von 10.806.462 neuen, auf den Namen lautenden Stückaktien ohne Nennbetrag (*Stückaktien*) (das „**Angebot**“), jeweils mit einem anteiligen Betrag des Grundkapitals von EUR 1,00 und mit voller Gewinnanteilberechtigung ab 1. Januar 2019 (die „**Neuen Aktien**“) der Epigenomics AG, Berlin, Deutschland (im Folgenden auch „**Epigenomics**“ oder die „**Gesellschaft**“ und, gemeinsam mit ihren direkten und indirekten Tochtergesellschaften, die „**Epigenomics Gruppe**“, die „**Gruppe**“ oder „**wir**“, „**uns**“ und „**unsere**“). Das Angebot besteht aus (i) einem öffentlichen Angebot in der Bundesrepublik Deutschland , (ii) Privatplatzierungen in bestimmten Rechtsordnungen außerhalb der Vereinigten Staaten, einschließlich der Bundesrepublik Deutschland, auf der Grundlage von Regulation S zum U.S. Securities Act von 1933 in der jeweils gültigen Fassung (der „**Securities Act**“) und (iii) Privatplatzierungen in den Vereinigten Staaten an bestimmte qualifizierte institutionelle Käufer (im Sinne von Rule 144A zum Securities Act) („**QIBs**“) und in den Vereinigten Staaten ansässige Aufsichtsrats- und Vorstandsmitglieder der Gesellschaft gemäß den entsprechenden Ausnahmen von den Registrierungsanforderungen nach dem Securities Act. Die Neuen Aktien werden aus einer Kapitalerhöhung gegen Bareinlagen aus dem genehmigten Kapital der Gesellschaft resultieren.

Die Internationale Wertpapierkennnummer (*International Securities Identification Number*, „**ISIN**“) der Neuen Aktien ist DE000A11QW50. Bezugsrechte der Neuen Aktien haben die ISIN: DE000A255FM4. Die Epigenomics AG ist unter ihrer Geschäftsadresse Geneststraße 5, 10829 Berlin, Deutschland, telefonisch unter +49 30 24345-0 oder über ihre Webseite www.epigenomics.com erreichbar. Die Rechtsträgerkennung (*Legal Entity Identifier, LEI*) der Epigenomics AG ist 549300X1C4U862NDLN97.

Das Angebot wird von Epigenomics gemeinsam mit M.M.Warburg & CO (AG & Co.) Kommanditgesellschaft auf Aktien, Ferdinandstraße 75, 20095 Hamburg, Deutschland (Telefon +49 40 3282-0; www.mmwarburg.com) (die „**Konsortialbank**”) gemacht.

Der Prospekt vom 18. Oktober 2019 wurde von der Bundesanstalt für Finanzdienstleistungsaufsicht („**BaFin**“) am 18. Oktober 2019 gebilligt. Die BaFin ist erreichbar unter Marie-Curie-Str. 24–28, 60439 Frankfurt am Main, Deutschland, telefonisch unter +49 228 4108-0 oder über ihre Webseite www.bafin.de.

Diese Zusammenfassung sollte als Einleitung zu diesem Prospekt verstanden werden. Bei jeder Entscheidung, in die Neuen Aktien der Epigenomics AG zu investieren, sollte sich der Anleger auf den Prospekt als Ganzes stützen. Anleger können das gesamte angelegte Kapital oder einen Teil davon verlieren.

Für den Fall, dass vor einem Gericht Ansprüche aufgrund der in dem Prospekt enthaltenen Informationen geltend gemacht werden, könnte der als Kläger auftretende Anleger nach nationalem Recht die Kosten für die Übersetzung des Prospekts vor Prozessbeginn zu tragen haben. Zivilrechtlich haften nur diejenigen Personen, die die Zusammenfassung samt etwaiger Übersetzungen vorgelegt und übermittelt haben, und dies auch nur für den Fall, dass die Zusammenfassung, wenn sie zusammen mit den anderen Teilen des Prospekts gelesen wird, irreführend, unrichtig oder widersprüchlich ist oder dass sie, wenn sie zusammen mit den anderen Teilen des Prospekts gelesen wird, nicht die Basisinformationen vermittelt, die in Bezug auf Anlagen in die Neuen Aktien für die Anleger eine Entscheidungshilfe darstellen würden.

B. Basisinformationen über die Emittentin

(i) Wer ist die Emittentin der Wertpapiere?

Epigenomics ist eine Aktiengesellschaft nach deutschem Recht. Die Gesellschaft hat ihren Sitz in Berlin, Deutschland, und ist im Handelsregister des Amtsgerichts Charlottenburg unter HRB 75861 eingetragen. Epigenomics ist unter ihrer Geschäftsadresse Geneststraße 5, 10829 Berlin, Deutschland, telefonisch unter +49 30

24345-0 oder über ihre Webseite www.epigenomics.com erreichbar. Die Rechtsträgerkennung (*Legal Entity Identifier, LEI*) der Epigenomics AG ist 549300X1C4U862NDLN97.

a. Haupttätigkeiten der Emittentin

Wir sind ein Molekulardiagnostikunternehmen in der kommerziellen Phase, das sich auf patientenfreundliche, blutbasierte In-vitro-Diagnosetests für die Krebsfrüherkennung und -diagnose konzentriert. Wir entwickeln krebsdiagnostische Tests, vor allem in den Bereichen Darmkrebs, Leber- und Lungenkrebs.

Unser Schlüsselprodukt Epi proColon ist nach unserem Kenntnisstand das erste und derzeit einzige blutbasierte Screening-Produkt zur Früherkennung von Darmkrebs, das von der U.S. Food and Drug Administration zugelassen ist. Derzeit konzentrieren wir uns auf die Vermarktung von Epi proColon in den USA. Insbesondere arbeiten wir daran, eine Erstattungsdeckung für den Test durch die Kostenträger im Gesundheitswesen zu erreichen, insbesondere seitens Medicare, einem nationalen Krankenversicherungsprogramm in den USA.

Zusätzlich zur U.S.-Version von Epi proColon vermarkten wir eine leicht modifizierte Version des Produkts unter dem Namen Epi proColon 2.0 CE direkt oder über Händler in Ländern mit etablierten Screening-Richtlinien, darunter ausgewählte europäische und südostasiatische Märkte. Darüber hinaus planen wir auf der Grundlage vielversprechender Ergebnisse aus klinischen Studien die nächsten Schritte zur Vermarktung eines blutbasierten Früherkennungstests, HCCBloodTest, zur Identifizierung von Leberkrebs bei Patienten mit Zirrhose. Wir haben 2017 außerdem die CE-Kennzeichnung für unser Produkt Epi proLung erhalten. Dieses Produkt ist ein blutbasierter Test zur Erkennung von Lungenkrebs im Blutplasma.

b. Hauptanteilseigner

Die Gesellschaft hat keinen Mehrheitsaktionär. Auf der Grundlage von Mitteilungen, die der Gesellschaft nach dem Wertpapierhandelsgesetz („**WpHG**“) zugegangen sind, hielten die folgenden Anteilseigner zum Zeitpunkt dieses Prospekts meldepflichtige Beteiligungen an der Gesellschaft:

	Wesentliche Beteiligungen in %[1]		
Name des Anteilseigners (oberste beherrschende Person)	**Beteiligungen[2]**	**Instrumente[3]**	**Insgesamt**
Wilhelm K. T. Zours[4]	13,57%	–	13,57%
Shaoqing Zhang[5]	5,53%	–	5,53%
Yong Yu[6]	4,84%	–	4,84%
Ari Zweiman[7]	3,74%	0,01%	3,75%
Roberto Mignone[8]	3,75%	–	3,75%

1 Die Stimmrechtsanteile wurden auf der Grundlage der Gesamtzahl der Stimmrechte der Gesellschaft (wie gemäß § 41 WpHG veröffentlicht) am Tag der jeweiligen Beteiligungsmeldung berechnet.

2 Gemäß den jeweiligen Stimmrechtsmitteilungen sind alle aufgeführten Beteiligungen indirekte Beteiligungen gemäß §§ 33, 34 WpHG.

3 Umfasst direkt und indirekt gehaltene Instrumente gemäß § 38 WpHG.

4 Einschließlich zugerechneter Beteiligungen, die von der Heidelberger Beteiligungsholding AG (4,37%) und der ABC Beteiligungen AG (5,86%) gehalten werden. Gemäß der entsprechenden Stimmrechtsmitteilung sind auch die übrigen 3,34% indirekte Beteiligungen und werden Wilhelm K. T. Zours über seine Tochterunternehmen zugerechnet.

5 Einschließlich zugerechneter Beteiligungen, die von Can Reach International Limited gehalten werden (5,53%).

6 Einschließlich zugerechneter Beteiligungen, die von Cathay Fortune International Company Limited gehalten werden (4,84%).

7 Einschließlich zugerechneter Beteiligungen, die von 683 Capital Partners, LP gehalten werden (3,74%).

8 Einschließlich zugerechneter Beteiligungen, die von Bridger Healthcare Ltd gehalten werden (3,75%).

c. Hauptgeschäftsführer

Der Vorstand der Gesellschaft besteht aus drei Mitgliedern: Gregory Hamilton (Chief Executive Officer), Jorge Garces, Ph.D. (President und Chief Scientific Officer) und Albert Weber (Executive Vice President Finance).

d. Abschlussprüfer

Für die am 31. Dezember 2017 und 2018 endenden Geschäftsjahre wurde die Baker Tilly GmbH & Co. KG Wirtschaftsprüfungsgesellschaft, Cecilienallee 6-7, 40474 Düsseldorf, Deutschland, Zweigniederlassung Nymphenburger Straße 3b, 80335 München, Deutschland („**Baker Tilly**“) zum Abschlussprüfer der Gesellschaft bestellt.

(ii) Was sind die wesentlichen Finanzinformationen über den Emittenten?

Die geprüften Konzernabschlüsse der Gesellschaft zum 31. Dezember 2018 (der „**Geprüfte Konzernabschluss 2018**“) und 2017 (der „**Geprüfte Konzernabschluss 2017**“ und, zusammen mit dem Geprüften Konzernabschluss 2018, die „**Geprüften Konzernabschlüsse**“) wurden in Übereinstimmung mit den International Financial Reporting Standards, wie sie in der Europäischen Union anzuwenden sind („**IFRS**“), und den zusätzlichen Anforderungen des deutschen Handelsrechts nach § 315e Abs. 1 des Handelsgesetzbuches („**HGB**“) und § 315a Abs. 1 HGB erstellt. Der ungeprüfte verkürzte Konzernzwischenabschluss der Gesellschaft zum 30. Juni 2019 (der „**Ungeprüfte Verkürzte Konzernzwischenabschluss**“) wurde in Übereinstimmung mit IFRS für die Zwischenberichterstattung (IAS 34) erstellt.

Die Geprüften Konzernabschlüsse wurden von Baker Tilly nach § 317 HGB und den deutschen Grundsätzen ordnungsmäßiger Abschlussprüfung, die vom Institut der Wirtschaftsprüfer herausgegeben werden, geprüft. Der Ungeprüfte Verkürzte Konzernzwischenabschluss wurde nicht geprüft, sondern von Baker Tilly einer prüferischen Durchsicht nach dem Wertpapierhandelsgesetz und den deutschen Grundsätzen für die prüferische Durchsicht von Abschlüssen, die vom Institut der Wirtschaftsprüfer veröffentlicht werden, unterzogen.

Wo die Finanzinformationen der Gruppe im Prospekt in Tabellen als „geprüft“ bezeichnet sind, wurden diese Informationen den Geprüften Konzernabschlüssen entnommen. Die Bezeichnung „ungeprüft“ wird in den Tabellen des Prospekts verwendet, um Finanzinformationen anzugeben, die aus dem Ungeprüften Verkürzten Konzernzwischenabschluss, den Buchhaltungsunterlagen oder den internen Management-Berichtssystemen der Gesellschaft stammen oder auf der Grundlage von Berechnungen dieser Zahlen erstellt wurden.

a. Wesentliche Finanzinformationen aus den Konzern-Gewinn- und Verlustrechnungen

	Für den Sechsmonatszeitraum zum 30. Juni		**Für das Geschäftsjahr zum 31. Dezember**	
	2019	**2018**	**2018**	**2017**
(EUR Tausend)	**(ungeprüft)**		**(geprüft, sofern nicht anders angegeben)**	
Umsatzerlöse	679	771	1.533	1.864
davon: Europa	139	128	296	280
davon: Nordamerika	504	247	637	943
davon: Rest der Welt	36	396	600*	641*
Veränderung der Umsatzerlöse im Periodenvergleich (in %) (ungeprüft)	(11,9)	N/A	(17,8)	N/A
Bruttomarge (in %)	75,7	79,2	71,3	86,8
Betriebsergebnis/Ergebnis vor Zinsen und Steuern (EBIT)[1]	**(7.980)**	**(5.829)**	**(12.895)**	**(10.289)**
Abschreibungen	240	151	308	343
EBIT vor Abschreibungen (EBITDA)[2]	**(7.740)**	**(5.678)**	**(12.587)**	**(9.946)**
Aufwendungen für anteilsbasierte Vergütung[3]	494	293	1.151	577
EBITDA vor anteilsbasierter Vergütung [4]	**(7.246)**	**(5.385)**	**(11.436)**	**(9.369)**
Periodenfehlbetrag	**(7.416)**	**(5.774)**	**(12.692)**	**(10.235)**
Ergebnis je Aktie (unverwässert und verwässert) [5]	**(0,21)**	**(0,24)**	**(0,47)**	**(0,44)**

* Ungeprüft.

[1] Betriebsergebnis/Ergebnis vor Zinsen und Steuern (EBIT) wird definiert als Gesamtergebnis des Jahres/der Periode vor dem sonstigen Ergebnis des Jahres/der Periode, Ertragsteuern, sonstigem Finanzergebnis, Zinsaufwendungen und Zinserträgen. Das Betriebsergebnis/Ergebnis vor Zinsen und Steuern (EBIT) ist eine von uns definierte Kennzahl, die nicht nach IFRS anerkannt ist und möglicherweise nicht mit ähnlich bezeichneten oder anderweitig ähnlichen Kennzahlen

anderer Unternehmen vergleichbar ist, Einschränkungen als Analyseinstrument hat und nicht isoliert oder als Ersatz für die Analyse unserer Betriebsergebnisse nach IFRS betrachtet werden sollte.

[2] EBIT vor Abschreibungen (EBITDA) wird definiert als Gesamtergebnis des Jahres/der Periode vor dem sonstigen Gesamtergebnis des Jahres/der Periode, Ertragsteuern, sonstigem Finanzergebnis, Zinsaufwendungen, Zinserträgen und Abschreibungen. EBIT vor Abschreibungen (EBITDA) ist eine von uns definierte Kennzahl, die nicht nach IFRS anerkannt ist und möglicherweise nicht mit ähnlich bezeichneten oder anderweitig ähnlichen Kennzahlen anderer Unternehmen vergleichbar ist, Einschränkungen als Analyseinstrument hat und nicht isoliert oder als Ersatz für die Analyse unserer Betriebsergebnisse nach IFRS betrachtet werden sollte.

[3] Aufwendungen für anteilsbasierte Vergütung werden definiert als die Änderung im gesamten Zeitwert aller gewährten Aktienoptionen und Phantom-Stock-Rechte während des Geschäftsjahrs/der Periode. Der beizulegende Zeitwert der gewährten Aktienoptionen wird gemäß IFRS 2 (Anteilsbasierte Vergütung) durch Simulation der künftigen Entwicklung des gezeichneten Kapitals der Gesellschaft auf der Basis von Marktparametern (z.B. Volatilität und risikofreier Zinssatz) und normalverteilten Zufallszahlen (Monte-Carlo-Simulation) ermittelt. Der beizulegende Zeitwert der Aktienoptionen wird über die erwartete Optionslaufzeit von bis zu vier Jahren mit der Kapitalrücklage aufwandswirksam verrechnet. Für die Bewertung wird der beizulegende Zeitwert am Tag der Gewährung herangezogen. Der beizulegende Zeitwert in vergangenen Jahren gewährter Phantom-Stock-Rechte wird unter Verwendung des Binomialverfahrens auf Basis des Cox-Ross-Rubinstein-Modells gemäß IFRS 2 (Anteilsbasierte Vergütung) berechnet und pro rata temporis als Aufwand und als Rückstellung für die Verpflichtung der Gesellschaft zum künftigen Barausgleich erfasst. Werden Phantom-Stock-Rechte von aktuellen Mitarbeitern der Gruppe gehalten, werden die damit verbundenen Aufwendungen als Personalaufwand ausgewiesen und in den Personalrückstellungen erfasst. Werden sich Phantom-Stock-Rechte von ehemaligen Mitarbeitern der Gruppe gehalten, so werden die damit verbundenen Aufwendungen als sonstige Kosten ausgewiesen und in den sonstigen Rückstellungen erfasst.

[4] EBITDA vor anteilsbasierter Vergütung wird definiert als EBITDA (wie oben definiert) bereinigt um den Posten Aufwendungen für anteilsbasierte Vergütung. EBITDA vor aktienbasierten Vergütungsaufwendungen ist eine von uns definierte Kennzahl, die nicht nach IFRS anerkannt ist und möglicherweise nicht mit ähnlich bezeichneten oder anderweitig ähnlichen Kennzahlen anderer Unternehmen vergleichbar ist, Einschränkungen als Analyseinstrument hat und nicht isoliert oder als Ersatz für die Analyse unserer Betriebsergebnisse nach IFRS betrachtet werden sollte.

[5] Das Ergebnis je Aktie (unverwässert) wird berechnet, indem der Jahresfehlbetrag durch die gewichtete durchschnittliche Anzahl der ausgegebenen Aktien dividiert wird. Die von der Gesellschaft gewährten ausstehenden Aktienoptionen wirken gemäß IAS 33.41 und 33.43 (*Ergebnis je Aktie*) dem Verwässerungseffekt entgegen. Daher entspricht das Ergebnis je Aktie (verwässert) dem Ergebnis je Aktie (unverwässert).

b. Wesentliche Finanzinformationen aus den Konzern-Bilanzen

	Für den Sechsmonatszeitraum zum 30. Juni	**Für das Geschäftsjahr zum 31. Dezember**	
	2019	**2018**	**2017**
(EUR Tausend)	**(ungeprüft)**	**(geprüft)**	
Bilanzsumme	**15.547**	**21.827**	**19.773**
Eigenkapital insgesamt	**11.703**	**18.613**	**10.577**

c. Wesentliche Finanzinformationen aus den Konzern-Kapitalflussrechnungen

	Für den Sechsmonatszeitraum zum 30. Juni		**Für das Geschäftsjahr zum 31. Dezember**	
	2019	**2018**	**2018**	**2017**
(EUR Tausend)	**(ungeprüft)**		**(geprüft)**	
Cashflow aus operativer Geschäftstätigkeit	(7.773)	(4.147)	(10.351)	(9.576)
Cashflow aus Investitionstätigkeit	(44)	(33)	724	(548)
Cashflow aus Finanzierungstätigkeit	(268)	(73)	13.274	11.499
Netto-Cashflow	(8.085)	(4.253)	3.647	1.375
Wechselkurseffekte	35	6	14	(80)

(iii) Was sind die zentralen Risiken, die für die Emittentin spezifisch sind?

Eine Investition in Aktien oder Bezugsrechte der Gesellschaft unterliegt einer Reihe von Risiken, von denen einige in diesem Abschnitt und unter Abschnitt „C.*(iii) Was sind die wichtigsten Risiken, die für die Wertpapiere spezifisch sind?*“ in dieser Zusammenfassung dargestellt werden. Das Eintreten eines der folgenden oder anderer Risiken, einzeln oder zusammen mit anderen Umständen und Unsicherheiten, die der Gesellschaft derzeit unbekannt oder von ihr als unwesentlich erachtet werden, könnte einen wesentlichen negativen Einfluss auf die Geschäfts-, Ertrags- und Finanzlage sowie die Cashflows der Gruppe haben.

Die folgenden Risiken sind wesentliche, für die Gesellschaft spezifische Risiken:

- Wir haben eine Verlusthistorie, erwarten künftig ansteigende Kosten im Zusammenhang mit der Kommerzialisierung von Epi proColon und werden möglicherweise nie Profitabilität erreichen oder erhalten.
- Unser kommerzieller Fortschritt hängt in erster Linie vom Umsatz unseres Epi proColon-Tests ab und wir sind darauf angewiesen, mit diesem Test erhebliche Einnahmen erzielen.
- Der Erfolg von Epi proColon hängt von der Marktakzeptanz durch Ärzte, Kostenträger, Laborkunden, Patienten und anderen in der medizinischen Fachwelt ab.
- Die erfolgreiche Kommerzialisierung von Epi proColon und anderen Produkten wird zum Teil davon abhängen, ob wir und unsere Kunden in der Lage sind, eine angemessene und rechtzeitige Erstattung durch staatliche und Gesundheitsbehörden, etwa Medicare, private Krankenversicherungen und andere Kostenträger sicherzustellen.
- Wir sind in einer stark umkämpften und sich schnell verändernden Branche tätig, was dazu führen kann, dass andere Unternehmen zuverlässigere Diagnoseanwendungen oder preislich attraktivere Produkte entwickeln.
- Die Akzeptanz unserer Produkte hängt von der Bereitschaft von Patienten ab, sich untersuchen zu lassen, die außerhalb unserer Kontrolle liegt.
- Die Nachfrage nach molekularen In-vitro-Diagnosetests für Krebs wird möglicherweise nicht oder nicht signfikant wachsen.
- Unsere Produkte HCCBloodTest und Epi proLung sowie unsere Produktkandidaten befinden sich noch in der Entwicklung, und wenn klinische Studien verlängert, verzögert oder erfolglos verlaufen, können wir diese und zukünftige Produkte und Produktkandidaten möglicherweise nicht oder nicht rechtzeitig vermarkten.
- Es wird uns möglicherweise nicht gelingen, blutbasierte Septin9-Tests in bestimmten Märkten, insbesondere in China, zu vermarkten.
- Wenn wir nicht in der Lage sind, unsere geistigen Eigentumsrechte zu schützen, sind wir möglicherweise nicht in der Lage, im Wettberwerb zu bestehen.
- Unsere Produkte, Produktkandidaten und die Gruppe unterliegen ständiger regulatorischer Überprüfung und regulatorischen Anforderungen wie beispielsweise Post-Zulassungsstudien.
- Wir könnten nach der Kapitalerhöhung zusätzliches Kapital zur Finanzierung unseres Geschäftsbetriebs benötigen und wenn wir mit der Kapitalerhöhung nicht genügend Kapital oder bei Bedarf zusätzliches Kapital aufnehmen können, müssen wir möglicherweise den Betrieb einschränken oder einstellen und/oder ein Insolvenzverfahren einleiten.

C. Basisinformationen über die Wertpapiere

(i) Was sind die Hauptmerkmale der Wertpapiere?

Die Neuen Aktien sind neue, auf den Namen lautende Stückaktien ohne Nennwert, jeweils mit einem rechnerischen Nennwert von EUR 1,00 am Grundkapital und voller Dividendenberechtigung ab dem 1. Januar 2019, mit der ISIN: DE000A11QW50. Bezugsrechte auf die Neuen Aktien haben die ISIN: DE000A255FM4. Alle

Aktien der Gesellschaft, einschließlich der angebotenen Neuen Aktien, sind Aktien derselben Gattung. Jede Aktie der Gesellschaft, einschließlich jeder Neuen Aktie, gewährt dem Inhaber eine Stimme in der Hauptversammlung der Gesellschaft. Es bestehen keine Stimmrechtsbeschränkungen. Stimmrechte sind für alle Aktionäre der Gesellschaft gleich. Die Aktien der Gesellschaft sind nach den gesetzlichen Bestimmungen für Namensaktien frei übertragbar. Die Neuen Aktien haben Anspruch auf einen Anteil am Liquidationserlös oder Insolvenzüberschuss im Verhältnis ihres rechnerischen Anteils am Grundkapital. Die Fähigkeit und Absicht der Gesellschaft, in Zukunft Dividenden auszuschütten, wird von ihrer Finanz- und Ertragslage, ihrem Kapitalbedarf, ihren Investitionsalternativen und anderen Faktoren abhängen. Die Gesellschaft kann keine Gewähr dafür bieten, dass sie in künftigen Jahren Dividenden ausschütten wird, und beabsichtigt derzeit nicht, in der Zukunft Dividenden auszuschütten.

(ii) Wo werden die Wertpapiere gehandelt?

Die Neuen Aktien werden am regulierten Markt an der Frankfurter Wertpapierbörse bei gleichzeitiger Zulassung zum Börsenhandel im Teilbereich des regulierten Marktes mit weiteren Zulassungsfolgepflichten (*Prime Standard*) an der Frankfurter Wertpapierbörse gehandelt werden, in dem die Aktien der Gesellschaft bereits gehandelt werden.

(iii) Was sind die zentralen Risiken, die für die Wertpapiere spezifisch sind?

Die folgenden Risiken sind wesentliche, für die Neuen Aktien spezifische Risiken:

- Der Marktpreis und das Handelsvolumen der Aktien der Gesellschaft könnten erheblich schwanken und Anleger könnten ihre Investition ganz oder teilweise verlieren.
- Zukünftige Angebote von Schuld- oder Beteiligungspapieren durch uns könnten den Marktpreis der Aktien der Gesellschaft negativ beeinflussen und zukünftige Kapitalmaßnahmen könnten die Anteile unserer Aktionäre an der Gesellschaft erheblich verwässern.
- Die Gesellschaft beabsichtigt nicht, in Zukunft Dividenden auszuschütten.

D. Basisinformationen über das öffentliche Angebot von Wertpapieren und/oder die Zulassung zum Handel an einem geregelten Markt

(i) Zu welchen Konditionen und nach welchem Zeitplan kann ich in dieses Wertpapier investieren?

Der Vorstand der Gesellschaft hat am 17. Oktober 2019 mit Zustimmung des Aufsichtsrats vom 17. Oktober 2019 beschlossen, das Grundkapital der Gesellschaft von 36.021.540,00 Euro um bis zu 10.806.462,00 Euro auf bis zu 46.828.002,00 Euro durch Ausgabe von bis zu 10.806.462 Neuen Aktien gegen Bareinlagen zu einem Bezugspreis (wie unten definiert) zu erhöhen (die „**Kapitalerhöhung**“). Den Aktionären der Gesellschaft wird dabei ein mittelbares Bezugsrecht (wie unten definiert) gegen Bareinlage eingeräumt. Die Neuen Aktien werden den Aktionären der Gesellschaft im Bezugsverhältnis 10:3 angeboten, d.h. für je zehn bestehende Aktien der Gesellschaft können drei Neue Aktien zum Bezugspreis erworben werden (das „**Bezugsverhältnis**“).

Der von den Aktionären je Neuer Aktie zu zahlende Bezugspreis beträgt mindestens EUR 1,05 und maximal EUR 3,50 und wird voraussichtlich am oder um den sechsten Kalendertag vor Ablauf der Zeichnungsfrist (wie unten definiert) festgelegt, d.h. am oder um den 31. Oktober 2019, und zu diesem Zeitpunkt als Ad-hoc-Mitteilung gemäß Artikel 17 der EU-Marktmissbrauchsverordnung ((EU) Nr. 596/2014 des Europäischen Parlaments und des Rates vom 16. April 2014 in der Fassung der Verordnungen (EU) Nr. 1011/2016 vom 8. Juni 2016 und 1033/2016 vom 23. Juni 2016), auf der Website der Gesellschaft (http://www.epigenomics.com/news-investors/capital-increase) und im Bundesanzeiger veröffentlicht werden („**Bezugspreis**“). Jede bestehende Aktie der Gesellschaft (ISIN: DE000A11QW50; WKN: A11QW5) berechtigt zu einem Bezugsrecht (das „**Bezugsrecht**“).

Bezugsrechte müssen während des Zeitraums von und einschließlich 24. Oktober 2019 bis einschließlich 6. November 2019 (die „**Zeichnungsfrist**“) ausgeübt werden. Weisungen der Anleger über die Ausübung von Bezugsrechten sind an ihre jeweilige Depotbank zu richten. Den Anlegern wird empfohlen, den Anweisungen ihrer Depotbanken zu folgen.

Die Bezugsrechte sind frei übertragbar und können im Zeitraum von einschließlich 24. Oktober 2019 bis einschließlich 4. November 2019 an der Frankfurter Wertpapierbörse gehandelt werden. Die Zulassung der Bezugsrechte zum Handel an der Frankfurter Wertpapierbörse wird voraussichtlich am 23. Oktober 2019 erfolgen.

Nicht ausgeübte Bezugsrechte verfallen und werden wertlos. Nach Ablauf der Zeichnungsfrist werden etwaige nicht gezeichnete Neue Aktien und etwaige Restbeträge, die sich aus dem Bezugsverhältnis ergeben, im Rahmen der Rumpfplatzierung an ausgewählte qualifizierte Anleger in bestimmten Jurisdiktionen außerhalb der Vereinigten Staaten, Kanadas, Australiens und Japans gemäß der Befreiung von den Registrierungsanforderungen nach Regulation S zum Securities Act platziert sowie innerhalb der Vereinigten Staaten an bestimmte QIBs und in den Vereinigten Staaten ansässige Aufsichtsrats- und Vorstandsmitglieder der Gesellschaft gemäß den entsprechenden Ausnahmen von den Registrierungsanforderungen nach dem Securities Act.

Der prozentuale Anteil eines Aktionärs am Grundkapital der Gesellschaft und seine Stimmrechte werden um einen Betrag von EUR 0,23 je Aktie oder um 23% verwässert, wenn dieser Aktionär keines seiner Bezugsrechte ausübt und unter der Annahme, dass alle Neuen Aktien ausgegeben werden.

Die Kosten der Gesellschaft im Zusammenhang mit dem Angebot und der Notierung werden unter der Annahme einer vollständigen Durchführung der Kapitalerhöhung voraussichtlich insgesamt ca. EUR 1.300.000,00 betragen. Die Gesellschaft, die Konsortialbank in ihrer Eigenschaft als Konsortialbank und Raymond James & Associates, Inc., 880 Carillon Parkway, St. Petersburg, FL 33716, Vereinigte Staaten, als Platzierungsagent (der "**U.S. Platzierungsagent**") für die Privatplatzierungen in den Vereinigten Staaten, werden den Anlegern keine Kosten in Rechnung stellen. Die Anleger sind jedoch verpflichtet, die von ihren Depotbanken oder anderen Finanzinstituten für den Kauf und das Halten von Wertpapieren erhobenen Gebühren selbst zu tragen.

(ii) Wer ist der Anbieter und/oder die die Zulassung zum Handel beantragende Person?

M.M.Warburg & CO (AG & Co.) Kommanditgesellschaft auf Aktien, eine Kommanditgesellschaft auf Aktien mit Sitz in der Ferdinandstraße 75, 20095 Hamburg, Deutschland, eingetragen in Deutschland und deutschem Recht unterliegend, ist der Anbieter und agiert als Zulassungsantragssteller für den Antrag der Gesellschaft auf Zulassung zum Handel.

(iii) Weshalb wird dieser Prospekt erstellt?

a. Zweckbestimmung und geschätzter Nettobetrag der Erlöse

Die Gesellschaft beabsichtigt, den Nettoerlös in Höhe von rund EUR 20,3 Mio. (unter der Annahme einer vollständigen Durchführung der Kapitalerhöhung zu einem Bezugspreis von EUR 2,00) primär dafür zu verwenden, (i) ihre Vermarktungsstrategie für Epi proColon in den Vereinigten Staaten nach einer positiven Erstattungsentscheidung umzusetzen, (ii) die Post-Zulassungsstudie für Epi proColon in den Vereinigten Staaten fortzusetzen und den HCCBloodTest weiter zu verbessern, (iii) den Epi proColon-Test mit besonderem Schwerpunkt auf der Entwicklung automatisierter Versionen weiter zu verbessern, (iv) ihre Forschungsaktivitäten in Bezug auf die Entdeckung und Analyse von Biomarkern fortzusetzen, und (v) ihr Portfolio an geistigem Eigentum zu erhalten und möglicherweise zu erweitern, und darüber hinaus dafür, alle anderen Zahlungsverpflichtungen zu erfüllen, die innerhalb der nächsten zwölf Monate für allgemeine Geschäftszwecke fällig werden.

b. Übernahmevertrag

Auf der Grundlage des am 18. Oktober 2019 zwischen unter anderem der Gesellschaft und der Konsortialbank abgeschlossenen Übernahmevertrages (der „**Übernahmevertrag**") hat sich die Konsortialbank unter anderem verpflichtet, unter bestimmten Bedingungen die Neuen Aktien zu zeichnen und den Aktionären der Gesellschaft im Rahmen des Angebots anzubieten, wodurch den Aktionären der Gesellschaft ein mittelbares Bezugsrecht zum Bezugsverhältnis und zum Bezugspreis gegen Bareinlage eingeräumt wird.

c. Wesentlichste Interessenkonflikte in Bezug auf das Angebot oder die Zulassung zum Handel

Im Rahmen des Übernahmevertrages erhält die Konsortialbank bei erfolgreichem Abschluss des Angebots eine Provision von der Gesellschaft. Die Gesellschaft geht daher davon aus, dass die Konsortialbank ein finanzielles Interesse an einem erfolgreichen Abschluss der Transaktion hat.

Darüber hinaus halten alle Mitglieder unseres Vorstands und unseres Aufsichtsrats (mit Ausnahme von Prof. Dr. Günther Reiter) direkt oder indirekt Aktien, Aktienoptionsrechte oder Phantom-Stock-Rechte der Gesellschaft und können möglicherweise als Folge dessen, getrennt von ihren jeweiligen Organfunktionen, finanzielle und wirtschaftliche Interessen haben, die von denjenigen der Gesellschaft abweichen.

1. RISK FACTORS

Prospective investors should carefully consider the risk factors set out below, together with the other information contained in this prospectus (the "Prospectus"), before investing in shares of Epigenomics AG (the "Company" or "Epigenomics" and, together with its consolidated subsidiary, the "Epigenomics Group", the "Group" or "we", "our" and "us"). In each category, the most material risks, in the assessment undertaken by the issuer, taking into account the negative impact on the issuer and the probability of their occurrence are set out first. The occurrence of any of these risks, individually or together with other circumstances and uncertainties currently unknown to us or deemed immaterial by us, could have a material adverse effect on our business, results of operations, financial position, and cash flows. Consequently, the value of the shares or the subscription rights of Epigenomics could decrease as a result of the occurrence of any of these risks.

1.1. Risks Related to our Business and the Industry in which we Operate

1.1.1. We have a history of losses, expect to incur increasing costs in the future in connection with the commercialization of Epi proColon, and may never achieve or maintain profitability.

Since inception, we have incurred significant operating losses. In particular, for the financial years ended December 31, 2018 and 2017, we incurred a net loss for the year of EUR 12,692 thousand and EUR 10,235 thousand, respectively. For the six-month period ended June 30, 2019, we incurred a net loss for the period of EUR 7,416 thousand.

Historically, our losses have resulted principally from our research and development efforts, our sales and marketing efforts, and our general and administrative expenses. We expect to continue to incur significant operating costs and anticipate that our expenses and losses will increase, in particular due to costs relating to the commercial exploitation of our key product, Epi proColon, a blood-based screening test for the early detection of colorectal cancer which is based on a specific DNA methylation of a certain gene (the "**Septin9**" gene) providing instructions for making a protein called septin-9. In accordance with the approval for sale in the United States of America ("**United States**" or "**U.S.**") of Epi proColon by the U.S. Food and Drug Administration ("**FDA**") on April 12, 2016, we are aiming to expand our operations once we receive favorable reimbursement decisions, in particular, a coverage determination by the U.S. Centers for Medicare & Medicaid Services ("**CMS**"), the federal agency that administers Medicare, a national health insurance program in the United States which we estimate covers approximately 40% of potential patients who could be tested using Epi proColon in the United States (*i.e.,* patients 65 to 75 years of age; estimate based on U.S. Census data) ("**Medicare**"). If we achieve reimbursement, our attempt to broadly commercialize Epi proColon is expected to result in an increase of our expenses, for example due to costs relating to the employment of operational, marketing, as well as sales and general administrative personnel. In addition, we are required by the FDA to conduct a post-approval clinical study for Epi proColon which we expect to entail substantial costs, and we may incur further cost for studies to support reimbursement decisions. Accordingly, we do not expect to reach the break-even point in the near term and may therefore need to rely on further, alternative cash inflows from financing activities. In addition, there is no guarantee that any such expenses will ever pay off, and if we do not manage to generate significant revenue in a timely manner or at all, we may never achieve or maintain profitability.

1.1.2. Our commercial progress depends primarily on the sales of our Epi proColon test and we will need to generate significant revenue from this test.

We have invested a significant portion of our efforts and financial resources in the development and regulatory approval of Epi proColon, and we are currently investing in its commercialization. We expect to derive substantially all of our revenue from the sales of Epi proColon for the foreseeable future, as our other products and product candidates are in early stages of development or must still be validated by additional clinical studies. Therefore, we will need to generate significant revenue from the Epi proColon test. To date, however, product revenue from Epi proColon has been relatively moderate. The success of Epi proColon will depend on several factors, many of which are outside of our control, including:

- The success of our efforts and those of our partners in launching and commercializing Epi proColon in the United States;
- The ability to maintain regulatory approval for Epi proColon in the United States, including the successful completion of post-approval studies;
- Obtaining adequate reimbursement for Epi proColon; and
- Acceptance of our products by the medical community at large.

If we do not achieve these objectives in a timely manner or at all, we may not be able to commercialize Epi proColon successfully.

1.1.3. The success of Epi proColon depends on its market acceptance by physicians, payors, laboratory customers, patients and others in the medical community.

Epi proColon may not gain market acceptance from clinical and genetic laboratories ("**Laboratory Customers**"), physicians, patients, payors and others in the medical community in a timely manner or at all. The degree of market acceptance of Epi proColon depends on a number of factors, including:

- Its demonstrated clinical performance for detecting colorectal cancer;
- Its value and cost-effectiveness;
- Market acceptance of our test by Laboratory Customers, including acceptance of its value proposition;
- The availability of alternative screening methods and the preferences of governments, payors, health administration authorities, private health insurers and regulatory bodies regarding screening methods;
- The willingness of physicians to prescribe Epi proColon and its inclusion in laboratory offerings;
- The inclusion of Epi proColon in official guidelines, which are used by payors and health systems as decision-making factors for their payment determinations and thus, have a particularly great influence on reimbursement decisions and commercial adoption;
- Its acceptance by the non-compliant target population; and
- The availability of third-party coverage or reimbursement.

The administration of clinical and economic utility studies is expensive and demands significant attention from certain members of our management team. Data collected from these studies may not be positive or consistent with our existing data or may not be statistically significant or compelling to the medical community. For example, a 2012 study we conducted to establish the non-inferiority of Epi proColon as to sensitivity (*i.e.*, the rate of false-negative test results, or missed actual cancer cases) when compared to fecal immunochemical tests ("**FIT**") found that Epi proColon was inferior to FIT with respect to specificity (*i.e.*, it exhibited a higher rate of false-positive test results, or positive test results in patients without cancer). Such higher rate of false-positive results could impair the acceptance of Epi proColon by the medical community and lead physicians, patients, payors, Laboratory Customers and others to favor other testing methods that exhibit greater specificity. Furthermore, if the results obtained from our ongoing or future studies are inconsistent with certain results obtained from our previous studies, acceptance of Epi proColon would suffer and our business would be harmed.

Peer-reviewed publications regarding our tests may be limited by many factors, including delays in the completion of, poor design of, or lack of compelling data from clinical studies, as well as delays in the review, acceptance and publication process. For example, the publication of the results of an advanced microsimulation model for Epi proColon, which we expect to support the inclusion of Epi proColon in guidelines of medical professional societies, has taken longer than expected and has still not been completed. If our tests or the technology underlying our current tests or future tests do not receive sufficient favorable exposure in peer-reviewed publications or the results are not accepted by relevant experts, the rate of clinician adoption of our tests and reimbursement coverage decisions for our tests could be negatively affected. The publication of clinical data in peer-reviewed journals and acceptance of the results in the medical community is a crucial step in commercializing and obtaining reimbursement for tests such as ours, and our inability to control when, if ever, results are published and how they are perceived may delay or limit our ability to derive sufficient revenue from our Epi proColon test.

1.1.4. The successful commercialization of Epi proColon and other products will depend, in part, on our and our customers' ability to secure adequate and timely reimbursement from government and health administration authorities, such as Medicare, private health insurers and other third-party payors.

The denial or revocation of reimbursement status for our products, the adoption of new price controls and other cost-containment measures or price determinations at insufficient levels for our products by third-party healthcare payors could decrease order volume and limit the revenue opportunities from our products. In particular, as we estimate that the population covered by Medicare represents approximately 40% of our available market for Epi proColon based on U.S. Census data, reimbursement coverage of our test under the Medicare program is critical to our success.

Maintaining and growing sales of Epi proColon and other products that we may commercialize in the future depends on our ability and the ability of our commercial partners (such as Polymedco Cancer Diagnostics Products LLC, New York, United States ("**Polymedco**")) to sell our products to Laboratory Customers. The demand from Laboratory Customers for our product depends to a large extent on the ability to get adequate reimbursement for the cost of our tests by their patients' third-party healthcare payors (*e.g.*, Medicare or private insurance companies).

In particular, adequate reimbursement for Epi proColon under the Medicare program currently depends on achieving Medicare coverage, which can be achieved either through (i) legislation or (ii) a National Coverage Determination ("**NCD**") issued by CMS. We are monitoring (draft) bills in

the U.S. Congress mandating Medicare coverage for FDA-approved blood tests for colorectal cancer screening, but their success remains uncertain, including due to political imponderabilities and strategic considerations. Additionally, we continue to seek an NCD. On May 3, 2019, CMS accepted our application to review Epi proColon as part of an NCD. Once CMS starts the review process (which they have not done yet due to limited resources), CMS must reach a final decision within nine months; however, there is no guarantee that CMS will start the review process in a timely manner or that it will arrive at a positive coverage determination. CMS has also indicated that a potentially important factor for an NCD is the inclusion in guidelines of medical professional societies, such as the American Cancer Society ("**ACS**"). Since Epi proColon was not included in updated ACS guidelines published on May 30, 2018, we are working on the publication of the results of a microsimulation model evaluating the long-term benefits and harms of our product to present to guideline groups and push for inclusion in such guidelines. We also believe such publication might support an NCD directly. However, there is no guarantee that such publication will occur and that we will be included in such guidelines. If we cannot achieve legislation or an NCD that would allow Epi proColon to be covered by Medicare, our revenue from Epi proColon in the key U.S. market will be materially lower than initially expected and we may not earn an appropriate return on our investment in this key product.

With respect to reimbursement by private insurance companies and healthcare programs, our Laboratory Customers have experienced sales teams which aim to negotiate commercially acceptable and sufficiently attractive contracts for our products with, and collect reimbursement from, such third-party payors. We do not negotiate arrangements or collect reimbursement from private healthcare payors ourselves. Our Laboratory Customers may be unable to successfully negotiate arrangements with third-party payors for Epi proColon or for other products if, for example, such healthcare payors consider testing services based on our products not to be cost-effective, if our products are not endorsed by guidelines of medical professional societies or if there is insufficient demand from healthcare providers and patients. If our Laboratory Customers fail to negotiate such arrangements and, as a result, there is inadequate or no coverage by third-party payors, or if there is any delay in concluding such arrangements or in collecting reimbursements thereunder, our products become significantly less attractive to the Laboratory Customers and, therefore, result in reduced order volume for our products. The unavailability or inadequacy of third-party coverage or reimbursement may result in a decrease in patient demand for, and physician utilization of, our products and a reduction in our Laboratory Customers' sales efforts.

The reimbursement status of newly approved diagnostic products is generally subject to significant uncertainty. Third-party payors are increasingly limiting coverage and reducing reimbursement for medical products and services. The U.S. government, U.S. state legislatures and other governments have continued implementing cost-containment programs, including price controls and restrictions on coverage and reimbursement for medical products and services. The risk of a negative reimbursement decision by these payors could also have an impact on other major payors in the U.S. health system. In addition, government and health administration authorities may deny or revoke the reimbursement status of a given diagnostic test or establish prices for new or existing marketed products at levels that are too low to allow commercial success. In addition, greater pressure on public healthcare budgets, leading to lengthy and sometimes heated public and political debates may negatively affect our ability to obtain reimbursement for our products. For example, in the United States, such discussions were a key issue in the 2016 presidential election campaign and the Trump administration has already begun to implement its plans to roll back measures on public healthcare initiated by the previous administration.

Besides a failure to achieve reimbursement coverage at all, inadequate reimbursement rates may cause our revenue to be materially lower than expected. Although CMS set the final reimbursement rate at USD 192.00 per Epi proColon test, and, typically, the Medicare rate sets the industry benchmark and private payors (*i.e.*, private insurance companies) adopt this rate within a range of 80% - 120%, private payors may still reimburse below this range. As a consequence our revenue from Epi proColon may be materially lower than initially expected and we may not earn an appropriate return on our investment in this key product. In addition, the rate of USD 192.00 per Epi proColon test which came into effect on January 1, 2019 might only remain in effect for three years under the U.S. Protecting Access to Medicare Act and may be substantially lower in the future. For instance, before the final rate of USD 192.00 was set in 2018, the initial reimbursement rate set by CMS was as low as USD 83.67 per test; at such rate, the test would become significantly less attractive and we would expect our sales volume to drop accordingly.

1.1.5. We operate in a highly competitive and rapidly changing industry, which may result in others creating more reliable diagnostic applications or more attractively priced products.

The molecular diagnostics industry is highly competitive and subject to significant and rapid technological change. Our success depends upon our ability to gain and keep sufficient market share by discovering, developing, obtaining marketing approval for, and successfully marketing new and innovative products, which are more reliable and/or cost-effective than other products available in the market.

In doing so, we face and will continue to face intense competition from a variety of businesses, including large, fully integrated pharmaceutical and diagnostic companies, specialty diagnostic companies and biopharmaceutical companies, independent laboratories, academic institutions, government agencies and other private and public research institutions in the United States, Europe, and other jurisdictions. These organizations may have significantly greater resources than we do; and may conduct similar research, seek patent protection and establish collaborative arrangements for research, development, manufacturing and marketing of products that compete with our products and/or product candidates.

The colorectal cancer screening market has attracted competitors, some of whom possess significantly greater financial and other resources and development capabilities than we do. Some companies and institutions are developing serum-based tests and screening tests based on the detection of proteins, nucleic acids or the presence of fragments of mutated genes in the blood that are produced by colorectal cancer. We are aware of a number of companies that are actively engaged in the research and development of blood-based tests for the same, or similar, detection products as we are targeting. Specifically, Guardant Health, Inc., Freenome, Inc. and CellMax, Inc. are developing blood-based tests for the detection of colorectal cancer in the United States utilizing a number of different approaches including next generation sequencing ("**NGS**"), polymerase chain reaction ("**PCR**"), cell capture, imaging, proteomics, epigenomics and genomics. Additionally, Thrive Early Detection Corp. is developing a single blood test that screens for eight common cancer types. The test, called CancerSEEK, is a non-invasive test that simultaneously evaluates levels of eight common cancer proteins and the presence of cancer gene mutations from DNA circulating in the blood. Timing for FDA approval, reimbursement and commercialization of these tests is unclear.

In addition, we are aware of several other companies that have expressed their intention to develop blood-based tests for the detection of colorectal cancer or have published initial research on new product developments, although to our knowledge, none of these companies have conducted the large-scale clinical trials for their blood-based tests that would be required to

support a pre-market approval ("**PMA**") submission to the FDA for their products. The same applies for several entities that offer a laboratory-developed test ("**LDT**") version of a blood test for colorectal cancer ("**CRC**") detection, such as the BeScreened-CRC test developed by Beacon Biomedical Inc. and offered by Sonora Quest Laboratories. These tests are not FDA-approved and have limited data on their performance claims. As these competitors develop their product candidates, they may develop proprietary positions in certain areas that may have a material adverse effect on the competitiveness of our products. We may not comprehensively be aware of development of competing products or technologies and, therefore, there may be significant competing products or detection technologies in development of which we have no knowledge.

Our commercial opportunity could be reduced or eliminated if our competitors develop and commercialize products that are more effective, safer, more convenient or less expensive than any products that we develop. Our competitors may also obtain approval by the FDA or comparable regulatory authorities for their products more rapidly than we obtain approval for ours, which could delay commercialization of our products or result in our competitors establishing a strong market position before we are able to enter the market. Epi proColon and our other products and product candidates may be priced at a significant premium over competitive products if any have been approved by then, resulting in reduced competitiveness of our products. In addition, any change in the regulatory landscape that would make it easier for competitors to develop and commercialize LDTs or homebrew assays being competitive against PMA approved products such as Epi proColon would also pose a risk for our competitive position.

We also face competition from procedure-based detection technologies, such as colonoscopy and colonography (a radiological imaging approach which visualizes the inside of the bowel by use of spiral computerized axial tomography known as a CT scan), as well as existing and possibly improved traditional screening tests, such as fecal occult blood tests, and FIT or stool DNA tests or for example improved ultrasound techniques. One example is the use of capsule endoscopy, which uses a tiny vitamin-size wireless camera to capture images of the digestive tract. Medtronic plc has commercialized the PillCam Colon system for polyp detection in certain high-risk individuals. It is not intended currently for CRC screening among average risk patients. Our competitors may also be working on additional methods of detecting colorectal cancer that have not yet been announced. We may be unable to compete effectively against these competitors either because their test is superior or because they may have more expertise, experience, financial resources or stronger business relationships.

1.1.6. Acceptance of our products depends on the willingness of patients to be screened, which is outside of our control.

Because cancer screening is voluntary, we depend on patients opting for a colorectal cancer screening with our Epi proColon product or for other cancer screening with our other products. Even if our Epi proColon test gains acceptance by physicians, payors, Laboratory Customers and others in the medical community, adequate third-party reimbursement is obtained and medical practitioners order our Epi proColon product, only a small number of patients may decide to be screened for colorectal cancer. In addition, the patients that decide to undergo colorectal cancer screening may opt for a screening method other than our blood-based Epi proColon product.

Despite the availability of colorectal cancer screening methods and the recommendations of the U.S. Preventive Services Task Force ("**USPSTF**", an independent panel of primary care physicians and epidemiologists specializing in primary care and prevention, staffed and funded by the U.S. Department of Health and Human Services' Agency for Healthcare Research and Quality, that systematically reviews and provides recommendations for clinical preventative services) that all Americans aged 50 to 75 be screened for colorectal cancer (source: USPSTF Recommendation

Summaries), we estimate that approximately 32% of individuals above the age of 65 (making them eligible for Medicare) are not being screened in accordance with current ACS guidelines (based on ACS Facts and Figures 2017-2019). The success of our Epi proColon test depends on an increasing willingness of patients to undergo colorectal cancer screening.

The risk of a lack of patients undergoing screening using our test methods also applies to HCCBloodTest and Epi proLung, as well as other products for the detection of cancer that we may develop and market.

1.1.7. Demand for cancer molecular in vitro diagnostic tests may not grow or may fail to grow significantly.

Our business strategy and assumptions rely on strong growth forecasts for the demand for in vitro diagnostic ("**IVD**") tests. For instance, Grand View Research predicts that the market for such testing will grow at a compound annual growth rate of approximately 9% per year until 2026, (source: http://www.grandviewresearch.com/industry-analysis/molecular-diagnostics-market; base year for estimate: 2018). However, this market is still evolving and may fail to grow or grow more slowly than expected.

In addition, even if the market does grow, physicians and Laboratory Customers may not recommend and order Epi proColon and our other IVD products. In addition, market growth might lead to increased competition and decreasing prices resulting from this competition. As a result, market growth might be over-compensated by price decrease.

1.1.8. Our products HCCBloodTest and Epi proLung and our product candidates are still under development, and if clinical trials are prolonged, delayed or unsuccessful, we may be unable to commercialize these and future products and product candidates on a timely basis or at all.

Our products, such as HCCBloodTest, a test for the detection of HCC, the most common form of liver cancer, in patients diagnosed with liver cirrhosis, and Epi proLung, a test to detect lung cancer in blood plasma, and product candidates are in different stages of development prior to commercialization in certain markets, including the United States. We may fail to successfully complete all prerequisites, *i.e.*, conduct clinical trials and obtain regulatory approvals, for the commercialization of these as well as other future product candidates in a timely manner or at all. To obtain the required regulatory approvals to market and sell future products, we must demonstrate through extensive clinical trials that our products are safe and effective in humans. While we achieved CE certification for Epi proLung in December 2017 and for HCCBloodTest in October 2018, the processes for obtaining governmental approval to market our products in other jurisdictions are rigorous, time-consuming and costly, and to achieve favorable reimbursement by healthcare payors, we may need to further optimize the product. It is impossible to predict the extent to which these processes may be affected by legislative and regulatory developments.

The development of medical products, including our diagnostic product candidates, involves a lengthy and expensive process with uncertain timelines and uncertain outcomes. They must be conducted in accordance with FDA regulations, European regulations and potentially other applicable regulatory authorities' legal requirements, regulations or guidelines, and are subject to oversight by these governmental agencies and institutional review boards at the medical institutions where the clinical trials are conducted. In addition, clinical trials must be conducted with supplies of our product candidates produced under current good manufacturing practices ("**cGMP**") and other requirements. The principles of cGMP which are applicable to us, being a medical device manufacturer, are set forth in the FDA's Quality System Regulation (21 CFR Part 820).

In addition, we depend on collaborators to conduct our clinical trials and comply with Good Clinical Practice ("**GCP**") as set forth in the International Conference on Harmonization of Technical Requirements for Registration of Pharmaceuticals for Human Use harmonized tripartite guideline for good clinical practice E6(R1). To the extent our collaborators fail to enroll participants in our clinical trials, fail to conduct the clinical trials in accordance with GCP standards or encounter delays in the execution of clinical trials, we may be burdened with increased costs, program delays or both, which may harm our business. If the results of such clinical trials do not support the thesis underlying the product candidate or raise other significant concerns, the product candidate may fail altogether.

Due to these and other factors, HCCBloodTest, Epi proLung and future products and product candidates could take a significantly longer time to gain certain regulatory approvals than expected or may never gain certain regulatory approvals. This could delay or eliminate any potential product revenue from such products and product candidates.

1.1.9. Our success depends on our ability to enter into, and successfully execute, collaboration and other agreements with our potential customers.

Historically, we pursued a business model focused on the identification and out-licensing of various biomarkers and/or our proprietary technologies. With the development and FDA approval of Epi proColon, we have transitioned to a new business model, where we aim to focus on developing molecular cancer diagnostic tests that use our proprietary biomarkers for highly regulated markets. For the commercial exploitation of these tests, we market them directly, but have also entered into commercialization agreements with certain collaborators, who are or have in the past been our direct customers, in order to generate revenue by distributing Epi proColon to Laboratory Customers and other intermediate and end users. Thus, we are exposed to a high concentration of risks regarding our direct customer base, *i.e.*, those collaborators. For example, in the financial years ended December 31, 2018 and 2017, 81% of our total revenue was generated by our three largest direct customers in each year. We may also, in the future, as we have done in the past, be party to exclusive license agreements with other parties regarding our products or product candidates.

The failure of our collaborators or other partners to develop and commercialize our products adequately, non-compliance with the terms of our existing or future agreements (including the failure to make payments to us), the termination of such agreements, any disputes with our partners or the misuse of intellectual property and proprietary information by such partners could negatively affect our ability to sell our product and our cost.

We have limited or no control over our partners' marketing strategy and there is no guarantee that they will dedicate sufficient resources and funds to their marketing efforts. In addition, our current license and collaboration agreements and any such agreements we may enter into in the future expose us to multiple additional risks, including the following:

- Collaborators may de-emphasize or not pursue development and commercialization of our product or product candidates, may not comply with the terms of our agreements or may elect not to continue or renew, or seek to terminate, specific development or commercialization programs or the entire agreement (for example, due to financial difficulties of such collaborators);
- We granted and could grant in the future exclusive rights to our collaborators, which would prevent us from collaborating with others or which prevents us from selling in such territories either by ourselves or through another third party;

- Disputes with collaborators over proprietary rights, the scope of exclusivity granted, contract interpretation, the preferred course of development, commercialization, or other matters have in the past, and may continue to cause delays or termination of the development or commercialization of products and may result in litigation or arbitration;
- Collaborators may infringe the intellectual property rights of third parties, may misappropriate our trade secrets or may use our proprietary information in such a way as to invite litigation that could jeopardize or invalidate our intellectual property or proprietary information or expose us to litigation and potential liability; and
- Collaborators may not defend infringements of our intellectual property rights by third parties as required under the respective agreements and this may jeopardize our success in the region.

To manage and optimize our production processes, we also depend on regular forecasts and sales reports to be provided by our collaborators in a timely manner, so that we may ensure that proper royalties or fees are being paid, where in some cases we have experienced delays in the past.

Furthermore, we have entered into historical licensing agreements with selected reference laboratories in North America that could affect our ability to fully capture the economic benefit of our technology through the collaborations described above. Under these historical licensing agreements, the reference laboratories have introduced their own versions of Septin9-based LDTs in the U.S. market. For example, since 2011, Quest Diagnostics, Inc., Madison, New Jersey, United States ("**Quest**") has offered its LDT (ColoVantage) for aiding the detection of colorectal cancer. In the recent past, Quest has been the only laboratory still offering an LDT version of Septin9. We believe that Quest may switch to the FDA-approved version of the test after a positive reimbursement decision so that they can actively market it as a screening product which they cannot do for LDTs. There is a remaining risk that such conversion might not occur, which would limit our ability to fully capture the economic benefit of our technology, given that this LDT license agreement is not as attractive for us as the ability to directly sell our products to Quest as a Laboratory Customer through our collaborators. In the past, we have also entered into a historical license agreement with a molecular diagnostics company that is currently producing no revenue due to lack of development efforts on the part of said company. In addition, we have been involved in an arbitral dispute with another licensee regarding the fulfillment of payment and diligence obligations. While this particular disagreement has been settled by terminating the agreement and selling the patent rights to the licensee; similar disputes with our partners in the future could adversely affect our ability to commercialize Epi proColon and our other product candidates and to generate adequate revenue.

In addition, we also rely on other partners, for example a logistics partner, to store and ship our products and product components, which exposes us to further operational risks. For example, in the past, we had to replace our central logistics provider in the Federal Republic of Germany ("**Germany**") after such provider terminated its service agreement with us for commercial reasons. Any cost increases for logistics services, disputes or other problems arising out of our relationship with logistics providers or difficulties in replacing a logistics partner could adversely affect our business.

1.1.10. We might not be successful in commercializing blood-based Septin9 testing in certain markets, in particular, China.

In recent years, we made efforts to commercialize our Septin9 biomarker for blood-based CRC screening in the People's Republic of China ("**China**"), and we may make similar efforts in other

markets in the future. Such expansion efforts might fail in certain markets, causing a loss of potential revenue.

To commercialize our product in China, we entered into an exclusive patent licensing agreement with BioChain Institute Inc., Newark, CA, United States ("**BioChain**"), pursuant to which BioChain marketed and sold their own version of our product and paid us royalties on our patents (the "**BioChain Colon Agreement**"). However, because BioChain did not meet certain minimum sales requirements, we declared the termination of the BioChain Colon Agreement on March 6, 2019. BioChain has since contested the termination, and we are currently in mediation proceedings. Given that BioChain did not pay the due minimum royalty and failed to deliver a sales report for the fourth quarter of 2018 as required, we sent another termination notice of the BioChain Colon Agreement (for precautionary purposes) in April 2019.

In addition, following a request for invalidation by Jiangsu Weizhen Biomedical Technology, Inc. ("**Weizhen**"), on July 15, 2019, the Reexamination and Invalidation Department of the China National Intellectual Property Administration ("**CNIPA**") deemed our Septin9 patent in China partially invalid. Pursuant to the decision, our Epi proColon 2.0 CE and HCCBloodTest products are no longer patent-protected in China.

Due to the termination of the BioChain Colon Agreement and the partial invalidation of our Septin9 patent, we have decided to discontinue our efforts to commercialize Epi proColon in China for the foreseeable future. The failure to commercialize blood-based Septin9 testing in China successfully and the abandonment of this market could mean a loss of significant potential future revenue.

Similarly, we may fail to commercialize blood-based Septin9 testing in other markets. While we currently have patent protection in all major markets except China, should these patents expire or become invalidated in a particular market, it may be difficult for us to find commercialization partners that would be willing to enter into a licensing or similar agreement with us. On our own, we may not be able to compete with local manufacturers such as Weizhen in terms of price, manufacturing and distribution infrastructure, and market penetration. In addition, we may not be able to achieve reimbursement status for our products in certain markets. We might therefore decide to discontinue our commercialization efforts in such markets, possibly incurring further losses of significant revenue potential.

1.1.11. Disruptions or delays in the supply of our diagnostic products, raw materials or other key components from our suppliers (some of which are single source suppliers), or in the manufacture of our products by our licensed manufacturers, or issues associated with their quality, could result in significant disruption to our business and sales.

We engage third parties to manufacture our diagnostic products, including our key product Epi proColon, as well as components of our diagnostic products in sufficient quantities and on a timely basis while maintaining the desired product quality, acceptable manufacturing costs and compliance with applicable regulatory requirements and quality standards. Only a few outside suppliers offer our diagnostic products and their components in desired qualities and quantities, and they may therefore be able to exercise significant pricing pressure on us.

Reliance on third-party manufacturers entails significant risks, such as:

- Regulatory compliance and quality assurance issues;
- Termination or non-renewal of manufacturing agreements with a supplier at times that are costly or inconvenient for us or material breaches of such agreements;

- Manufacturing problems experienced by a supplier;
- The inability of a supplier to obtain required components in the desired quantities and qualities, including in the event of rapid changes in the demand for our products;
- The inability or failure to find alternative suppliers in the event of delays or unforeseen costs; and
- Insolvency or bankruptcy of a supplier.

Given the highly regulated nature of our industry, changing third-party suppliers in our manufacturing process may create significant regulatory and economic burdens on the Group. Ahead of the market launch of Epi proColon in the United States, we implemented the manufacturing processes with a qualified alternative supplier capable of producing the test kits for us should our primary supplier experience production interruptions, but we may be unable to replace this alternative supplier (should our primary supplier fail) or other critical outside suppliers quickly, including both large multinational pharmaceutical companies and smaller specialized suppliers. These include, for example, the suppliers supplying us with magnetic beads and PCR reagents, both used in our Epi proColon test. Particularly, we may have difficulty replacing suppliers and manufacturers in the event an agreement is terminated, breached or cancelled for any reason. We also rely on certain manufacturers which have been approved by the FDA as manufacturers for our FDA-approved diagnostic product. If we lose any of our suppliers or manufacturing partners, we would incur the expense and time burden of identifying an appropriate supplier or manufacturer and, in case of certain manufacturers, obtaining FDA approval of the same and setting up an appropriate production process. If we are unable to replace manufacturing partners, we could be forced to manufacture our Epi proColon kits ourselves, which might be more costly than relying on third-party manufacturers, as we would need to establish our own production sites and maintain the facilities and qualified staff necessary to meet the required cGMP standards, and which could therefore materially adversely affect our business, results of operations, financial position and cash flows.

In addition, we rely on the availability to our Laboratory Customers of certain instruments produced by third parties that are used in performing the Epi proColon test. In most markets, the performance of the Epi proColon test is restricted to certain instruments specifically detailed in our regulatory filings. For example, in the United States, the FDA has approved the Epi proColon assay for use on the 7500 Fast Dx platform produced by Life Technologies AS, Oslo, Norway ("**Life Technologies**"). Any changes in the offerings of laboratory instrument manufacturers might limit the ability of Laboratory Customers to use the Epi proColon product. Such a restriction would reduce demand for Epi proColon, which would adversely affect our revenue and, thus, negatively impact our financial situation. We are currently in discussions with our supplier to evaluate and obtain FDA approval on the use of other PCR instruments for our Epi proColon test in the future, a process which might be time consuming, costly or may entirely fail.

1.1.12. We may be exposed to warranty and product liability claims for our products.

The sale and use of our Epi proColon test or any other products or product components could lead to warranty or product liability claims based on allegations that the product contained a design or manufacturing defect or our laboratory was negligent in processing test results which resulted in the failure to detect the disease for which it was designed. In addition, we may face product liability claims with respect to our products even if a third party, for example, one of our distribution or manufacturing collaborators, is responsible for the defect in the respective product. We have no

direct control over such collaborators and therefore limited ability to ensure that they maintain proper quality standards.

Product liability or warranty claims could result in substantial damages and be costly and time-consuming to defend, either of which could materially harm our business or financial condition. There can be no assurance that our liability insurance would protect our assets from the financial impact of defending a liability claim. Any claim brought against us, with or without merit, could increase our liability insurance rates or prevent us from securing insurance coverage in the future. Furthermore, any such claim could also negatively impact the public's perception of us and our products and therefore the willingness of end customers to use them.

1.1.13. Negative media cover, public scrutiny, or adverse events in our business or in the field of molecular diagnostics or IVD testing may damage public perception of our products or product candidates.

We may be subject to a reduction in consumer demand and potential regulatory changes that might arise from negative public perceptions of us or our industry.

The commercial success of our products and product candidates depends to a great extent on our reputation, but also in part on public perception and acceptance of molecular diagnostics and IVD testing in general. Such perceptions are subject to various risks, many of which are outside of our control. Adverse events in clinical trials of our products or product candidates, or in clinical trials conducted by others developing similar products, and the resulting publicity could result in a decrease in demand for Epi proColon or other products that we develop. For example, recently, several cervical cancer patients died in Ireland after having received false negatives on their pap tests (Papanicolaou-tests use cervical screening for early detection of cervical cancer risk). Instances such as these may cause general public distrust towards other early cancer detection methods, in particular those relying on laboratory work. If public perception is influenced by claims that IVD testing is unsafe or inaccurate, our products may not be accepted by the general public or the medical community.

Furthermore, warranty and product liability claims or failure to comply with applicable regulations could result in negative publicity and damage our reputation. In particular, due to our high reliance on collaborators such as our distribution, supply, and manufacturing partners, any product defects or regulatory non-compliance by such third-party collaborators, over which we have limited control, could subject us to such claims and negative publicity, which could adversely impact our reputation and the success of our business.

Future adverse events in our industry could also result in greater governmental regulation, stricter labeling requirements and potential regulatory delays in the testing or approvals of our products. Any increased scrutiny could delay the process or increase the costs of obtaining regulatory approval for our product candidates.

1.1.14. We may not be able to expand and efficiently manage our organization in the future and scale our operations for our anticipated future growth.

If we cannot effectively manage our expanding operations and costs, we may not be able to grow effectively or we may grow at a slower pace.

Potential future growth could require us to implement increases in scale and related processing, such as expanding our internal quality assurance program and technology platform to support operations on a larger scale. In addition, we need to further develop certain sales functions such as customer service, logistics, warehousing, delivery and billing that we took over from Polymedco in 2018, and may be required to develop additional capacities for other functions that we take over

from partners in the future. Furthermore, we may be required to hire additional personnel to address compliance and regulatory affairs, which we have not yet developed fully. This will entail significant additional costs, and there can be no assurance that any increases in scale, related improvements and quality assurance will be implemented successfully or that equipment and appropriate personnel will be available. As additional tests are developed, we may need to bring in new equipment, implement new systems, technology, controls and procedures and hire personnel with different qualifications, all of which entails various risks, takes time and is costly.

In addition, as part of our commercialization strategy for Epi proColon, we may expand our marketing efforts for such product. Any such marketing efforts would entail significant costs and dedication of our employees' time to procure market research, external support and trade marketing, and to update our marketing materials and further documents. Furthermore, there can be no assurance that such an effort will be successful in promoting the further commercialization of Epi proColon.

Managing our business effectively also requires us to forecast expenses accurately and to expend funds to improve our operational, financial and management controls, reporting and accounting systems and procedures. In particular, we have not yet developed an internal audit function, which will be necessary as we grow in scale. As we move forward in commercializing Epi proColon or other potential future products, we also need to manage our manufacturing and sales needs effectively with and through our collaborators, which represent new areas of oversight for us.

In addition, our growth may place a significant strain on our management, operating and financial systems and our administrative resources. As a result, our operating costs may escalate even faster than in the past or than planned.

1.1.15. If we are unable to attract and retain the members of our executive board, senior management team and skilled personnel, we may be unable to execute our business strategy.

Our success depends to a significant extent on the skills, experience and efforts of the Company's executive board (the "**Executive Board**"), management team and skilled personnel such as our research and development team. The loss of any or all of these individuals could harm our business and might significantly delay or prevent the achievement of our business objectives.

In addition, recruiting and retaining qualified personnel such as medical, regulatory and laboratory personnel will be critical to our success. However, in particular given the competition among numerous medical devices, pharmaceutical and biotechnology companies for similarly skilled personnel, we may not be able to attract and retain such personnel on acceptable terms.

1.2. Risks Related to Intellectual Property

1.2.1. If we are unable to protect our intellectual property rights, we may not be able to compete effectively.

Our success depends on obtaining, maintaining and enforcing patents and other intellectual property rights relating to our technologies and products. We will only be able to protect our technologies and products from unauthorized use by third parties to the extent that they are covered by valid and enforceable patents or other proprietary rights. We rely on patent protection to prevent competitors from launching competing products based on our biomarkers and technologies. Since, over recent years, we have moved our business from only developing new products to also marketing and selling our existing product and product components, patent

protection is now even more important to prevent competitors from launching competitive products based on our biomarkers.

Our patents and patent applications may not contain claims that are sufficiently broad to prevent others from using our technologies or developing competing products. In addition, the issuance of a patent is not conclusive of its validity or enforceability. The patents on which we rely may also be challenged and invalidated, including by competitors, and our patent applications may not result in issued patents.

For example, following a request for invalidation by Weizhen, on July 15, 2019, the Reexamination and Invalidation Department of the CNIPA deemed our Septin9 patent in China partially invalid. Pursuant to the decision, our Epi proColon 2.0 CE and HCCBloodTest products are no longer patent-protected in China. We filed an appeal against against the decision on October 10, 2019, but reversal of the decision could take several years (if ever).

If third parties successfully challenge the validity, ownership, or enforceability of our owned or licensed patents, we may lose important patent protection relating to our technologies, products, and product candidates, and we could lose our ability to prevent others from utilizing these technologies or commercializing products similar or identical to ours without payment to us, resulting in substantial damage to our business. In the past, we have also agreed to sell some intellectual property rights as a result of a settlement of an intellectual property dispute. If the outcome of litigation or other proceedings relating to our intellectual property position is adverse to us, third parties may be able to use our technologies and develop products similar or identical to ours without payments to us.

In particular, the laws of some foreign countries do not protect intellectual property rights to the same extent as the laws of Germany and the U.S. We may not obtain patent rights in all countries in which we file patent applications. For example, we currently do not have patent protection for our SHOX2 and PTGER4 technology in China, though we have a pending application covering the composition of matter for SHOX2 and PTGER4 technology in China. Though a patent of that family has been granted in the United States, such patent application in China may not result in patents being issued, which may limit our ability to protect our products, product candidates and technology. Even if we obtain patent rights in China and other foreign jurisdictions, we may encounter significant problems in protecting and defending intellectual property rights in certain foreign jurisdictions. For example, the legal systems of some countries, particularly China, do not favor the enforcement of patents and other intellectual property protection, especially those relating to life sciences. In addition, due to the complexity, size and other factors such as language barriers in markets such as China, the process of defending our rights and rejecting and prosecuting an infringer may prove drawn-out and costly. This could make it difficult for us to stop the infringement of our patents or the misappropriation of our other intellectual property rights.

In addition, many countries have compulsory licensing laws under which a patent owner must grant licenses to third parties. Some countries also limit the enforceability of patents against third parties, including government agencies or government contractors. In these countries, patents may provide limited or no benefit.

Proceedings to enforce our patent rights have resulted, and might result in the future, in substantial costs and might divert our management’s attention and resources from other aspects of our business. Our efforts to protect our intellectual property rights may be inadequate and thus result in delays in, or the prevention of, the commercialization of our products. In addition, changes in the law and legal decisions by courts in Germany, the United States, China and other countries

may affect our ability to obtain adequate protection for our technology and the enforcement of intellectual property.

1.2.2. We depend on certain technologies that are licensed to us. We do not control these technologies and any loss of our rights to them could prevent us from selling our products or developing and commercializing our product candidates.

We are party to certain in-bound license agreements, such as an exclusive license agreement with the University of Southern California, Los Angeles, California, United States ("**USC**") and a cooperative regulatory and marketing agreement with Life Technologies, for rights relating to our products, product candidates and technology, some of which are due to expire in the near future. Any impairment of our licensed rights under such contracts might prevent us from commercializing our prodcuts, product candidates and other tests we may develop.

Our in-bound license agreements impose, and we may enter into additional licensing arrangements or other agreements with third parties that may impose, diligence, development and commercialization timelines, milestone payments, royalty, insurance and other obligations on us. For example, under our license agreement with USC we are obligated to pay single digit royalties on net sales of Epi proColon and other product candidates or related technologies to the extent they are covered by the agreement, subject to a low six digit minimum annual royalty amount for certain groups of licensed patent rights, as well as royalties on any sublicensing revenue. We are also required to use our best efforts in commercializing the licensed products under the USC license agreement.

If we fail to comply with our obligations under current or future license agreements, or otherwise breach a license agreement as a result of our own actions or inaction or the actions or inactions of our collaborators, our counterparties may have the right to terminate these agreements, in which event we might not have the rights or the financial resources to develop, manufacture or market any product that is covered by these agreements. Termination of these agreements or reduction or elimination of our rights under these agreements may require us to negotiate new or restated agreements with less favorable terms, seek alternative sources of financing or cause us to lose our rights under these agreements, including our rights to our products and product candidates and other important intellectual property or technology.

1.2.3. If we are unable to protect the confidentiality of our trade secrets and other proprietary information, our business and competitive position may be harmed.

In addition to patent protection, we also rely on confidential proprietary information, including trade secrets and know-how, to develop and maintain our competitive position. We seek to protect our confidential proprietary information, in part, by entering into confidentiality agreements with our employees, consultants, collaborators and others upon the commencement of their relationships with us. These agreements require that all confidential information developed by the individual or made known to the individual by us during the course of the individual's relationship with us be kept confidential. However, we may not obtain these agreements in all circumstances, and individuals with whom we have these agreements may not comply with their terms. Thus, despite such agreements, such inventions may become assigned to third parties. Monitoring unauthorized uses and disclosures of our intellectual property is difficult, and we do not know whether the steps we have taken to protect our intellectual property will be effective. In the event of unauthorized use or disclosure of our trade secrets or proprietary information, these agreements, even if obtained, may not provide meaningful protection, particularly for our trade secrets or other confidential

information. To the extent that our employees, consultants or contractors use technology or know-how owned by third parties in their work for us, disputes may arise between us and those third parties as to the rights in related inventions.

New regulatory developments in the EU will require the implementation of further measures for the protection of trade secrets. The EU Directive 2016/943 on the protection of undisclosed know-how and business information, which has been implemented in Germany through the Act on the Protection of Trade Secrets of April 26, 2019 (*Geschäftsgeheimnisgesetz*, "**GeschGehG**"), obligates companies to put in place reasonable measures for the protection of their trade secrets. In particular, the GeschGehG requires companies to take efforts that are reasonable under the circumstances for the protection of their trade secrets including organizational, technical and legal measures. Such measures may include, *inter alia*, the definition of responsibilities, access restrictions, password protection, virus protection, data encryption, conclusion of confidentiality agreements and employee trainings. Finally, control mechanisms should be implemented and updates ensured. For us as the owner of trade secrets, the establishment of adequate confidentiality measures is crucial in two respects: On the one hand, information that is not subject to such measures falls outside of the scope of protection of the GeschGehG. This could impair the confidentiality of trade secrets, as third parties could not be made legally responsible for any unauthorized access to such information. On the other hand, our management would be exposed to a liability risk if reasonable measures for the protection of confidentiality have not been implemented and third parties have used our trade secrets to our detriment.

The disclosure of trade secrets could impair our competitive position and materially harm our business. Costly and time-consuming litigation could be necessary to enforce and determine the scope of our proprietary rights, and adequate remedies may not exist in the event of unauthorized use or disclosure of our proprietary information. In addition, others may independently discover or develop our trade secrets and proprietary information, and the existence of our own trade secrets affords no protection against such independent discovery.

We may also employ individuals who were previously or are concurrently employed at research institutions and/or other medical device companies, including our competitors or potential competitors. We may be subject to claims that these employees, or we, have inadvertently or otherwise used or disclosed trade secrets or other proprietary information of their former employers, or that patents and applications we have filed to protect inventions of these employees, even those related to one or more of our products, are rightfully owned by their former or concurrent employer. Litigation may be necessary to defend against these claims. Even if we are successful in defending against these claims, litigation could result in substantial costs and be a distraction to management.

In addition, our competitors and potential competitors may seek to hire our employees who have proprietary information and know-how specific to our technologies. Such a departure by one of our key employees could lead to unauthorized use of our proprietary information by or disclosure of our trade secrets to our competitors, in which case adequate remedies may not exist.

1.2.4. We may infringe intellectual property rights of third parties and become subject to expensive litigation for actual or alleged such infringements.

Our research, development and commercialization activities, including our current proprietary tests and product candidates, as well as any other tests resulting from these activities, may infringe, or be alleged to infringe, patents, trademarks or other intellectual property rights owned by other parties. Resulting third-party patent claims and actual or threatened litigation could incur us significant costs and may lead to restrictions on our products and product candidates.

Certain of our competitors and other companies in the industry have substantial patent portfolios, and may attempt to use patent litigation as a means to obtain a competitive advantage. In addition, some of our competitors may be able to sustain the costs of complex patent disputes and litigation more effectively than we can because they have substantially greater resources. We may become a target of such litigation. The risks of being involved in such litigation may increase as we move into new markets and applications for our tests. There may also be patents and patent applications that are relevant to our technologies or tests that we are not aware of, but which could be asserted against us. Claims brought by third parties against us could cause us to incur substantial expenses and, if the claims are successful, pay substantial damages, including treble damages and attorneys' fees. We could also be forced to stop or delay research, development or sales of the test that is the subject of an intellectual property infringement suit. The defense of such suit could divert the attention of our management and technical personnel.

As a result of infringement claims, or in order to avoid potential claims, we may choose or be compelled to seek intellectual property licenses from third parties. These licenses may not be available on acceptable terms, or at all. Even if we are able to obtain a license, the license would likely obligate us to pay license fees or royalties or both, and the rights granted to us would likely be non-exclusive, which would mean that our competitors could also obtain licenses to the same intellectual property. Ultimately, we could be prevented from commercializing a test or be forced to cease some aspect of our business operations if, as a result of actual or threatened infringement claims, we are unable to enter into licenses of the relevant intellectual property on acceptable terms. Further, if we attempt to modify our tests or to develop alternative methods or products in response to infringement claims or to avoid potential claims, we could incur substantial costs, encounter delays in product introductions or interruptions in test sales, and such attempts may not be successful.

1.2.5. Obtaining and maintaining patent protection depends on compliance with various procedural, document submission, fee payment and other requirements imposed by governmental patent agencies, and our patent protection could be reduced or eliminated for non-compliance with these requirements.

The USPTO and various other patent offices require compliance with a number of procedural, documentary, fee payment and other similar provisions. In addition, periodic maintenance fees on our owned and in-licensed patents are due to be paid to governmental patent agencies over the lifetime of the patents. Future maintenance fees will also need to be paid on any other patents that may be issued to us. We have systems in place in which these fees are automatically paid through an outside firm unless we instruct them to the contrary. In certain cases, an inadvertent lapse can be cured by payment of a late fee or by other means in accordance with the applicable rules. However, there are situations in which non-compliance can result in abandonment or lapse of the patent or patent application, resulting in partial or complete loss of patent rights in the relevant jurisdiction. This might have a detrimental effect on our competitive position in the respective market.

1.2.6. Changes in patent laws and their interpretation, in particular in the United States, may make it difficult to predict how patents will be issued or enforced in our industry.

Changes in the patent laws or the interpretation thereof in the United States and other countries may have a significant impact on our ability to protect our technology and enforce our intellectual property rights. To the extent that our intellectual property, including licensed intellectual property,

offers inadequate protection or is found to be invalid or unenforceable, we would be exposed to a greater risk of direct competition.

There have been numerous recent changes to the patent laws and proposed changes to the rules of the United States Patent and Trademark Office (the "**USPTO**"), which may have a significant impact on our ability to protect our technology and enforce our intellectual property rights. For example, the Leahy-Smith America Invents Act, which was signed into law in 2011, includes a transition of the U.S. patent system from a "first-to-invent" system to a "first-inventor-to-file" system, and also changes the way issued patents are challenged. Certain changes, such as the institution of inter partes review proceedings, only came into effect in 2012. Substantive changes to patent law associated with the America Invents Act may affect our ability to obtain patents, and, if obtained, to enforce or defend them in litigation or inter partes review or other administrative proceedings, all of which could harm our business.

Two cases involving diagnostic method claims and "gene patents" have been decided by the Supreme Court of the United States. In March 2012, the Supreme Court issued a decision in Mayo Collaborative Services v. Prometheus Laboratories, Inc. ("**Prometheus**"), a case involving patent claims directed to measuring a metabolic product in a patient to optimize a drug dosage amount for the patient. According to the Supreme Court, the addition of well-understood, routine or conventional activity such as "administering" or "determining" steps was not enough to transform an otherwise patent ineligible law of nature into patent eligible subject matter.

In June 2013, the Supreme Court issued its decision in Association for Molecular Pathology v. Myriad Genetics, Inc. ("**Myriad**"), a case involving patent claims held by Myriad Genetics, Inc. relating to the breast cancer susceptibility genes BRCA1 and BRCA2. Myriad held that isolated segments of naturally occurring DNA, such as the DNA constituting the BRCA1 and BRCA2 genes, is not patent-eligible subject matter, but that cDNA, which is an artificial construct that is complementary to RNA transcripts of genes, may be patent eligible.

On December 16, 2014, the USPTO issued interim guidance, entitled "2014 Interim Guidance on Patent Subject Matter Eligibility", which is for use by USPTO personnel in examining patent claims reciting judicially recognized exceptions to patentable subject matter, including laws of nature, natural phenomena, or abstract ideas, for patent eligibility in view of the Supreme Court decisions in Prometheus, Myriad, and Alice Corporation Pty. Ltd. v. CLS Bank International. The guidance indicates that claims reciting a judicial exception to patent-eligible subject matter must amount to significantly more than the judicial exception itself in order to be patent-eligible subject matter. There can be no assurance that our efforts to seek patent protection for our technology and products will not be negatively impacted by the decisions described above, rulings in other cases or changes in guidance or procedures issued by the USPTO. Most recently, on May 5, 2016, the USPTO published updated guidance to include two new examples relating to diagnostic methods and two new examples relating to "nature-based" products. The new guidance adds Examples 28-33 to the USPTO's body of patent eligibility examples, of which Examples 29 and 31 relate to diagnostic methods. Example 31 relates to screening for genetic markers, and is based loosely on the claims of Myriad's U.S. Patent 5,753,441. Out of the five sample claims, four are said to be "eligible" and one is said to be "ineligible". These examples, while instructive, do not necessarily ensure that the courts will concur with the USPTO's analysis.

Two additional cases involving diagnostic method claims have recently been decided by the U.S. Court of Appeals for the Federal Circuit. On December 17, 2014, the Federal Circuit issued its decision in In re BRCA1- and BRCA2-Based Heredity Cancer Test Patent Litigation ("**Myriad II**"). In this case, the Federal Circuit held that requiring physical transformations including hybridizing a probe, amplification of DNA or sequencing of DNA was not sufficient to render the claims in

question patent eligible. On June 12, 2015, the Federal Circuit issued its decision in Ariosa Diagnostics, Inc. v. Sequenom, Inc. ("**Ariosa**"). The claims at issue in this case encompassed using maternally isolated cell free fetal DNA ("**cffDNA**"), to determine characteristics of the fetus like gender and the presence of genetic disorders such as Down Syndrome. In Ariosa, the Federal Circuit held that because the cffDNA existed in nature and the other steps of the claimed methods were well-understood and routine in the relevant scientific field, the claims were not patent eligible.

We cannot fully predict what impact the Supreme Court's decisions in Prometheus and Myriad and the Federal Circuit's decisions in Myriad II and Ariosa may have on the ability of molecular diagnostic companies or other entities to obtain or enforce patents relating to diagnostic methods or isolated products of nature in the future.

We believe our technology may be differentiated from that at issue in the above cases because the diagnostic method claims contained in our patents and patent applications are directed at the analysis of bisulfite-converted DNA rather than naturally occurring genomic DNA. We also believe that the oligonucleotides used in the amplification of bisulfite-converted genomic DNA and in the detection of methylation status are not covered by the judicially recognized exceptions to patent eligible subject matter established in Myriad, since the nucleotide sequences of these oligonucleotides are different from sequences occurring in nature. Methods of detecting a disease based upon the presence of a genomic marker may not be patent eligible, unless there are elements added to the claim which amount to significantly more than the correlation itself. However, the full impact of the decisions is not yet known and they have created uncertainty around the patentability of certain claims contained in certain of our issued patents and pending patent applications. The claims of our patent applications may therefore fail to issue, or if they do issue, may, along with the claims of our issued patents, subsequently be challenged or invalidated, on the grounds that they include subject matter that is not patent eligible based on the Supreme Court's rulings in these cases and the further evolution of case law in this area.

1.2.7. If our trademarks and trade names are not adequately protected, we may not be able to build name recognition in our markets of interest.

We believe name recognition and goodwill associated with our brand and products play an important role in the commercialization of our products. However, our registered or unregistered trademarks or trade names may be challenged, infringed, circumvented, declared generic or determined to be infringing on other marks or names. We may not be able to protect our rights in these trademarks and trade names, which we need in order to build name recognition with potential customers in our markets of interest. There is no guarantee that we will be able to secure registration for any of our pending or future applications to register a trademark with the USPTO or comparable authorities. If we are unable to establish name recognition based on our trademarks and trade names, we may not be able to compete effectively and our business may be adversely affected.

In addition, we may become involved in litigation or other proceedings to protect our trademark rights. An adverse decision in such proceeding could require us to establish an alternative name for our products. Any objections we receive from the USPTO or other trademark authorities or third parties relating to our pending applications could require us to incur significant expense in defending the objections or establishing alternative names. Names used with our products may be claimed to infringe names held by others or to be ineligible for proprietary protection. If we have to change our name or the name of any product, we may experience a loss in goodwill associated with our brand name and customer confusion.

1.2.8. Under German law, employee inventors may own or co-own their inventions and intellectual property rights and may be entitled to receive compensation.

Our agreements with employees and our personnel policies generally provide that any inventions conceived by the individual in the course of rendering services to us shall be our exclusive property. However, approximately 70% of our employees work in Germany and are subject to German employment law. Ideas, developments, discoveries and inventions made by such employees are subject to the provisions of the German Act on Employees' Inventions (*Gesetz über Arbeitnehmererfindungen*), which regulates the ownership of, and compensation for, inventions made by employees. We face the risk of disputes between us and our current, former or future employees in Germany under this act pertaining to the ownership rights to inventions or the sufficiency of compensation paid by us to such employees.

If, under the the provisions of the act, an employee inventor retained sole ownership or co-ownership of any inventions or related intellectual property rights, we may lose valuable intellectual property rights (including to competitors) and may be required to obtain and maintain licenses from such employee inventors to such inventions or intellectual property rights in order to continue our operations, which may not be possible on commercially reasonable terms or at all. Employee inventors might also claim that the compensation we paid to them was insufficient, and we may be required to increase such compensation or pay damages for the use of the invention.

1.2.9. Our intellectual property may be subject to U.S. federal regulations such as "march-in" rights and a preference for U.S. industry. Compliance with such regulations may limit our exclusive rights and limit our ability to contract with non-U.S. manufacturers.

Certain intellectual property that we have licensed from USC includes inventions that were made with U.S. government funding, and we may develop or license intellectual property in the future using U.S. government funding. With respect to such intellectual property developed using U.S. government funding, the U.S. government may have certain rights, including "march-in" rights. When new technologies are developed with U.S. government funding, the U.S. government generally obtains certain rights in any resulting patents, including a non-exclusive license authorizing the U.S. government to use the invention for non-commercial purposes. These rights may permit the U.S. government to disclose our confidential information to third parties and to exercise march-in rights to use, or allow third parties to use, our licensed technology, which might have a material adverse effect on our competitive position. The U.S. government can exercise its march-in rights if it determines that action is necessary because we fail to achieve practical application of the U.S. government-funded technology, because action is necessary to alleviate health or safety needs, to meet requirements of U.S. federal regulations or to give preference to U.S. industry. In addition, our rights in such inventions may be subject to certain requirements to manufacture products embodying such inventions in the United States, unless a waiver is obtained from the applicable U.S. federal agency.

1.3. Regulatory Compliance Risks

1.3.1. Our products, product candidates and the Group are subject to continuing regulatory review and regulatory requirements such as post-approval studies.

We and our products are subject to continuing regulatory review, and granted marketing authorizations (such as the FDA approval for Epi proColon) can be withdrawn or restricted on its basis. Ongoing obligations subject to oversight by regulatory authorities in the United States and

elsewhere include post-approval studies, adverse event reporting requirements, marketing restrictions and, potentially, other post-marketing obligations, all of which may result in significant expense and limit our ability to commercialize such products. In addition, any modifications affecting the safety or effectiveness of a product may require new regulatory clearances or PMA, or may require us to cease marketing or recall the modified product until such clearances are obtained.

In particular, the FDA has required that we perform a post-approval study for our Epi proColon product. We commenced this study in the fourth quarter of 2016 and expect the study to run through 2022. We are required to submit post-approval study reports to the FDA for every six months during the first two years of the study, and annually thereafter. The post-approval study can be expected to result in significant costs as we plan to enroll approximately 4,500 patients across multiple study centers in the United States over the next years. If we are unable to meet the agreed parameters of the study or fail to comply with the FDA's reporting obligations, our FDA approval for Epi proColon may be withdrawn or restricted. The success of our key product Epi proColon, and any other products or product candidates that we may develop, could be adversely affected by costs of this or similar required studies and regulatory compliance even after approval by a regulator such as the FDA.

We cannot determine with certainty the duration and completion costs of future clinical trials of our products or product candidates. We may never succeed in achieving regulatory approval for any of our future products or product candidates. The duration, costs and timing of clinical trials and development of our future products or product candidates will depend on a variety of factors, including:

- The scope, rate of progress and expense of our ongoing and any additional non-clinical studies, clinical trials and other research and development activities;
- Clinical trial and early-stage results; and
- The terms and timing of regulatory approvals.

In addition, in connection with the renegotiation of our joint commercialization agreement with Polymedco in 2018, we have taken over certain sales responsibilities for Epi proColon, including product storage and distribution in the United States. Due to the nature of the goods stored and distributed, these activities require a number of specific permits and approvals by the State of California and the FDA, and while we believe that we have complied with all applicable requirements, this may not be the case, in particular given our lack of previous experience in performing these activities.

We may also be subject to regulatory approval requirements for each jurisdiction in which we sell our tests. Therefore, our future performance depends on, among other matters, the timely receipt of necessary regulatory approvals for our products and product candidates. Regulatory approval can be a lengthy, expensive and uncertain process. In addition, regulatory processes are subject to change, and new or changed regulations can result in increased costs and unanticipated delays. Any changes in foreign approval requirements and processes may cause us to incur additional costs or lengthen review times of our tests. We may also not be able to obtain foreign regulatory approvals in a timely manner, if at all, and any failure to do so may cause us to incur additional costs or prevent us from marketing our tests in foreign countries, which may harm our business.

If there are legislative or regulatory changes in the application of legislation or regulatory policies, or if problems are discovered with a product or the manufacture of a product, or if we or one of our

distributors, licensees, co-marketers or other collaborators and partners fail to comply with regulatory requirements, regulators could also take various actions. These include imposing fines on us, imposing restrictions on the product or its manufacture, and/or requiring us to recall or remove the product from the market. Regulators could also suspend or withdraw our marketing authorizations or require us to conduct additional clinical trials, change our product labeling, or submit additional applications for marketing authorization.

1.3.2. Our products are subject to continuing quality inspections.

Under the medical device regulations in the United States, the FDA regulates quality control and manufacturing procedures by requiring us to demonstrate and maintain compliance with the Quality System Regulation, which sets forth the FDA's cGMP requirements for medical devices. The FDA monitors compliance by conducting periodic inspections of manufacturing facilities, which are typically unannounced.

For example, the FDA is permitted to inspect our facilities as well as the manufacturing facilities of our suppliers or any third party where our products are assembled. Although we audit our suppliers' and manufacturers' facilities, our suppliers and manufacturers are not under our direct control. If the FDA determines we or any of our suppliers or manufacturers have violated the applicable regulations and have not complied with warnings provided by the FDA after an inspection, or if we or our suppliers or manufacturers are unable or delayed, for any reason, to cause the operations to comply with the applicable regulations, the inspected facility may ultimately be closed, and, as a result, we may incur significant delays and substantial additional expenses in our production and continued marketing of our products. In addition, in the event of product defects or regulatory non-compliance by us or our collaborators and other partners, we may be exposed to warranty and product liability claims.

1.3.3. Enacted and future legislation and regulation, or new interpretations thereof, may increase the difficulty and cost for us to obtain marketing approval of and commercialize our products and product candidates.

Future legislation and regulation, or new interpretations thereof, whether in North America, Europe (including in particular, potentially diverging legislation regarding healthcare in the United Kingdom of Great Britain and Northern Ireland (the "**United Kingdom**") and the European Union ("**EU**") following the United Kingdom's departure from the EU) or elsewhere, may increase the difficulty and cost for us to obtain relevant marketing approval and commercialize our products and product candidates.

In the United States, the EU and some other foreign jurisdictions, there have been a number of legislative and regulatory changes, and proposed changes, regarding the healthcare system. These changes could prevent or delay marketing approval of our product candidates, restrict or regulate post-approval activities and affect our ability to profitably sell any products for which we obtain marketing approval.

It is likely that federal and state legislatures in the United States and other national governments will continue to consider changes to existing healthcare legislation. We cannot predict the reform initiatives that may be adopted in the future or whether initiatives that have been adopted will be repealed or modified. The continuing efforts of governments, insurance companies, managed care organizations and other payors of healthcare services, to contain or reduce costs of healthcare may adversely affect:

- The demand for any products for which we may obtain regulatory approval;
- Our ability to set a price that we believe is fair for our products;

- Our ability to obtain coverage and reimbursement approval for a product;
- Our ability to generate revenue and achieve or maintain profitability; and
- The level of taxes that we are required to pay.

Additionally, in the United States, other legislative changes have been proposed and adopted since the 2010 passage of the ACA. The Budget Control Act of 2011, as amended, (the "**Budget Control Act**"), includes provisions intended to reduce the federal deficit. The Budget Control Act resulted in the imposition of 2% reductions in Medicare payments to providers beginning in 2013. Recent U.S. legislation extends the reductions through to 2023. Any significant spending reductions affecting Medicare, Medicaid or other publicly funded or subsidized healthcare programs that may be implemented, or any significant taxes or fees that may be imposed on us as part of any broader deficit reduction effort or legislative replacement to the Budget Control Act, could have an adverse impact on our anticipated product revenue. Both in the United States and in the EU, legislative and regulatory proposals have been made to expand post-approval requirements and restrict sales and promotional activities for diagnostic products. We are not sure whether additional legislative changes will be enacted, or whether the regulations, guidance or interpretations will be changed, or what the impact of such changes on the marketing approvals of our product candidates, if any, may be. Increased scrutiny by U.S. Congress of the FDA's approval process may significantly delay or prevent marketing approval, as well as subject us to more stringent product labeling and post-marketing testing and other requirements in the United States

In addition to potential legislative changes in the United States, the regulatory environment in cancer molecular diagnostics is complex. For example, the U.S. regulatory landscape is affected by numerous entities including the FDA, CMS, USPSTF, and U.S. Congress. New or modified regulations by any of these entities could have a material impact on our business.

1.3.4. Our business is subject to complex U.S. federal, U.S. state, German and other national healthcare laws, including fraud and abuse, anti-kickbacks, health information privacy and security laws. We and our collaborators could face substantial penalties for failure to comply with these regulations.

We and our collaborators are subject to various U.S. federal and U.S. state healthcare laws, including:

- The U.S. federal Anti-Kickback Law, which constrains, among other things, our marketing practices, educational programs, pricing policies and relationships with healthcare providers or other entities, by prohibiting, among other things, soliciting, receiving, offering or paying remuneration, directly or indirectly, to induce or reward, or in return for, either the referral of an individual or the purchase, lease, ordering or recommendation of any good, facility, item or service reimbursable under a U.S. federal healthcare program, such as the Medicare and Medicaid programs;
- U.S. federal civil and criminal false claims laws and civil monetary penalty laws, which prohibit, among other things, individuals or entities from knowingly presenting, or causing to be presented, claims for payment from Medicare, Medicaid or other U.S. federal healthcare programs that are false or fraudulent;
- U.S. federal criminal statutes, created by the U.S. Health Insurance Portability and Accountability Act ("**HIPAA**"), that prohibit, among other things, knowingly and willfully executing, or attempting to execute, a scheme to defraud any healthcare benefit program or knowingly and willfully making any materially false statements relating to healthcare matters;

- HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act of 2009, also known as the HITECH Act, and its implementing regulations, which imposes certain requirements relating to the privacy, security and transmission of individually identifiable health information;
- The U.S. federal physician self-referral law, commonly known as the Stark Law, which prohibits a physician from making a referral to an entity for certain designated health services reimbursed by Medicare or Medicaid if the physician or a member of the physician's family has a financial relationship with the entity, and which also prohibits the submission of any claims for reimbursement for designated health services furnished pursuant to a prohibited referral;
- The U.S. federal Physician Payments Sunshine Act requirements under the ACA, which require manufacturers of drugs, devices, biologics and medical supplies to report to the Department of Health and Human Services, information related to payments and other transfers of value made to or at the request of covered recipients, such as physicians and teaching hospitals, and certain physician ownership and investment interests in such manufacturers; and
- U.S. state law equivalents of each of the above U.S. federal laws, such as anti-kickback, false claims and self-referral laws, which may apply to items or services reimbursed by any third-party payor, including commercial insurers, and state laws governing the privacy and security of health information in certain circumstances, many of which differ from each other in significant ways and often are not preempted by HIPAA, thus complicating compliance efforts.

In addition, we are subject to complex healthcare laws in the other jurisdictions where we operate, for example the German pharmaceutical-advertising law (*Heilmittelwerbegesetz*), the German Act Against Unfair Competition (*Gesetz gegen den unlauteren Wettbewerb*) or the EU Directive 98/79/EC (IVD Directive) and German laws that implement this EU legislation.

Failure by us or our collaborators, such as Polymedco, to comply with any of the above laws or regulations in the United States or elsewhere could result in substantial penalties or material restrictions being imposed on our or our collaborators' ability to do business.

1.3.5. Our global operations and international expansion plans subject us to risks inherent in doing business internationally and require additional governance and compliance functions which, as a small and medium-sized enterprise, we may not have the resources or organizational structure to develop.

Our international operations subject us to laws and regulations in various jurisdictions. Compliance with these laws and regulations often involves significant costs or requires changes in our business practices that may reduce revenue and profitability. Such compliance costs and restrictions on our business may increase as we seek to expand our operations throughout the world. For instance, as we have expanded our U.S. operations in connection with the commercialization of Epi proColon, we have had to comply with complex laws and regulations in the U.S. market. As we expand in other markets, we and our commercialization partners may be subject to new laws and regulations. It may be difficult to comply with varying requirements in different jurisdictions, and as a result we may need to hire personnel, establish a physical presence or incur other compliance costs when we enter into or expand in a market. In particular, testing protocols and requirements for reimbursement may differ across the jurisdictions in which we seek to do business, and the rules and regulations applicable to our business may change.

In addition, we may become subject to other risks of doing business internationally, such as trade protection measures, import or export licensing requirements or other restrictive actions by U.S.,

European or foreign governments, price controls, changes in tax laws or changes in a specific country's or region's political or economic environment, any of which could restrict our ability to conduct our business. In particular, we might be impacted by tariffs that the U.S. government might impose on products manufactured abroad but sold on the U.S. market, as we currently manufacture our products in Europe and export to the U.S., and we might not be able to pass the costs on to our customers.

Due to the limited size of our organization and our lack of certain resources, we may not have fully developed governance functions or other operational systems in place. For example, due to our limited size we have not yet established an internal audit function. The lack of such fully developed functions could have an adverse effect on our operations. Furthermore, as we expand in order to develop and commercialize our products successfully, or because of regulatory changes, we may have to develop such functions, which could entail significant costs and strain our management, operating and financial systems and our administrative resources. There can be no assurance that we will be able to implement such governance and compliance systems successfully.

1.3.6. We are subject to environmental, health and safety laws and regulations and may become exposed to liability and substantial expenses in connection with environmental compliance and remediation activities.

Our operations, including our research, development and testing activities, are subject to numerous environmental, health and safety laws and regulations. These laws and regulations govern, among other things, the controlled use, handling, release and disposal of, and the maintenance of a registry for, hazardous materials and biological materials, such as human blood samples and solvents, human cells, chemical solvents, carcinogenic compounds, mutagenic compounds and compounds that have a toxic effect on reproduction, as well as laboratory procedures and exposure to blood-borne pathogens. If we fail to comply with such laws and regulations, we could be subject to fines or other sanctions.

As with other companies engaged in activities similar to ours, we face a risk of environmental liability inherent in our current and historical activities, including liability relating to releases of or exposure to hazardous or biological materials. Environmental, health and safety laws and regulations are becoming more stringent. We may be required to incur substantial expenses in connection with future environmental compliance or remediation activities, in which case our production and development efforts may be interrupted or delayed.

1.4. Financial Risks

1.4.1. We may require additional capital after the capital increase to finance our business operations, and if we cannot raise sufficient capital with the capital increase or additional capital when needed, we may have to curtail or cease operations and/or file for insolvency proceedings.

For the financing of our business operations, we have experienced, and are currently experiencing, a significant consumption of cash and high accounting losses. For the financial year ended December 31, 2018, we incurred a net loss of EUR 12,692 thousand, and for the six-month period ended June 30, 2019, we incurred a net loss of EUR 7,416 thousand.

The proceeds of the offering and the capital increase which are the subject matter of the Prospectus may not be sufficient to fully fund our business and growth strategy. In particular, it is unlikely that we will be able to meet our medium-term funding needs solely from cash flows from the sale of products such as Epi proColon. The funds raised from the capital increase may not be

sufficient to reach the cash flow break-even point, and we will likely need to raise additional funds in the future through public or private equity or debt financings, corporate collaborations or licensing arrangements to continue to fund or expand our operations.

Our actual liquidity and capital funding requirements will depend on numerous factors, including:

- Our ability to achieve broader commercialization of Epi proColon;
- The success of our research, development, and commercialization efforts for potential new products and product candidates;
- Our ability to obtain more extensive coverage and reimbursement for our tests;
- Our ability to collect our accounts receivable;
- The costs and success of further expansion of our sales and marketing activities and research and development activities;
- The degree to which we require additional sales, marketing and reimbursement personnel;
- Our need to finance capital expenditures and further expand our clinical laboratory operations;
- Our general and administrative expenses;
- The cost of any pre- and post-market approval studies and clinical trials we may need to perform to fulfill regulatory requirements or gain clinical acceptance for Epi proColon or other future products and product candidates; and
- The timing and results of any regulatory authorizations that we are required to obtain for our tests.

In addition, the high accounting losses we are currently experiencing may lead, from time to time and in particular if we are not able to obtain new equity funding, to a reduction of our equity to less than half of our nominal capital. In this case, according to Section 92 German Stock Corporation Act (*Aktiengesetz*), our executive board (*Vorstand*) must immediately convene a general shareholders' meeting (*Hauptversammlung*) and notify it accordingly. Such a situation might occur before the capital increase. In this instance, we would aim for the capital increase to cure the lack of equity and increase our equity again to more than half of our nominal capital.

In view of securing the financing needs of the Company, we have been on a regular basis, and currently are, in contact with potential investors regarding participation and financing possibilities. We reserve the possibility to implement further capital measures, also in the short term, including, for example, the implementation of one or several private placement(s) in case the capital increase is not completely implemented, and/or the issuance of convertible instruments under the conditional capitals. Such future capital measures would be subject to the lock-up provisions pursuant to the Underwriting Agreement (as defined in section *1.5.5. "— Risks Related to the Capital Increase — If the capital increase is not consummated or if the Company's share price declines sharply, the subscription rights will expire or become worthless."*) and require the underwriters' prior consent during the lock-up period of 180 days after the date of the listing. Any additional capital raised through the sale of equity or equity-linked securities will dilute our shareholders' ownership interests in the Company and may have an adverse effect on the price of our shares.

However, additional capital, if needed, may not be available on satisfactory terms, or at all. In addition to any potential dilution, the terms of any financing may adversely affect shareholders' holdings or rights. Debt financing, if available, may include restrictive covenants. To the extent that

we raise additional funds through collaborations and licensing arrangements, it may be necessary to relinquish some rights to our technologies or grant licenses on terms that may not be favorable to us.

If we are not able to obtain adequate funding when needed, we may have to delay development programs or selling and marketing initiatives. In addition, we may have to work with a partner on one or more of our tests or market development programs, which could lower the economic value of those programs to us. If due to inadequate funding we were forced to curtail or cease operations and/or file for insolvency proceedings, our business could be adversely affected, the value of the shares of Epigenomics could decrease, and investors could lose all or a substantial part of their investment.

1.4.2. Financial market or economic crises and other developments may compromise our financing options and increase the costs of financing.

Due to our need to continue funding our operations with additional financing activities, we are dependent on the condition and the development of the capital markets (mainly in the United States and Germany), particularly with regard to the life sciences industry, and future financial market or economic crises could have a material impact on our ability to carry out such financing activities.

In the recent past, economic stagnation occurred in certain Eurozone countries. This was in part due to the effects of the sovereign debt crisis and austerity measures implemented to address the crisis in these markets. There continue to be concerns that the Eurozone sovereign debt crisis could worsen, and that it could lead to contagion in other economically more stable countries, including Germany. This could result in the reintroduction of national currencies in one or more Eurozone countries. Any of these developments and risks, including the actual or possible departure by one or more countries (for example, Greece and/or Italy) from the Eurozone and/or the abandonment of the Euro as a currency would severely adversely impact the economic situation in the EU as a whole and in Germany in particular and, in turn, the development of the capital markets.

Furthermore, the potential exit of the United Kingdom from the EU as a result of the United Kingdom's referendum on this matter and the exit process pursuant to Article 50 of the Lisbon Treaty which, under the new extension to the exit process, is forseen to end by October 31, 2019, commonly referred to as "Brexit", may have significant, albeit unpredictable consequences. After Brexit, the United Kingdom could lose access to the EU's single market and customs union (and the UK government has stated its expectation that the United Kingdom will lose such access even in case a withdrawal agreement is agreed between the EU and the United Kingdom) resulting in an impact on the general, economic and capital market conditions in the United Kingdom and EU. Other EU countries could follow suit and also leave the EU in the future, or threaten to leave unless certain concessions are made.

Moreover, the escalation in the trade war between the United States and China in the summer of 2019 had an immediate impact on the U.S. capital markets, causing all three major U.S. stock indexes to decrease substantially. Should the U.S.-China trade war continue or escalate further, this could have a material negative impact on the U.S. and other capital markets and, thus, impair our ability to meet our financing needs.

Should an increased need for capital require additional refinancing via the capital markets, and should such capital measures not be successfully concluded in sufficient quantity, we would, where necessary, be dependent on wholly or partially financing our financial needs via loans or other debt instruments. Whether we would be able to borrow the required funds on appropriate

terms depends on a number of factors, including the requirements of the capital markets and the general economic situation. A re-occurrence of events such as those described above or a worsening of the global economic or political situation may result in difficulties in obtaining financing, *i.e.*, higher financing costs, or the unavailability of any financing at all.

In addition, because we rely on a few large distribution and licensing partners as our direct customers to generate revenue, collecting on accounts receivable is particularly important for our ability to generate cash flows and finance our business. Our ability to collect on accounts receivable particularly depends on the economic situation of our collaborators or other partners, as well as on other factors. For example, in the past, we have not always received outstanding amounts when due, forcing us to expend extra effort on collection. If we are unsuccessful in collecting accounts receivable in a timely manner or at all, our liquidity could be adversely affected and we may need to raise additional capital.

1.4.3. We are subject to foreign currency exchange risks, in particular, the Euro-U.S. dollar exchange rate risk.

With the FDA approval and commercialization of Epi proColon, an increasing share of the Group's revenue and/or costs is, and is expected to continue to be, generated in U.S. dollars by Epigenomics, Inc., Federal Way, Washington, United States, our wholly owned U.S. subsidiary ("**Epigenomics, Inc.**"). However, the Epi proColon product kits are manufactured and invoiced primarily in Euros. As proceeds generated in U.S. dollars can, therefore, only partly be used to finance the operating business activities of Epigenomics, Inc., we are exposed to increasing foreign currency exchange risks as our results of operations and cash flows are subject to fluctuations in foreign currency exchange rates, the impact of which we cannot predict. We currently do not engage in hedging transactions to protect against uncertainty in future exchange rates between particular foreign currencies and the Euro.

Thus, the development of the Euro against the U.S. dollar may have a significant impact on us. When compared to the U.S. dollar, the Euro weakened significantly in 2015 and remained weak in 2016, before strengthening again during 2017. In particular, in the event the U.S. dollar would depreciate against the Euro, for example, due to an escalation of the U.S.-China trade war, we may suffer significant financial losses due to foreign exchange rate fluctuations or volatility.

1.4.4. We could be required to pay additional taxes as a result of the loss of our tax loss carryforwards or our R&D tax credit.

Our tax loss carryforwards and our research and development ("**R&D**") tax credit could be reduced, which could lead to an increase in our tax obligations once we recognize net operating profits in a particular jurisdiction, and thus have a material adverse effect on our financial position.

As of December 31, 2017, our tax loss carryforwards in Germany amounted to EUR 190.9 million for corporation tax and EUR 189.4 million for trade tax, and we anticipate that the accumulated tax loss carryforwards in each of the aforementioned tax categories will increase by more than EUR 10 million when we file our tax returns for 2018. As a consequence of completed tax audits, tax loss carryforwards in the amount of EUR 167 million are undisputed. As of December 31, 2017, our tax loss carryforwards in the United States amounted to EUR 11.3 million for corporation tax.

Under German tax law, our tax losses in Germany generally have an unlimited carryforward period. If, however, as a result of the capital increase, more than 50% of the shares of the Company are transferred to a purchaser, parties related to this purchaser, or a group of purchasers with common interests, both the current tax loss carryforwards at the level of the

Company and any tax losses arising in the period up to the conclusion of the capital increase could be lost in full. According to a decree issued by the German tax authorities, the interim purchase of shares by an underwriting bank in the context of an initial public offering of shares should not be deemed affected by the aforementioned rules. However, it cannot be ruled out that the tax authorities may generally not apply this decree in case of a capital increase or at least in cases where the placement covers a longer period.

Tax loss carryforwards in the United States arising before December 31, 2018 may be utilized for up to twenty years. In addition, as of December 31, 2018, our R&D tax credit in the United States amounted to EUR 3.1 million. This R&D tax credit expires on various dates beginning in 2022 through to 2037.

1.4.5. We have received certain financial aid granted from the EU as well as German state and federal funds, which could be reclaimed in case of non-compliance with granting conditions, adversely affecting our financial position and liquidity.

We have received, and may receive in the future, financial aid and research grants from several governmental sources, which could be reclaimed in the event we do not comply with the grant conditions, or we could be subject to administrative and financial penalties for such non-compliance.

For example, in the years 2016 to 2018, we received a grant of EUR 2.6 million from the Horizon 2020 program of the EU's Executive Agency for Small and Medium-sized Enterprises ("**EASME**") – a framework program for research and innovation for small and medium-sized enterprises – for the purpose of developing our blood-based lung cancer test, Epi proLung. Furthermore, in February 2018, we received a grant payment of EUR 81 thousand from the European Commission (Directorate General Research & Innovation) as one of 14 partners working on a project called "Advancing a Precision Medicine Paradigm in metastatic Colorectal Cancer; Systems based patient stratification solutions. – COLOSSUS" and we are expected to receive further payments under this project over the course of the next years.

If EASME or the European Commission, as applicable, were to determine that any of the funds granted or to be granted were illegitimate under the terms of the respective grant, or that we are in breach of the grant agreement, we could be subject to recovery of funds awarded, an abandonment of further grants or administrative and financial penalties.

In addition, we have received German state and federal funding under the program of Public Financial Aid to the Commercial Economy (*Öffentliche Finanzierungshilfen an die gewerbliche Wirtschaft im Rahmen der Gemeinschaftsaufgabe "Verbesserung der regionalen Wirtschaftsstruktur"*), which we used to acquire non-current tangible assets. In case of non-compliance with certain granting conditions, the granted funds might be reclaimed in part or in full. Most importantly, the funds are tied to the preservation of the current permanent jobs at our Berlin site and the obligation to keep the subsidized assets in the subsidized place of business for a period of at least until April 8, 2022.

1.4.6. Management valuations in our balance sheet and/or our statement of profit or loss depend on many factors that may be especially difficult to predict for novel products like blood-based cancer tests, and incorrect valuations may cause decisions which prove overly risky or cause liquidity crises.

Due to the novelty of our key products such as Epi proColon, valuation of our financial statement positions requiring management judgment is particularly difficult and subject to risk of revision.

For example, determining the useful life of capitalized development costs of our products requires a long-term estimation of the market approval timelines for such products, their market acceptance and/or the speed of their market penetration, regulatory developments in key markets, the timing and the extent of reimbursement decisions, and competition, among other parameters. For novel products such as our blood-based cancer tests there are no empirical values and less experience available, which makes any estimations difficult.

Furthermore, reaching or not reaching a milestone such as a market approval decision will lead to reassessments that may significantly change previously expected useful lives. For example, following the FDA approval of Epi proColon on April 12, 2016, the useful life of the capitalized development costs for this product was reassessed and extended from six to ten years, decreasing annual amortization of this asset from EUR 333 thousand to EUR 111 thousand. However, a negative regulatory approval decision regarding one of our products or product candidates could have the opposite effect, decreasing the useful life and increasing annual amortization of the asset.

In addition, due to our size and limited resources, we may not have sufficient processes in place to ensure that management valuations are properly made. Incorrect valuations might cause an overly optimistic estimate of our economic situation, and cause our management to take decisions which in retrospect prove to be affected with an unsuitable degree of risk.

1.5. Risks Related to the Capital Increase

1.5.1. The market price and trading volume of the Company's shares could fluctuate significantly and investors could lose all or part of their investment.

The price as well as the trading volume of the Company's shares have been in the past and may continue to be subject to substantial fluctuations as a result of various factors. These include, among others, changes in the actual or forecast results of operations of the Group, variances in our financial performance from the expectations of market analysts and negative assessments by capital markets participants (particularly analysts and investors), changes in reimbursement determinations relating to testing services based on our current and future products, announcements by us or our competitors of significant clinical trial results, changes in, or entry into new, licensing or collaborative arrangements or acquisitions, new products introduced by our competitors, regulatory changes as well as the assessment of the related risks, changes in the underlying market conditions, and external factors such as changes in regulatory legislation and the general economic conditions, changes in the shareholder structure and other factors. The Company's share price might also be impacted in case the capital increase is not consummated, *e.g.*, because the Company's share price falls below its nominal value of EUR 1 during the subscription period.

General fluctuations in share prices, especially the price of shares in other companies active in the same industry in which we operate, or a general deterioration in capital markets, can lead to pressure on the price of the Company's shares, and these fluctuations in share price may not necessarily be based on our business operations or earnings prospects.

Any such fluctuations in the Company's share price, whether due to Group-specific, industry or general market developments, could cause the value of an investment in the Company's shares to drop substantially.

1.5.2. Future offerings of debt or equity securities by us could adversely affect the market price of the Company's shares, and future capitalization measures could substantially dilute our shareholders' interests in the Company.

In the future, we may need additional capital to finance our business operations and growth, in particular given our expected medium-term financing needs. We may therefore seek to raise capital through offerings of debt securities or additional equity securities. The issuance of additional shares, convertible bonds or bonds with warrants may have a material adverse effect on the market value of the shares in the Company and namely the issuance of additional equity securities or securities with rights to convert into equity would dilute the shareholding percentage (*wirtschaftliche Rechte*) and the voting rights of the existing shareholders if the new shares or bonds are issued without granting subscription rights or similar rights to the existing shareholders or to the extent such rights are not exercised.

We cannot predict or estimate the amount, timing or nature of future offerings because the timing and nature of any future offering would depend in part on market conditions at the time of such an offering. Therefore, our shareholders bear the risk that such future offerings could reduce the market price of the Company's shares and potentially dilute their shareholdings in the Company. In addition, the acquisition of other companies, or investments in other companies in exchange for newly issued shares, or the exercise of stock options by our employees in the context of possible future stock participation programs, may also dilute the economic value and voting rights of existing shareholders' shares.

1.5.3. The Company does not intend to pay dividends in the future.

Under German corporate law, a company may only pay dividends if it shows unappropriated retained earnings in its unconsolidated German Commercial Code (*Handelsgesetzbuch*) financial statements. The Company does not anticipate paying any dividends for at least the next several years. We intend to retain all available funds and any future earnings to fund the development and growth of our business. Even if the Company would want to pay dividends, it may not be able to generate sufficient unappropriated retained earnings to be able to distribute dividends under the requirements of German corporate law.

A lack of dividend payments could cause the price of the Company's shares to fall, in which case investors could lose some or all of their investment.

1.5.4. The holdings of shareholders who do not participate in the capital increase will be significantly diluted, *i.e.*, the value of their shares and their control rights will be negatively impacted.

Subscription rights for the 10,806,462 newly issued ordinary registered shares with no par value (*Stückaktien*), each such share representing a notional amount of the Company's issued share capital of EUR 1.00 and with full dividend rights as from January 1, 2019 ("**New Shares**"), will expire if they are not exercised by 12:00 p.m. CET (noon) on November 6, 2019, being the end of the subscription period. If a shareholder does not exercise the subscription rights granted to it, its percentage shareholding in the Company will decline and its voting rights will be diluted. This dilution will be proportional to the percentage rate by which the share capital of the Company is increased and to the extent to which the shareholder does not participate in the capital increase. The shareholder's percentage ownership in the Company's share capital and its voting rights will be diluted by up to 23% if such shareholder does not exercise any of its subscription rights. Attention is drawn to the fact that shareholders who do not hold ten shares or integral multiples thereof will not be able to exercise all subscription rights and may thus be left with subscription rights that they can neither exercise nor sell.

1.5.5. If the capital increase is not consummated or if the Company's share price declines sharply, the subscription rights will expire or become worthless.

Based on the underwriting agreement entered into on October 18, 2019 (the "**Underwriting Agreement**") among, *inter alios*, the Company and M.M.Warburg & CO (AG & Co.) Kommanditgesellschaft auf Aktien, Ferdinandstraße 75, 20095 Hamburg, Germany ("**M.M.Warburg**" or the "**Underwriter**"), the Underwriter has agreed, subject to certain conditions, to subscribe for the New Shares and to offer such shares in public offerings in Germany to the Company's shareholders in connection with an indirect subscription right at the subscription ratio and at the subscription price per New Share. Under certain circumstances, the offering may be terminated.

If the offering is terminated prior to registration of the capital increase with the commercial register maintained by the local court (*Amtsgericht*) of Charlottenburg, the offering will not take place and the subscription rights will expire and become worthless. Under these circumstances investors will not be entitled to delivery of shares of the Company. Any investors engaging in short selling transactions bear the risk of being unable to meet their obligation to deliver New Shares. The agents brokering the subscription rights transactions will not reverse such short selling transactions. Investors who purchased subscription rights via a stock exchange will accordingly suffer a loss.

Furthermore, the price of each New Share and the value of the subscription rights depend on the quoted market price of the shares of the Company. A decline in share price will therefore have an adverse impact on the value of the subscription rights. In particular, in case the Company's share price falls below its nominal value of EUR 1.00 during the subscription period, the subscription rights might become worthless and the capital increase might not be consummated at all.

1.5.6. If the capital increase is not consummated, our financial position will be materially adversely impacted.

We have incurred significant and continuing net losses since inception, and we expect to continue to incur losses in the near term, even in the case of favorable reimbursement decisions by healthcare payors in the United States If the capital increase is not consummated, we will not receive any proceeds from capital increase, and as a result we may not have sufficient cash flows and liquidity to finance our business operations as currently contemplated. Accordingly, we may be compelled to reduce general and administrative expenses and delay research, development and commercialization projects until we are able to obtain sufficient financing or we may have to curtail or cease operations and/or file for insolvency proceedings. We have no additional committed sources of capital and may find it difficult to raise money on terms favorable to us or at all.

1.5.7. It is not certain that subscription rights trading will develop, and the subscription rights may be subject to greater quoted market price fluctuations than the shares of Epigenomics AG.

We intend to provide for the subscription rights to be traded during the period from October 24 2019 until November 4 2019 at the Frankfurt Stock Exchange. We do not intend to apply for subscription rights trading on any other stock exchange. We cannot assure that active subscription rights trading will develop, nor that there will be sufficient liquidity in subscription rights trading. In particular, no trading of the subscription rights might take place prior to the determination of the subscription price, which we expect on or about October 31, 2019. The development of the quoted market price of the Company's shares is one of the factors influencing the price of the subscription rights, which, however, may also be subject to considerably stronger price fluctuations than the

shares. Insufficient liquidity in subscription rights trading could lead to sharp declines in the value of such rights or the inability of investors to sell such rights at their fair price

1.5.8. The Company does not intend to pay dividends in the future.

Under German corporate law, a company may only pay dividends if it shows unappropriated retained earnings in its unconsolidated German Commercial Code (*Handelsgesetzbuch*) financial statements. The Company does not anticipate paying any dividends for at least the next several years. We intend to retain all available funds and any future earnings to fund the development and growth of our business. Even if the Company would want to pay dividends, it may not be able to generate sufficient unappropriated retained earnings to be able to distribute dividends under the requirements of German corporate law.

A lack of dividend payments could cause the price of the Company's shares to fall, in which case investors could lose some or all of their investment.

2. GENERAL INFORMATION

2.1. Responsibility for the Contents of the Prospectus

Epigenomics AG, with its registered office at Geneststraße 5, 10829 Berlin, Federal Republic of Germany ("**Germany**"), and registered with the commercial register maintained by the local court (*Amtsgericht*) of Charlottenburg, Germany (the "**Company**" or "**Epigenomics**" and, together with its consolidated subsidiary, the "**Epigenomics Group**", the "**Group**" or "**we**", "**our**" and "**us**"), together with M.M.Warburg & CO (AG & Co.) Kommanditgesellschaft auf Aktien, Ferdinandstraße 75, 20095 Hamburg ("**M.M.Warburg**"or the "**Underwriter**") assume responsibility for the contents of this prospectus (the "**Prospectus**") pursuant to Section 8 German Securities Prospectus Act (*Wertpapierprospektgesetz*) and hereby declare that, to the best of their knowledge, the information contained in the Prospectus is in accordance with the facts and that the Prospectus makes no omission likely to affect its import. Neither the Company nor the Underwriter are required by law to update the Prospectus subsequent to the date hereof, except in accordance with Article 23 of Regulation (EU) 2017/1129 (the "**Prospectus Regulation**"), which stipulates that every significant new factor, material mistake or material inaccuracy relating to the information included in a prospectus which may affect the assessment of the securities and which arises or is noted between the time when the prospectus is approved and the closing of the offer period or the time when trading on a regulated market begins, whichever occurs later, shall be mentioned in a supplement to the prospectus without undue delay. In any event, the obligation to supplement a prospectus does no longer apply when a prospectus is no longer valid. The validity of the prospectus will expire on October 17, 2020.

Where a claim relating to the information contained in the Prospectus is brought before a court, the plaintiff investor might, under the respective national legislation of the relevant member state of the European Economic Area (the "**EEA**"), have to bear the costs of translating the Prospectus before the legal proceedings are initiated.

2.2. Subject Matter of the Prospectus

For purposes of the public offering in Germany and the admission to trading on the regulated market of the Frankfurt Stock Exchange with the simultaneous admission to the sub-segment of the regulated market with additional post-admission obligations (Prime Standard) of the Frankfurt Stock Exchange, the Prospectus relates to 10,806,462 ordinary registered shares with no par value (*Stückaktien*), each such share representing a notional amount of the Company's issued share capital of EUR 1.00 and with full dividend rights as from January 1, 2019 (the "**New Shares**"), from the Capital Increase (as defined in section *3.1. "The Offering — Subject Matter of the Offering"*) with subscription rights for the Company's shareholders against contributions in cash, resolved by the executive board of the Company (the "**Executive Board**") on October 17, 2019, with approval of the supervisory board of the Company (the "**Supervisory Board**") on October 17, 2019 by partly utilizing the Company's Authorized Capital 2019/II (as defined in section *15.3.2. "Information on the Share Capital of Epigenomics AG and Applicable Regulations — Authorized Capital — Authorized Capital 2019/II"*) (the "**Offering**").

The Prospectus constitutes a prospectus for the purposes of Article 3 of the Prospectus Regulation and has been filed with and approved by the German Federal Financial Supervisory Authority (*Bundesanstalt für Finanzdienstleistungsaufsicht*, "**BaFin**") as competent authority under Regulation (EU) 2017/1129. BaFin only approves the Prospectus as meeting the standards of completeness, comprehensibility and consistency imposed by Regulation (EU) 2017/1129, and BaFin's approval should not be considered as an endorsement of the Company or the New Shares

that are the subject of the Prospectus. Investors should make their own assessment as to the suitability of investing in the securities. BaFin can be contacted at Marie-Curie-Str. 24-28, 60439 Frankfurt am Main, Germany, by telephone +49 228 4108-0, or via its website: www.bafin.de.

The Offering consists of (i) a public offering in Germany, (ii) private placements in certain jurisdictions outside the United States of America ("**United States**" or "**U.S.**"), including in Germany, in reliance on Regulation S under the U.S. Securities Act of 1933, as amended (the "**Securities Act**"), and (iii) private placements within the United States to certain qualified institutional buyers (as defined in Rule 144A under the Securities Act, the "**QIBs**") and directors and executive officers of the Company resident in the United States pursuant to the relevant exemptions from the registration requirements under the Securities Act, whereby Raymond James & Associates, Inc., 880 Carillon Parkway, St. Petersburg, FL 33716, United States, is acting as placement agent for the private placements in the United States (the "**U.S. Placement Agent**").

The New Shares and the subscription rights have not been and will not be registered under the Securities Act, or the securities laws of any other jurisdiction of the United States and may not be offered, sold or otherwise transferred to or within the United States, except pursuant to an exemption from, or in a transaction not subject to, the registration requirements of the Securities Act and in compliance with any applicable securities laws of any state or other jurisdiction in the United States.

2.3. Notice regarding the U.S. Placement Agent

No representation or warranty, express or implied, is made or given by the U.S. Placement Agent or any of its affiliates or any of its directors, officers or employees, as to the contents of the Prospectus, including its accuracy, completeness or fairness of the information or opinions contained therein, and nothing in the Prospectus, is, or shall be relied upon as, a promise or representation by the U.S. Placement Agent or any of its affiliates or any of its directors, officers or employees, as to the past or future. The U.S. Placement Agent does not accept any responsibility whatsoever for the contents of the Prospectus or for any other statements made or purported to be made by either itself or on its behalf in connection with the Company, the Group and the New Shares. Accordingly, the U.S. Placement Agent disclaims, to the fullest extent permitted by applicable law, all and any liability, whether arising in tort or contract or which they might otherwise be found to have in respect of this document and/or any such statement.

2.4. Forward-Looking Statements

The Prospectus contains certain forward-looking statements. A forward-looking statement is any statement that does not relate to historical facts, or events or facts or events as of the date of the Prospectus. This applies, in particular, to statements in the Prospectus containing information on future earnings capacity, plans and expectations regarding our business, such as its growth and profitability, as well as the general economic and legal conditions and other factors to which we are exposed. Statements made using the following wording: "expect", "forecast", "intend", "plan" or "predict" are an indication of forward-looking statements. They can be found in several sections in the Prospectus, for example, in the sections *8. "Profit Forecast", 9. "Markets and Competitive Environment"* and *10. "Business".* In addition, the forward-looking estimates and forecasts reproduced in the Prospectus from third-party sources could prove to be inaccurate. For more information on third-party sources see *2.5. "Information from Third Parties"*.

The forward-looking statements contained in the Prospectus are based on the Company's current estimates and assessments. These forward-looking statements are based on assumptions and are

subject to risks, uncertainties and other factors, the occurrence or non-occurrence of which could cause actual circumstances – including with regard to our business, financial position, cash flows and prospects – to differ materially from or fail to meet the expectations expressed or implied in the forward-looking statements. Even if future results of our Group meet the expectations expressed herein, they may not be indicative of the results of any succeeding periods.

Our business is also subject to a number of risks and uncertainties that could cause any forward-looking statement, estimate or prediction in the Prospectus to become inaccurate. Accordingly, investors are strongly advised to consider the Prospectus as a whole and, in particular, to ensure that they have read each of the following sections of the Prospectus, which include more detailed descriptions of factors that might influence our business performance and the markets where we operate: *1. "Risk Factors", 7. "Operating And Financial Review", 9. "Markets and Competitive Environment", 10. "Business"* and *21. "Recent Developments and Outlook"*.

In light of the risks, uncertainties assumptions and other factors, it is also possible that the future events mentioned in the Prospectus may not occur or may differ materially from actual events. In addition, the forward-looking estimates and forecasts reproduced in the Prospectus from third-party sources could prove to be inaccurate. The foregoing may prevent the Company from achieving its financial and strategic objectives.

The forward-looking statements contained in the Prospectus are only current as of the date on which they were made. Investors are advised that neither the Company nor the Underwriter assume any obligation to and do not intend to, except where required by law, publicly release any updates or revisions to these forward-looking statements to reflect any change in the Company's expectations with regard thereto, or any change in events, conditions or circumstances on which any such statement is based, or to adjust them in line with future events or developments.

2.5. Information from Third Parties

Unless otherwise indicated, statements in the Prospectus regarding the market environment, market developments, growth rates, market trends and the competitive situation within the markets and segments in which the Epigenomics Group operates are based on data, statistical information, sector reports and third-party studies as well as our estimates. Management estimates – unless otherwise indicated – are based on internal market observations and/or studies commissioned by the Group.

In drafting the Prospectus, the following third-party sources were used in particular:

- Allied Market Research. Summary of report titled "Molecular Diagnostics Market by Application (Infectious Disease (Hepatitis, HIV), Oncology, Genetic Testing), Technology (PCR, DNA Sequencing & NGS), End User (Hospital/Academic Laboratory), Product & Service (Reagent, Software) – Global Forecast to 2023", published in 2018, available at https://www.marketsandmarkets.com/Market-Reports/molecular-diagnostic-market-833.html ("**Allied Market Research**");
- American Cancer Society ("**ACS**"), "Cancer Statistics Center: Liver and intrahepatic bile duct", revised in 2019, available at https://cancerstatisticscenter.cancer.org/#!/cancer-site/Liver%20and%20intrahepatic%20bile%20duct ("**ACS Liver Cancer Statistics**");
- American Cancer Society, "Colorectal Cancer Facts & Figures 2017-2019", published in 2017, available at https://www.cancer.org/content/dam/cancer-org/research/cancer-facts-and-statistics/colorectal-cancer-facts-and-figures/colorectal-cancer-facts-and-figures-2017-2019.pdf ("**ACS Facts and Figures 2017-2019**");

- American Cancer Society, “Key Statistics for Lung Cancer”, revised in January 2019, available at https://www.cancer.org/cancer/non-small-cell-lung-cancer/about/key-statistics.html (“**ACS Lung Cancer Statistics**”);
- American Cancer Society, “Key Statistics for Colorectal Cancer”, revised in January 2019, available at https://www.cancer.org/cancer/colon-rectal-cancer/about/key-statistics.html (“**ACS Colorectal Cancer Statistics**”);
- BCC Research, “Liquid Biopsy with Emphasis on Cancer: Global Markets to 2023” (Report Overview), published in June 2019, available at https://www.bccresearch.com/market-research/healthcare/liquid-biopsy-cancer-market-report.html (“**BCC Research Study**”);
- Carlsen, Bruce, “Molecular Diagnostics Continues to Deliver”, published March 13, 2017, available at http://www.genengnews.com/gen-exclusives/molecular-diagnostics-continues-to-deliver/77900872 (“**Overview of the Kalorama Report**”);
- Chudgar M.D., Neel P., Bucciarelli, M.D., Peter R., Jeffries, Elizabeth M., Rizk, M.D., Nabil P., Park, M.D. Bernard J., Adusumilli, M.D. Prasad S., and Jones, M.D., David R. Results of the National Lung Cancer Screening Trial: Where Are We Now?, Thorac Surg Clin. 2015 May ; 25(2): 145–153 , available at https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4817217/ (“**National Lung Cancer Screening Trial Results**”)
- Clinical Trials.gov, https://clinicaltrials.gov/ct2/results?cond=&term=epigenomics%2C+inc.&cntry1=&state1=&recrs=; https://clinicaltrials.gov/ct2/show/NCT01580540?term=FIT+AND+comparison&rank=10 (together the “**Clinical Trials**”);
- Deloitte Touche Tohmatsu Limited, “2019 Global life sciences outlook – Focus and transform | Accelerating change in life sciences”, available at https://www2.deloitte.com/content/dam/Deloitte/global/Documents/Life-Sciences-Health-Care/gx-lshc-ls-outlook-2019.pdf (“**Deloitte 2019 Sector Outlook**”);
- Deloitte Touche Tohmatsu Limited, “2019 Global health care outlook – Shaping the future”, available at https://www2.deloitte.com/content/dam/Deloitte/global/Documents/Life-Sciences-Health-Care/gx-lshc-hc-outlook-2019.pdf (“**Deloitte 2019 Global Health Care Outlook**”);
- Evaluate Ltd., “EvaluateMedTech World Preview 2018, Outlook to 2024”, published September 25, 2018, available at https://www.evaluate.com/thought-leadership/medtech/evaluatemedtech-world-preview-2018-outlook-2024#download (“**Evaluate 2018 Outlook**”);
- Grand View Research Inc., Report summary of “Molecular Diagnostics Market Size, Share & Trends Analysis Report By Technology, By Test Location, By Product (Instruments, Reagents), By Application (Oncology, Infectious Diseases), And Segment Forecasts, 2019 - 2026”, published in April 2019, available at http://www.grandviewresearch.com/industry-analysis/molecular-diagnostics-market (“**Grand View Research**”);
- Laboratory Corporation of America Holdings, information about the company on its website, available at https://www.labcorp.com/provider-services/hospital-services (“**LabCorp Company Website**”);
- Market Research Report “In Vitro Diagnostics Market by Product (Instruments, Reagents), Technology (Immunoassay, Clinical Chemistry, Molecular Diagnostics, Hematology, Urinalysis), Application (Diabetes, Oncology, Cardiology, Nephrology) - Forecast to 2023”

(Description), published in March 2018, available at https://www.marketsandmarkets.com/Market-Reports/ivd-in-vitro-diagnostics-market-703.html ("**IVD Market Research Report**");

- National Cancer Institute, Webpages relating to the National Lung Screening Trial, published in 2002 and last updated November 12, 2014, available at http://www.cancer.gov/types/lung/research/nlst-qa ("**NCI Lung Screenings**");
- Omata, Masao et al., "Asia–Pacific clinical practice guidelines on the management of hepatocellular carcinoma: a 2017 update", published in Hepatol Int (2017) 11:317–370, available at https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5491694/, ("**Asia-Pacific 2017 Update**")
- Organization for Economic Co-operation and Development (OECD), "Health at a Glance: Europe 2018", published in November 2018, available at https://doi.org/10.1787/health_glance_eur-2018-en ("**Health at a Glance**");
- Oussalah, Abderrahim et al., "Plasma mSEPT9: A Novel Circulating Cell-free DNA-Based Epigenetic Biomarker to Diagnose Hepatocellular Carcinoma", published in EbioMedicine 30 (2018) 138–147, available at https://www.ebiomedicine.com/article/S2352-3964(18)30116-6/pdf ("**mSEPT9 Research Paper**");
- Sarin S.K.; Maiwall, Rakhi, "Global Burden Of Liver Disease: A True Burden on Health Sciences and Economies!!", available at https://www.worldgastroenterology.org/publications/e-wgn/e-wgn-expert-point-of-view-articles-collection/global-burden-of-liver-disease-a-true-burden-on-health-sciences-and-economies ("**WGO Study**");
- 2010 U.S. Census data on age and sex distribution, available at https://www.census.gov/topics/population/age-and-sex/data/tables.2010.html ("**U.S. Census data**");
- US Preventive Services Task Force ("**USPSTF**") Recommendations, available at https://www.uspreventiveservicestaskforce.org/Page/Document/UpdateSummaryFinal/colorectal-cancer-screening2; http://www.uspreventiveservicestaskforce.org/Page/Document/UpdateSummaryFinal/lung-cancer-screening ("**USPSTF Recommendation Summaries**");
- US Preventive Services Task Force, Final Recommendation Statement Lung Cancer: Screening, available at https://www.uspreventiveservicestaskforce.org/Page/Document/RecommendationStatementFinal/lung-cancer-screening ("**USPSTF Statements**"); and
- World Health Organization, International Agency for Research on Cancer, "All Cancers Fact Sheet", "Cancer Fact Sheet: Liver" and "Population Fact Sheet: China", published in March 2019, available at http://gco.iarc.fr/today/data/factsheets/cancers/39-All-cancers-fact-sheet.pdf, http://gco.iarc.fr/today/data/factsheets/cancers/11-Liver-fact-sheet.pdf and http://gco.iarc.fr/today/data/factsheets/populations/160-china-fact-sheets.pdf ("**Globocan 2018**").

To the extent that information has been sourced from third parties, this information has been accurately reproduced by the Company in the Prospectus and, as far as the Company is aware and is able to ascertain, regarding information published by these third parties, no facts have been omitted which would render the reproduced information inaccurate or misleading. However, market studies and analyses are frequently based on information and assumptions that may not be

accurate or technically correct, and their methodology is, by nature, forward-looking and speculative.

Irrespective of the assumption of responsibility for the contents of the Prospectus by the Company and the Underwriter (see *2.1. "— Responsibility for the Contents of the Prospectus"*), neither the Company nor the Underwriter have verified the figures, market data and other information used by third parties in their studies, publications and financial information, or the external sources on which the Company's estimates are based. The Company and the Underwriter therefore assume no liability for and offer no guarantee of the accuracy of the data from studies and third-party sources contained in the Prospectus and/or for the accuracy of data on which our estimates are based.

The Prospectus contains forecasts, statistics, data and other information relating to markets and other industry data on the Company's business and markets (together, the "**Market Data**") provided by third-party sources interpreted by us. This Market Data is, in part, derived from published research and additional market studies prepared primarily as a research tool, and reflects estimates of market conditions based on research methodologies including primary research, secondary sources and econometric modeling. The representativeness of the Market Data may be impacted by various factors. We operate in an industry for which it is difficult to obtain precise, relevant Market Data. Such Market Data should therefore be considered with caution and not be solely relied upon, as Market Data is often based on information and assumptions that may be inaccurate or inappropriate, and its methodology is inherently predictive and speculative. We have no reason to believe that such information is false or misleading or that any material fact has been omitted that would render such information false or misleading. However, information prepared by third parties has not been independently verified by us, the Underwriter or any other party and no guarantee for the completeness and accuracy of Market Data can be given by us, the Underwriter or any third party.

Prospective investors should also note that the Company's own estimates and statements of opinion or belief are not always based on studies from third parties. The Prospectus also contains estimates of Market Data and other data and information derived from such data, which cannot be obtained from publications by market research institutes or from other independent sources. Such information is partly based on our own market observations, the evaluation of industry information (from conferences, sector events, etc.) or internal assessments. The Company's management believes that its estimates of Market Data and other data and the information it has derived from such data assists investors in gaining a better understanding of the industry in which companies of the Epigenomics Group operate in and the Group's position therein. The Company's own estimates have not been checked or verified externally. We nevertheless assume that our own market observations are reliable. However, they may differ from estimates made by competitors of the Epigenomics Group or from future studies conducted by market research institutes or other independent sources. The Company and the Underwriter give no warranty that their estimates do not differ materially from actual events.

Information contained on any website mentioned in the Prospectus, including our website, is not incorporated by reference in the Prospectus and is not part of the Prospectus, unless otherwise explicitly indicated.

2.6. Documents Available for Inspection

For as long as the Prospectus is valid, copies of the following documents are available for inspection during regular business hours at the Company's offices at Geneststraße 5, 10829 Berlin, Germany, and on the website of the Company (www.epigenomics.com):

i) the articles of association of the Company (the "**Articles of Association**");

ii) the audited consolidated financial statements of Epigenomics AG prepared in accordance with International Financial Reporting Standards issued by the International Accounting Standards Board, as adopted by the European Union ("**IFRS**"), as of and for the financial year ended December 31, 2018 (the "**Audited Consolidated Financial Statements 2018**");

iii) the audited consolidated financial statements of Epigenomics AG prepared in accordance with IFRS, as of and for the financial year ended December 31, 2017, (the "**Audited Consolidated Financial Statements 2017**", and together with the Audited Consolidated Financial Statements 2018, the "**Audited Consolidated Financial Statements**");

iv) the unaudited consolidated interim financial statements of Epigenomics AG prepared in accordance with International Accounting Standard 34: Interim Financial Reporting (IAS34), as of and for the six-month period ended June 30, 2019, (the "**Unaudited Consolidated Interim Financial Statements**", and together with the Audited Consolidated Financial Statements, the "**Consolidated Financial Statements**"); and

v) the audited unconsolidated financial statements of Epigenomics AG for the financial year ended December 31, 2018 prepared in accordance with the German Commercial Code (*Handelsgesetzbuch*) (the "**Audited Unconsolidated Financial Statements 2018**").

Future annual and interim financial reports of the Company will be available on the website of the Company (www.epigenomics.com) and from the German Company Register (*Unternehmensregister*) (www.unternehmensregister.de). Annual financial reports will also be published in the German Federal Gazette (*Bundesanzeiger*).

2.7. Note on Financial Information

The financial information contained in the Prospectus is mainly derived from the Consolidated Financial Statements, which are included in the financial section of the Prospectus, as well as from the Audited Unconsolidated Interim Financial Statements, which can be found on the website of the Company (http://www.epigenomics.com/news-investors/financial-reports/). The financial years ended December 31, 2017 and December 31, 2018, as well as the financial year ending December 31, 2019, are also referred to in the Prospectus as "**financial year 2017**" or "**2017**", "**financial year 2018**" or "**2018**", and "**financial year 2019**" or "**2019**", respectively.

The historical financial and business information of the Epigenomics Group as of and for the financial years 2018 and 2017 (i) if presented as "audited" is taken from the Audited Consolidated Financial Statements and Audited Unconsolidated Financial Statements and (ii) if presented as "unaudited", is either derived from our Audited Consolidated Financial Statements, or taken or derived from our accounting records or our management reporting, or is based on calculations of these figures.

The historical financial and business information of the Group as of and for the six-month periods ended June 30, 2019 and 2018 is taken or derived from our Unaudited Consolidated Interim Financial Statements or from our accounting records or our management reporting, or is based on calculations of these figures.

All of the financial data presented in the Prospectus are shown in thousands of Euro, except as otherwise stated. Certain financial data (including percentages) in the Prospectus have been

rounded according to established commercial standards, whereby aggregate amounts (sum totals, sub-totals, differences or amounts put in relation) are calculated based on the underlying unrounded amounts. As a result, the aggregate amounts in the Prospectus may not correspond in all cases to the corresponding rounded amounts contained in the following tables. Furthermore, those rounded figures may not add up exactly to the totals contained in the tables.

The Audited Consolidated Financial Statements were prepared by the Company in accordance with IFRS, as adopted by the European Union, and the additional requirements of German commercial law pursuant to Section 315a German Commercial Code (*Handelsgesetzbuch*). The Unaudited Consolidated Interim Financial Statements were prepared by the Company in accordance with International Accounting Standard 34: Interim Financial Reporting (IAS 34). The Audited Consolidated Financial Statements 2018 and the Audited Consolidated Financial Statements 2017 were each audited by Baker Tilly GmbH & Co. KG Wirtschaftsprüfungs-gesellschaft, Cecilienallee 6-7, 40474 Düsseldorf, Germany, branch office Nymphenburger Straße 3b, 80335 Munich, Germany (formerly: Baker Tilly Roelfs AG Wirtschaftsprüfungsgesellschaft and Baker Tilly AG Wirtschaftsprüfungsgesellschaft, "**Baker Tilly**"), who issued in each case an unqualified auditor's report (*uneingeschränkter Bestätigungs-vermerk*) thereon as included elsewhere in the Prospectus, whereby the unqualified auditor's report for the Audited Consolidated Financial Statements 2017 contains the additional remark that a material uncertainty exists which may raise doubts as to the Group's ability to continue as a going concern and poses a risk to the Group's continued existence as a going concern or that the Company's ability to continue as a going concern is dependent on future cash inflows outside the operating business, as included in the section *19. "Financial Information"* of the Prospectus beginning on page F-1. In this context, the unqualified auditor's report for the Audited Consolidated Financial Statements 2017 (see pages F-147 to F-152 (Independent Auditor's Report to the Audited Consolidated Financial Statements 2017)) also refers to page F-96 (Notes to the Consolidated Financial Statements 2017) and the "Financial opportunities and risks" section of the group management report 2017, which reads as follows:

"As of December 31, 2017, our available liquidity (cash, cash equivalents and marketable securities) amounted to EUR 13.7 million. Management is aware of the risk of having limited liquid assets to appropriately sustain the operations of the business. In 2017, as in previous years, we repeatedly demonstrated that additional financial resources are accessible to us, even under difficult conditions. With the current funding and based on our business strategy for the months to come, our cash runway is expected to reach into early 2019, as long as the convertible bond issued in 2017 must not be redeemed as of December 31, 2018. Even in case of favorable reimbursement decisions by payors in the U.S.A. for Epi proColon, it cannot be expected that we will generate sufficient income from product sales quickly enough to reach the cash break-even point before the end of that runway. A lack of alternative cash inflows from financing activities before that point in time jeopardizes the Company's ability to continue as a going concern. In such a scenario, while running out of funds, the Company would have to file for insolvency. In order to mitigate the risks associated with the launch of our product, we will continue to evaluate all strategic options including the option of raising additional capital in the markets at any time throughout 2018. Against this backdrop, it must be noted that we issued convertible notes with an aggregate principal amount of EUR 7.1 million in the reporting year. These mature as of December 31, 2018. Until that date, holders have the right at any time before maturity to convert these on a pro rata basis into a specific number of shares to be issued by us. Holders also have the right, upon maturity, to demand the full redemption of the notes (less any portion previously converted into shares). Without successfully completing corporate actions in 2018 and/or in the absence of an extension of maturity or changes in the terms and conditions of the notes to be agreed with the

holders, we do not expect to have the necessary liquidity as of December 31, 2018 to guarantee full or even partial redemption of the notes. In this case, we would be exposed to immediate insolvency as of the redemption date. With respect to this risk, too, we will review all possible options to avoid these potential consequences. Based on our past experience, we expect that any necessary corporate actions will be successful."

The audits of the Audited Consolidated Financial Statements for each of the financial years 2018 and 2017 were conducted in accordance with Section 317 German Commercial Code (*Handelsgesetzbuch*) and German Generally Accepted Standards for Financial Statements Audits, which are promulgated by the Institute of Public Auditors in Germany (*Institut der Wirtschaftsprüfer*), by Baker Tilly. The Unaudited Consolidated Interim Financial Statements have not been audited, but reviewed (*prüferisch durchgesehen*) in accordance with the German Securities Trading Act (*Wertpapierhandelsgesetz*) and German Generally Accepted Standards for the Review of Financial Statements, which are promulgated by the Institute of Public Auditors in Germany (*Institut der Wirtschaftsprüfer*), by Baker Tilly.

2.8. Note on Currency

The amounts set forth in the Prospectus in "EUR" or "Euro" refer to the single currency of the participating member states in the third stage of the European Union pursuant to the Treaty Establishing the European Community. The amounts set forth in the Prospectus in "USD" or "U.S. dollar" refer to the single currency of the United States.

The functional currency of the Group is the Euro and we prepare our financial statements in Euro. The table below shows the average exchange rates of the U.S. dollar against the Euro for the periods listed as used in the Prospectus. Since Epigenomics, Inc., Federal Way, Washington, United States, our wholly owned U.S. subsidiary ("**Epigenomics, Inc.**"), conducts its financial, commercial and organizational activities independently, the U.S. dollar is its functional currency. In accordance with IAS 21, assets and liabilities are translated at the closing rate while the income statement amounts are, due to practical reasons, translated at exchange rate prevailing on the day of the relevant transaction.

Foreign currency exchange rates that have been applied by the Company in the periods under review are:

	Reporting date rates as of			**Average rates for the**			
	June 30	**December 31,**		**Six-month period endedJune 30,**		**financial year**	
	2019	**2018**	**2017**	**2019**	**2018**	**2018**	**2017**
EUR/USD	1.1380	1.1450	1.1993	1.1315	1,2071	1.1793	1.1370

2.9. Note Regarding Figures and Technical Terms

Some figures (including percentages) in the Prospectus have been rounded in accordance with standard commercial practice, whereby aggregate amounts (sum totals, sub-totals, differences or amounts put in relation) are calculated based on either the underlying unrounded amounts or the underlying amounts rounded to EUR thousands. As a result, the aggregate amounts in the following tables may not correspond in all cases to the corresponding rounded amounts contained in the following tables. In some instances, such rounded figures and percentages may not add up to 100%, or to the totals or subtotals contained in tables or stated elsewhere in the Prospectus. Furthermore, totals and subtotals in tables may differ slightly from unrounded figures stated

elsewhere in the Prospectus due to rounding off in accordance with commercial practice. Figures shown as 0 (referring to a positive amount) or (0) (referring to a negative amount) result from rounding to EUR thousand for the purposes of the Prospectus. A dash ("–") signifies that the relevant figure is not available. Financial information presented in parentheses denotes the negative of such number presented. Change as percentage is calculated by dividing the differences between the starting value and the end value by the starting value. A change in parentheses denotes a deterioration, *i.e.*, a positive value decreasing or a negative value increasing.

The definitions of terms herein shall apply equally to the singular and plural forms of the terms defined.

A glossary of certain technical and financial terms and abbreviations used in the Prospectus is provided at the end of the Prospectus under the heading *20. "Glossary"*.

3. THE OFFERING

3.1. Subject Matter of the Offering

The Offering relates to 10,806,462 New Shares.

The New Shares will result from the capital increase against cash contributions from the Company's Authorized Capital 2019/II. By partly utilizing the authorization of the Authorized Capital 2019/II, the Executive Board resolved on October 17, 2019, and the Supervisory Board approved on October 17, 2019, to increase the Company's share capital from EUR 36,021,540.00 by up to EUR 10,806,462.00 to up to EUR 46,828,002.00 by issuing up to 10,806,462 New Shares against cash contributions at a Subscription Price (as defined in section *3.3. "The Offering — Subscription Price"*) (the "**Capital Increase**"). The shareholders of the Company will be granted an indirect Subscription Right (as defined in section *3.4. "The Offering — Allotment of Subscription Rights"*) against contribution in cash in this process. The New Shares will be offered to the shareholders of the Company at a subscription ratio of 10:3, *i.e.,* three New Shares may be acquired at the Subscription Price for every ten existing shares in the Company (the "**Subscription Ratio**").

Based on the underwriting agreement entered into on October 18, 2019 among, *inter alios*, the Company and the Underwriter (the "**Underwriting Agreement**"), the Underwriter has agreed, subject to certain conditions, to subscribe for the New Shares and to offer such shares in the Offering to the Company's shareholders in connection with an indirect Subscription Right at the Subscription Ratio and at the Subscription Price against contribution in cash. For further details see *2.2. "General Information — Subject Matter of the Prospectus".*

Under certain circumstances, the Offering may be terminated.

3.2. Subscription Offer

An English translation of the German language version of the subscription offer (*Bezugsangebot*) (the "**Subscription Offer**") which is expected to be published on October 21, 2019 in the German Federal Gazette (*Bundesanzeiger*) is reproduced below:

"**Epigenomics AG**

Berlin

ISIN DE000A11QW50 / WKN A11QW5

Subscription Offer

On October 17, 2019, the Executive Board of Epigenomics AG (hereinafter also referred to as the "**Company**") resolved, with the approval of the Supervisory Board dated October 17, 2019, to exercise the authorization pursuant to Section 5 para. 8 of the Articles of Association of the Company (Authorized Capital 2019/II) and to increase the Company's share capital from EUR 36,021,540.00, being divided into 36,021,540 ordinary registered shares with no par-value, by up to EUR 10,806,462.00 to up to EUR 46,828,002.00 by issuing up to 10,806,462 ordinary registered shares with no par-value (the "**New Shares**") against contributions in cash. The New Shares will be issued at an issue price of EUR 1.00 per New Share and with full dividend rights as from January 1, 2019.

The New Shares will be offered to the shareholders against contributions in cash at a subscription ratio of 10:3 (the "**Subscription Offer**"). This means that each shareholder is entitled to purchase three (3) New Shares at the subscription price for every ten (10) existing shares held. The shareholders are not entitled to purchase New Shares or to cash compensation if and to the extent that the subscription ratio leads to fractional claims for shares. In this respect the subscription right is excluded. Each shareholder's portfolio of existing shares as of the end of October 23, 2019 is decisive for determining the number of subscription rights allocated to each shareholder.

The shareholders can acquire New Shares based on their subscription rights in exchange for cash contributions. The shareholders will be granted the statutory subscription right in the form of an indirect subscription right pursuant to Section 186 (5) of the German Stock Corporation Act (*Aktiengesetz* – AktG). M.M.Warburg & CO (AG & Co.) Kommanditgesellschaft auf Aktien (also referred to as the "**Subscription Agent**") has agreed in the underwriting agreement dated October 18, 2019, under certain conditions, (i) to subscribe for the New Shares and (ii) to offer the New Shares to the shareholders in connection with an indirect subscription right during the subscription period at the subscription ratio and at the subscription price per New Share.

The depositary banks will credit the subscription rights (ISIN DE000A255FM4, WKN A255FM) relating to the existing shares of the Company to the depositary accounts of the shareholders on or about October 24, 2019.

We kindly request our shareholders to exercise their subscription rights to the New Shares during the period

from and including October 24, 2019 up to and including November 6, 2019

(the "Subscription Period")

through their respective depositary bank at the Subscription Agent referred to below. Subscription rights that are not exercised during this period will expire and become worthless. No compensation will be awarded for subscription rights that will not be exercised.

M.M.Warburg & CO (AG & Co.) Kommanditgesellschaft auf Aktien, Ferdinandstraße 75, 20095 Hamburg acts as subscription agent. The exercise of the subscription rights is subject to the registration of the implementation of the capital increase with the commercial register and is also subject to the further restrictions described in the section "**Important Notices**".

1. Subscription Price and Payment of the Subscription Price

The subscription price per New Share to be paid by the shareholders shall at a minimum be equal to EUR 1.05 and at a maximum to EUR 3.50 and is expected to be determined on or about six calendar days before the end of the Subscription Period, *i.e.*, on or about October 31, 2019 ("**Determination Date**"), and to be published on or about that date by way of an ad hoc announcement pursuant to Article 17 of the EU Market Abuse Regulation ((EU) No. 596/2014 of the European Parliament and of the Council of April 16, 2014 as amended by Regulations (EU) No. 1011/2016 of 8 June 2016 and 1033/2016 of 23 June 2016), on the Company's website (http://www.epigenomics.com/news-investors/capital-increase) and in the German Federal Gazette (*Bundesanzeiger*) ("**Subscription Price**"). The Subscription Price, which shall at a minimum be equal to EUR 1.05 and at a maximum to EUR 3.50, will be determined by the Executive Board with the approval of the Supervisory Board taking into account the volume-weighted average price for

one Share of the Company on the electronic trading system XETRA on the Frankfurt Stock Exchange (Frankfurter Wertpapierbörse) from the beginning of the Subscription Period on October 24, 2019, until close of trading the day prior to the Determination Date, such date being expected to be on or about October 30, 2019, less a certain discretionary discount of between 6% and 10%. The size of the discount will take into consideration, *inter alia*, an estimate of the volatility of the price of the Share at the time of pricing, as well as market related factors. Shareholders willing to make use of their subscription rights have to pay the subscription price per New Share upon exercise of their subscription rights, at the latest, however, on November 6, 2019, to M.M.Warburg & CO (AG & Co.) Kommanditgesellschaft auf Aktien in its role as Subscription Agent through their respective depositary bank. In this regard the receipt of payment by the Subscription Agent is decisive.

2. Sale of Subscription Rights

In connection with the offering of the New Shares, the subscription rights will be freely transferable and can be traded during the period from and including October 24, 2019 up to and including November 4, 2019 at the Frankfurt Stock Exchange. To this effect the subscription rights (ISIN DE000A255FM4, WKN A255FM) will be credited to the deposit accounts of the shareholders on or about October 24, 2019. To the extent the terms and conditions of the depositary banks provide so, these banks will attempt to sell the subscription rights at the best possible price, unless the shareholder entitled to the subscription issues an instruction regarding the exercise of its Subscription Rights. No compensation will be granted for any subscription rights not exercised. Upon expiration of the Subscription Period, the unexercised subscription rights will expire and become worthless. As of October 22, 2019, the existing shares of Epigenomics AG (ISIN DE000A11QW50, WKN A11QW5) will be quoted "ex-rights" on the regulated market of the Frankfurt Stock Exchange.

3. Sale of Unsubscribed Shares (Rump Placement)

The New Shares remaining unsubscribed in the Subscription Offer by existing shareholders will be offered to selected qualified investors in private placements at the subscription price (the "**Rump Placement**"). In the United States of America ("**United States**"), the New Shares will be offered only to qualified institutional buyers (the "**QIBs**"), as defined in Rule 144A under the U.S. Securities Act of 1933, as amended (the "**Securities Act**"), and directors and executive officers of the Company resident in the United States according to the available exceptions. In this regard Raymond James & Associates, Inc. will act as placement agent for the private placements in the United States.

4. Share Certificates and Delivery of the New Shares

The New Shares (ISIN DE000A11QW50, WKN A11QW5) will be represented by one global share certificate deposited with Clearstream Banking AG. According to the Articles of Association, the shareholders shall not be entitled to share certificates or dividend coupons, to the extent legally permissible and unless required under the rules of a stock exchange where the shares are listed. The New Shares are vested with the same rights as all other shares of the Company and are not vested with any additional rights or benefits. The New Shares are expected to be delivered on or about November 12, 2019 by crediting the New Shares to the collective custodial account, unless the Subscription Period has been extended.

5. Stock Exchange Admission and Commencement of Trading of the New Shares

The admission of the New Shares to trading on the regulated market *(regulierter Markt)* of the Frankfurt Stock Exchange with simultaneous admission to the sub-segment of the regulated

market with additional post-admission obligations (Prime Standard) of the Frankfurt Stock Exchange is expected to take place on or about November 8, 2019. Commencement of trading is expected on or about November 12, 2019. It is expected that the New Shares will be included in the existing quotation of the Company's shares upon listing.

6. Publication of the Prospectus

In connection with the Subscription Offer, a securities prospectus of Epigenomics AG dated October 18, 2019 (the "**Prospectus**") has been published on the Company's internet website (http://www.epigenomics.com/news-investors/capital-increase). Printed copies of the Prospectus will be available for distribution free-of-charge at Epigenomics AG, Geneststraße 5, 10829 Berlin, during regular business hours.

7. Selling Restrictions

The New Shares and the subscription rights will only be publicly offered in the Federal Republic of Germany ("**Germany**"). The New Shares and the subscription rights are not and will not be registered under the Securities Act or with the securities regulators of the individual states of the United States. The New Shares and the subscription rights may neither be offered, sold, nor directly or indirectly delivered there, except for cases where exceptions from the registration requirements of the Securities Act and the securities laws of the respective individual states of the United States apply and in accordance with further applicable laws of the United States.

The acceptance of this offer outside Germany may be subject to restrictions. Persons who intend to accept this offer outside Germany are requested to inform themselves of and comply with the restrictions that exist outside Germany.

8. Important Notices

Existing shareholders and investors are advised to read the Prospectus very carefully, before making a decision to exercise, acquire or sell any subscription rights or to acquire any shares. M.M.Warburg & CO (AG & Co.) Kommanditgesellschaft auf Aktien is entitled, under certain conditions, to withdraw from the Underwriting Agreement or to postpone the implementation of the Subscription Offer. These conditions include, for example, the receipt of customary confirmation and legal opinions, satisfactory to M.M.Warburg & CO (AG & Co.) Kommanditgesellschaft auf Aktien. The obligation of M.M.Warburg & CO (AG & Co.) Kommanditgesellschaft auf Aktien will also terminate if the implementation of the capital increase has not been registered by November 11, 2019, 6:00 p.m. CET, with the commercial register of the Local Court of Berlin Charlottenburg and if the Company and M.M.Warburg & CO (AG & Co.) Kommanditgesellschaft auf Aktien fail to agree on a later date. In addition, the obligation of M.M.Warburg & CO (AG & Co.) Kommanditgesellschaft auf Aktien will also end, if the New Shares are not admitted to trading by or on November 12, 2019. In case M.M.Warburg & CO (AG & Co.) Kommanditgesellschaft auf Aktien withdraws from the Underwriting Agreement prior to the registration of the Capital Increase with the commercial register, the subscription rights of all existing shareholders will expire without compensation. In such a case, a reverse transaction relating to the trading of subscription rights by M.M.Warburg & CO (AG & Co.) Kommanditgesellschaft auf Aktien will not take place and investors who purchased subscription rights via the stock exchange would suffer a loss. In case M.M.Warburg & CO (AG & Co.) Kommanditgesellschaft auf Aktien withdraws from the Underwriting Agreement after the capital increase has been registered with the commercial register, the shareholders who have exercised their subscription rights may acquire New Shares at the subscription price. In case M.M.Warburg & CO (AG & Co.) Kommanditgesellschaft auf Aktien withdraws from the Underwriting Agreement after the Subscription Offer has been completed, which is also possible following delivery, settlement and the listing of the New Shares subscribed

for in the offering, such withdrawal would only apply to New Shares that were not subscribed for. Share purchase agreements for unsubscribed New Shares are accordingly subject to reservations. If short-selling has occurred as of the time of cancelling the booking of shares, it is solely the seller of such New Shares who bears the risk of being unable to meet its obligation to deliver New Shares.

Berlin, October 2019

Epigenomics AG

The Executive Board"

3.3. Subscription Price

The subscription price to be paid by the shareholders per New Share shall at a minimum be equal to EUR 1.05 and at a maximum to EUR 3.50 and is expected to be determined on or about six calendar days before the end of the subscription period, *i.e.*, on or about October 31, 2019 ("**Determination Date**"), and to be published on or about that date by way of an ad hoc announcement pursuant to Article 17 of Regulation (EU) No. 596/2014 of the European Parliament and of the Council of April 16, 2014 as amended by Regulations (EU) No. 1011/2016 of June 8, 2016 and 1033/2016 of June 23, 2016 (the "**Market Abuse Regulation**"), on the Company's website (http://www.epigenomics.com/news-investors/capital-increase) and in the German Federal Gazette (*Bundesanzeiger*) ("**Subscription Price**"). The Subscription Price will be determined by the Executive Board with the approval of the Supervisory Board and after consultation and the consent of the Underwriter taking into account the volume-weighted average price for one share of the Company on the electronic trading system XETRA on the Frankfurt Stock Exchange (*Frankfurter Wertpapierbörse*) from the beginning of the subscription period on October 24, 2019, until close of trading the day prior to the Determination Date, such date being expected to be on or about October 30, 2019, less a certain discretionary discount of between 6% and 10%. The size of the discount will take into consideration, *inter alia*, an estimate of the volatility of the price of the share of the Company at the time of pricing, as well as market related factors. The Subscription Price has to be paid at the latest on November 6, 2019, for shareholders exercising their Subscription Rights.

3.4. Allotment of Subscription Rights

Each existing share of the Company (ISIN: DE000A11QW50; WKN: A11QW5) entitles to one subscription right (the "**Subscription Right**"). On or about October 24, 2019, the depositary banks are expected to credit the Subscription Rights to the shareholders' depositary accounts. As of or about October 22, 2019, the existing shares of Epigenomics AG are expected to be quoted "ex-rights" on the regulated market of the Frankfurt Stock Exchange.

3.5. Exercise of Subscription Rights

Pursuant to the Subscription Ratio of 10:3, three New Shares may be acquired at the Subscription Price for every ten existing shares of Epigenomics AG. Subscription Rights must be exercised during the period from and including October 24, 2019 up to and including November 6, 2019 (the "**Subscription Period**"). Instructions by investors regarding the exercise of Subscription Rights have to be addressed to their respective depository banks. Investors are recommended to follow the instructions by their depository banks.

3.6. Sale of Subscription Rights

The Subscription Rights are freely transferable and can be traded during the period from and including October 24, 2019 up to and including November 4, 2019 at the Frankfurt Stock Exchange. The admission of the Subscription Rights to trading at the Frankfurt Stock Exchange is expected to occur on October 23, 2019. To the extent the terms and conditions of the depositary banks provide so, these banks will attempt to sell the Subscription Rights at the best possible price, unless the shareholder entitled to the subscription issues an instruction regarding the exercise of its Subscription Rights. No compensation will be granted for any Subscription Rights not exercised. Upon expiration of the Subscription Period, the unexercised Subscription Rights will expire and become worthless.

3.7. Subscription Rights Remaining Unexercised and Potential Rump Placement

Subscription Rights which remain unexercised will expire and become worthless. Following the end of the Subscription Period of the Subscription Offer New Shares not subscribed for in the Subscription Offer, if any, and any residual amounts resulting from the Subscription Ratio shall be placed as part of the rump placement to selected qualified investors in certain jurisdictions outside the United States, Canada, Australia and Japan pursuant to the exemption from registration requirements under Regulation S under the Securities Act, as well as inside the United States to certain QIBs and directors and executive officers of the Company resident in the United States pursuant to the relevant exemptions from registration requirements under the Securities Act (together, the "**Rump Placement**"). For information on the Rump Placement, see *3.12. "— The Underwriting Agreement*".

3.8. Stock Exchange Admission, Commencement of Trading, Delivery Announcement of the Final Results of the Offering

The Company, together with the Underwriter, will apply for admission of the New Shares to trading on the regulated market segment (*regulierter Markt*) of the Frankfurt Stock Exchange (*Frankfurter Wertpapierbörse*) and, simultaneously, on the sub-segment thereof with additional post-admission obligations (Prime Standard) (the "**Listing**").

The final number of New Shares that the Company will issue is expected to be published on or about November 7, 2019, by means of an ad hoc announcement in various media distributed across the entire European Economic Area (*Medienbündel*) and on the Company's website (http://www.epigenomics.com/news-investors/capital-increase).

The decision on the admission of the New Shares is expected to be announced on or about November 8, 2019. The decision on the admission of the New Shares to trading will be made solely by the Frankfurt Stock Exchange (*Frankfurter Wertpapierbörse*) at its discretion. Trading of the New Shares on the Frankfurt Stock Exchange (*Frankfurter Wertpapierbörse*) is expected to commence on or about November 12, 2019.

The New Shares will be delivered to buyers in the form of co-ownership rights in one global share certificate expected to be deposited with the collective securities depositary Clearstream Banking Aktiengesellschaft, Mergenthalerallee 61, 65760 Eschborn, Germany ("**Clearstream**") on or about November 12, 2019. Investors can obtain information about the actual delivery of the New Shares subscribed for under the Subscription Offer or the Rump Placement from their respective

custodian bank. Trading in New Shares is expected to start on the day of crediting of such shares to the investor's account.

3.9. Scheduled Timetable

The scheduled timetable for the Offering is as follows:

October 18, 2019	Approval of the Prospectus by BaFin.
	Publication of the approved Prospectus on the Company's website (http://www.epigenomics.com/news-investors/capital-increase).
October 21, 2019	Publication of the Subscription Offer in the German Federal Gazette (*Bundesanzeiger*).
October 24, 2019	Start of the Subscription Period of the Subscription Offer.
	Credit by the depositary banks of the Subscription Rights to the depositary accounts of the shareholders of the Company.
	Start of trading of the Subscription Rights.
On or about October 31, 2019	Determination of the Subscription Price and publication of the Subscription Price on the Company's website (http://www.epigenomics.com/news-investors/capital-increase) and in the German Federal Gazette (*Bundesanzeiger*).
November 6, 2019	End of the Subscription Period of the Subscription Offer; latest possible date for the payment of the Subscription Price.
November 6, 2019	Rump Placement.
On or about November 7, 2019	Announcement of the final results of the Offering.
November 8, 2019	Expected registration of the implementation of the Capital Increase with the commercial register of the Company.
On or about November 8, 2019	Expected delivery of one global share certificate evidencing the New Shares to Clearstream.
	Expected admission decision by the Frankfurt Stock Exchange (*Frankfurter Wertpapierbörse*).
On or about November 12, 2019	Commencement of trading of the New Shares on the Frankfurt Stock Exchange (*Frankfurter Wertpapierbörse*).
	Delivery of the New Shares, to be held in collective custody.

The Prospectus will be published on the internet website of Epigenomics AG (http://www.epigenomics.com/news-investors/capital-increase). Printed copies of the Prospectus will be available for distribution free-of-charge at Epigenomics AG, Geneststraße 5, 10829 Berlin, during regular business hours.

3.10. Dilution

The rights of the Company's shareholders to subscribe for the New Shares from the Capital Increase, excluding share fractional amounts, ensure that each shareholder of the Company exercising its Subscription Rights will continue to hold its original, nearly unchanged percentage share in the share capital of the Company. The shareholder's percentage ownership in the Company's share capital and its voting rights will be diluted by 23% if such shareholder does not exercise any of its Subscription Rights, and assuming that all New Shares will be issued (see *3.5. "— Exercise of Subscription Rights"* and *3.7. "— Subscription Rights Remaining Unexercised"*).

The net asset value of the Company (calculated as total assets minus total non-current liabilities minus total current liabilities, *i.e.,* equaling the total equity) in its Group balance sheet based on the Unaudited Consolidated Interim Financial Statements amounted to EUR 11,703 thousand as of June 30, 2019, and corresponding to EUR 0.32 per share of the Company, calculated on 36,021,540 issued shares of the Company as of June 30, 2019.

Based on the foregoing, and assuming a full implementation of the Capital Increase from EUR 36,021,540.00 by EUR 10,806,462.00 to EUR 46,828,002.00 by issuing 10,806,462 New Shares against cash contributions, as well as assuming a Subscription Price of EUR 2.00 per ordinary share of the Company and after deducting the total costs of the Company relating to the Listing and the Offering of approximately EUR 1,300,000.00, the net asset value of the Company would have been approximately EUR 32,016 thousand, representing EUR 0.68 per ordinary share of the Company. This would correspond to a value enhancement of EUR 0.36, corresponding to 113%, per share for existing shareholders of the Company. For purchasers of the New Shares, this would result in a dilution of EUR 1.32 (66%) per share, as the adjusted net asset value of the Company attributable to the shareholders of the Company per share falls short of the Subscription Price by this amount or this percentage.

3.11. Reasons for the Offering and Use of Proceeds from the Offering

We have in the past funded our operations in particular through private and public offerings of equity securities. The Company requires further liquidity for financing its current business operations and its future development.

We expect to receive total estimated net proceeds of approximately EUR 20,312,924.00 from the Offering assuming a full implementation of the Capital Increase from EUR 36,021,540.00 by EUR 10,806,462.00 to EUR 46,828,002.00 by issuing 10,806,462 New Shares at a Subscription Price of EUR 2.00 per New Share, an exercise rate of existing shareholders' Subscription Rights of 50% and the remainder of the New Shares to be fully placed in the Rump Placement.

We currently expect that we will use the net proceeds from the Offering as follows:

- primarily, to (i) execute our commercialization strategy for Epi proColon in the United States subsequently to a positive reimbursement decision, (ii) continue the post-approval study for Epi proColon in the United States and start and conduct further development with regard to the HCCBloodTest, (iii) continue improving the Epi proColon test with a particular focus on developing automated versions, (iv) continue our research activities with regard to biomarker discovery and analysis, and (v) maintain and potentially expand our intellectual property portfolio; and
- in addition, to satisfy all other payment obligations that will fall due within the next twelve months for general business purposes.

The Company will have broad discretion in the application of the net proceeds and may decide to use the net proceeds for purposes other than those listed above, and investors will be relying on our judgment regarding the application of the net proceeds of the Offering. The amounts and timing of our actual use of net proceeds will vary depending on numerous factors, many of which are beyond our control, including, but not limited to, our ability to obtain additional financing, the relative success and cost of our research, preclinical and clinical development programs, the amount and timing of additional revenue, if any, received from our partners and our collaboration with third parties and whether we enter into future collaborations. In addition, we might decide to postpone or not pursue other clinical trials or preclinical activities if the net proceeds from the Offering and our other sources of cash are less than expected.

3.12. The Underwriting Agreement

On October 18, 2019, the Company, the Underwriter and the U.S. Placement Agent entered into the Underwriting Agreement. Under the Underwriting Agreement (i) the Underwriter has agreed, subject to certain conditions, to subscribe for the New Shares and to offer such shares in the Offering to the Company's shareholders in connection with an indirect Subscription Right at the Subscription Ratio and at the Subscription Price against contribution in cash, and (ii) the U.S. Placement Agent has agreed, with regard to a potential Rump Placement inside the United States, to introduce the Company to certain QIBs and directors and executive officers of the Company resident in the United States, after which the Company may sell New Shares to such QIBs and directors and executive officers pursuant to the relevant exemptions from registration requirements under the Securities Act.

With respect to the Offering, eligible shareholders of the Company are granted indirect Subscription Rights with regard to the New Shares in such a way that the Underwriter is admitted to subscribe for the New Shares with the obligation of the Underwriter to offer the New Shares to the eligible shareholders against contribution in cash in accordance with their respective share in the Company's share capital at the Subscription Price and the respective Subscription Ratio.

Following the end of the subscription period of the Subscription Offer shares not subscribed for in the Subscription Offer, if any, and any residual amounts resulting from the Subscription Ratio shall, upon request of the Company, on a reasonable endeavors basis and on the basis of the conditions set forth in the Underwriting Agreement, be offered by the Underwriter within a Rump Placement (i) to selected qualified investors in certain jurisdictions outside the United States, Canada, Australia and Japan pursuant to the exemption from registration requirements under Regulation S under the Securities Act and (ii) in collaboration with the U.S. Placement Agent, inside the United States to certain QIBs and directors and executive officers of the Company resident in the United States pursuant to the relevant exemptions from registration requirements under the Securities Act.

The private placements in the context of the Rump Placement outside the United States and inside the United States are to be at a price at least at the Subscription Price per New Share.

The underwriting commitment of the Underwriter pursuant to the Underwriting Agreement with respect to the New Shares exists only to the extent that Subscription Rights are exercised by eligible shareholders against contribution in cash, or that New Shares are purchased by investors within the framework of the Rump Placement.

The Underwriter's and the U.S. Placement Agent's obligations under the Underwriting Agreement are subject to the occurrence of certain conditions precedent and the non-occurrence of certain material adverse events. In addition, in the Underwriting Agreement the Company gives certain

representations and warranties which include the confirmation of the substantive accuracy of the information contained in the Prospectus, and indemnifies the Underwriter and the U.S. Placement Agent in case such representations and warranties are incorrect or in case of any misstatement or alleged misstatement contained in the Prospectus or the marketing materials used in the context of the Offering.

The Underwriter has undertaken in the Underwriting Agreement to pay to the Company the difference between the Subscription Price for the New Shares and EUR 1.00 per share already paid by the Underwriter upon subscription (less agreed fees, commissions and costs). The Underwriter and the U.S. Placement Agent shall be paid an aggregate fee in an amount of approximately EUR 650,000.00, assuming a full implementation of the Capital Increase from EUR 36,021,540.00 by EUR 10,806,462.00 to EUR 46,828,002.00 by issuing 10,806,462 New Shares at a Subscription Price of EUR 2.00 per New Share, an exercise rate of existing shareholders' Subscription Rights of 50% and the remainder of the New Shares to be fully placed in the Rump Placement.

3.13. Lock-Up Agreements

Most of the Company's shares will not be subject to any lock-up agreement. The Company and the members of the Executive Board have agreed with the Underwriter for a period of 180 days after the date of the Listing, not to directly or indirectly:

- offer, sell, contract to sell, pledge, grant any option to purchase or otherwise dispose of or take any other action, whether through derivative contracts, options or otherwise to reduce their financial risk of holding any of our securities, or any securities convertible into or exercisable or exchangeable for, or any rights to purchase or otherwise acquire, any securities held or deemed to be beneficially owned by the person or entity without the prior written consent of the Underwriter (other than the ordinary shares issued pursuant to employee benefit plans, qualified stock option plans or other employee compensation plans existing on the date hereof or pursuant to currently outstanding options); or
- exercise or seek to exercise or effectuate in any manner any rights of any nature that the person or the entity has or may have hereafter to require us to register under the Securities Act, the sale, transfer or other disposition of any of the securities held or deemed to be beneficially owned by the person or entity, or to otherwise participate as a selling security holder in any manner in any registration by us under the Securities Act.

In addition, the Company has agreed with the Underwriter that for 180 days after the date of the Listing, it will not, to the extent permitted by German corporate law, directly or indirectly without the prior written consent of the Underwriter,

(i) directly or indirectly, issue, sell, offer, contract to sell, otherwise dispose of or announce the offering of any shares from an increase of the Company's share capital or any other securities or uncertificated rights, convertible into or exchangeable for or which carry the right to acquire such shares from an increase of the Company's share capital;

(ii) announce or effect an increase of the share capital out of authorized capital;

(iii) submit a proposal for a capital increase to any meeting of the shareholders of the Company for resolution (unless any such proposal is duly requested by the Company's shareholders to be included in the agenda of a general shareholders' meeting); or

(iv) enter into a transaction (including any derivatives transaction) or perform any action economically similar to those described in (i) through (iii) above.

The Company may, however, offer, sell and issue options, warrants and shares of the Company (i) under current employee stock option programs, and (ii) in consideration of all or a portion of the acquisition price of any business acquired by the Company or for purposes of entering into a joint venture or similar kind of transaction, provided that the Company shall in case of (ii), (x) consult with the Underwriter prior to the issuance of the shares or other securities and (y) use its best efforts to negotiate an undertaking of the recipient of the shares or such other securities of the Company to comply with the restrictions on the disposal of shares contained in this Section.

3.14. Selling Restrictions

The acceptance of the Subscription Offer outside Germany may be subject to restrictions. It is the responsibility of any person who receives a copy of this document to satisfy himself or herself as to full observance of the laws of any relevant territory in respect of any actions he or she may take, including obtaining of any requisite governmental or other consent or the observance of any requisite formalities and the payment of any issue, transfer or other taxes due in such territory.

The Prospectus does not constitute an offering for the sale of securities in the United States. Securities may not be offered or sold in the United States without being registered except pursuant to an exemption from the registration requirements of the U.S. securities laws and in compliance with all other applicable provisions of U.S. law. The New Shares and the subscription rights have not been and will not be registered under the Securities Act, or the securities laws of any state or other jurisdiction of the United States, and may not be offered, sold or otherwise transferred, except pursuant to an exemption from, or in a transaction not subject to, the registration requirements of the Securities Act and in compliance with any applicable securities laws of any state or other jurisdiction in the United States. The New Shares may only be sold in or into the United States to QIBs and directors and executive officers of the Company resident in the United States, and outside the United States in accordance with Rule 903 of Regulation S and in compliance with other U.S. legal requirements. Any offer or sale of New Shares in reliance on Rule 144A will be made by broker-dealers who are registered as such under the Securities Act. Terms used above shall have the meanings ascribed to them by the Rules and Regulations under the Securities Act. In addition, until 40 days after the commencement of the Offering, an offer or sale of New Shares within the United States by any dealer (whether or not participating in the Offering) may violate the registration requirements of the Securities Act, if such offer or sale does not comply with Rule 144A or another exemption from registration under the Securities Act.

Sales in the United Kingdom of Great Britain and Northern Ireland (the "**United Kingdom**") are also subject to restrictions. This document is directed only at persons who (i) are qualified investors within the meaning of the Financial Services and Markets Act 2000 (as amended) and any relevant implementing measures and/or are outside the United Kingdom or (ii) have professional experience in matter relating to investments who fall within the definition of "investment professionals" contained in article 19 (5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (as amended) (the "**Order**") or are persons falling within article 49 (2)(a) to (d) (high net worth companies, unincorporated associations, etc.) of the Order, or fall within another exemption to the Order (all such persons referred to in (i) and (ii) above together being referred to as "**Relevant Persons**"). Any person who is not a Relevant Person must not act or rely on the Prospectus or any of its contents. Any investment or investment activity to which the Prospectus relates is available only to Relevant Persons and will be engaged in only with Relevant Persons.

In the Underwriting Agreement, the Underwriter has also represented and warranted that in relation to each Member State of the European Economic Area (each a "**Member State**"), it has

not made and will not make an offer of the New Shares to the public in that Member State other than in Germany, except that it may make an offer of New Shares in that Member State at any time under the following exemptions under the Prospectus Regulation:

(i) to any qualified investor as defined in the Prospectus Regulation, or

(ii) in any other circumstances falling within article 1 para. 4 of the Prospectus Regulation;

provided that no such offer (as set forth in clauses (i) to (ii)) of New Shares will result in a requirement for the publication by the Company or the Underwriter of a prospectus pursuant to article 3 para. 1 of the Prospectus Regulation.

For the purposes of this restriction, the expression of an "offer of securities to the public" in relation to any New Shares in any Member State means a communication to persons in any form and by any means, presenting sufficient information on the terms of the offer and the securities to be offered, so as to enable an investor to decide to purchase or subscribe for those securities.

The Underwriter will also undertake to comply with the relevant laws of any and all countries in which they conduct selling and other activities in connection with the Subscription Offer. Accordingly, neither the Prospectus nor any advertisement or any other offering material may be distributed or published in any jurisdiction except under circumstances that will result in compliance with any applicable laws and regulations. Persons into whose possession the Prospectus comes are required to inform themselves about and observe any such restrictions, including those set out in the preceding paragraphs. Any failure to comply with these restrictions may constitute a violation of the securities laws of any such jurisdiction.

3.15. Interest of Persons Participating in the Offering and the Listing

The Underwriter, in connection with the Offering and the Listing, and the U.S. Placement Agent, in connection with the potential private placements inside the United States to QIBs and directors and executive officers of the Company resident in the United States, have entered into a contractual relationship with the Company. Under certain conditions, the Underwriter and the U.S. Placement Agent will receive commissions from the Company and, therefore, both the Underwriter and the U.S. Placement Agent have a financial interest in the successful completion of Offering and the Listing (see *3.12. "— The Underwriting Agreement"*).

All members of our Executive Board, *i.e.*, Gregory Hamilton, Jorge Garces, Ph.D., and Albert Weber, as well as our Supervisory Board members Heino von Prondzynski, Ann Clare Kessler, Ph.D., Dr. Helge Lubenow, and Franz Thomas Walt directly or indirectly hold shares, stock option rights or phantom stock rights ("**PSRs**") of the Company (see *16.2.3. "Governing Bodies — Executive Board — Compensation, Other Benefits, Share Ownership"* and *16.3.3. "Governing Bodies — Supervisory Board — Compensation, Other Benefits, Share Ownership"*). As a result, they have financial and economic interests, separately from their positions in the respective governing body, that may diverge from the Company's and, thus, may constitute a potential conflict of interest.

3.16. Costs of the Offering and the Listing

The costs of the Company related to the Offering and the Listing are expected to total approximately EUR 1,300,000.00, assuming a full implementation of the Capital Increase from EUR 36,021,540.00 by EUR 10,806,462.00 to EUR 46,828,002.00 by issuing 10,806,462 New Shares at a Subscription Price of EUR 2.00 per New Share, an exercise rate of existing

shareholders' Subscription Rights of 50% and the remainder of the New Shares to be fully placed in the Rump Placement, all of which will be borne by the Company.

Neither the Company nor the Underwriter in its capacity as Underwriter and the U.S. Placement Agent in its capacity as U.S. Placement Agent will charge expenses to investors. However, investors will themselves be required to bear the fees charged by their brokers or other financial institutions for the purchase and holding of securities.

4. INFORMATION ABOUT THE NEW SHARES

4.1. Form, Voting Rights

All shares of the Company including the New Shares are no par value ordinary registered shares, each such share representing a notional amount of the Company's issued share capital of EUR 1.00 (together the "**Shares**"). Each Share confers one vote at the general shareholders' meeting of the Company. The voting rights are not restricted.

4.2. Dividend Rights and Share in Liquidation Proceeds

The New Shares will carry full dividend rights as from January 1, 2019, *i.e.*, for the financial year ending December 31, 2019 and for all subsequent financial years. The New Shares will be entitled to a share of any liquidation proceeds or insolvency surpluses at the ratio of their notional share in the share capital.

4.3. Stock Exchange Admission, Certificate, Delivery

The decision of the Frankfurt Stock Exchange regarding the admission of the New Shares to trading on the regulated market with simultaneous admission to the sub-segment of the regulated market with additional post-admission obligations (Prime Standard) is expected on or about November 8, 2019. The start of trading and the inclusion of the New Shares in the existing listing on the Frankfurt Stock Exchange is expected on or about November 12, 2019.

The New Shares will be represented by a global share certificate without dividend coupons, which is expected to be deposited with Clearstream on or about November 12, 2019. The rights of the shareholders to certificates representing their New Shares are excluded unless the issuance of share certificates is required under the rules applying to a stock exchange to which the Shares are admitted for trading.

The New Shares will be delivered to a collective safe custody account. If the Subscription Period is not extended, the New Shares subscribed in connection with the Subscription Offer and the New Shares purchased in the private placements are expected to be delivered on or about November 12, 2019, by way of book-entry by Clearstream, if and to the extent the Underwriting Agreement is not terminated early.

4.4. ISIN, WKN, Common Code and Trading Symbol

International Securities Identification Number (ISIN)	DE000A11QW50
German Securities Code (*Wertpapier-Kenn-Nummer*) (WKN)	A11QW5
Common Code	019606805
Trading Symbol	ECX

4.5. Transferability of the New Shares

The transferability of the Shares is restricted neither by law nor by the Articles of Association of the Company. There will be no restrictions on the transferability of the Shares other than the lock-up agreements *3.13. "The Offering — Lock-Up Agreements*".

4.6. Notices

Pursuant to the Articles of Association, Company notices are to be published in the German Federal Gazette (*Bundesanzeiger*). Notices regarding the Shares of the Company are also published in the German Federal Gazette.

5. DIVIDEND POLICY

5.1. General Rules on Allocation of Profits and Dividend Payments

Shareholders have a share in the Company's distributable profits determined in proportion to their interest in the Company's share capital. The participation of new shares in the profits may be determined in a different manner.

Distributions of dividends on shares of the Company for a given financial year are generally determined by a process in which the Executive Board and the Supervisory Board submit a proposal for the distribution of dividends to the annual general shareholders' meeting held within the first eight months of the subsequent financial year. The general shareholders' meeting then adopts a resolution on such distribution with a simple majority of the votes cast, without being bound by the proposal of the Executive Board and the Supervisory Board. Under German law, dividends can only be resolved upon and paid if the unconsolidated financial statements of the Company show distributable profits (*Bilanzgewinn*). In contrast to the Company's consolidated financial statements, which are prepared in accordance with IFRS, the annual financial statements are prepared in accordance with the accounting principles of the German Commercial Code (*Handelsgesetzbuch*) and other applicable German law. These accounting regulations differ from IFRS in material respects. The unconsolidated financial statements of the Company are approved by the Executive Board and the Supervisory Board unless the Executive Board and the Supervisory Board refer the approval to the general shareholders' meeting. In determining the distributable profits, the profit or loss for the financial year is adjusted for profits or losses carried forward from previous financial years as well as for withdrawals from, and transfers to reserves. Certain reserves must be maintained by law and must be deducted when calculating the distributable profits. Subject to certain statutory restrictions, the general shareholders' meeting is entitled to transfer additional amounts to the reserves or carry them forward. If the Executive Board and the Supervisory Board approve the unconsolidated financial statements, they may, pursuant to Section 58(2) German Stock Corporation Act, transfer up to 50% of the profit for the financial year remaining after deducting any transfers to statutory reserves and any losses carried forward to non-statutory reserves.

Dividends resolved by the general shareholders' meeting are due and payable on the third business day after the relevant general shareholders' meeting, unless a later maturity is provided for in the dividend resolution, in compliance with the rules of the respective clearing system. Under German law, the right to dividend payments is generally time-barred after three years for the benefit of the Company.

The New Shares will be entitled to profit participation beginning January 1, 2019, *i.e.*, for the full financial year ending December 31, 2019, and for all subsequent financial years. The dividends will be paid out in accordance with the rules of the clearing system of Clearstream. Details on dividend payments and the respective payment agent will be published in the German Federal Gazette (*Bundesanzeiger*) after the general shareholders' meeting. Neither German law nor the Company's Articles of Association provide for a special procedure for the exercise of dividend rights by shareholders not resident in Germany.

Generally, withholding tax (*Kapitalertragsteuer*) is withheld from dividends paid. The Company assumes responsibility for the withholding of taxes on distributions at source, in accordance with statutory provisions. For more information on the taxation of dividends see *18.1. "Taxation of Shareholders* in *Germany — Income Tax Implications of the Holding, Sale and Transfer of Shares and Subscription Rights"*.

5.2. Dividend Policy and Earnings per Share

We have not paid any dividends for the last three financial years. We do not currently intend to pay dividends in the foreseeable future. We intend to retain future earnings, if any, in particular for investments in product development and marketing.

Any future determination to pay dividends will be at the discretion of our Executive Board and Supervisory Board and will depend upon a number of factors, including our results of operations, financial position, future prospects, contractual restrictions, restrictions imposed by applicable law and other factors our Executive Board and Supervisory Boards deem relevant.

The table below shows the net loss for the period/year and the corresponding net loss per share (basic and diluted) of our Group for the six-month period ended June 30, 2019, as well as for the financial years 2018 and 2017:

	As of June 30,	**For the financial year ended December 31,**	
	2019	**2018**	**2017**
(in EUR thousand unless otherwise indicated)	**(unaudited)**	**(audited)**	
Net loss for the period/year	(7,416)	(12,692)	(10,235)
Earnings per share (basic and diluted, in EUR)[1]	(0.21)	(0.47)	(0.44)

[1] Earnings per share (basic) are calculated by dividing the net loss for the year by the weighted average number of Shares issued. The outstanding stock options granted by the Company are antidilutive in accordance with IAS 33.41 and 33.43 *Earnings per Share*. Therefore, the earnings per share (diluted) equal the earnings per share (basic). The numbers of Shares issued as of June 30, 2019 amounted to 36,021,540 (December 31, 2018: 36,021,540; December 31, 2017: 24,014,360).

6. CAPITALIZATION AND INDEBTEDNESS

6.1. Capitalization

The following table shows an overview of our capitalization (including total debt) as of July 31, 2019, taken or derived from our accounting records, (i) prior to implementation of the Offering and (ii) as adjusted for the completion of the Offering based on the assumption of a complete placement of the New Shares at a Subscription Price of EUR 2.00 per New Share and that the Company will receive net proceeds from the Offering of approximately EUR 20,312,924.00 (see *3.11. "The Offering — Reasons for the Offering and Use of Proceeds from the Offering"*).

Investors should read this table in conjunction with 7. *"Operating And Financial Review"* and the Consolidated Financial Statements, including the notes thereto, which are included in the financial section of the Prospectus.

	As of July 31, 2019	
(in EUR thousand)	**(i) Prior to the Offering**	**(ii) As adjusted for the completion of the Offering**
	(unaudited)	
Total current debt[1]	**3,152**	**3,152**
of which, guaranteed	0	0
of which, secured	0	0
of which, unguaranteed/unsecured	3,152	3,152
Total non-current debt (excluding current portion of long-term debt)[2]	**837**	**837**
of which, guaranteed	0	0
of which, secured	0	0
of which, unguaranteed/unsecured	0	0
Shareholders' equity[3]	**10,589**	**30,902**
Share capital[4]	36,022	46,828
Legal reserve[5]	69,299	78,805
Other reserves[6]	(85,806)	(85,806)
Total capitalization[7]	**14,578**	**34,891**

1 Total current debt is shown as total current liabilities in the Consolidated Financial Statements. For a separate presentation of current financial indebtedness, see *6.2. "— Net Financial Indebtedness"*.

2 Total non-current debt is shown as total non-current liabilities in the consolidated balance sheet of the Consolidated Financial Statements. For a separate presentation of non-current financial indebtedness, see *6.2. "— Net Financial Indebtedness"*.

3 Shareholders' equity is shown as total equity in the consolidated balance sheet of the Consolidated Financial Statements.

4 Share capital is shown as subscribed capital in the consolidated balance sheet of the Consolidated Financial Statements.

5 Legal reserve is shown as capital reserve in the consolidated balance sheet of the Consolidated Financial Statements.

6 Other reserves are the sum of retained earnings, net loss for the period and other comprehensive income each as shown in the consolidated balance sheet of the Consolidated Financial Statements.

7 Total capitalization represents the sum of total current debt, total non-current debt and shareholders' equity.

6.2. Net Financial Indebtedness

The following table shows an overview of our net financial indebtedness as of July 31, 2019, taken or derived from our accounting records, (i) prior to implementation of the Offering and (ii) as adjusted for the completion of the Offering based on the assumption of a complete placement of the New Shares at a Subscription Price of EUR 2.00 per New Share and that the Company will

receive net proceeds from the Offering of approximately EUR 20,312,924.00 (see *3.11.* "*The Offering — Reasons for the Offering and Use of Proceeds from the Offering"*).

Investors should read this table in conjunction with *1. "Risk Factors"*, *7. "Operating And Financial Review"* and the Consolidated Financial Statements, including the notes thereto, which are included in the financial section of the Prospectus.

	As of July 31, 2019	
(in EUR thousand)	**(i) Prior to the Offering**	**(ii) As adjusted for the completion of the Offering**
	(unaudited)	
A. Cash[1]	7,481	27,794
B. Cash equivalents[2]	0	0
C. Trading securities[3]	710	710
D. Liquidity (A)+(B)+(C)	**8,191**	**28,504**
E. Current financial receivable[4]	560	560
F. Current bank debt	0	0
G. Current portion of non-current debt[5]	0	0
H. Other current financial debt[6]	3,152	3,152
I. Current financial debt (F)+(G)+(H)	**3,152**	**3,152**
J. Net current financial indebtedness (I)-(E)-(D)	**(5,599)**	**(25,912)**
K. Non-current bank loans	0	0
L. Bonds issued	0	0
M. Other non-current loans	0	0
N. Non-current financial indebtedness (K)+(L)+(M)	**0**	**0**
O. Net financial indebtedness (J)+(N)	**(5,599)**	**(25,912)**

1 Cash consists of bank deposits and cash on hand. Bank deposits include restricted cash. In the consolidated balance sheet of the Consolidated Financial Statements cash is included in cash and cash equivalents.

2 Cash equivalents are defined as instruments which are convertible on a short-term basis to a known amount of cash, *i.e.*, highly liquid financial instruments which carry a very low risk of change in value. In the consolidated balance sheet of the Consolidated Financial Statements cash equivalents are included in cash and cash equivalents.

3 Trading securities are short-term financial investments which are recognized in the consolidated balance sheet of the Consolidated Financial Statements within current assets and are shown as marketable securities.

4 Current financial receivable is the sum of trade and other receivables and other current assets, each as shown in the consolidated balance sheet of the Consolidated Financial Statements, adjusted for deposits which are included in other current assets in the Consolidated Financial Statements, but which will not be due for repayment within the next twelve months in an amount of EUR 40 thousand.

5 Current portion of non-current debt is included in current debt (*i.e.,* total current liabilities) as shown in the consolidated balance sheet of the Consolidated Financial Statements, and amounts are therefore reflected in H. Other current financial debt.

6 Other current financial debt includes trade payables, deferred income, other liabilities and current provisions as shown in the consolidated balance sheet of the Consolidated Financial Statements.

6.3. Indirect and Contingent Liabilities

As of July 31, 2019, there were no indirect or contingent liabilities. For further information on other financial obligations, see *7.8.6. "Operating And Financial Review — Liquidity and Capital Resources — Other Financial Obligations"*.

6.4. Working Capital Statement

As of the date of the Prospectus, the Group is not in a position to meet the payment obligations that become due within at least the next twelve months from the date of the Prospectus. According to current planning, the means of the Company would suffice until February 28, 2020.

Payment obligations of the Company that will fall due within the next twelve months relate in particular to (i) selling, general and administrative costs, including those related to general corporate purposes and, among others, in connection with the commercialization of Epi proColon in the United States and (ii) research and development costs, including, *inter alia*, in connection with certain post-approval clinical studies. In order to fully satisfy the payment obligations that will fall due within the next twelve months (including those that the Group expects to arise and fall due within the ordinary course of business within the next twelve months), the Company would require further funding of approximately EUR 7.0 million (net). The Company plans to secure funding to fully satisfy the payment obligations that will fall due within the next twelve months through the Capital Increase.

We are confident that it is very likely that the Capital Increase will be successfully implemented by the expected timeline of the Capital Increase, in full or at least in a sufficient portion, as set out in the expected timeline; for the expected timeline of the Capital Increase, see also *3.9. "The Offering — Scheduled Timetable"*.

Should the Capital Increase not be consumed with minimum net proceeds of EUR 7.0 million, depending on the amount of underfunding, we would seek (i) alternative debt or convertible bond financing, and/or (ii) to cut certain costs, including costs for R&D and clinical studies and personnel costs. If we fail to implement these measures, there may be significant risk to the Group's continued existence and we may have to curtail or cease operations and/or file for insolvency proceedings.

6.5. No Significant Change

Between June 30, 2019 and the date of the Prospectus, no significant change in the financial position of the Group for which the Unaudited Consolidated Interim Financial Statements as of and for the six-month period ended June 30, 2019 are provided in the Prospectus, has occurred. For information on current trading, see *21. "Recent Developments and Outlook"*.

7. OPERATING AND FINANCIAL REVIEW

Our historical results are not necessarily indicative of the results that should be expected in the future, and our interim results are not indicative of the results that should be expected for the full year or any other period. Investors should read the following discussion and analysis of our financial position and results of operations in conjunction with the additional financial information contained in the Prospectus, in particular, in the sections 1. "Risk Factors", 6. "Capitalization and Indebtedness" as well as the Audited Consolidated Financial Statements, Unaudited Consolidated Financial Statements and the Audited Unconsolidated Financial Statements included in the section 19. "Financial Information" of the Prospectus beginning on page F-1.

7.1. Overview

We are a commercial-stage molecular diagnostics company focused on patient-friendly, blood-based in vitro diagnostic ("**IVD**") tests for the screening and diagnosis of cancer. We develop cancer diagnostic tests, mainly in the colorectal cancer, liver and lung cancer fields.

Our key product, Epi proColon, a blood-based screening test for the detection of colorectal cancer, was approved for sale in the United States by the U.S. Food and Drug Administration ("**FDA**") in April 2016. In addition to the U.S. version of Epi proColon, we market a slightly modified version of the product under the name Epi proColon 2.0 CE directly or through distributors in countries with established screening policies, including select European and Southeast Asian markets.

Furthermore, based on promising results from clinical studies, we plan to take additional steps towards marketing a blood-based screening test ("**HCCBloodTest**") for the identification of liver cancer, or hepatocellular carcinoma ("**HCC**"), in patients suffering from cirrhosis in the future.

We also achieved a CE mark for our product Epi proLung in 2017. This product is a blood-based test to assist in the detection of lung cancer in blood plasma. Epi proLung is based on a combination of certain of our proprietary DNA methylation biomarkers. Our goal is to continue to optimize the performance of the product in order to initiate the prospective trials necessary for larger scale adoption.

For additional information on our business, see *10. "Business"*.

7.2. Performance Indicators

We use financial and non-financial performance indicators to control and monitor the success of our activities on an ongoing basis. The financial indicators used to manage our operations include revenue, gross margin, EBIT, EBITDA before share-based payment expenses, the operating result and earnings per share. Revenue and EBITDA before share-based payment expenses are our key indicators with regard to managing the Company and, therefore, our financial market reporting. As we remain reliant on external funding from investors to support our business operations, our cash consumption is among the important financial indicators and is therefore monitored extremely closely and reported regularly.

Certain of the financial indicators presented in this section and throughout the Prospectus, *i.e.*, gross margin, EBIT, EBITDA, EBITDA before share-based payment expenses and earnings per share, are not presented in accordance with IFRS or any other generally accepted accounting principles. We present these non-IFRS measures as (i) they are used by our management to measure operating performance, including in presentations to the members of the Executive Board and our Supervisory Board, and as a basis for strategic planning and forecasting, and (ii) they

represent similar measures that we believe are widely used by certain investors, securities analysts and other parties as supplemental measures of operating and financial performance. These non-IFRS measures may enhance management's and investors' understanding of our financial performance and liquidity by excluding items that are outside of our ongoing operations, such as taxes on income, costs of capital and non-cash expenses. For example, we believe that EBITDA is widely used by investors to measure our operating performance before depreciation and amortization in particular because depreciation and amortization under IFRS can vary substantially from company to company depending on the accounting methods, carrying amount of assets, and capital structure or method by which assets were acquired and are therefore less comparable as a result. However, these non-IFRS measures are defined by us and may not be comparable to similarly titled or other similar measures used by other companies, have limitations as analytical tools and should not be considered in isolation or as a substitute for analysis of our operating results as reported under IFRS. The non-IFRS measures are not measurements of our performance or liquidity under IFRS and should not be considered as alternatives to total comprehensive income for the year/period or any other performance measures derived in accordance with IFRS or any other generally accepted accounting principles or as alternatives to cash flow from operating, investing or financing activities.

The non-financial performance indicators important for our business primarily relate to our R&D and commercial activities. This set of indicators includes sensitivity and specificity numbers for our products as obtained from scientific studies and the results of studies published in renowned scientific journals as well as the number of tests performed using our products. Progress in obtaining market approval from health authorities, the successful passing of audits of our quality management system, and reaching benchmarks and milestones in our development activities are further important indicators in measuring achievement of our targets and in helping us manage our internal activities and external communication. Last but not least, we monitor customer satisfaction using indicators such as delivery and/or turnaround times, number and nature of audit findings and complaint rates.

The following table shows selected financial performance indicators for the Group where available and, as applicable, for our geographical markets, for the six-month periods ended June 30, 2019 and 2018, as well as for the financial years ended December 31, 2018 and 2017.

	Six–month periods ended June 30,		**Financial Year ended December 31,**	
	2019	**2018**	**2018**	**2017**
(EUR thousand)	**(unaudited)**		**(audited, unless indicated otherwise)**	
Revenue	679	771	1,533	1,864
thereof: Europe	139	128	296	280
thereof: North America	504	247	637	943
thereof: Rest of the world	36	396	600*	641*
Operating result/Earnings before interest and taxes (EBIT)[1]	**(7,980)**	**(5,829)**	**(12,895)**	**(10,289)**
Depreciation and amortization	240	151	308	343
EBIT before depreciation and amortization (EBITDA)[2]	**(7,740)**	**(5,678)**	**(12,587)**	**(9,946)**
Share-based payment expenses[3]	494	293	1,151	577
EBITDA before share-based payment expenses[4]	**(7,246)**	**(5,385)**	**(11,436)**	**(9,369)**
Net cash flow[5]	(8,085)	(4,253)	3,647	1,375
Cash consumption[6]	(7,817)	(4,180)	(9,627)	(10,124)
Total liquidity[7] at end of the period	9,137	9,360	17,140*	13,731*

* Unaudited.

[1] Operating result/Earnings before interest and taxes (EBIT) is defined as total comprehensive income for the year/period before other comprehensive income for the year/period, taxes on income, other financial result, interest expenses and interest income. Operating result/Earnings before interest and taxes (EBIT) is a non-IFRS measure defined by us and may not be comparable to similarly titled or other similar measures used by other companies, have limitations as analytical tool and should not be considered in isolation or as a substitute for analysis of our operating results as reported under IFRS.

[2] EBIT before depreciation and amortization (EBITDA) is defined as total comprehensive income for the year/period before other comprehensive income for the year/period, taxes on income, other financial result, interest expenses, interest income, depreciation and amortization. EBIT before depreciation and amortization (EBITDA) is a non-IFRS measure defined by us and may not be comparable to similarly titled or other similar measures used by other companies, have limitations as analytical tool and should not be considered in isolation or as a substitute for analysis of our operating results as reported under IFRS.

[3] Share-based payment expenses are defined as the change in the total fair value of all granted stock options and phantom stock rights over the financial year/period. The fair value of granted stock options is determined in accordance with IFRS 2 (Share-based Payment) by simulation of the future movement in the Company's share capital on the basis of market parameters (*e.g.*, volatility and risk free rate) and normal distributed random numbers (Monte Carlo simulation). The fair value of the stock options is expensed over the expected option term of up to four years against the capital reserve. The valuation date is the grant date. The fair value of phantom stock rights granted in previous years is calculated using the binomial model based on the Cox-Ross-Rubinstein model in accordance with IFRS 2 (Share-based Payment), and recognized *pro rata temporis* as expenses and as a provision due to the obligation of the Company for a cash settlement in the future. If phantom stock rights are held by current employees of the Group, the related expenses are recorded as personnel costs and included in the payroll provisions. If phantom stock rights are held by former employees of the Group, the related expenses are recorded as other costs and included in other provisions.

[4] EBITDA before share-based payment expenses is defined as EBITDA (as defined above) adjusted for the line item share-based payment expenses. EBITDA before share-based payment expenses is a non-IFRS measure defined by us and may not be comparable to similarly titled or other similar measures used by other companies, have limitations as analytical tool and should not be considered in isolation or as a substitute for analysis of our operating results as reported under IFRS.

[5] Net cash flow is defined as the sum of cash flow from operating activities, cash flow from investing activities and cash flow from financing activites.

[6] Cash consumption is defined as the sum of cash flow from operating activites, cash flow from investing activities and transactions in securities, whereby this measure, until December 31, 2017, comprised also payments from operating leasing contracts, which as from January 1, 2019 is included in cash flow from financing activities. In the first six month of 2019, cash outflow from leasing contracts amounted to EUR 0.1 million. The calculation of cash consumption in the period under review is set out in the following table.

	Six–month periods ended June 30,		**Financial Year ended December 31,**	
	2019	**2018**	**2018**	**2017**
(EUR thousand)	**(unaudited)**		**(audited)**	
Cash flow from operating activities	(7,773)	(4,147)	(10,351)	(9,576)
Cash flow from investing activities	(44)	(33)	724	(548)
Net proceeds from transactions in securities	0	0	0	0
Cash consumption	**(7,817)**	**(4,180)**	**(9,627)**	**(10,124)**

[7] Total liquidity is defined as the sum of cash, cash equivalents and marketable securities.

7.3. Key Factors Affecting Results of Operations, Financial Position and Cash Flows

We believe that the factors discussed below have significantly affected our results of operations, financial position and cash flows in the past periods for which financial information is presented in the Prospectus, and expect that these factors will continue to have a material influence on our results of operations, financial position and cash flows in the future.

For a discussion of certain factors that may adversely affect our results of operations, financial position and cash flows, see also *1. "Risk Factors"*.

7.3.1. Commercialization of our Key Product and Product Candidates

Historically we pursued a business model focused on the identification and out-licensing of various biomarkers, for which we received royalty payments from the licensee laboratories. With the development and FDA approval (in 2016) of our Epi proColon blood-based colorectal cancer test, our key product, we have transitioned to a new business model, where we focus on developing molecular cancer diagnostic tests, in particular IVD tests that use our proprietary biomarkers in highly regulated markets for the screening, early detection and diagnosis of cancer.

In the United States, we are currently focused on the commercialization of Epi proColon, in partnership with our commercial partner for North America, Polymedco Cancer Diagnostics Products LLC, New York, United States ("**Polymedco**"). On September 28, 2018, we entered into an amended and restated joint commercialization agreement with Polymedco (as amended, the "**Sales Partnership Agreement**"; see *11.1. "Material Agreements — Sales Partnership Agreement with Polymedco"*). Under the Sales Partnership Agreement, Polymedco acts as a sales and marketing agent in the United States on a commission basis to distribute Epi proColon to clinical and genetic laboratories ("**Laboratory Customers**"). In contrast to the previous version of our agreement with Polymedco, we have taken over a number of responsibilities from Polymedco, including customer service, logistics, warehousing, delivery and billing. We believe this change has brought us closer to the customer than before and gives us greater economic efficiency.

We have made significant progress in achieving nationwide availability for Epi proColon, and are now working on reimbursement for the test, specifically by Medicare, a national health insurance program in the United States which we estimate covers approximately 40% of potential patients who could be tested using Epi proColon in the United States (*i.e.,* patients 65 to 75 years of age; estimate based on U.S. Census data) ("**Medicare**"). Medicare patients not only represent a large portion of the relevant market for Epi proColon, but Medicare has also typically been viewed as a market benchmark for pricing and benefit coverage.

Additionally, we sell and license our products directly or through distributors in countries with established screening policies, including, but not limited to, select European markets. A version of Epi proColon is CE marked and approved for sale in all countries that accept the CE mark as a pre-requisite for commercialization, as well as in China, where it was approved for commercialization in December 2014 by the China Food and Drug Administration, which is now the National Medical Products Administration ("**NMPA**").

Our customers can currently be categorized in three groups:

- In the United States, we sell our products to Laboratory Customers either directly or through our commercial partner Polymedco, to which we pay a commission fee on a per-test basis;

- In certain countries, we sell our products to regional distributors, which hence qualify as our direct customers. These commercial partners in turn sell our products to Laboratory Customers, which are generally our indirect customers; and
- In certain other countries, including, *inter alia*, some European and Asian countries, we also sell our products directly to Laboratory Customers and other small customers with currently non-material ordering volumes, such as clinics and researchers.

The FDA and NMPA approval of our key product Epi proColon and subsequent commercialization efforts have significantly affected our results of operations in the periods under review and are expected to continue to do so in the future. In 2018, product sales made up more than half of our overall revenue for the first time, with a large share generated through our business in the United States.

In the future, we strive for the inclusion of Epi proColon (and other products and product candidates, once approved) in official guidelines, which we believe to be used by health care payors as input for their payment determinations and to have a great influence on reimbursement decisions and commercial adoption. Such decisions are expected to significantly affect our future results of operations. In particular, we expect guideline inclusion and final reimbursement decisions in the United States to affect our revenue from product sales. For further details on reimbursement and guideline inclusion see also *10.7. "Business — Epi proColon Reimbursement and Price Determination".*

7.3.2. Trends, Conditions and Expected Developments in our Market

Innovative technologies in our industry include promising new and improved diagnostic and therapeutic measures which contribute to improved outcomes for patients and increasing effectiveness for healthcare systems, such as, in our view, our key product Epi proColon. Nevertheless, in prosperous countries worldwide the market environment is characterized by health reforms, pressure on costs and prices and by the rather weak economic situation in general. According to the Deloitte 2019 Global Health Care Outlook, health care demand and expenditures continue to increase due to aging and growing populations, greater prevalence of chronic diseases and exponential advances in innovative, but costly, digital technologies. Innovative technologies in our industry include promising new and improved diagnostic and therapeutic measures which contribute to improved outcomes for patients and increasing effectiveness for healthcare systems, such as, in our view, our key product Epi proColon. For molecular diagnostics in particular, annual growth rates of 8-9% are predicted for the coming years (sources: Overview of the Kalorama Report, Allied Market Research, Grand View Research).

We believe that our area of activity is also currently benefiting in particular from innovation and technological progress (*e.g.*, digital health applications), which has been a driver for the introduction of our products in the past. We believe that increased awareness of personalized medicine, large and aging populations with increasing income, as well as improved healthcare in the Asia-Pacific region may in the future be impacting demand for our products and thus affect our results of operations, financial position and cash flows. Also, the performance of our products when compared to the performance of alternative cancer screening methods is in our view an important factor for market acceptance.

In this market environment, we also believe the overall competitive situation to influence our business, in particular, as we are a small company in a market in which we compete with large competitors. This might make it difficult for us to penetrate our markets and hence impede our results of operations, financial position and cash flows. For additional information on our relevant

markets, their past and expected future development and the competition that we face in these markets, see also *9. "Markets and Competitive Environment".*

7.3.3. Funding and Liquidity

Our ability to obtain funding has significantly affected our financial position and cash flows in the past. Since inception, we have incurred significant operating losses. In particular, for the financial years ended December 31, 2018 and 2017, we incurred a net loss for the year of EUR 12,692 thousand and EUR 10,235 thousand, respectively. For the six-month periods ended June 30, 2019 and 2018, we incurred a net loss for the period of EUR 7,416 thousand and EUR 5,774 thousand, respectively, see also *7.8. "— Liquidity and Capital Resources*".

In particular, our business model is characterized by high research and development expenses, as well as selling, general and administrative costs, which we currently cannot solely fund by our cash flow from operating activities, as highlighted by the high levels of cash consumption in 2018 (EUR 9,627 thousand) and 2017 (EUR 10,124 thousand). Our cash and funding sources have in the past included cash contributions from capital increases, the issuance of convertible notes and public funding, for example via investment subsidies and research grants. The funds raised from the Offering may not be sufficient to reach the cash flow break-even point in the future and we will likely need to raise additional funds through public or private equity or debt financings, including grants from public institutions, corporate collaborations or licensing arrangements to continue to fund or expand our operations and our ability to raise additional funds will significantly affect our financial position and cash flows in the future, see also *1.4.1. "Risk Factors — Financial Risks — We may require additional capital after the capital increase to finance our business operations, and if we cannot raise sufficient capital with the capital increase or additional capital when needed, we may have to curtail or cease operations and/or file for insolvency proceedings. "*

7.3.4. Share Based Payments

Our results of operations, financial position and cash flows have in the past been significantly impacted by effects of the valuation and exercises of PSRs, a long-term performance-based compensation used by us. The PSRs entitle their holders (once certain vesting and waiting periods have passed) to payment in cash of the absolute difference between the current price of a Share on the exercise date and the exercise price of the PSR ("**PSR Premium**"). As PSRs are settled by payment in cash of the PSR premium at their exercise, we regularly record a provision based on the fair values of the outstanding rights. The fair value of outstanding PSRs depends on the development of the Company's share price and can fluctuate significantly, see also *1.4.6. "Risk Factors — Financial Risks — Management valuations in our balance sheet and/or our statement of profit or loss depend on many factors that may be especially difficult to predict for novel products like blood-based cancer tests, and incorrect valuations may cause decisions which prove overly risky or cause liquidity crises."* In 2017, the share-based payment expenses for PSR amounted to EUR 122 thousand and included a fluctuation of the fair value of the rights in the amount of EUR 109 thousand. In 2018, the share-based payment expenses for PSR amounted to EUR 0 thousand and included a fluctuation of the fair value of the rights in the amount of EUR 2 thousand.

In order to reduce liquidity effects of our performance-based share component in the future, we launched new stock option programs in 2016, 2017 and 2019, the SOP 16-18 (as defined below), the SOP 17-19 (as defined below) and the SOP 19-21 (as defined below), respectively, as incentive schemes especially for our senior management team, see also *16.5.1.1. "Governing Bodies — Stock Option Programs – Phantom Stock Programs — Stock Option Programs — SOP 16-18", 16.5.1.2. "Governing Bodies — Stock Option Programs – Phantom Stock Programs —*

Stock Option Programs — SOP 17-19" and 16.5.1.3. "Governing Bodies — Stock Option Programs – Phantom Stock Programs — Stock Option Programs — SOP 19-21". In October 2017, we issued further 429,920 and 152,580 rights from the SOP 16-18 and the SOP 17-19, respectively. The exercise price of these rights was set at EUR 5.10 per Share and these newly issued stock option rights will not be exercisable before October 2021. In April 2018, we issued further 366,250 and 318,750 rights from the SOP 16-18 and the SOP 17-19, respectively. The exercise price of these rights was set at EUR 4.12 per Share and these newly issued stock option rights will not be exercisable before April 2022. Until June 30, 2019 we have issued further 611,170 rights from the Stock Option Program 17-19. The exercise price of these rights was set at EUR 1.92 per Share and these newly issued stock option rights will not be exercisable before April 2023. Measurement of the stock options granted gave rise to share-based payment expenses in 2018 of EUR 1,151 thousand (compared to EUR 455 thousand in 2017).

The development of the Company's share price is however still expected to affect our personnel costs in the future as, in particular, our phantom stock programs ("**PSPs**") based on PSRs (albeit having been discontinued in the meantime) have not yet expired, see also *16.5.2. "Governing Bodies — Phantom Stock Programs".*

7.4. Comparability of our Financial Statements as a Result of the Application of New and Revised IFRS

From the financial year to end on December 31, 2019 onwards, we applied the new IFRS 16 (Leases), the first-time adoption of which had an effect on our Unaudited Consolidated Interim Financial Statements. When first applying the modified retrospective model, we opted for the transitional relief for short-term leases and low-value assets.

As a result of the first-time application of the new IFRS 16 (Leases), liabilities from our rental agreements are no longer treated as off-balance-sheet obligations, but were recognized as liabilities as of January 1, 2019 (Berlin) and April 2019 (San Diego), respectively. Correspondingly, based on the current contractual situation and parameters, the rental agreement of the Company was capitalized as a non-current asset in the amount of EUR 685 thousand as of January 1, 2019. This value takes into account our contractually agreed option to extent the contract until April 30, 2026. The rental agreement of our U.S. subsidiary was capitalized as a non-current asset in the amount of EUR 393 thousand in April 2019. These reclassifications led to an extension of the balance sheet and a reduction in the equity ratio compared with the closing balance sheet for the 2018. The statement of comprehensive income now shows amortization and interest expense from the leases in question instead of the rental expense previously recognized, which led to a slight improvement in EBIT, EBITDA and EBITDA before share-based payment expenses. For further details see page F-21 (page 16 of the Unaudited Consolidated Interim Financial Statements).

7.5. Comparison of the Results of Operations for the Six-Month Periods Ended June 30, 2019 and 2018

The following table sets forth our consolidated statement of profit or loss and other comprehensive income for the six-month periods ended June 30, 2019 and 2018.

	Six-month period ended June 30,		
	2019	Change (in %)	2018
(EUR thousand unless otherwise indicated)		(unaudited)	
Revenue	**679**	**(11.9)**	**771**

	Six-month period ended June 30,		
	2019	Change (in %)	2018
(EUR thousand unless otherwise indicated)		(unaudited)	
Cost of sales	(165)	3.1	(160)
Gross profit	**514**	**(15.9)**	**611**
Gross margin (in %)	75.7	n/a	79.2
Other income	768	56.1	492
Research and development costs	(3,867)	27.1	(3,043)
Selling, general and administrative costs	(4,859)	25.1	(3,883)
Other expenses	(536)	8,833.3	(6)
Operating result/earnings before interest and taxes (EBIT)	**(7,980)**	**36.9**	**(5,829)**
Interest income	112	1,144.4	9
Interest expenses	(29)	(89.7)	(281)
Other financial result	(1)	0	(1)
Net loss for the period before taxes on income	**(7,898)**	**29.4**	**(6,102)**
Taxes on income	482	47.0	328
Net loss for the period	**(7,416)**	**28.4**	**(5,774)**
Items that may be reclassified subsequently to profit or loss:			
Exchange rate differences from the conversion of foreign entities	(37)	(81.3)	(198)
Fair value adjustment of financial instruments measured at fair value through other comprehensive income	47	n/a	(124)
Other comprehensive income for the period	**10**	**n/a**	**(322)**
Total comprehensive income for the period	**(7,406)**	**(21.5)**	**(6,096)**
Earnings per share (basic and diluted) in EUR	(0.21)	12.5	(0.24)

7.5.1. Revenue

Our revenue comprises (i) revenue from product sales (own and third-party), (ii) revenue from sale of non-capitalized property rights, (iii) licensing income, and (iv) R&D income and reimbursements.

Revenue from product sales (own and third-party) includes sales made through our own sales channels and distribution partners and royalties received from third parties that render services (such as laboratory-developed tests ("**LDTs**")) based on our products to third parties. Revenue from sale of non-capitalized property rights comprise of revenue from the sale of patents. We generate licensing income by out-licensing of our intellectual property (*e.g.*, technologies, biomarkers) to third parties. We generate R&D income and reimbursements by rendering services in connection with contract research and by charging pass-through costs to third parties.

The following table sets forth our revenue by type for the six-month periods ended June 30, 2019 and 2018:

	Six-month period ended June 30,			
	2019		2018	
	(unaudited)			
	(EUR thousand)	(% of total)	(EUR thousand)	(% of total)
Product sales (own and third-party)	660	97.2	358	46.5
Licensing income	19	2.8	413	53.5
Total revenue	679	100.0	771	100.0

Total revenue decreased by EUR 92 thousand, or 11.9%, from EUR 771 thousand in the six-month period ended June 30, 2018, to EUR 679 thousand in the six-month period ended June 30, 2019. This decrease was due to lower licensing income which decreased by EUR 394 thousand, or 95.4%, from EUR 413 thousand in the six-month period ended June 30, 2018, to EUR 19 thousand in the six-month period ended June 30, 2019, representing 2.8% of our total revenue in the six-month period ended June 30, 2019, compared to 53.5% in the six-month period ended June 30, 2018. The main reason for this decrease was our decision to terminate the collaboration and exclusive licencing agreement with our Chinese partner BioChain regarding the licensing of the Septin9 marker and the exclusive distribution rights for Epi proColon 2.0 CE, in particular, in China (the "**BioChain Colon Agreement**") with immediate effect as from March 2019.

As a balancing effect, revenue from product sales (own and third-party) increased by EUR 302 thousand, or 84.4%, from EUR 358 thousand in in the six-month period ended June 30, 2018, to EUR 660 thousand in in the six-month period ended June 30, 2019, representing 97.2% of our total revenue in in the six-month period ended June 30, 2019, compared to 46.5% in the six-month period ended June 30, 2018. This increase was mainly due to an increase of product sales in the United States.

The following table sets forth our revenue by geographical market:

	Six-month period ended June 30,			
	2019		2018	
	(unaudited)			
	(EUR thousand)	(% of total)	(EUR thousand)	(% of total)
Europe	139	20.4	128	16.6
North America	504	74.3	247	32.0
Rest of the world	36	5.3	396	51.4
Total revenue	679	100.0	771	100.0

Revenue in North America increased by EUR 257 thousand, or 104.1%, from EUR 247 thousand in the six-month period ended June 30, 2018, to EUR 504 thousand in the six-month period ended June 30, 2019, representing 74.3% of our total revenue in the six-month period ended June 30, 2019, compared to 32.0% in the six-month period ended June 30, 2018. This increase was principally due to the abovementioned higher product sales.

Revenue in Rest of the world decreased by EUR 360 thousand, or 90.9%, from EUR 396 thousand in the six-month period ended June 30, 2018, to EUR 36 thousand in the six-month period ended June 30, 2019, representing 5.3% of our total revenue in the six-month period ended June 30, 2019, compared to 51.4% in the six-month period ended June 30, 2018. This was mainly due to the termination of the abovementioned contract with our Chinese licensing partner BioChain.

7.5.2. Cost of Sales

In the six-month period ended June 30, 2019, our cost of sales increased by EUR 5 thousand, or 3.1%, to EUR 165 thousand from EUR 160 thousand in the six-month period ended June 30, 2018. This increase was due to an increase in materials and consumables by EUR 5 thousand, or 3.3%, to EUR 158 thousand in the six-month period ended June 30, 2019, compared to EUR 153 thousand in the six-month period ended June 30, 2018, as a result of the increase of product sales and corresponding manufacturing.

7.5.3. Gross Margin

Our gross margin decreased from 79.2% in the six-month period ended June 30, 2018, to 75.7% in the six-month period ended June 30, 2019. Besides the general opposing effects of a decrease in our revenue with a slight increase of cost of sales, this decrease of our gross margin in the six-month period ended June 30, 2019 was also attributable to the aforementioned drop in the ratio of licensing income to our total revenue, as licensing income is essentially characterized by very low cost of sales.

7.5.4. Other Income

Other income increased by EUR 276 thousand, or 56.1%, from EUR 492 thousand in the six-month period ended June 30, 2018, to EUR 768 thousand in the six-month period ended June 30, 2019. This increase was primarily attributable to an increase of foreign exchange rate gains which increased by EUR 442 thousand, or 179.0% from EUR 247 thousand in the six-month period ended June 30, 2018, to EUR 689 thousand in the six-month period ended June 30, 2019, mainly due to the development of the U.S. dollar against the Euro. As a partial counter effect, income from the reversal of provisions decreased by EUR 163 thousand, or 89.1%, from EUR 183 thousand in the six-month period ended June 30, 2018, to EUR 20 thousand in the six-month period ended June 30, 2019. In the six-month period ended June 30, 2018, lower share-based payments for PSRs had led to a reversal of provisions in the amount of EUR 183 thousand, a one-off effect which was not repeated in the six-month period ended June 30, 2019.

7.5.5. R&D Costs

In the six-month period ended June 30, 2019, R&D costs increased by EUR 824 thousand, or 27.1%, to EUR 3,867 thousand from EUR 3,043 thousand in the six-month period ended June 30, 2018. This increase was primarily due to higher other costs within R&D costs which increased from EUR 1,402 thousand in the six-month period ended June 30, 2018 to EUR 1,909 thousand in the six-month period ended June 30, 2019. This was mainly due to higher expenses in connection with the post-approval study for Epi proColon and the HCC study in the United States. Additionally, costs of materials and consumables increased to EUR 463 thousand in the six-month period ended June 30, 2019, from EUR 213 thousand in the six-month period ended June 30, 2018. This increase was primarily due to write-downs on expired materials.

7.5.6. SG&A Costs

SG&A costs increased by EUR 976 thousand, or 25.1%, from EUR 3,883 thousand in the six-month period ended June 30, 2018, to EUR 4,859 thousand in the six-month period ended June 30, 2019. This decrease was mainly related to higher other costs reported under SG&A costs which increased by EUR 502 thousand, or 26.7%, from EUR 1,880 thousand in the six-month period ended June 30, 2018, to EUR 2,382 thousand in the six-month period ended June 30, 2019, primarily due to an increase in sales and marketing activities as well as increased costs for legal advice. In addition, personnel costs increased by EUR 406 thousand, or 20.7%, from EUR 1,959 thousand in the six-month period ended June 30, 2018, to EUR 2,365 thousand in the six-month period ended June 30, 2019. This increase was largely related to share-based payment expenses accounted for under personnel costs in SG&A costs and which increased to EUR 494 thousand in the six-month period ended June 30, 2019, from EUR 293 thousand in the six-month period ended June 30, 2018, primarily because the valuation of phantom stock rights in the six-month period ended June 30, 2018 had led to a reduction in costs in such period.

7.5.7. Other Expenses

Other expenses increased by EUR 530 thousand from EUR 6 thousand in the six-month period ended June 30, 2018, to EUR 536 thousand in the six-month period ended June 30, 2019. This increase was mainly related exchange rate losses from currency translation primarily as a result of the development of the U.S. dollar against the Euro.

7.5.8. Operating Result/Earnings before Interest and Taxes (EBIT)

Our operating result/earnings before interest and taxes (EBIT) decreased by EUR 2,151 thousand, or 36.9%, from EUR (5,829) thousand in the six-month period ended June 30, 2018, to EUR (7,980) thousand in the six-month period ended June 30, 2019.

The main reasons for this decrease were the increase of SG&A costs, R&D costs and other expenses, as well as the decrease of our revenue by EUR 92 thousand in the six-month period ended June 30, 2019, in each case compared to the six-month period ended June 30, 2018 and as set out above.

7.5.9. Total Financial Result

In the six-month period ended June 30, 2019, the total financial result increased by EUR 355 thousand to EUR 82 thousand from EUR (273) thousand in the six-month period ended June 30, 2018. This increase was primarily related to lower interest expenses which amounted to EUR (29) thousand in the six-month period ended June 30, 2019, compared to EUR (281) thousand in the six-month period ended June 30, 2018, mainly as a result of the repayment of a convertible note to a Chinese investor towards the end of 2018. Furthermore, interest income increased to EUR 112 thousand in the six-month period ended June 30, 2019, compared to EUR 9 thousand in the six-month period ended June 30, 2018. This was mainly due to higher volumes of U.S. dollar fixed term deposits which led to higher interest income in the six-month period ended June 30, 2019.

7.5.10. Taxes on Income

Income contribution related to taxes on income increased by EUR 154 thousand, or 47.0%, from EUR 328 thousand in the six-month period ended June 30, 2018, to EUR 482 thousand in the six-month period ended June 30, 2019. This increase related to deferred taxes on loss carry-forwards of our U.S. subsidiary.

7.5.11. Net Loss for the Period/Earnings per Share

Net loss for the period increased by EUR 1,642 thousand, or 28.4%, to EUR 7,416 thousand in the six-month period ended June 30, 2019, from EUR 5,774 thousand in the six-month period ended June 30, 2018, mainly due to the abovementioned decrease in our operating result/earnings before interest and taxes (EBIT), whereas the increase of our total financial result and higher income contribution related to taxes on income had a partial balancing effect on our net loss for the period, all as described above.

The loss per share (basic and diluted) decreased to EUR 0.21 in the six-month period ended June 30, 2019, from EUR 0.24 in the six-month period ended June 30, 2019. Irrespective of our higher net loss for the period, the increased average number of issued Shares in the six-month period ended June 30, 2019, compared to the six-month period ended June 30, 2018, contributed to this decrease in loss per share.

7.6. Comparison of the Results of Operations for the Financial Years Ended December 31, 2018 and 2017

The following table sets forth our consolidated statement of profit or loss and other comprehensive income for the financial years ended December 31, 2018 and 2017:

	Financial Year ended December 31,		
	2018	Change (in %)	2017
(EUR thousand unless otherwise indicated)	**(audited)**	**(unaudited)**	**(audited)**
Revenue	1,533	(17.8)	1,864
Cost of sales	(440)	78.9	(246)
Gross profit	**1,093**	**(32.4)**	**1,618**
Gross margin (in %)	71.3	n/a	86.8
Other income	1,441	36.7	1,054
Research and development costs	(6,418)	48.3	(4,329)
Selling, general and administrative costs	(8,703)	8.3	(8,035)
Other expenses	(308)	(48.4)	(597)
Operating result/earnings before interest and taxes (EBIT)	**(12,895)**	**25.3**	**(10,289)**
Interest income	17	(5.6)	18
Interest expenses	(550)	214.3	(175)
Other financial result	(2)	(33.3)	(3)
Net loss for the period before taxes on income	(13,430)	28.5	(10,449)
Taxes on income	**738**	**244.9**	**214**
Net loss for the year	**(12,692)**	**24.0**	**(10,235)**
Items that may be reclassified subsequently to profit or loss:			
Exchange rate differences from the conversion of foreign entities	(321)	(199.7)	322
Fair value adjustment of financial instruments measured at fair value through other comprehensive income	(252)	n/a	152
Other comprehensive income for the period	(573)	n/a	474
Total comprehensive income for the year	(13,265)	(35.9)	(9,761)
Earnings per share (basic and diluted) in EUR	**(0.47)**	**(6.8)**	**(0,44)**

7.6.1. Revenue

The following table sets forth our revenue by type for the financial years ended December 31, 2018 and 2017:

	Financial Year ended December 31,			
	2018		2017	
	(audited)			
	(EUR thousand)	(% of total)	(EUR thousand)	(% of total)
Product sales (own and third-party)	808	52.7	548	29.4
Licensing income	636	41.5	1,271	68.2
R&D income and reimbursements	46	3.0	45	2.4
Other	43	2.8	0	0
Total revenue	**1,533**	**100.0**	**1,864**	**100.0**

In 2018, total revenue decreased by EUR 331 thousand, or 17.8%, to EUR 1,533 thousand from EUR 1,864 thousand in 2017.

The major part of this decrease was attributable to revenue from licensing income which decreased by EUR 635 thousand, or 50.0%, from EUR 1.271 thousand in 2017 to EUR 636 thousand in 2018, representing 41.5% of our total revenue in 2018 (compared to 68.2% in 2017). This decrease was mainly due to a new out-licensing agreement with a European customer under which we generated a one-off out-licensing item that raised our overall licensing income in 2017 and which was not repeated in 2018. In 2018, most of our licensing income was generated from our (former) Chinese partner BioChain under the BioChain Colon Agreement which we terminated in March 2019 (see also *11.2.1.1. "Material Agreements — License Agreements — BioChain Agreements — License for Septin9 Biomarker"*).

In contrast, revenue from product sales (own and third-party) increased by EUR 260 thousand, or 47.4%, from EUR 548 thousand in 2017 to EUR 808 thousand in 2018, which represented 52.7% of our total revenue in 2018 (compared to 29.4% in 2017), in particular due to higher sales of Epi proColon in the United States. Additionally, other revenue increased to EUR 43 thousand in 2018 from EUR nil in 2017, primarily due to a one-off payment received from Polymedco in connection with the renegotiation of our joint commercialization agreement.

The following table sets forth our revenue by geographical market:

	Financial Year ended December 31,			
	2018		2017	
	(audited)			
	(EUR thousand)	(% of total)	(EUR thousand)	(% of total)
Europe	296	19.3	280	15.0
North America	637	41.6	943	50.6
Asia	598	39.0	638	34.2
Rest of the world	2	0.1	3	0.2
Total revenue	**1,533**	**100.0**	**1,864**	**100.0**

Revenue in Europe increased by EUR 16 thousand, or 5.7%, from EUR 280 thousand in 2017 to EUR 296 thousand in 2018, representing 19.3% of our total revenue in 2018, compared to 15.0% in 2017. This increase was mainly due to increased licensing income from a German pharmaceutical and diagnostics company.

Revenue in North America decreased by EUR 306 thousand, or 32.5%, from EUR 943 thousand in 2017 to EUR 637 thousand in 2018, representing 41.6% of our total revenue in 2018 (compared to 50.6% in 2017). This decrease was principally due to product sales to Polymedco in 2017, which were not repeated in 2018.

Revenue in Asia decreased by EUR 40 thousand, or 6.3%, from EUR 638 thousand in 2017 to EUR 598 thousand in 2018, representing 39.0% of our total revenue in 2018, compared to 34.2% in 2017. This decrease was mainly due to lower annual royalties from our partner BioChain.

7.6.2. Cost of Sales

Cost of sales increased by EUR 194 thousand, or 78.9%, from EUR 246 thousand in 2017 to EUR 440 thousand in 2018. This increase was principally due to an increase in materials and consumables by EUR 225 thousand, or 114.2%, from EUR 197 thousand in 2017 to EUR 422 thousand in 2018, mainly as a result of the increase in product sales (own and third-party), as mentioned above, and corresponding increased manufacturing costs. As a counter effect, other costs decreased by EUR 23 thousand, or 63.9%, from EUR 36 thousand in 2017 to EUR 13

thousand in 2018, primarily because royalty charges related to patents which expired in October 2017 were no longer incurred in 2018.

7.6.3. Gross margin

Our gross margin decreased from 86.8% in 2017 to 71.3% in 2018. Besides the general opposing effects of a decrease in our revenue with an increase of cost of sales, this decrease of our gross margin in 2018 was also attributable to the aforementioned drop in the ratio of licensing income to our total revenue, as licensing income is essentially characterized by very low cost of sales.

7.6.4. Other income

Other income increased by EUR 387 thousand, or 36.7%, from EUR 1,054 thousand in 2017 to EUR 1,441 thousand in 2018. This increase was mainly related to an increase of income from foreign exchange rate gains by EUR 702 thousand from EUR 2 thousand in 2017 to EUR 704 thousand in the 2018, mainly as a result of the the development of the U.S. dollar against the Euro. Additionally, third-party research grants from public authorities increased from nil in 2017 to EUR 58 thousand in 2018.

As counter effects, other income related to the reversal of write-downs on receivables decreased to EUR nil in 2018 from EUR 209 thousand in 2017. In 2017, other income related to the reversal of write-downs on receivables primarily related to an agreement with a customer on the payment of a formerly written-down receivable, whereas no such other income occurred in 2018. Furthermore, in 2018, income from the disposal of other assets decreased from EUR 161 thousand in 2017 to EUR 1 thousand. In 2017, income from the disposal of other assets was attributable due to the sale of our remaining shares in Epiontis GmbH, a company which had been spun-off from us in 2003, whereas no such other income occurred in 2018.

7.6.5. R&D Costs

R&D costs increased by EUR 2,089 thousand, or 48.3%, from EUR 4,329 thousand in 2017 to EUR 6,418 thousand in 2018. This increase was primarily attributable to an increase of other costs within R&D costs which increased by EUR 1,675 thousand from EUR 1,238 thousand in 2017 to EUR 2,913 thousand in 2018, to a large extent due to higher external costs that arose mainly in connection with carrying out our studies, in particular the post-approval study for Epi proColon in the United States. After lower-than-anticipated enrollment in 2017, the study proceeded in 2018 as planned. Furthermore, personnel costs within R&D costs increased by EUR 654 thousand from EUR 2,247 thousand in 2017 to EUR 2,901 thousand in 2018, mainly as a result of high levels of individual target achievement which caused a year-on-year increase in bonuses to be paid.

7.6.6. SG&A Costs

SG&A costs increased by EUR 668 thousand, or 8.3%, from EUR 8,035 thousand in 2017 to EUR 8,703 thousand in 2018. This increase was mainly due to an increase in personnel costs within SG&A costs by EUR 1,155 thousand to EUR 4,440 thousand in 2018 from EUR 3,285 thousand 2017. Besides the expansion of our Executive Board from two to three members, in particular the variable remuneration contributed to this increase, driven by high levels of individual target achievement in 2018. The new issue of employee option rights also incurred a greater expense.

As a counter effect, other costs within SG&A costs decreased by EUR 516 thousand to EUR 4,136 thousand in 2018 from EUR 4,652 thousand in 2017, primarily due to lower legal consultancy and audit costs which, in 2017, mainly comprised one-off costs in connection with the takeover offer received from a Chinese consortium of bidders.

7.6.7. Other Expenses

Other expenses decreased by EUR 289 thousand, or 48.4%, from EUR 597 thousand in 2017 to EUR 308 thousand in 2018. The main reason for this increase were foreign exchange rate losses which decreased by EUR 290 thousand from EUR 595 thousand in 2017 to EUR 305 thousand in 2018, mainly due to the development of the U.S. dollar against the Euro.

7.6.8. Operating Result/Earnings before Interest and Taxes (EBIT)

Our operating result/earnings before interest and taxes (EBIT) decreased by EUR 2,606 thousand, or 25.3%, from EUR (10,289) thousand in 2017 to EUR (12,895) thousand in 2018.

The main reasons for this decrease in 2018 were, besides the decrease of our revenue on the one hand with higher cost of sales on the other hand, the increase of R&D costs and of SG&A cost in 2018 by EUR 2,089 thousand and EUR 668 thousand, in each case compared to 2017 and as further described above.

7.6.9. Total Financial Result

Total financial result decreased by EUR 375 thousand from EUR (160) thousand in 2017 to EUR (535) thousand in 2018. This decrease was mainly due to higher interest and related expenses which amounted to EUR (550) thousand in 2018 compared to EUR (175) thousand in 2017, primarily as a result of the interest expense for the convertible note which was repaid to the Chinese investor just before the end of the year.

7.6.10. Taxes on Income

Income contribution related to taxes on income increased by EUR 524 thousand, or 244.9%, from EUR 214 thousand in 2017 to EUR 738 thousand in 2018, largely as a result of the above-mentioned effects of the U.S. tax reform enacted shortly before year-end 2017 which gave rise to a one-off item for us in 2017 due to remeasurement of the tax loss carryforwards that had accrued up to that point. This lowered the income that had accrued at that time accordingly.

7.6.11. Net Loss for the Year/Earnings per Share

Net loss for the year increased by EUR 2,457 thousand, or 24.0%, from EUR 10,235 thousand in 2017 to EUR 12,692 thousand in 2018, mainly due to the abovementioned decrease in our operating result/earnings before interest and taxes (EBIT), as well as the decrease of our total financial result, whereas taxes on income had a positive counter effect on our net loss for the year, all as described above.

The loss per share (basic and diluted) increased to EUR 0.47 in 2018, from EUR 0.44 in 2017. This was mainly due to the increase of our net loss for the year, whereas the increased average number of issued Shares in 2018, compared to 2017, had a partial counter effect.

7.7. Statement of Financial Position

The following table presents the consolidated balance sheet as of June 30, 2019, as well as of December 31, 2018 and 2017:

	As of June 30,	As of December 31,	
	2019	2018	2017
(EUR thousand)	**(unaudited)**	**(audited)**	
ASSETS			
Non-current assets			

	As of June 30,	As of December 31,	
	2019	2018	2017
(EUR thousand)	**(unaudited)**	**(audited)**	
Intangible assets	412	474	668
Property, plant and equipment	1,686	701	720
Deferred taxes	2,887	2,378	1,526
Total non-current assets	4,985	3,553	2,914
Current assets			
Inventories	422	364	293
Trade receivables	326	164	937
Marketable securities	700	653	905
Cash and cash equivalents	8,437	16,487	12,826
Other current assets	677	606	1,898
Total current assets	10,562	18,274	16,859
Total assets	**15,547**	**21,827**	**19,773**
EQUITY AND LIABILITIES			
Equity			
Subscribed capital	36,022	36,022	24,014
Capital reserve	69,299	68,802	59,509
Retained earnings	(85,807)	(73,115)	(62,880)
Net loss for the period	(7,416)	(12,692)	(10,235)
Other comprehensive income	(395)	(404)	169
Total equity	**11,703**	**18,613**	**10,577**
Non-current liabilities			
Liabilities from leasing contracts	804	–	–
Provisions	47	47	43
Total non-current liabilities	851	47	43
Current liabilities			
Trade payables	1,503	1,411	952
Liabilities from leasing contracts	205	–	–
Deferred income	23	23	0
Convertible notes issued	0	0	6,536
Other liabilities	762	771	562
Provisions	500	962	1,103
Total current liabilities	2,993	3,167	9,153
TOTAL EQUITY AND LIABILITIES	**15,547**	**21,827**	**19,773**

7.7.1. Non-Current Assets

As of June 30, 2019, our total non-current assets amounted to EUR 4,985 thousand, representing 32.1% of our total assets, compared to EUR 3,553 thousand as of December 31, 2018, representing 16.3% of our total assets, as well as compared to EUR 2,914 thousand as of December 31, 2017, representing 14.7% of our total assets. Non-current assets comprised intangible assets, representing 8.3%, 13.3% and 22.9% of our total non-current assets, property, plant and equipment, representing 33.8%, 19.7% and 24.7% of our total non-current assets and deferred taxes, representing 57.9%, 66.9% and 52.4% of our total non-current assets, in each case as of June 30, 2019 and as of December 31, 2018 and 2017, respectively.

The main reason for the increase in total non-current assets as of June 30, 2019, compared to December 31, 2018, was property, plant and equipment which increased by EUR 985 thousand to EUR 1,686 thousand as of June 30, 2019, compared to EUR 701 thousand as of December 31, 2018. This increase in property, plant and equipment was mainly due to an increase in fixtures/leasehold improvements which increased to EUR 1,311 thousand as of June 30, 2019, compared to EUR 342 thousand as of December 31, 2018, primarily as a result of the first-time application of the new IFRS 16 (Leases) as further set out above under *7.4. "Comparability of our Financial Statements as a Result of the Application of New and Revised IFRS"*. Additionally, deferred tax assets increased by EUR 509 thousand to EUR 2,887 thousand as of June 30, 2019, compared to EUR 2,378 thousand as of December 31, 2018, primarily due to tax loss carry-forwards recognized by our U.S. subsidiary. As a slight counter effect, intangible assets decreased by EUR 62 thousand to EUR 412 thousand as of June 30, 2019, compared to EUR 474 thousand as of December 31, 2018, mainly due to scheduled depreciation on capitalized development costs.

The increase in total non-current assets as of December 31, 2018, compared to December 31, 2017, was mainly attributable to deferred tax assets which increased by EUR 852 thousand from EUR 1,526 thousand as of December 31, 2017 to EUR 2,378 thousand as of December 31, 2018. This increase was primarily due to the significant increase in tax loss carry-forwards recognized by our U.S. subsidiary. As a slight counter effect, intangible assets decreased to EUR 474 thousand as of December 31, 2018, from EUR 668 thousand as of December 31, 2017, principally due to scheduled amortization. The annual amortization on capitalized development costs for Epi proColon and Epi proLung amounted to EUR 111 thousand and EUR 8 thousand in 2018, respectively.

7.7.2. Current Assets

As of June 30, 2019, our total current assets amounted to EUR 10,562 thousand, representing 67.9% of our total assets, compared to EUR 18,274 thousand as of December 31, 2018, representing 83.7% of our total assets, as well as compared to EUR 16,859 thousand as of December 31, 2017, representing 85.3% of our total assets. Current assets comprised cash and cash equivalents, representing 79.9%, 90.2% and 76.1% of our total current assets, marketable securities, representing 6.6%, 3.6% and 5.4% of our total current assets, inventories, representing 4.0%, 2.0% and 1.7% of our total current assets, trade receivables, representing 3.0%, 0.9% and 5.6% of our total current assets, and other current assets, representing 6.4%, 3.3% and 11.3% of our total current assets, in each case as of June 30, 2019 and as of December 31, 2018 and 2017, respectively.

The decrease in total current assets as of June 30, 2019, compared to December 31, 2018, was mainly attributable to a decrease of cash and cash equivalents by EUR 8,050 thousand from EUR 16,487 thousand as of December 31, 2018 to EUR 8,437 thousand as of June 30, 2019, primarily as a result of the cash consumption by our operating activities. As the main counter effect, other trade receivables increased by EUR 162 thousand to EUR 326 thousand as of June 30, 2019, from EUR 164 thousand as of December 31, 2018.

The increase in total current assets from EUR 16,859 thousand as of December 31, 2017 to EUR 18,274 thousand as of December 31, 2018, was primarily due to an increase of cash and cash equivalents which increased from EUR 12,826 thousand as of December 31, 2017, to EUR 16,487 thousand as of December 31, 2018. This increase was primarily a result of the gross proceeds received from our capital increase in October 2018. As a balancing effect, other current assets decreased by EUR 1,292 thousand to EUR 606 thousand as of December 31, 2018, from EUR 1,898 thousand as of December 31, 2017, mainly due to an incoming payment for claims still outstanding from a project funded by the EU which caused claims from grant projects accounted

for other current assets to decrease from EUR 808 thousand as of December 31, 2017 to EUR 1 thousand as of December 31, 2018. Additionally, trade receivables decreased by EUR 773 thousand from EUR 937 thousand as of December 31, 2017 to EUR 164 thousand as of December 31, 2018, mostly due to a single substantial receivable towards the end of 2017 which was settled during 2018.

7.7.3. Equity

As of June 30, 2019, the Company's total equity amounted to EUR 11,703 thousand, compared to EUR 18,613 thousand as of December 31, 2018, as well as compared to EUR 10,577 thousand as of December 31, 2017.

The decrease of our equity as of June 30, 2019, compared to December 31, 2018, was mainly a result of the decrease of retained earnings due to the transfer of the net loss for the year 2018.

The increase in equity as of December 31, 2018 to EUR 18,613 thousand, compared to EUR 10,577 thousand as of December 31, 2017, was mainly due to an increase of subscribed capital from EUR 24,014 thousand as of December 31, 2017, to EUR 36,022 thousand as of December 31, 2018, as a result of our capital increase in October 2018. Furthermore, our capital reserve increased from EUR 59,509 thousand as of December 31, 2017, to EUR 68,802 thousand as of December 31, 2018, mainly also as a result of the aforementioned capital increase to which a net increase of EUR 8,142 thousand was attributable, as well as the issuance of stock options to the members of the Executive Board and staff members to which an increase of EUR 1,151 thousand was related. As a counter effect, retained earnings decreased by EUR 10,235 thousand from EUR (62,880) thousand as of December 31, 2017 to EUR (73,115) thousand as of December 31, 2018, primarily due to the transfer of the net loss for the year 2017.

7.7.4. Non-Current Liabilities

As of June 30, 2019, our total non-current liabilities amounted to EUR 851 thousand compared to EUR 47 thousand as of December 31, 2018, as well as compared to EUR 43 thousand as of December 31, 2017.

The increase of our non-current liabilities from EUR 47 thousand as of December 31, 2018, to EUR 851 thousand as of June 30, 2019, exclusively related to non-current liabilities from leasing contracts in the amount of EUR 804 thousand due to the first-time application of IFRS 16 (Leases) and included liabilities from rental and leasing agreements.

7.7.5. Current Liabilities

As of June 30, 2019, our total current liabilities amounted to EUR 2,993 thousand compared to EUR 3,167 thousand as of December 31, 2018, as well as compared to EUR 9,153 thousand as of December 31, 2017. Current liabilities comprised primarily trade payables, representing 50.2%, 44.6% and 10.4% of total current liabilities, provisions, representing 16.7%, 30.4% and 12.1% of total current liabilities, other current liabilities, representing 25.5%, 24.3%, and 6.1% of total current liabilities, convertible notes issued, representing 0.0%, 0.0% and 71.4% of total current liabilities, in each case as of June 30, 2019, and December 31, 2018 and 2017, respectively, as well as current liabilities from leasing contacts, representing 6.8% of total current liabilities as of June 30, 2019.

The decrease in total current liabilities by EUR 174 thousand as of June 30, 2019, compared to December 31, 2018, was mainly due to the decrease of provisions from EUR 962 thousand as of December 31, 2018, to EUR 500 thousand as of June 30, 2019. The main reason for this decrease was the decrease of payroll provisions by EUR 436 thousand to EUR 443 thousand as

of June 30, 2019, compared to EUR 879 thousand as of December 31, 2018. As the major partial balancing effect, liabilities from leasing contracts increased to EUR 205 thousand as of June 30, 2019, compared to EUR nil as of December 31, 2018, due to the aformentioned first-time application of IFRS 16 (Leases).

The decrease in total current liabilities to EUR 3,167 thousand as of December 31, 2018, from EUR 9,153 thousand as of December 31, 2017, was mainly due to the repayment of the convertible note to the Chinese investor towards the end of 2018. Partially offsetting this, trade payables increased to EUR 1,411 thousand as of December 31, 2018, from EUR 952 thousand as of December 31, 2017, an increase which was attributable to effects relating to the reporting date. In addition, other current liabilities increased from EUR 562 thousand as of December 31, 2017, to EUR 771 thousand as of December 31, 2018, primarily as a result of higher claims on the part of our employees.

7.8. Liquidity and Capital Resources

Since inception, we have incurred significant operating losses. In particular, for the financial years ended December 31, 2018 and 2017, we incurred a net loss for the year of EUR 12,692 thousand and EUR 10,235 thousand, respectively. For the six-month periods ended June 30, 2019 and 2018, we incurred a net loss for the period of EUR 7,416 thousand and EUR 5,774 thousand, respectively.

We have funded our operations since the initial public offering of Shares in the Prime Standard segment of the Frankfurt Stock Exchange in Germany in 2004 primarily through private and public offerings of equity securities and convertible notes, grant revenues and revenues from our operating activities (*i.e.*, product sales, sale of intangible assets, licensing income, as well as R&D income and reimbursements).

In October 2018, the Company executed a capital increase with subscription rights of existing shareholders by issuance of 12,007,180 shares against contributions in cash and partially in kind at an issue price of EUR 1.86 per share. The transaction was registered with the commercial register (*Handelsregister*) of the local court (*Amtsgericht*) of Charlottenburg on October 24, 2018, and resulted in gross proceeds to us of EUR 22.33 million. For more information on this transaction, see *7.8.5.1. — Cash and Funding Sources — "Share Capital Increase on October 7, 2018"*.

In September 2017, the Company executed a private placement under exclusion of the subscription rights of existing shareholders of 1,279,100 new Shares to institutional investors from Germany and the United States at an issue price of EUR 4.28 per Share. The transaction was registered with the commercial register (*Handelsregister*) of the local court (*Amtsgericht*) of Charlottenburg on October 6, 2017, and resulted in gross proceeds to us of EUR 5,475 thousand. For more information on this transaction, see *7.8.5.2. "— Cash and Funding Sources — Share Capital Increase by Way of Private Placement on September 20, 2017"*.

Furthermore, in September 2017, the Company issued 71,000 convertible notes with a nominal value of EUR 100 per convertible note at a price of EUR 91 each, resulting in an aggregate amount of EUR 6,461 thousand, see *7.8.5.3. "— Cash and Funding Sources — Convertible Notes Issuance to CFICL on September 7, 2017".*

Our cash and cash equivalents are deposited primarily in savings and deposit accounts with original maturities of three months or less. As of December 31, 2017, an amount of EUR 24 thousand of bank deposits was restricted cash.

7.8.1. Cash Flows

The following table sets forth the consolidated statement of cash flows for the six-month periods ended June 30, 2019 and 2018, as well as for the financial years ended December 31, 2018 and 2017:

	Six-month period ended June 30,		Financial Year ended December 31,	
	2019	2018	2018	2017
(EUR thousand)	**(unaudited)**		**(audited)**	
Cash and cash equivalents at the beginning of the period	16,487	12,826	12,826	11,531
Operating activities				
Net loss for the year/period	(7,416)	(5,774)	(12,692)	(10,235)
Adjustments for:				
Share-based payment expenses	507	558	1,151	455
Amortization of intangible asset	99	96	196	191
Depreciation of property, plant and equipment	141	55	112	152
Losses from the disposal of non-current assets	0	0	0	2
Foreign currency exchange results	(30)	0	(4)	0
Financial income	(112)	(9)	(18)	(18)
Financial expenses	30	282	552	177
Taxes	(481)	(328)	(738)	(214)
Operating result before changes in operating assets and liabilities	(7,262)	(5,120)	(11,431)	(9,490)
Changes in operating assets and liabilities:				
Inventories	(66)	(65)	(66)	(37)
Trade receivables	(162)	413	782	1,262
Other assets	(71)	1,171	1,297	(1,491)
Non-current and current provisions	(460)	(541)	(147)	(698)
Trade payables and other liabilities	263	(62)	(776)	891
Deferred income	1	65	23	(6)
Taxes paid	(16)	(8)	(23)	(7)
Cash flow from operating activities	(7,773)	(4,147)	(10,351)	(9,576)
Investing activities				
Payments to acquire intangible assets	(32)	(3)	(15)	(37)
Payments to acquire property, plant and equipment	(56)	(48)	(91)	(183)
Payments related to capitalized development costs	0	0	0	(363)
Proceeds from investment grants received	0	0	813	17
Interest received	44	18	17	18
Cash flow from investing activities	(44)	(33)	724	(548)
Financing activities				
Proceeds from the issue of new shares	0	0	21,253	5,475
Payments for the issue of new shares	(174)	(71)	(1,958)	(374)
Proceeds from the conversion of convertible notes	0	0	0	6,461
Payments for the issue or conversion of convertible notes	0	(2)	(1)	(63)
Payments for the redemption of convertible notes	0	0	(6,020)	0
Payments from leasing contracts	(94)	0	0	0

	Six-month period ended June 30,		Financial Year ended December 31,	
	2019	2018	2018	2017
(EUR thousand)	**(unaudited)**		**(audited)**	
Cash flow from financing activities	(268)	(73)	13,274	11,499
Total net cash flow	(8,085)	(4,253)	3,647	1,375
Currency translation effects	35	6	14	(80)
Cash and cash equivalents at the end of the year/period	**8,437**	**8,579**	**16,487**	**12,826**

7.8.2. Cash Flow from Operating Activities

In the six-month period ended June 30, 2019, cash flow from operating activities decreased by EUR 3,626 thousand, or 87.4%, to EUR (7,773) thousand from EUR (4,147) thousand in the six-month period ended June 30, 2018. This decrease was mainly due to the increased net loss for the period, which, including certain adjustments as set out in the table above, resulted in an impact on cash flow from operating activities by the operating result before changes in operating assets and liabilities of EUR (7,262) thousand in the six-month period ended June 30, 2019, as compared to EUR (5,120) thousand in the six-month period ended June 30, 2018. In addition, the receipt of payments for third-party projects in the six-month period ended June 30, 2018, had led to a lower cash outflow in such period, compared to the six-month period ended June 30, 2019. Further, in particular other assets negatively impacted the cash flow from operating activities by EUR (71) thousand in the six-month period ended June 30, 2019, whereas, in the six-month period ended June 30, 2018, the impact had been EUR 1,171 thousand.

In 2018, cash flow from operating activities decreased by EUR 775 thousand, or 8.1%, to EUR (10,351) thousand from EUR (9,576) thousand in 2017. This decrease was partly due to the increased net loss for the year, which, in combination with certain adjustments, as set out in the table above, in particular relating to share-based payment expenses, financial expenses and taxes, resulted in an impact on cash flow from operating activities by the operating result before changes in operating assets and liabilities of EUR (11,441) thousand in 2018, compared to EUR (9,490) thousand in 2017. Furthermore, trade receivables impacted the cash flow from operating activities in 2018 only by EUR 782 thousand, compared to EUR 1,262 thousand in 2017, mostly due to a single substantial receivable towards the end of 2017 which was settled during 2018. In addition, trade payables and other liabilities negatively impacted the cash flow from operating activities by EUR (776) thousand in 2018, compared to a positive impact of EUR 891 thousand in 2017. However, these negative impacts were partly compensated by the changes in other assets which impacted the cash flow from operating activities in 2017 by EUR (1,491) thousand, whereas, in 2018, other assets had a positive impact of EUR 1,297 thousand. This was mainly due to the aforementioned incoming payment in 2018 for claims still outstanding from a project funded by the EU.

7.8.3. Cash Flow from Investing Activities

In the six-month period ended June 30, 2019, cash flow from investing activities decreased insignificantly by EUR 11 thousand, or 33.3%, from EUR (33) thousand in the six-month period ended June 30, 2018 to EUR (44) thousand. This decrease mainly resulted from payments to acquire intangible assets which negatively impacted the cash flow from investing activities in the six-month period ended June 30, 2019 by EUR (32) thousand, whereas the impact amounted to only EUR (3) thousand in the six-month period ended June 30, 2018. As a counter effect, the impact of interest received on the cash flow from investing activities increased from EUR 18

thousand in the six-month period ended June 30, 2018, to EUR 44 thousand in the six-month period ended June 30, 2019.

In 2018, cash flow from investing activities increased by EUR 1,272 thousand, or 232.1%, from EUR (548) thousand in 2017 to EUR 724 thousand. The main investing activities in 2018 were payments to acquire property, plant and equipment and totalled EUR (91) thousand (compared to EUR (183) thousand in 2017). The increase in cash flow from investing activities was also a result of an increase of proceeds from investment grants received which impacted the cash flow from investing activities in 2018 by EUR 813 thousand and were obtained from a project funded by the EU, whereas, in 2017, cash proceeds from investment grants received only amounted to EUR 3 thousand. In addition, the negative impact from payments related to capitalized development costs on our cash flow from investing activities in 2017 in an amount of EUR (363) thousand changed to EUR nil in 2018.

7.8.4. Cash Flow from Financing Activities

In the six-month period ended June 30, 2019, cash flow from financing activities decreased by EUR 195 thousand, or 267.1%, from EUR (73) thousand in the six-month period ended June 30, 2018 to EUR (268) thousand, principally due to payments for the issue of new shares which impacted the cash flow from financing activities in the six-month period ended June 30, 2019 by EUR (174) thousand, compared to EUR (71) thousand in the six-month period ended June 30, 2018. In addition, payments from leasing contracts amounted to EUR (94) thousand in the six-month period ended June 30, 2019, compared to nil in the six-month period ended June 30, 2018. This effect was due to the abovementioned first-time application of IFRS 16 (Leases).

In 2018, cash flow from financing activities increased by EUR 1,775 thousand, or 15.5%, from EUR 11,499 thousand in 2017 to EUR 13,274 thousand. This increase was principally due to our capital increase in October 2018 which caused an increase in proceeds from the issue of new shares impacting the cash flow from financing activities in 2018 by EUR 21,253 thousand, compared to EUR 5,475 thousand in 2017. In contrast, the positive impact of proceeds from the conversion of convertible notes of EUR 6,461 thousand in 2017 was not repeated in 2018; moreover, due to the repayment of the convertible notes, payments for the redemption of convertible notes impacted our cash flow from financing activities in 2018 by EUR (6,020) thousand, with no such effect in 2017.

7.8.5. Cash and Funding Sources

Our cash and cash equivalents at the end of the period/year amounted to EUR 8,437 thousand, EUR 16,487 thousand and EUR 12,826 thousand as of June 30, 2019, as well as of December 31, 2018 and 2017, respectively. In addition, we held marketable securities in the form of so-called “Trust-preferred Securities” issued by a wholly owned subsidiary of Deutsche Bank AG and which were available-for-sale of EUR 700 thousand, EUR 653 thousand and EUR 905 thousand as of June 30, 2019, as well as of December 31, 2018 and 2017, respectively.

7.8.5.1. Share Capital Increase on October 7, 2018

On October 7, 2018, the Company executed a capital increase with subscription rights of existing shareholders against contributions in cash and partially in kind by use of with the authorized capital 2018/I and the authorized capital 2018/II in order to acquire further liquidity to finance its current business operations and to reduce the Company’s outstanding financial debt. A total of 12,007,180 shares were newly issued at an issue price of EUR 1.86 per share. The capital increase was registered with the commercial register (*Handelsregister*) of the local court (*Amtsgericht*) of Charlottenburg on October 24, 2018, and resulted in gross proceeds to us of

EUR 22.33 million. As a result, the Company's share capital was increased from from EUR 24,014,360.00 by EUR 12,007,180.00 to EUR 36,021,540.00, and the resulting shares were admitted to trading on the sub-segment of the regulated market with additional post-admission obligations (Prime Standard) of the Frankfurt Stock Exchange.

7.8.5.2. Share Capital Increase by Way of Private Placement on September 20, 2017

On September 20, 2017, the Company executed a private placement of newly issued Shares to institutional investors from Germany and the United States under exclusion of shareholders' subscription rights for the purpose of financing operations and expanding U.S. commercialization capacities for our key product, Epi ProColon. A total of 1,279,100 newly issued Shares from the authorized capital 2017/I were sold to such institutional investors at an issue price of EUR 4.28 per Share, resulting in net proceeds to us of EUR 5,475 thousand. The capital increase from this private placement was registered with the commercial register (*Handelsregister*) of the local court (*Amtsgericht*) of Charlottenburg on October 6, 2017, resulting in an increase in the Company's share capital of EUR 1,279,100.00 to EUR 24,014,360.00, and the resulting Shares were admitted to trading on the sub-segment of the regulated market with additional post-admission obligations (Prime Standard) of the Frankfurt Stock Exchange.

7.8.5.3. Convertible Notes Issuance to CFICL on September 7, 2017

On April 26, 2017, the Company, CFICL and Summit Hero Holding GmbH ("**SHH**") entered into a business combination agreement regarding the takeover of the Company by SHH (the "**BCA**"). To finance the short-term working capital requirements of the Company, SHH agreed in the BCA upon request of the Company to subscribe to, and CFICL agreed to procure that SHH will subscribe to and fulfill its obligations arising under the BCA, convertible notes for a total cash investment into the Company of up to EUR 6,461,000 in accordance with the terms of the BCA. The termination of the BCA after the contemplated takeover failed left the obligation to subscribe to a convertible note issuance unaffected.

On September 7, 2017, the Company issued 71.000 convertible notes with a total nominal value of EUR 7,100,000, *i.e.*, a nominal value of EUR 100 per convertible note at a price of EUR 91 each, which represented a discount of 9% on the nominal value. Hence, the investment into the Company amounted to EUR 6,461,000. The notes were subscribed to by CFICL, which at the time of issuance already was a shareholder in the Company. The subscription rights of all other shareholders were excluded. The Parties agreed that CFICL subscribed to the notes instead of SHH and therefore fulfilled the obligations of SHH to subscribe to convertible notes arising under the BCA.

CFICL participated in the above-mentioned capital increase on October 7, 2018 by exercising its subscription right for all shares held by CFICL in the Company by contributing per new share such amount of its outstanding repayment claim from the convertible notes that is equal to the subscription price at which the other shareholders could acquire a new share by exercising their indirect subscription right. As a result, the Company's liabilities from the convertible notes issued to CFICL decreased by approximately EUR 1.08 million from EUR 7.1 million to EUR 6.02 million. The remaining amount outstanding under the convertible notes was redeemed as of the due date on December 31, 2018.

7.8.5.4. Investment Subsidies within the Framework of the Common Task "Improvement of the Regional Economic Structure"

In April 2014, we received a funding notice from the Federal State of Berlin for investment subsidies within the framework of the common task "improvement of the regional economic

structure" (a Federal German funding program). As a consequence of this grant, we received funding in the total amount of EUR 429 thousand as a subsidy for specified capital expenditures over a 36 month period. The funded project expired on April 8, 2017. All funds received under this program have been provided under certain granting conditions, including, *inter alia*, the preservation of the current permanent jobs at our Berlin site and the obligation to keep the subsidized assets until April 8, 2022.

7.8.5.5. Research Grant from the European Union from its Horizon 2020 Framework Programme

In May 2015, we were awarded a research grant by the European Union for our project "Validation of a Lung Cancer Plasma Reflex Test Using Epigenetic Biomarker for Cancer Detection (proLungPlasma)" (Grant agreement number 672680). Under the terms of the award, we were initially granted EUR 970 thousand in 2015 (of which EUR 97 thousand were held retained) and further received EUR 816 thousand in 2016 and EUR 813 thousand in 2018. The project has been successfully terminated and finalized in March 2018.

7.8.5.6. Research Grant from the European Union "Colossus"

In November 2017, we and 13 other partners/beneficiaries were awarded a research grant by the European Union for the project "Advancing a Precision Medicine Paradigm in metastatic Colorectal Cancer: Systems based patient stratification solutions' — 'COLOSSUS' ('action')" (Grant agreement number 754923). Under the terms of the award, we were initially granted a prepayment of EUR 81 thousand in 2018. We may further receive up to EUR 150 thousand for research work on this project in the course of the project. The project has a term of 60 months from the starting date January 1, 2018.

7.8.6. Other Financial Obligations

Our other financial obligations as of June 30, 2019, amounted to EUR 2,287 thousand, compared to EUR 1,825 thousand as of December 31, 2018.

The following table sets forth our other financial obligations as of June 30, 2019 and December 31, 2018, grouped according to the period in which payments are due:

	As of June 30, 2019		**As of December 31, 2018**	
	term < 1 year	**term 1-5 years**	**term < 1 year**	**term 1-5 years**
(EUR thousand)		**(unaudited)**		
Financial obligations from commercial lease agreements	279	708	317	31
Financial obligations from licensing agreements	49	0	47	0
Financial obligations from operating rental, lease, maintenance and service agreements	6	0	22	0
Financial obligations from manufacturing orders	249	0	467	0
Financial obligations from the purchase of goods and services	973	23	940	1
Total financial obligations	**1,556**	**731**	**1,793**	**32**

Obligations from commercial lease agreements arise from a lease at our Berlin location and a sublease at our San Diego location. For the office and lab space at Geneststrasse 5, Berlin, there is a fixed-term lease with a term expiring on April 30, 2023. The Company has the option to extend the lease by three more years. For the office and lab space in San Diego, there is a fixed-term lease with a term expiring on December 31, 2021.

For further details on the total expenses under these leases see page F-79 (note 46 of the Audited Consolidated Financial Statements 2018).

We also acquired numerous exclusive licenses to third-party intellectual property. This means that there are some obligations to pay minimum license fees in years to come. Additionally, we have the obligation to reimburse most of those third parties for costs incurred in connection with the maintenance and the prosecution of the licensed rights. Those costs are mainly charges for patent attorneys or office actions and are difficult to forecast regarding their amounts and timing.

7.8.7. Investments

7.8.7.1. Overview

We define investments as capital expenditures. Capital expenditures include additions to technical/laboratory equipment, leasehold improvements, office equipment, IT equipment, software and development projects.

The main sources of funding for our historic and ongoing capital expenditures have been, and continue to be, private and public offerings of equity securities and convertible notes, grant revenues and revenues from our operating activities (*i.e.*, product sales, sale of intangible assets, licensing income, as well as R&D income and reimbursements).

The following table shows our capital expenditures in the financial years ended December 31, 2018 and 2017:

	Financial Year ended December 31,	
	2018	**2017**
(EUR thousand)	**(unaudited)**	
Technical/laboratory equipment	73	139
Leasehold improvements	0	0
Office equipment	0	7
IT equipment	17	37
Software	16	37
Development costs	0	363
Total capital expenditures	**106**	**583**

7.8.7.2. Ongoing and Future Investments

In the six-month period ended June 30, 2019, we made capital expenditures in an amount of EUR 88 thousand which mainly related to IT hardware equipment, technical equipment and software.

Our major current capital expenditures, *i.e.*, such projects that have been decided upon by the Executive Board and which have been initiated but have not been finalized as of the date of the Prospectus, mainly relate to our internal IT systems (ERP system). These capital expenditures relate to Germany and are financed out of our cash flows. These investments are not expected to exceed a higher five digit amount in Euros in the next twelve months.

As of the date of the Prospectus, we plan to make some additional investments in an electronic quality management system and in our technical laboratory and warehousing equipment as well as usual replacement and maintenance investments. These capital expenditures are expected to mainly relate to Germany and the U.S. and to be financed out of our cash flows. These

investments are not expected to exceed a medium six digit amount in Euros in the next twelve months.

7.8.7.3. Major Investments in the Financial Years ended December 31, 2018 and 2017.

Our total capital expenditures decreased from EUR 583 thousand in 2017 to EUR 106 thousand in 2018, mainly due to lower expenses in connection with the development of Epi proLung in 2017

7.9. Disclosures about Market Risks

Our activities expose us to a variety of risks, including liquidity risk, foreign currency exchange risk, credit risk, and interest rate risk. These risks are described in, and should be read in conjunction with, our risk management see pages F-63 to F-65 (notes 34 - 38 of the Audited Consolidated Financial Statements 2018) and *1.4. "Risk Factors — Financial Risks"*.

7.10. Critical Judgments and Accounting Estimates

Our management has made, and will continue to make, several judgments in the process of applying the Group's accounting policies that have a significant effect on the amounts recognized in the financial statements. Those judgments concern, among others, the capitalization of development costs and the recognition of deferred taxes. Furthermore, in the case of several items, assumptions or estimates are required to be made that affect the carrying amounts in the consolidated balance sheet and/or the amounts recognized in the consolidated statement of profit or loss and comprehensive income. This also applies to the presentation of contingent assets and liabilities. The actual amounts may vary from these assumptions and estimates.

In particular, determining the useful life of capitalized development costs of our products requires a long-term estimation of several factors, including, *inter alia,* the market approval timelines for products, their market acceptance and/or the speed of their market penetration, regulatory developments in key markets, the timing and the extent of reimbursement decisions, and competition. Particularly for novel products like blood-based cancer tests there are no empirical values and less experience available which makes any estimations difficult. Our management closely observes developments on the key markets and regularly reviews its own projections. Reaching or not reaching a milestone, such as a market approval division, will therefore lead to remeasurements which may possibly be decisive for a change of the previously expected useful lives.

Further details on management's judgments, assumptions and expectations are described in the notes to our Audited Consolidated Financial Statements, in particular in the section entitled "Management's Judment, Assumptions and Expectations", see *19. "Financial Information"*.

7.11. Additional Information Relating to the German GAAP (German Generally Accepted Accounting Principles) Audited Unconsolidated Financial Statements of the Company for the Financial Year 2018

The Audited Unconsolidated Financial Statements 2018 have been prepared in accordance with the provisions of the German Commercial Code (*Handelsgesetzbuch*) in conjunction with the supplementary rules of the German Stock Corporation Act (*Aktiengesetz*).

In 2018, the Company recorded total revenue of EUR 3,302 thousand, compared to EUR 4,117 thousand in 2017. In 2018, the net loss for the year amounted to EUR 10,482 thousand, compared to a net loss for the year of EUR 7,028 thousand in 2017.

As of December 31, 2018, the total assets of the Company amounted to EUR 29,527 thousand, compared to EUR 24,343 thousand as of December 31, 2017. Total equity amounted to EUR 26,913 thousand as of December 31, 2018, compared to EUR 15,077 thousand as of December 31, 2017. Total liabilities amounted to EUR 2,614 thousand as of December 31, 2018, compared to EUR 9,267 thousand as of December 31, 2017.

8. PROFIT FORECAST

8.1. Revenue and EBITDA Before Share-Based Payment Expenses Profit Forecast by the Company for Epigenomics AG and its Subsidiary for the Financial Year 2019

As the following forecast is prepared on the basis of assumptions about future events and actions, it naturally entails substantial uncertainties. Because of these uncertainties it is possible that the actual revenue and/or profit of the Group may differ materially from the forecasted numbers. The forecast expressed in this section relates to revenue, as well as EBITDA before share-based payment expenses (as defined in section *7.2. "Operating And Financial Review — Performance Indicators"*) of the Group and is not a statement about facts and should not be interpreted as such by potential investors. Rather, it is a statement about the expectations of the Company's management in respect of the revenue and EBITDA before share-based payment expenses of the Group. In this context, the Company considers EBITDA before share-based payment expenses to be an indicative equivalent for its operating result.

The forecast is based on the assumptions set out below made by the Company's Executive Board for the development of the influencing factors of the revenue and the EBITDA before share-based payment expenses of the Group. The assumptions used in this forecast relate to factors which (i) cannot be influenced by the Group and those which (ii) can, even if only to a limited extent, be influenced by the Group. Even if the Company believes that these assumptions are reasonable at the time of the estimate of revenue and EBITDA before share-based payment expenses by the Company's management, they may prove erroneous or unfounded. If one or more of these assumption(s) prove(s) to be erroneous or unfounded, the actual result could deviate materially from the Groups' current revenue and EBITDA before share-based payment expenses prediction.

The members of the Executive Board of Epigenomics AG confirm that the following forecast is valid, has been properly compiled on the basis of the assumptions stated and that the basis of accounting used is consistent with Epigenomics AG's accounting policies.

The forecast has been made by the Company's Executive Board based on the financial budget for 2019, as adjusted in October 2019 following an updated outlook on the remainder of the current financial year.

Based on the following factors and assumptions and associated uncertainties, we expect that revenue will increase in 2019, compared to 2018, but will remain low in the financial year 2019, ranging between EUR 1.0 million and EUR 1.5 million due to delays in the reimbursement decision and due to a license agreement that has not been concluded as expected.

As far as our operating costs are concerned, on the one hand, we expect higher R&D costs in 2019, compared to 2018, due to the post-approval clinical study for Epi proColon as required by the FDA, which we expect will entail substantial costs, as well as the current cross-sectional liver cancer study, and further planned development activities. On the other hand, the marketing, sales and distribution activities (*e.g.*, preparation of the broader commercialization of Epi proColon in the U.S. market), and increased supporting activities with regard to the awaited reimbursement determination in the United States, led to higher costs on the marketing and sales side. Against the aforementioned backdrop of the revenue and costs predictions, we continue to expect an operating loss for 2019. On this basis, we anticipate that EBITDA before share-based payment expenses for the full year 2019 will be in a range between EUR (12.5) million and EUR (14.0) million in 2019.

8.2. Explanatory Notes to the Revenue and EBITDA Before Share-Based Payment Expenses Profit Forecast

8.2.1. Factors and Assumptions

8.2.1.1. Factors Which Cannot Be Influenced by the Group and Related Assumptions

Our business projections for 2019 are based partly on assumptions which cannot be influenced by the Group. Our revenue projections have their primary focus on the commercialization of Epi proColon in the United States. The commercialization of this key product for us depends primarily on securing reimbursement from public and private health insurers. Positive reimbursement decisions are supported by an inclusion of our product in screening guidelines of medical or scientific societies. As these societies and the health insurers are independent, public organizations, we have no influence on the timing and the outcome of their decision-making processes. Medicare reimbursement remains our key focus for 2019. Regretfully, the process is taking longer than we would like but we still remain optimistic and will continue to pursue all available paths to achieve coverage for Epi proColon.

A further factor impacting our revenue development in 2019 was our decision to terminate the collaboration and exclusive licencing agreement with our Chinese partner BioChain regarding the licensing of the Septin9 marker and the exclusive distribution rights for Epi proColon 2.0 CE, in particular, in China. Our forecast assumes no such revenue from licencing in China in 2019. Product revenue in the United States is generated in U.S. dollars while our reporting currency is the Euro. Thus, the foreign exchange rate between these two currencies is another factor influencing our revenue which cannot be controlled by us. Our financial budget for 2019 was based on an anticipated foreign exchange rate of the Euro against the U.S. dollar of 1.1403. For the remainder of 2019 we anticipate the EUR/USD rate to be at roughly the same level.

8.2.1.2. Factors Which Can Be Influenced by the Group and Related Assumptions

Our EBITDA before share-based payment expenses is depending on the one hand on our revenue as set out above. On the other hand it depends on the development of our operating costs of our business. Our cost structure is dominated by personnel costs, as well as legal and IP costs and costs for services and consulting. In line with our assumptions for the commercialization in the United States, we do not plan to expand our headcount significantly in 2019 and strive to keep remuneration largely at current levels. In addition, we do not expect any extraordinary expenses for the remainder of 2019 and also we have a strict cost savings program in place.

8.2.2. Principles

The revenue and EBITDA before share-based payment expenses forecast for the financial year 2019 was prepared in accordance with the principles of the Institute of Public Auditors in Germany (*Institut der Wirtschaftsprüfer*, IDW) Accounting Practice Statement: Preparation of Profit Estimates and Estimates in accordance with the Special Requirements of the Regulation on Prospectuses IDWAcPS AAB 2.003 (IDW RH HFA 2.003). With respect to the accounting policies applied, reference is made to the notes of the Unaudited Consolidated Interim Financial Statements and the notes of the Audited Consolidated Financial Statements 2018.

Although not being an IFRS measurement of operating income, operating performance or liquidity, the EBITDA before share-based payment expenses profit forecast for the financial year 2019 was derived using accounting principles of the International Financial Reporting Standards as adopted by the European Union (IFRS).

9. MARKETS AND COMPETITIVE ENVIRONMENT

The statements on markets and competition provided below are based on the cited third-party sources and on our internal market observations and estimates – some of which are, in turn, derived from various sources we believe to be reliable. Such sources include industry publications as well as surveys, data and studies published by third parties. We did not verify or modify any of the Market Data provided by third-party providers. For more information on the sources used, see *2.5. "General Information — Information from Third Parties*".

Due to the lack of comparable publicly available information in certain areas and due to differing methodologies, market definitions and modeling, the data on market sizes, projected growth rates and competitive position should be viewed with caution as they may be different from other publications of the used sources or similar analyses by other market research companies or competitors. Market sizes, market positions and market shares mentioned in the Prospectus may not be fully comparable with other information mentioned in the Prospectus. Additional factors which should be considered in assessing the market and competitive data and, in particular, the projected growth rates, are described elsewhere in the Prospectus, including those set out in the sections entitled *1. "Risk Factors"*, *2.4. "General Information — Forward-Looking Statements"* and *7.3. "Operating And Financial Review — Key Factors Affecting Results of Operations, Financial Position and Cash Flows"*.

9.1. IVD and Molecular IVD

The healthcare industry has seen changes and challenges in the past and is expected to see them in the future. According to the Deloitte 2019 Global Health Care Outlook, health care demand and expenditures continue to increase due to aging and growing populations, greater prevalence of chronic diseases and exponential advances in innovative, but costly, digital technologies.

As part of the healthcare industry, the life sciences industry is closely tied to this development. In this environment we consider ourselves to be active within the IVD field of the medtech segment, as defined for example by the Deloitte 2019 Sector Outlook. According to the Deloitte 2019 Sector Outlook, IVD is expected to be the largest medtech segment by 2024. The Evaluate 2018 Outlook predicts the global IVD field to reach a value of approximately USD 79.6 billion by 2024, growing at a compound annual growth rate ("**CAGR**") of 6.1% from 2017 to 2024. The IVD Market Research Report forecasts global revenues for IVD well in excess of USD 80 billion in 2023.

More particularly, we are active in the molecular IVD area of the IVD field, because our key commercial product, Epi proColon, as well as other products, such as HCCBloodTest, and certain product candidates are IVD tools that use molecular diagnostic techniques. The global molecular IVD area represented approximately one tenth of the IVD field according to the Overview of the Kalorama Report, and was valued at approximately USD 6.8 billion in 2016. According to the same source, the molecular IVD area is expected to reach a value of approximately USD 9.9 billion in 2021 (which equals a CAGR of 8% from 2016 to 2021), with the major part of this growth expected in the field of infectious diseases. Similarly, Allied Market Research valued the global molecular diagnostics market at approximately USD 7.1 billion in 2017 and predicts it to grow to approximately USD 11.5 billion by 2023 at a CAGR of 8.4% during the period from 2018 to 2023, also largely crediting infectious diseases and various types of cancers, as well as, *inter alia*, the growth in the biomarker identification market. Grand View Research values the global molecular diagnostics market at USD 9.9 billion in 2018 and anticipates a CAGR of 9.1% until 2026.

Throughout the healthcare industry including the IVD field and particularly the molecular IVD area, regulation and reimbursement are vital success factors for companies active in the field of

developing and commercializing novel diagnostic tools and methods. It will remain a challenge to adequately address these factors in different markets, given the fragmented nature of the regulatory and reimbursement landscapes. While the U.S. is still the most attractive single market from an economic perspective, China is increasingly catching up in terms of public health policy, technology development, maturity of the capital markets, entrepreneurial spirit and increasing income among its population. In our opinion, it is becoming the most interesting market to consider in the medium term and it may offer greater opportunities for our industry than experienced to date.

9.2. Molecular Diagnostics and Cancer

According to a BCC Research Study, the global market for liquid biopsy is expected to grow from USD 2.3 billion in 2018 to USD 6.1 billion by 2023 at a CAGR of 21.1% for the period of 2018-2023. However, we also expect market fragmentation, differences among regulatory regimes and reimbursement status to become increasingly important factors for new molecular diagnostic products (*see 7.3.2. "— Key Factors Affecting Results of Operations, Financial Position and Cash Flows — Trends, Conditions and Expected Developments in our Market"*).

9.2.1. The Colorectal Cancer Testing Market

Colorectal cancer is one of the most common types of cancer worldwide (see *9.3. "— Cancer Diagnostics Markets by Geography"*), leading to significant demand for clinical and diagnostic products in this area. Given that colorectal cancer typically develops slowly over long periods of time, screening for the disease has proven to be effective in reducing mortality rates (source: ACS Facts and Figures 2017-2019). However, current screening methods suffer from high non-adherence rates, meaning that large numbers of patients do not undergo testing despite official recommendations that they do so (source: ACS Facts and Figures 2017-2019). As a result, we believe that screening methods which can increase adherence rates and are cost-effective have the potential to gain wide acceptance in the medical community.

Treatment of early-stage colorectal cancer is relatively successful (source: ACS Facts and Figures 2017-2019), and therefore, the benefits to be obtained from screening for early-stage colorectal cancers are considerable. According to our estimates, screening among those in the familial or genetically predisposed risk groups has been fairly adequate; however, screening programs for average-risk individuals have consistently been below desired levels.

Colorectal cancer ("**CRC**") screening has historically been performed using one of two testing methods: image-based or stool-based methods. The key limitations of image-based testing, such as colonoscopy and colonography (a radiological imaging approach which visualizes the inside of the bowel by use of spiral computerized axial tomography known as a CT scan), are either the invasiveness of the method, the required colon preparation which the patient usually performs the day prior to testing at home and/or the high procedure cost. Existing and possibly improved traditional screening tests including stool-based testing, such as fecal occult blood tests, fecal immunochemical tests or stool DNA tests, while less invasive, typically rely on patients to collect a stool sample in their homes and then return the sample to a clinical laboratory. Possibly as a result of the inconvenience associated with this type of testing, the rate of adherence is a challenge, *i.e.*, many patients do not follow through and complete the test regularly (source: ACS Facts and Figures 2017-2019).

We believe some of the benefits of blood-based testing offered by our product Epi proColon are that it does not require any preparation and can be performed through a routine blood draw as part of a routine medical visit. Once the medical professional draws the patient's blood, the patient is

free to return to his or her daily routine and simply wait for the test results. For this reason, Epi proColon is indicated for use in screening average-risk adults who have a history of non-adherence to colorectal cancer screening guidelines. To our knowledge, Epi proColon is the first and currently only FDA-approved blood-based screening product for the early detection of colorectal cancer.

9.2.2. Liver Cancer Diagnostics Market

Liver cancer was the fourth most common cause of cancer death worldwide in 2018, and about 840,000 new cases (number 5 among all cancers) were diagnosed that year according to Globocan 2018 (see also *9.3. "—Cancer Diagnostics Markets by Geography"*). We have identified a clinical need for improved diagnostic testing for liver cancer as despite major progress in imaging methods such as ultrasound, the reliable diagnosis of liver cancer remains a significant medical challenge. As the signs and symptoms of HCC, which is the most common of primary liver cancers (source: mSEPT9 Research Paper), usually first become apparent at advanced stages of the disease, it is important for high risk individuals, particularly patients with cirrhosis, to undergo regular surveillance. This is relevant, in particular, as the detection of HCC at an early stage improves survival and allows the use of potentially curative treatments in light of generally very poor prognosis for liver cancer (overall mortality to incidence rate of approximately 0.93 in 2018 based on our interpretation of statistics provided by Globocan 2018). Worldwide, approximately 80% of HCC cases are caused by hepatitis B virus and/or hepatitis C virus infection, especially in the setting of established cirrhosis or advanced fibrosis. Alcoholic liver disease and non-alcoholic fatty liver disease are also important risk factors for HCC, but the single largest risk factor for development of HCC is cirrhosis of any etiology, which is present in 70–90% of those who have primary liver cancer (source: Asia-Pacific 2017 Update).

In many countries these patients are subject to continuous diagnostic monitoring. Based on an estimate of 50 million people worldwide suffering from chronic liver disease (according to WGO Study), and assuming 10% of the affected population is under surveillance twice per year, we estimate that the global market for liver cancer surveillance among patients with cirrhosis is likely to cover more than 10 million tests annually. Currently the favored surveillance approach to detect early-stage HCC includes ultrasound and measurement of the serum biomarker alpha-fetoprotein ("**AFP**"), a widely used diagnostic marker for liver cancer in cirrhosis patients. However, it is also considered insufficiently sensitive or specific for use in a screening assay and suboptimal for routine clinical practice. Research has suggested that our HCCBloodTest has a higher degree of diagnostic accuracy than AFP (source: mSEPT9 Research Paper).

We believe that a blood test designed specifically for cirrhosis patients with higher diagnostic accuracy compared to AFP could provide both medical and economic value to patients, physicians and payors in the healthcare system by accelerating follow-up or clinical intervention, which improves the HCC survival rate and reduces the need for costly treatments at advanced stages. Specifically, we expect our HCCBloodTest to address the liver cancer diagnostic market related to therapy management for severe illnesses, rather than that related to general screening. Furthermore, liver cancer surveillance is, according to our assessment, generally carried out in fewer but specialized liver centers allowing for focused distribution efforts and marketing activities. We believe that by offering our HCCBloodTest we can increase diagnostic accuracy compared to AFP in detecting HCC among patients with cirrhosis based on the data collected by the mSEPT9 Research Paper.

9.2.3. The Lung Cancer Testing Market

Lung cancer exhibits even higher prevalence rates in key markets worldwide than CRC (see *9.3. "—Cancer Diagnostics Markets by Geography").* Despite the high prevalence rates globally, we believe very few industrialized countries utilize a screening program. Lung cancer screening produces high false positive rates, meaning that large numbers of patients are recommended for more invasive and costly secondary screening even though they do not have lung cancer. For instance, a national lung screening trial, performed in over 50,000 current or former heavy smokers aged 55 to 74 in the United States demonstrated an estimated false positive rate of 96.4% (source: National Lung Cancer Screening Trial Results) for patients screened by means of a low dose computed tomography ("**LDCT**") scan and a false positive rate of 94.5% for chest x-ray exams (source: NCI Lung Screenings). A highly accurate blood-based test could help determine which of these positively tested patients require additional diagnostic follow-up and possibly treatment, thus providing both medical and economic value to patients, physicians and payors in the healthcare system by reducing the number of patients undergoing more invasive follow-up diagnostics based on false-positive initial screening results.

Our product for lung cancer detection, Epi proLung, is a blood-based non-invasive test used to assist in the determination on additional follow-up procedures such as a biopsy. Currently, we are continuing research and development on the test to achieve the degree of sensitivity we believe is required for this use. Additionally, in the future our test may also be used to monitor the recurrence of lung cancer and to monitor lung cancer patients' response to chemotherapy.

9.3. Cancer Diagnostics Markets by Geography

According to Allied Market Research, which splits the global molecular diagnostics market into North America, Europe, Asia-Pacific and rest of the world, North America is expected to account for the highest market share of the global molecular diagnostics market in 2018, in particular due to factors such as the prevalence of infectious diseases and cancers in the region, the presence of a highly developed healthcare system including laboratories, easy accessibility to technologically advanced instruments, availability of government funds, and growing applications of molecular diagnostics in genetic disorders and cancer screening. North America is also predicted to remain the biggest market in 2023. However, Allied Market Research predicts the highest growth for molecular diagnostics from 2018 to 2023 in the Asia-Pacific region.

9.3.1. The Cancer Diagnostics Market in the United States

Due to its size, well-developed healthcare system and leading role in cancer research, we consider the U.S. the most attractive single market for our products and current product candidates. This view accords with that of other market researchers, such as Grand View Research, which considers North America the industry leader and largest revenue generating region for molecular diagnostics in 2018 and likely to remain in this position at least until 2026.

CRC, also known as bowel cancer, is the third leading cause of cancer-related deaths in men and women in the United States (source: ACS Colorectal Cancer Statistics). According to ACS Colorectal Cancer Statistics, approximately 145,600 new cases of CRC and approximately 51,020 related deaths are expected in the United States in 2019. Based on age distribution in the U.S. population according to U.S. Census data and statistics from ACS Facts and Figures 2017-2019, we estimate that the CRC screening opportunity in the United States alone represents a target market of approximately 30 million unscreened patients.

According to ACS Liver Cancer Statistics, liver (including intrahepatic bile duct) cancer is the fourteenth most common cancer among new cases and the fifth most common cause of cancer death in the United States with 31,780 deaths expected in 2019.

Lung cancer is the leading cause of cancer deaths in men and women in the United States, with the ACS estimating approximately 228,150 newly diagnosed cases of lung cancer and 142,670 deaths from the disease in 2019, noting that the chances for developing lung cancer are much higher for smokers (source: ACS Lung Cancer Statistics). Accordingly, we believe that there is a large and identifiable at-risk population in the United States for diagnostic screening under medical guidelines.

We believe that due to the high prevalence of, and large at-risk population for, cancers such as colorectal, lung and liver cancer in the United States, there is a potentially significant market for IVD screening tests such as our Epi proColon and, if approved in the future, our HCCBloodTest and Epi proLung.

9.3.2. The Cancer Diagnostics Market in Europe

In Europe, lung cancer was the most common cause of death from cancer among men in 2015, accounting for 25% of all cancer deaths, followed by colorectal cancer accounting for 11%, while liver cancer was the fifth most prevalent cause, accounting for 5% of cancer deaths (source: Health at a Glance). With respect to women, according to the same source, lung cancer accounted for 15% of cancer deaths and colorectal cancer for 12% of cancer deaths in 2015. According to the World Health Organization (WHO), there were around 82,500 liver cancer incidences in Europe in 2018, with around 77,400 deaths in the same year (source: Globocan 2018).

HCC (constituting 70-90% of cases of liver cancer) is one of the most serious outcomes of cirrhosis (source: Asia-Pacific 2017 Update). While we believe that, due to the high prevalence and large at-risk population of cancers such as colorectal, liver and lung cancer in Europe, our products may be used successfully in Europe, local market entry barriers are high for us. According to our analysis, differences in local regulation, reimbursement practices and care patterns add complexity to the acceptance and marketing of molecular diagnostic products across Europe and result in a high fragmentation of the market. As cancer screening is organized on a governmental level in most European countries, the barriers to entry into such systems are typically very high. Self-payor segments are small in most markets and need to be addressed individually on the physician and patient level.

9.4. Competition

9.4.1. Overall Competitive Situation

We consider our market to be competitive with competitors of all sizes vying for business, from large European (*e.g.*, Roche, Philips and bioMérieux) and U.S. players (*e.g.*, Abbott, Exact Sciences Corp. and Becton, Dickinson and Company) to small companies like us. With respect to M&A activities, according to the Deloitte 2019 Sector Outlook, while expectations around immunooncology have been tempered, cell and gene therapies are expected to remain popular with investors in 2019, with China in particular racing to expand its AI and biotech capabilities. Acquisitions are expected to be strategic, with a focus on core therapies or specialties, and a lot of activity is expected in divestitures. We believe that increased consolidation in the market would allow the offering of complete test and treat approaches for specific cancers.

We believe that recent industry trends (such as liquid biopsies and next generation sequencing ("**NGS**")) will continue to fuel the already strong industry competition and most likely lead to further

M&A transactions in the near and mid-term future, with particular interest coming from Chinese investors.

Our competitors and potential competitors may have widespread brand recognition and substantially greater financial, technical and research and development resources and selling and marketing capabilities than we do. Others may develop products with prices lower than ours that could be viewed by healthcare providers and payors as functionally equivalent to our solution, or offer solutions at prices designed to promote market penetration, which could force us to lower the price of our current and future products and affect our ability to achieve or maintain sufficient market share (see also *1.1.3. "Risk Factors — Risks Related to our Business and the Industry in which we Operate — The success of Epi proColon depends on its market acceptance by physicians, payors, laboratory customers, patients and others in the medical community."* and *1.1.5. "Risk Factors — Risks Related to our Business and the Industry in which we Operate — We operate in a highly competitive and rapidly changing industry, which may result in others creating more reliable diagnostic applications or more attractively priced products."*).

We believe the principal competitive factors for our molecular diagnostic cancer screening tests are:

- Accuracy and reliability of the tests;
- Ease and convenience for patients – their patient-friendly and minimally invasive nature;
- Proven clinical utility in CRC screening;
- Inclusion in colorectal screening guidelines issued by leading medical associations;
- Compelling value proposition to healthcare providers in supporting their goal of screening patients;
- Compelling, cost-effective value proposition for payor organizations and relatively low costs to healthcare system generally;
- Reimbursement by payors in the healthcare system;
- Breadth of commercial reach and distribution capabilities;
- Ability to engage clinical laboratories in the commercialization of our products;
- Ability to improve existing and develop new innovative products; and
- Protection and expansion of intellectual property portfolio.

We believe we compete favorably on the factors described above, particularly with Epi proColon offering patients an easy and convenient option for colorectal cancer screening, in providing a compelling value proposition to healthcare providers and payors, in the ability to engage clinical laboratories in the commercialization of our products and by our ability to improve our current and develop future products on the basis of our strong intellectual property position, which we believe protects our innovative solutions from competitors. We also strive to develop a competitive position for our liver and lung cancer tests in the future.

9.4.2. Colon Cancer Screening

To our knowledge, Epi proColon is the first and currently only FDA-approved blood-based screening product for the early detection of colorectal cancer. We believe that Epi proColon's ease of use as a blood-based test will contribute to an increase in screening compliance and the associated improvement of early detection of previously unscreened patients and become an

important tool in fighting colorectal cancer worldwide. We expect to face competition from a number of companies already operating in, or that are developing solutions for, colorectal cancer screening, including imaging-based methods, stool-based diagnostic tests and other blood-based tests. These companies will promote their services and products in the population not compliant with colorectal cancer screening, which is also the target population for our Epi proColon test. However, since none of the currently available FDA-approved products for colorectal cancer screening are blood-based, we believe competition from stool-based or imaging-based screening methods should be limited, particularly since our blood-based Epi proColon test targets patients who are non-compliant with guideline recommended stool-based tests or colonoscopy.

We believe that our competition will primarily come from companies that are offering or plan to offer other blood-based tests for colorectal cancer detection. To our knowledge, the following companies have developed blood-based tests for the detection of colorectal cancer: Innovative Diagnostic Laboratory, Richmond, VA, United States; Freenome, South San Franciso, CA, United States; DiscernDX, Menlo Park, CA, United States; VolitionRx, Belgium (in particular in Europe); and CellMax Life, Sunnyvale, CA, United States (especially in South Korea). To our knowledge, none of these companies currently have FDA approval for their blood-based tests for colorectal cancer detection. Additionally, we are not aware of any of these companies having attempted or completed clinical trials that would be suitable to support a pre-market approval ("**PMA**") submission to the FDA. We are aware of a number of companies that are actively engaged in the research and development of blood-based tests for the same, or similar, detection products as we are targeting. For example, Johns Hopkins Kimmel Cancer Center at Johns Hopkins University in the United States has developed a single blood test that screens for eight common cancer types and helps identify the location of the cancer. The test, called CancerSEEK, is a noninvasive test that simultaneously evaluates levels of eight common cancer proteins and the presence of cancer gene mutations from DNA circulating in the blood. The test screens for cancers of the ovary, liver, stomach, pancreas, esophagus, colorectal, lung, or breast. Further studies of the test are currently underway. We are currently unaware of their plans, if any, to obtain FDA approval for manufacture and sale of the test.

In addition, we are aware of several companies that have expressed their intention to develop blood-based tests for the detection of CRC or have published initial research on new product developments. Any company deciding to apply to the FDA for PMA would first have to conduct and complete the necessary prospective clinical trials. Obtaining PMA for such tests is time-consuming and expensive. Furthermore, a company would likely have to demonstrate clinical performance that is non-inferior to already approved tests such as our Epi proColon test. Even if these companies were to obtain PMA, they would likely be entering the market years after our Epi proColon test and their tests would also need to be competitive with respect to their cost-benefit ratio, obtain favorable reimbursement and be broadly recognized and used by medical professionals.

9.4.3. Liver Cancer Detection

The liver cancer diagnosis market relies upon three main diagnostic methods, namely imaging technologies such as ultrasound scans, IVD screening, and liver biopsy as a confirmatory diagnostic test. Given recent technological advances in HCC surveillance, in our view it is possible that more sensitive and specific, therefore more efficient, surveillance methods may gain market shares. In our opinion our HCCBloodTest, which measures promoter methylation in circulating cell-free DNA, represents a new surveillance product capable of gaining market share. However, the market in HCC surveillance products is highly competitive, with similar products being produced by numerous companies, such as Exact Sciences Inc., Madison, WI, United States, and,

as with our Epi proColon product, we are aware of a number of companies that are actively engaged in the research and development of blood-based tests for the same, or similar, detection products as we are targeting.

In our opinion, success in this market is dependent upon reliable, high sensitivity indications receiving regulatory approval for use in the different geographic markets. In this regard, we believe we are well positioned, with our HCCBloodTest having received the CE Mark in October 2018, thereby making it ready for commercialization in Europe. The HCCBloodTest is used to detect liver cancer among patients with cirrhosis. A cross-sectional study of the HCCBloodTest in the United States is being conducted this year.

9.4.4. Lung Cancer Detection

The lung cancer diagnosis market today is predominately served by imaging technologies, and both primary screenings and follow-up confirmatory diagnostic tests primarily utilize radiological methods. An additional approach, as a follow-up diagnostic procedure to confirm suspicious results from a primary screening, is to collect a sample from the affected region, either by a bronchoscopy or through a biopsy procedure, in order to subject the obtained tissue sample to a pathological examination. In recent years, companies have begun developing various laboratory tests to be performed on these pathological samples in order to increase the accuracy of pathological observations.

10. BUSINESS

10.1. Overview

We are a commercial-stage molecular diagnostics company focused on patient-friendly, blood-based IVD tests for the screening and diagnosis of cancer. We develop cancer diagnostic tests, mainly in the colorectal cancer, liver and lung cancer fields. Our key product, Epi proColon, a blood-based screening test for the detection of colorectal cancer, was approved for sale in the United States by the FDA in April 2016. To our knowledge, Epi proColon is the first and currently only FDA-approved blood-based screening product for the early detection of colorectal cancer, which we believe addresses a significant unmet medical need in today's colorectal cancer screening market and also provides a compelling, cost-effective value proposition for patients, healthcare providers, payor organizations and Laboratory Customers. With the achievement of this regulatory milestone, we have transitioned into an organization with an increased focus on commercializing our products, in particular Epi proColon, which we primarily distribute indirectly through sales partnerships, including in our key market, the United States, but also via direct marketing and sales of IVD kits in some other markets, including in Europe.

In the United States, we are currently focused on the commercialization of Epi proColon. Together with our sales partner Polymedco, which acts as an exclusive sales and marketing agent on a commission basis, we market Epi proColon to Laboratory Customers, which in turn offer the assay as a screening service and collect payments from their customers, including commercial third-party payors and government health benefit programs.

We have made significant progress in achieving nationwide availability for Epi proColon, and we are now working on reimbursement for the test, specifically Medicare reimbursement. Achievement of Medicare coverage is the most significant milestone for us. Medicare patients not only represent a large portion of the relevant market for Epi proColon, but Medicare has also typically been viewed as a market benchmark for pricing and benefit coverage. The U.S. Centers for Medicare & Medicaid Services ("**CMS**") have already set a final reimbursement rate of USD 192.00 per Epi proColon test with effect from January 1, 2019, and on May 3, 2019, CMS accepted our application to review Epi proColon for a coverage decision as part of a National Coverage Determination ("**NCD**").

In addition to the U.S. version of Epi proColon, we market a slightly modified version of the product under the name Epi proColon 2.0 CE directly or through distributors in countries with established screening policies, including select European and Southeast Asian markets. Epi proColon 2.0 CE is CE marked, indicating that it is approved for sale in all countries that accept the CE mark as pre-requisite for commercialization, as well as NMPA approved.

Depending on the territory, we market and sell Epi proColon either through distributors or directly to Laboratory Customers and other smaller customers, or both.

Furthermore, based on promising results from clinical studies, we plan to take additional steps towards marketing a test for the identification of liver cancer in patients suffering from cirrhosis under the name "HCCBloodTest" in the United States and Europe in the future.

We also achieved a CE mark for our product Epi proLung in 2017. This product is a blood-based test to assist in the detection the presence of lung cancer in blood plasma. Epi proLung is based on a combination of certain of our proprietary DNA methylation biomarkers. Our goal is to continue to optimize the performance of the product in order to initiate the prospective trials necessary for larger scale adoption.

Our research and development efforts are targeted at developing product candidates based on specific DNA methylation biomarkers that can be used to identify the presence of certain cancers and are potentially useful for screening, diagnostic, prognostic or predictive purposes. In particular, we are currently focused on developing various liquid biopsy products based on NGS technology, which uses bisulfite sequencing methods to analyze one patient sample using multiple biomarkers at the same time, increasing the speed and efficiency of the testing process. In 2016, we completed the first proof-of-concept studies for the use of NGS for liquid biopsy purposes, we further refined and optimized these protocols in 2017 and we established three further NGS panels across multiple cancer types. In 2018, we developed multiplexed methylation-based biomarker panels for the analysis and detection of multiple cancers from a single blood specimen using NGS. We have been able to develop a prototype and proprietary 56 marker comprehensive NGS cancer panel, which we are working to clinically validate in the future. There are now prototype NGS panels for the detection of colorectal, liver, lung, prostrate, bladder and kidney cancer. Our research group is also studying a number of gene methylation markers for head and neck cancer using NGS. We evaluate the clinical performance of these panels, and plan to continue doing so in the future.

In addition to biomarkers for liver, bladder and prostate cancers, we have also identified additional DNA methylation biomarkers for blood-based diagnosis of other solid tumors, for example gastric cancer, that could provide the basis for future product development opportunities.

We maintain a patent portfolio with 36 owned patent families and two exclusively in-licensed patent families (data as of June 30, 2019), which we believe offers protection for our current and future products and technologies in multiple territories. We believe this intellectual property portfolio, in conjunction with the potential research capabilities of the new NGS technology, provides us with opportunities to develop new and even better cancer tests.

10.2. Our Strengths

We believe that the following strengths and, in particular, their combination, distinguish us from our competitors and are a basis for further growth and success of our business:

- To our knowledge, Epi proColon is the first and currently only FDA-approved blood-based screening product for the early detection of colorectal cancer;
- We offer, in our view, a compelling, cost-effective value proposition for patients, healthcare providers, payor organizations, and Laboratory Customers offering the Epi proColon test;
- We have a strong commercialization infrastructure established through commercial partnerships, with a commercialization approach that presents a new opportunity for Laboratory Customers to provide colorectal cancer screening;
- We believe that Epi proColon addresses a significant unmet medical need among the large population of non-compliant adults who do not undergo regular colorectal cancer screening;
- With our new product, the HCCBloodTest for the detection of liver cancer based on methylated Septin9, we have an excellent opportunity to establish ourselves in the market for therapy management for severe illnesses, where we believe reimbursements for medical products and services may be more readily obtained, in comparison to diagnostic screening;
- Our CE marked product, Epi proLung, assists in the detection of the presence of lung cancer in blood plasma with the potential for large scale adoption after optimized performance;

- We believe that, in an environment of increasing trends toward tightening regulatory standards, our approach of choosing the regulated path to commercialization of our products provides us with a competitive advantage over those companies which do not or cannot comply with these stricter requirements;
- We have secured an extensive proprietary intellectual property portfolio consisting of 36 owned patent families and two exclusively in-licensed patent families (data as of June 30, 2019), which we believe to be a competitive advantage over many of our competitors in the field of DNA-based diagnostics who partly rely their businesses on generic technologies or products;
- We believe our current additional pipeline of, as of June 30, 2019, nine proprietary, patent-protected biomarkers has the potential to be used to develop additional IVD tests for the prognosis, diagnosis and screening of various cancer types; especially in conjunction with the know-how we have developed in new NGS technology; and
- We also believe that the experience and know-how of our management and personnel, in particular our research and development personnel, provides us with a competitive advantage over competitors.

10.3. Our Strategy

We seek to become a leader in the liquid biopsy cancer molecular diagnostics field and to establish our diagnostic tests as vital components of the cancer diagnostics standard of care. We believe our approach is transforming cancer detection into an accessible and cost-effective solution that meets the needs of patients, healthcare providers and payors, and will improve patient outcomes and reduce healthcare costs. By developing diagnostic tests based on liquid biopsies, *i.e*., tests to be performed on samples of blood, urine, or saliva, the relevant diagnostic information can be delivered more easily, without the complications associated with tissue biopsy and at potentially lower costs.

Our corporate strategy focuses primarily on what we believe to be the two key factors that are most critical in achieving our goal of becoming a leading liquid biopsy company: the successful market adoption of Epi proColon and, in the long run, our continued development of new liquid biopsy offerings, such as our HCCBloodTest and Epi proLung. We believe that establishing leadership in liquid biopsy, primarily through the commercialization of Epi proColon, which we believe to be a pioneer product in the fast-growing area of IVD testing, has the potential to allow us to introduce other disruptive products such as the HCCBloodTest and potential future tests for other types of cancer based on the biomarkers that our research has identified.

Our commercial strategy is initially primarily focused on the commercializiation of Epi proColon in the United States, as this is where we see the greatest economic opportunities. A key condition for commercial success in the United States is securing reimbursement, *i.e.*, convincing the payors in the U.S. healthcare system to reimburse their patients the cost of carrying out our test. Major third-party payors such as Medicare, private insurance plans, and managed care programs dominate the healthcare market in the United States. Receiving favorable reimbursement decisions from such third parties, in particular Medicare, as the market benchmark, is therefore critical to increasing demand among patients, doctors and Laboratory Customers, as well as to increasing revenues.

Accordingly, since receiving FDA approval for Epi proColon in 2016, Medicare reimbursement for Epi proColon on the U.S. market has been our top focus and remains our most significant

milestone in the near future. This is reflected in the three key areas of our reimbursement strategy: (i) Medicare rate; (ii) Medicare coverage; and (iii) private payor adoption, which tends to be strongly influenced by the first two areas. After we were able to obtain a favorable final Medicare reimbursement rate of USD 192.00 with effect from January 1, 2019, we are now focused on a positive Medicare coverage decision, either through the adoption of a bill by the U.S. Congress or an NCD issued by CMS. To push for the latter, we are working on the publication of the results of an advanced microsimulation model evaluating the long-term benefits and harms of Epi proColon, in order to present them to guideline groups and achieve inclusion of Epi proColon in the guidelines issued, for instance, by the ACS, which CMS has indicated would be an important factor for an NCD.

Besides the United States, until March 2019, we worked with BioChain to promote blood-based Septin9 testing in the Chinese market. However, in March 2019, we terminated our agreement with BioChain. In addition, on July 15, 2019, our Septin9 patents were declared invalid in China insofar as they relate to HCC detection and blood-based CRC detection. In light of this situation, we have decided to discontinue our efforts to commercialize Epi proColon in China for the foreseeable future.

In Europe, for the time being, our strategy involves a very limited focus on commercialization of Epi proColon because the European market for IVD products is highly fragmented and dominated by local effects in each country. Moreover, in many European countries, colorectal cancer screening is organized on a governmental level and, thus, the barriers to entry into such systems are typically very high. We, therefore, do not currently see commercialization in Europe as being key to the success of Epi proColon.

We seek to achieve our commercialization targets through our own commercialization activities as well as through commercialization and sales partnerships, such as with Polymedco. We believe that the strategy of entering into partnerships reduces the risks that would be associated with an autonomous market entry of our products and product candidates from scratch, because it gives us access to already existing sales and marketing channels. In the commercial partnerships into which we have entered, we typically pay a sales commission or receive a participation in the profits of our partners through upfront and milestone payments, but most importantly through royalties.

With respect to the marketing of the HCCBloodTest in the United States and Europe, we obtained CE marking for the product in Europe in October 2018, and are conducting a cross-sectional study in the United States in 2019. Our HCCBloodTest provides us with an excellent opportunity to establish ourselves in the market for therapy management for severe illnesses. As we believe it to be easier to obtain reimbursement for such services, compared to diagnostic screening, this, in our view, creates an attractive market opportunity for us. Additionally, as monitoring liver cancer is generally carried out in a few specialized liver centers, it is possible for us to focus distribution and marketing efforts.

For our Epi proLung product, we achieved CE marking and our goal now is to continue to optimize the performance of the product in order to initiate the prospective trials necessary for larger scale adoption and acceleration of commercial activities.

We aim to prioritize our commercial and R&D efforts by first focusing on achieving reimbursement for Epi proColon in the United States. Secondly, we will look to focus on the further development of our HCCBloodTest. Thereafter, we aim to use the remaining resources to optimize Epi proLung. We currently expect that our capital and personal resources will be dedicated to these activities in this order.

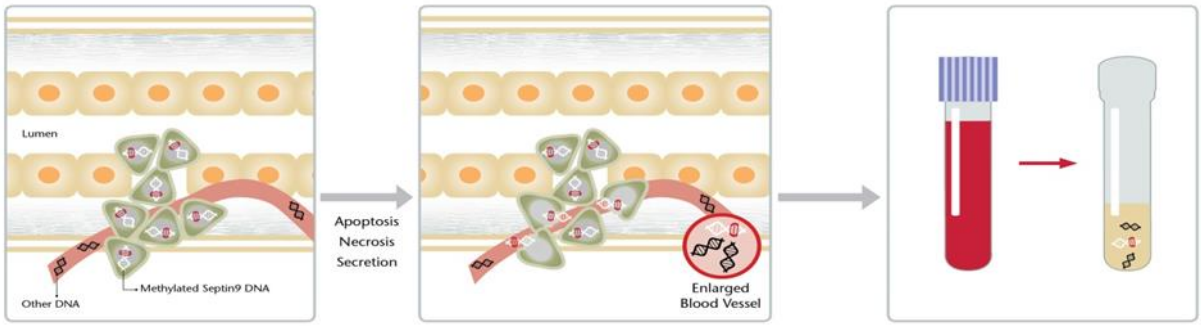
10.4. Our Technology Platform

Our products and product candidates are designed to enable the accurate detection of cancer to reduce mortality rates and lower overall healthcare costs. They are based on epigenetics, the study of changes to genetic function that are not associated with changes in DNA sequence. More specifically, our products and product candidates are based on the detection of DNA methylation changes that have been found to occur in cancer cells. DNA methylation is a biological phenomenon in which one of the four building blocks of the DNA, the nucleotide cytosine, is modified through the addition of a methyl group. This change may affect the gene's original function. Multiple methylations of the DNA at different sites of the gene or DNA methylation patterns can be cell-type specific and often manifest themselves in disease, especially in cancer, and, therefore, can serve as disease-relevant biomarkers for screening, diagnostic, prognostic and predictive purposes. Our key product, Epi proColon, is based on a specific DNA methylation of the Septin9 gene. The Septin9 gene provides instructions for the synthesis of a protein called septin-9 involved in many cellular functions and the DNA methylation status of the gene can be used clinically as a strong indicator for the presence of colon cancer in the general population of individuals 50 – 75 years of age and the presence of the most common form of liver cancer known as HCC among high risk patients with cirrhosis of the liver.

Based on our proprietary technologies, we can detect DNA methylation changes with broadly used and commonly available diagnostic testing methods and instruments, such as the polymerase chain reaction ("**PCR**") and NGS. Diagnostic PCR and NGS instruments are commonly available in laboratories across the world.

Our intellectual property portfolio is designed to protect all steps of our analytic process. We have optimized a series of assay components to (i) extract double-stranded DNA from the blood, (ii) convert the unmethylated DNA to a different sequence by a chemical process referred to as bisulfite conversion, and (iii) specifically detect the presence of the targeted methylated DNA sequence using PCR or other methods. Through our own research, we were able to identify that the DNA methylation of a particular gene, the Septin9 gene, is a biomarker highly correlated with the presence of CRC and HCC when used in varying clinical contexts. Our key product now on the market as Epi proColon is able to detect the very small quantities of methylated Septin9 biomarker that is present in the blood plasma of patients with CRC. The biochemical performance of our test for the detection of HCC, HCCBloodTest, currently mimics that of our Epi proColon test.

The illustration below is a schematic representation of the release of DNA from tumor tissue growing on the inner side of the large intestine, or colon of a patient. It shows how the tumor derived cell-free DNA is released into the patient's bloodstream, where our test detects the methylation status of the Septin9 gene. The detection of methylated Septin9 is thereby possible at a level of approximately 1-2 copies of the methylated Septin9 gene per milliliter of blood plasma, which represents, according to our estimate, one of the most analytically sensitive PCR assays currently available on the market. Although not illustrated, the mechanism for the release of cell-free DNA into the patient's bloodstream is similar in liver cancer.



Our test to detect the presence of methylated Septin9, which constitutes the basis for Epi proColon, is characterized by:

- *Extensive validation*. The product is approved by the FDA, the Chinese NMPA and is CE marked in Europe. The performance of the Septin9 biomarker and Epi proColon has been established in multiple independent studies including approximately 10,000 patients globally (see *10.5.7.1. "— Our Products — Overview of Clinical Studies"*) ;
- *High clinical sensitivity*. In multiple clinical studies, Epi proColon consistently identified 68-81% of colorectal cancers in clinical studies (see *10.5.7.1. "— Our Products — Overview of Clinical Studies — Epi proColon"*); and
- *Robustness and Reproducibility*. The robustness and reproducibility of the Epi proColon test has been evaluated extensively through studies and has demonstrated an equivalent and reliable performance across multiple laboratories. Repeated use of Epi proColon by multiple operators and laboratories showed a reproducibility of results of more than 95%.

With respect to HCCBloodTest, in April 2018, two independent clinical studies conducted in France and Germany, which examined blood from cirrhotic patients with and without HCC, found that among patients with cirrhosis, the methylated Septin9 test constitutes a promising circulating epigenetic biomarker for HCC diagnosis at the individual patient level. These results indicate that methylated Septin9 exhibits higher diagnostic accuracy for HCC detection than other currently available standard of care surveillance methods including the use of AFP (source: mSEPT9 Research Paper).

In addition to our proprietary Septin9 biomarker, we have been able to identify several other genes, which, by means of selective methylation, are indicators of the presence of other cancers. For example, we have been able to show and obtain patent rights on the fact that a specific methylation of the Short Stature Homeobox 2 ("**SHOX2**") gene is an indicator of the presence of lung cancer. Based on this finding and in combination with another proprietary methylation marker encoding the prostaglandin E receptor 4 ("**PTGER4**"), we have developed a first generation blood test for lung cancer marketed under the name "Epi proLung".

We believe that by using our proprietary technology platform, we should be able to discover additional disease markers that could be developed into diagnostic products used for screening, diagnostic, prognostic or predictive purposes for the detection of other solid tumors such as prostate, bladder, liver, gastric and head and neck. For example, we have been developing multiplexed methylation-based biomarker panels for the analysis and detection of multiple cancers

from a single blood specimen using NGS. We have been able to develop several prototypes and proprietary NGS cancer panels, which we are working to clinically validate in the future.

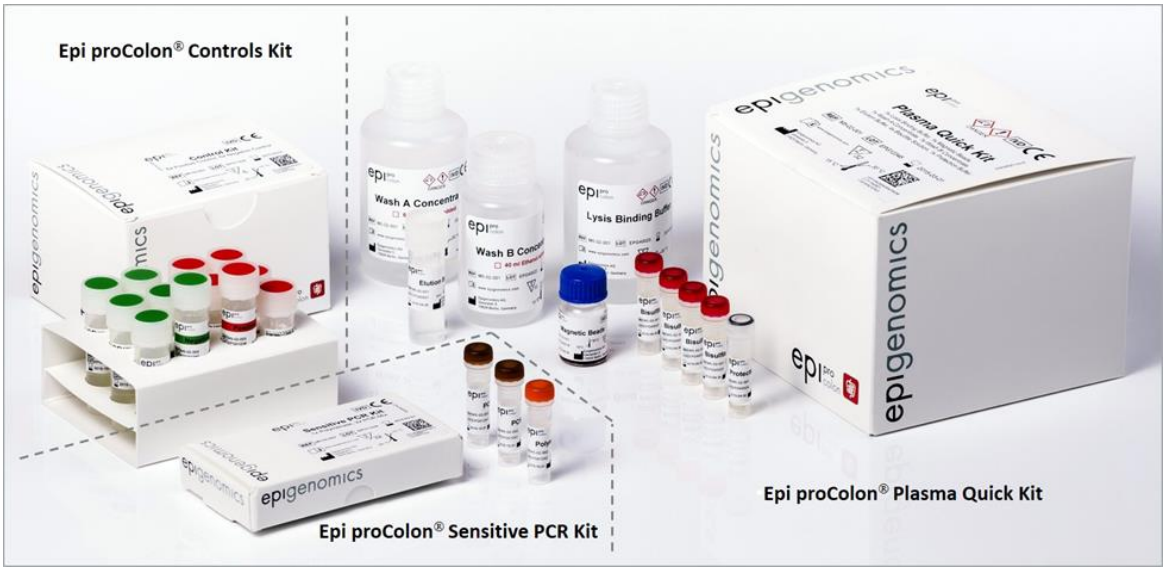
10.5. Our Products

10.5.1. Epi proColon

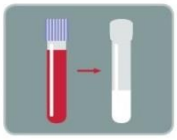
Epi proColon is the brand name we use for our blood-based screening test for colorectal cancer and it relies on detecting changes in the DNA methylation of Septin9, which, as explained above, is a highly accurate biomarker in the presence of colorectal cancer. Detection of methylated Septin9 in blood plasma represents a straightforward, minimally invasive method for detecting colorectal cancer throughout all stages of the disease. The Septin9 DNA biomarker is present only in very small quantities, especially in the blood plasma of early-stage cancer patients. The entire amount of DNA present in a 10 ml blood sample from a patient is extracted, and after a chemical modification, the extracted DNA is subjected to PCR in order to maximize the test's ability to detect even very small amounts of methylated Septin9 as an indicator for the presence of colorectal cancer. A negative test result, as characterized by the absence of methylated Septin9 in the patient's blood sample, indicates a reduced likelihood of the presence of colorectal cancer. In such cases, patients are advised to discuss all colorectal cancer screening options with their healthcare providers after one year. A positive test result indicates an increased likelihood of the presence of colorectal cancer, and such patients should be referred to a gastroenterologist for further diagnosis, such as a colonoscopy.

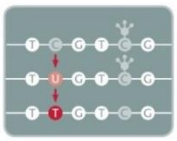
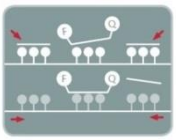
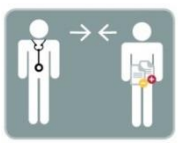
We received FDA approval for Epi proColon on April 12, 2016. In addition, a version of Epi proColon is CE-marked and approved for sale in all countries that accept the CE mark as a pre-requisite for commercialization, as well as in China, where it was approved for commercialization in December 2014 by the China Food and Drug Admnistration (now the NMPA) (see *10.5.2. "— Epi proColon 2.0 CE"*).

The product is comprised of three elements: Epi proColon Plasma Quick Kit, which includes the reagents required to extract DNA from the blood sample and for the bisulfite conversion of 32 samples; Epi proColon Sensitive PCR kit which includes the reagents required for PCR-based detection of the methylated Septin9 gene in 32 samples; and Epi proColon Control kit, which includes positive and negative quality control samples to be run in parallel with clinical samples in order to verify that the procedure was accurately followed and the results are valid and reportable. These three components are shown in the image below:



The chart and steps below summarize the flow of the Epi proColon® process:

Step 1: Blood draw	
	• A 10 milliliter standard blood collection tube is filled with the patient's blood sample, either at the physician's office during a visit or at a laboratory blood-drawing facility • Once collected, the blood sample is refrigerated and sent to a clinical laboratory for testing
Step 2: Blood plasma separation	
	• The blood sample is submitted to centrifugation, a process by which the red blood cells are separated from the supernatant liquid, or blood plasma • The centrifugation step is either performed at the clinical laboratory or, if the appropriate equipment is available at the blood draw facility, at the time of the blood draw
Step 3: DNA isolation and purification	
	• The total amount of free circulating DNA present in a 3.5 milliliter blood plasma sample is collected by the DNA's binding to specially coated magnetic beads • After a wash step to eliminate the presence of other blood components, the DNA is eluted from the beads and concentrated

Step 4: Bisulfite conversion	
	• The present non-methylated DNA base cytosine is altered, while the methylated cytosine bases are left unaltered • The methylated Septin9 DNA sequences are therefore different from their non-methylated counterparts • DNA isolation, purification and bisulfite conversion are performed with the reagents provided in the Epi proColon Plasma Quick Kit
Step 5: PCR amplification	
	• PCR amplification and detection is carried out on a standard instrument, the AB 7500 Fast Dx manufactured by Life Technologies AS, Oslo, Norway ("**Life Technologies**") a subsidiary of Thermo Fischer Scientific Inc., Waltham, MA, United States • PCR is a process by which specific sequences of DNA are amplified, while all other DNA sequences are not • For the Epi proColon test, the methylated Septin9 sequence is amplified. Amplification means that even small amounts of the target DNA that is present is multiplied over and over again, thus increasing their concentration by orders of magnitude above all other sequences present • After multiple cycles of amplification, a photochemical process that results in the emission of light is used, where the light is detected and analyzed by the PCR instrument • The PCR amplification step is performed with the reagents provided in the Epi proColon Sensitive PCR Kit • The entire amount of DNA extracted from each blood specimen is split into three portions, which are all independently tested for the Septin9 biomarker through PCR • A patient's blood sample will be called "positive" if at least one of the three portions of extracted DNA tests positive for Septin9 through PCR
Step 6: Reporting of results	
	• Once a test result has been generated (either positive or negative) the laboratory reports the result to the patient's healthcare provider • A negative test result will lead to a recommendation for the patient to return to his physician for consultation and recommendation of colorectal cancer screening options after one year • A positive test result will lead to a recommendation by the healthcare provider to refer the patient to a gastroenterologist for a

	colonoscopy to confirm the diagnosis

The lack of compliance with current screening guidelines is one of the largest obstacles in addressing mortality due to colorectal cancer (source: ACS Facts and Figures 2017-2019). Because the Epi proColon test is based on a simple blood sample, we believe Epi proColon will encourage high patient participation. The "Adherence to Minimally Invasive Testing Study," or ADMIT study, was conducted as a multi-center study at clinical centers within the Kaiser Permanente and Geisinger Health Systems in the United States. The study enrolled 420 average-risk, screening-eligible patients that were historically non-compliant with current screening guidelines, and demonstrated a 99.5% rate of adherence to colorectal cancer screening using Epi proColon (see *10.5.7.1.3. "— Overview of Clinical Studies — Adherence to Minimally Invasive Testing Study"*).

We believe that our Epi proColon test:

- Is convenient for the patient, can be administered as part of a routine medical examination and therefore should promote increased patient compliance with colorectal cancer screening, especially for patients that are not compliant with other colorectal cancer screening tests such as colonoscopy or fecal tests;
- Is simple and efficient to administer and produces test results that are easy for healthcare providers to interpret, thereby helping healthcare providers to increase colorectal cancer screening participation in their patient populations;
- Can be run on existing equipment in clinical laboratories and, therefore, presents an opportunity for the laboratories to engage in colorectal cancer screening;
- Offers a compelling value proposition for healthcare payor organizations for a disease that, according to our estimates, is associated with a significant annual cost of treatment in the United States; and
- Provides an attractive new option for the non-compliant, and therefore unscreened, population through its minimally invasive nature and ease of sample collection. We estimate a target market of approximately 30 million number of people unscreened in the United States alone based on U.S. Census data and ACS Facts and Figures 2017-2019.

We aim to leverage the value of our methylated Septin9 biomarker for detecting colorectal cancer, potentially in combination with other proprietary biomarkers, in other populations, such as high-risk patients, and for patient care and management (*e.g.*, monitoring disease recurrence and potentially prognosis assessment). Furthermore, we are conducting a multi-center post-approval study, with the goal of generating data to demonstrate the clinical value of repeat testing with Epi proColon. In doing so, we hope to establish the product as a standard screening test for colorectal cancer in the future.

We are also in the process of publishing a microsimulation model estimating the benefits and hazards associated with CRC screening using our Epi proColon test with a collaborator. We have submitted the results of this modeling to a scientific journal and are awaiting acceptance. The publication will provide data on life-years gained compared with no screening (benefit), lifetime number of colonoscopies required (burden), lifetime number of colonoscopy complications (harms), ratios of incremental burden and benefit (efficiency ratios), and the most appropriate screening interval for our blood test. We expect this model, once published, to further assist us in

obtaining Medicare reimbursement coverage for Epi proColon through an NCD from CMS (see *10.7.2. "—Epi proColon Reimbursement and Price Determination — Medicare Coverage"*).

In the future, we aim to leverage our Epi proColon test by offering automation solutions for Epi proColon processing to our Laboratory Customers (also see *10.5.3. "— Epi BiSKit and Automation Solution"*). Our R&D team recently developed a pipetting-robot platform, which makes it possible to automate the processing of 48 or 96 plasma samples in parallel. The robots enable a lab technician to extract DNA from plasma samples, then perform the bisulfite conversion of the DNA obtained and finally clean the DNA treated with bisulfite while minimizing manual interaction. The technician loads the samples, runs a software module and, at the end of the process, obtains the cleaned, bisulfited DNA. The automation platform performs all tasks related to the reagent and liquid transfer, mixing, warming, shaking, incubation of reaction batches and capturing of magnetic particles and dispersion. The resulting DNA can be used for PCR amplification and analysis. Currently, a technician typically processes 16 samples at a time; using the new automation system, a single user can simultaneously process up to 96 samples in an eight-hour shift. The automation means higher throughput and lower processing costs per sample by reducing the time it takes to process them. Another benefit of automation is the improved precision, which leads to a lower degree of variability between the runs.

10.5.2. Epi proColon 2.0 CE

Epi proColon 2.0 CE, which is technically equivalent to Epi proColon, but has different instructions for use and specifically uses a different algorithm to interpret test results, bears the CE mark and is currently for sale in selected markets in the European Union and elsewhere. Epi proColon 2.0 CE was also approved by the China Food and Drug Administration (now the NMPA) in December 2014. The NMPA approval was previously obtained by our former partner BioChain, and we are currently in discussions with NMPA to move the relevant filing authority from BioChain to us in connection with the renewal of the NMPA approval. NMPA requsted approval from us to release the documents needed for this renewal. We granted our approval and once NMPA releases these documents, the license renewal process will resume.

In both tests, Epi proColon and Epi proColon 2.0 CE, the entire amount of DNA extracted from each blood specimen is split into three portions, which are all independently tested for the Septin9 biomarker through PCR. According to the instructions for use of the FDA-approved test version, a patient's blood sample will be called "positive" if at least one of the three portions of extracted DNA tests positive for Septin9 by PCR. In contrast, according to the instructions for use of the CE marked version, a test will only indicate a patient's blood sample as "positive" if a minimum of two portions of extracted DNA test positive for Septin9 by PCR. In both cases, a positive result means that the patient should be referred to a gastroenterologist for further testing.

Epi proColon 2.0 CE was made available for sale beginning in 2012 in the European Union and other selected countries outside the United States that accept the CE mark as pre-requisite for commercialization.

10.5.3. Epi BiSKit and Automation Solution

In June 2018, we completed the development of an automated process for labor-intensive portions relating to the bisulfate conversion of DNA, which may be used for the application of the Epi proColon test or other tests for DNA methylation. The Epi BiSKit provides a complete set of reagents for the preparation of bisulfite-converted DNA from plasma derived from human whole blood samples or urine samples. Using the reagents provided, each Epi BiSKit is intended to process 32 preparations, providing purified, sulfonated bisulfite-converted DNA for use in diverse,

downstream molecular applications. Three kits can be used to process 96 reactions on a Tecan automated liquid handling instrument.

The technology works as follows: DNA is extracted from plasma by binding to magnetic beads. Impurities are removed from the magnetic beads by a wash step. The purified DNA is then released from the beads by suspension in an elution buffer, and treated with bisulfite reagents to produce sulfonated bisulfite converted DNA (bisDNA). The bisDNA is then re-purified using magnetic beads and cleansing steps to produce the finished product of pure, sulfonated bisulfite-converted DNA.

The output of this process can for example be used to enhance application of our existing products, such as Epi proColon, but also of other products requiring bisulfite-converted DNA, such as our liver cancer product (HCCBlood Test). Data on the Epi BisKit and the automation process has been presented at the 2018 annual meeting of the Association for Molecular Pathology and has been published both in the Tecan Journal (Edition 2, 2019) and BMC Research Notes (BMC Res Notes, 2019 August 30; 12:551).

10.5.4. HCCBloodTest

We have modified our Epi proColon product to use the technology for detection of liver cancer in a product called “HCCBloodTest”. HCCBloodTest is a qualitative assay for the real-time PCR detection of methylated Septin9 DNA in bisulfite converted DNA from human plasma samples. It is a modified version of our Epi proColon 2.0 CE test, repurposed for the detection of HCC, the most common form of liver cancer, in patients diagnosed with liver cirrhosis. While the presence of methylated Septin9 in non-cirrhotic patients is associated with CRC, in the blood of a patient with cirrhosis, the presence of methylated Septin9 is 30 times more likely to indicate the presence of HCC than CRC.

In April 2018, we had announced the results of two independent clinical studies which show high accuracy of our Septin9 biomarker for detecting liver cancer in patients suffering from cirrhosis. In particular, these results indicate that methylated Septin9 exhibits higher diagnostic accuracy for HCC detection than other currently available standard of care surveillance methods, including the use of AFP.

Given the strong clinical data, good responses from the medical and scientific communities and what we perceive as considerable diagnostic need around the world, we quickly decided to develop a relevant product and announced this at the beginning of July 2018. Product development was rapid due to the Septin9 marker already used in our Epi proColon test and the proprietary technology applied for this, allowing us to obtain the CE mark in October 2018.

Going forward, we are conducting a cross-sectional study in the United States in 2019, and plan to initiate additional studies in the future towards obtaining FDA approval. For details, see *10.5.7.3. “— Overview of Clinical Studies – HCCBloodTest Studies”*.

Our HCCBloodTest provides us with an excellent opportunity to establish ourselves in the market for therapy management for severe illnesses. As we believe it to be easier to obtain reimbursement for such services, compared to diagnostic screening, this, in our view, creates an attractive market opportunity for us. Additionally, as monitoring liver cancer is generally carried out in a few specialized liver centers, it is possible for us to focus distribution and marketing efforts. However, we do not expect to see any significant commercial growth until after the above-mentioned additional studies will have been published, which we expect in a range of two to four years from now.

10.5.5. Epi proLung

Our Epi proLung test has been developed as an aid for the diagnosis of lung cancer and may help pathologists to confirm a diagnosis of malignant lung disease in patients with suspected lung cancer when current diagnostic procedures lead to inconclusive results. Epi proLung has been developed to determine the methylation status of both the SHOX2 and PTGER4 genes in patients' blood plasma, which can be collected during a routine medical check-up. We successfully completed preliminary clinical studies for Epi proLung, and CE marked the product at the end of 2017.

We believe our target population for the Epi proLung test will be patients at a high risk of lung cancer. Recently adopted U.S. screening guidelines for lung cancer recommend that this patient population receive a LDCT scan every year (source: USPSTF Recommendation Summaries). However, LDCT scans are known to have a substantial rate of false-positive results, leading patients to require follow-up diagnostic procedures, which may be invasive (source: USPSTF Statements). We believe an accurate blood-based lung cancer test using the methylated SHOX2 biomarker and the PTGER4 biomarker would be of great benefit to patients and healthcare providers, as the detection of the methylated SHOX2 and PTGER4 could facilitate a quick and reliable diagnosis, and determine which patients would need follow-up diagnostic procedures. We believe this presents a major opportunity for our methylated SHOX2 and PTGER4 biomarkers and our Epi proLung.

In March 2016, we entered into a strategic license agreement with BioChain for the development and commercialization of Epi proLung in China. When BioChain did not meet certain contractual milestones, however, we terminated the agreement on November 16, 2018. See *11.2.1.2. "Material Agreements — License Agreements — BioChain Agreements — License for Epi proLung"*.

We intend to further optimize the clinical performance of the assay prior to broader commercialization, with the aim to increase its diagnostic accuracy and improve the clinical utility of Epi proLung in nodule adjudication strategies.

10.5.6. Other Product Candidates

We have identified and protected with patents additional DNA methylation biomarkers for a variety of cancers, apart from colon and lung, including those of the prostate, bladder, gastric and head and neck. We believe these markers have the potential to form the basis for future diagnostic product development opportunities, in particular in combination with the implementation of NGS technology as the new platform we are developing with which to use our tests. Further validation through testing of clinical samples will be necessary to confirm the usefulness of these markers in clinical practice. In addition, we are also investigating biomarkers with respect to sequencing by means of various platform technologies.

10.5.7. Overview of Clinical Studies

10.5.7.1. Epi proColon

Epi proColon has been extensively studied in clinical trials enrolling more than 10,000 patients (source: Clinical Trials). The results from our studies have demonstrated that Epi proColon is a safe and effective test for colorectal cancer detection and results in a greater increase in patient compliance with colorectal cancer screening when compared to fecal immunochemical tests ("**FIT**"). On April 12, 2016, the FDA granted PMA for Epi proColon for use in adults of either gender, 50 years or older, defined as average risk for colorectal cancer, who have been offered and declined tests that are available and recommended in the USPSTF 2008 colorectal cancer

screening guidelines, such as fecal occult blood tests and colonoscopies. Patients with a positive Septin9 test should then be referred to a physician for a diagnostic colonoscopy. To our knowledge, Epi proColon is currently the only FDA-approved blood-based screening product for the early detection of colorectal cancer.

Epi proColon's U.S. regulatory approval by the FDA was supported by three major clinical studies, the Prospective Pivotal Study, the FIT Comparison Study and the Adherence to Minimally Invasive Testing Study.

10.5.7.1.1. Prospective Pivotal Study (VAL0018)

In December 2011, we completed the prospective pivotal study as part of our PMA submission to the FDA. In this multi-center clinical study of Epi proColon, approximately 7,940 screening-eligible individuals, defined as persons between 50 and 75 years of age with no personal history or first-degree familial history of colorectal cancer, who were identified as "average risk" under current screening guidelines, were enrolled. The study took place at 32 clinical sites in the United States and Germany. Blood samples from all participants in the study were obtained prior to the patients undergoing screening colonoscopies and tested with Epi proColon in three different clinical laboratories.

The results from Epi proColon testing were compared to the results from colonoscopy testing in a blinded manner with a control group. The study demonstrated a test sensitivity of 68% (percentage of cancer cases present in the tested group that were correctly identified by Epi proColon) and a specificity of 80% (percentage of individuals in the group identified as negative by a colonoscopy that were correctly identified by Epi proColon).

The data in this study suggests that Epi proColon's sensitivity correlates with the stage of the cancer. In a detailed analysis the data showed that 65% of the stage I cancers present in the study group were also classified as being very small tumors. These small tumors are generally assumed to be responsible for the lower likelihood of detection, due to lower amounts of tumor DNA being shed into the bloodstream. This disproportionately high amount of small early stage tumors led to a lower than expected performance of the test in this trial. However, if the test is used regularly (for instance, annually), as these tumors are usually relatively slow growing, we believe that cancers could eventually be detected at an early enough stage, where treatment options could still result in a cure. However, at this time, such long-term repeated use testing data is not yet available. We expect that such data will be collected in the context of our post-FDA-approval study (see also *10.5.7.1.4. "—FDA Post-Approval Study"*).

10.5.7.1.2. FIT Comparison Study (SPR0022)

Following the completion of the pivotal study and the presentation and discussion of the data with the FDA, we agreed to conduct a further study comparing Epi proColon to FIT. In 2012, we conducted the FIT Comparison Study, a head-to-head, multi-center comparative clinical study between Epi proColon and OC-FIT Chek, according to our estimates the market-leading FIT test. The sample collection for the study took place at 61 clinical sites in the United States. A total of 301 patients were enrolled, including 98 cancer cases identified in screening colonoscopies and 202 prospectively enrolled subjects undergoing screening colonoscopies. In total, 101 cancer patients were included in the study, 101 patients provided a blood sample (but only 97 provided a stool sample). The study demonstrated that Epi proColon was able to detect 73% of all evaluable colorectal cancer cases (compared to 68% of colorectal cancer cases detected by FIT) at a specificity of 82%, and that the sensitivity of the blood plasma-based methylated Septin9 test is statistically non-inferior to FIT (although the specificity of the Septin9 test was lower than that of OC-FIT Chek).

The successful completion of the FIT Comparison Study allowed us to submit our PMA for Epi proColon in January 2013, which was granted in April 2016.

10.5.7.1.3. Adherence to Minimally Invasive Testing Study

We conducted the ADMIT Study after the FDA, in a June 2014 response letter to our PMA application, requested additional data to demonstrate that the blood-based Epi proColon test will increase patient compliance with colorectal cancer screening in the intended use population. As a consequence, the design of the ADMIT Study focused on subjects that have been historically non-compliant with colorectal cancer screening according to current screening guidelines.

The ADMIT study was conducted as a multi-center study at clinical centers within the Kaiser Permanente and Geisinger Health Systems. We enrolled 420 average-risk, screening-eligible patients that were historically non-compliant with current screening guidelines and had at least twice rejected or not completed an offer to be screened for colorectal cancer. The goal of the study was to demonstrate that blood-based testing with Epi proColon will result in increased patient compliance in colorectal cancer screening as compared to FIT stool-based testing.

The study was completed in May 2015 and demonstrated a 99.5% rate of adherence to colorectal cancer screening using Epi proColon, which was substantially greater than the adherence rates to FIT and other methods. Baseline adherence to standard of care colorectal cancer screening at Kaiser Permanente or Geisinger Health System amounted to less than 25%, as measured in a passive control arm of the study in which previously non-compliant patients were offered colorectal cancer screening tests (FIT or colonoscopy).

The results of these and other clinical studies have been published in peer-reviewed scientific publications, authored by their respective principal investigators. In general, in our view, it has been concluded that the detection of methylated Septin9 DNA methylation in blood plasma represents a straightforward, minimally invasive method to detect all stages of colorectal cancer, which, either alone or in combination with other screening strategies, has the potential to satisfy unmet needs for increased compliance in the target population.

10.5.7.1.4. FDA Post-Approval Study

As part of the FDA's PMA approval process of Epi proColon, we are required to conduct a post-approval study for Epi proColon. We commenced this study in the fourth quarter of 2016 and currently expect it to run until 2022. We currently expect to enroll approximately 4,500 patients across multiple study centers in the United States over the next three years. As of August 2019, we have enrolled approximately 40% of the target number of subjects in this study. The post-approval study is intended to establish the programmatic performance of our Epi proColon test. In addition, the study will establish data regarding patients' adherence to follow-up colorectal cancer testing upon receiving a positive result from Epi proColon and the compliance rate for continued participation in colorectal cancer screening programs that use Epi proColon as a screening option. The study will assess the impact of annual colorectal cancer testing using Epi proColon for people who are eligible for colorectal cancer screening but have declined screening by methods recommended by USPSTF, such as a colonoscopy or a fecal occult blood test, a method that uses stool samples as a basis for the test. In accordance with FDA rules, we have submitted the complete protocol of our post-approval study to the FDA and provide interim reports to the FDA every six months during the first two years of the study, and annually thereafter.

10.5.7.1.5. VA Manhattan Study

In October 2018, we announced the start of a study carried out by the Veterans Administration New York Harbor Healthcare System (VA Manhattan), which consists of a number of hospitals, for

participation in a colorectal cancer screening with Epi proColon. The study examines patients who have rejected both a colonoscopy and a fecal immunochemical test (FIT), with the objective to evaluate the potential of a blood-based test as an acceptable alternative for patients resistant to screening. We have provided Epi proColon test kits and financial support for the study.

10.5.7.2. Epi proColon 2.0 CE Studies

The clinical performance of Epi proColon 2.0 CE was determined using 149 clinical samples with no evidence of disease selected from a group of average risk screening population and using 197 clinical specimens in a case-control design comprised of samples from histologically confirmed colorectal carcinoma patients of all stages and samples from colonoscopy-verified negative individuals with no evidence of disease.

In the average-risk group, one out of 149 samples provided a positive test result. Accordingly, the estimated false positive rate in this group of patients was 1%. These numbers translate into a clinical specificity (percentage of individuals in the group identified as negative by a colonoscopy that were correctly identified by Epi proColon 2.0 CE) of 99%. Within the 99 subjects from the control group with no evidence of disease (controls), 96 specimens were determined to be Septin9 negative, resulting in an estimated clinical specificity of 97%.

Of the 98 subjects diagnosed with colorectal carcinoma, 79 specimens were determined to be Septin9 positive resulting in an estimated clinical sensitivity (percentage of cancer cases present in the tested group that were correctly identified by Epi proColon 2.0 CE) of 81%. In early, localized colorectal cancer the Epi proColon 2.0 CE test was positive in 43 (18 stage I, 25 stage II) of the 56 patients (77%).

10.5.7.3. HCCBloodTest Studies

In April 2018, two independent clinical studies conducted in France and Germany, which examined blood from cirrhotic patients with and without HCC, found that among patients with cirrhosis, the methylated Septin9 test constitutes a promising circulating epigenetic biomarker for HCC diagnosis at the individual patient level. These results indicate that methylated Septin9 exhibits higher diagnostic accuracy for HCC detection than other currently available standard of care surveillance methods including the use of AFP. The two clinical studies included 289 cirrhosis patients with or without liver cancer from France (initial study) and Germany (replication study). *Inter alia*, the studies demonstrated that a triple-negative test on methylated Septin9 had the highest negative predictive value for excluding liver cancer (97%), whereas a triple-positive methylated Septin9 test had the highest positive predictive value for retaining a diagnosis of liver cancer (92%) (source: mSEPT9 Research Paper).

Based on these results, we obtained CE marking for HCCBloodTest in Europe in October 2018, and are conducting a cross-sectional study on cirrhotic subjects in the United States in 2019, with 150 enrolled subjects as of August 2019. We are testing Septin9 alone and with other methylation markers to assess the clinical performance of at least two versions of the test in a U.S. population. We plan to initiate larger prospective trials in the United States in the future. We also plan to sponsor a large longitudinal study in Europe consisting of approximately 440 patients to ascertain the diagnostic performance of the assay in a clinical setting

10.5.7.4. Epi proLung Studies

We have developed and CE marked a proprietary blood-based Epi proLung test. In late 2015, in a first feasibility study to evaluate the viability of a blood plasma-based lung cancer test, we explored the performance of some of our proprietary DNA methylation biomarkers, including the SHOX2 and PTGER4 genes. Levels of DNA methylation were analyzed in two independent case-control

sets of plasma samples. The training set of 30 plasma samples and the larger testing study of 151 plasma samples included all major histological types and covered a broad range of lung cancer stages. The DNA methylation panel displayed high sensitivity in detecting lung cancer. The findings observed in the training study were confirmed in the testing study. We are working to further optimize the diagnostic accuracy of the Epi proLung in the future.

10.6. Our Commercialization Strategy for Epi proColon

Depending on the structure of the market we want to target and our knowledge of that market's requirements, we pursue different commercialization strategies for our commercial-stage product Epi proColon.

10.6.1. North America

The U.S. market is our primary focus geographically, as it remains the most attractive market for us worldwide (see *9.3.1. "Markets and Competitive Environment — Cancer Diagnostics Markets by Geography — The Cancer Diagnostics Market"*). With an estimated target market of approximately 30 million patients who have not been screened for CRC despite existing guideline recommendations (based on U.S. Census data and standard average percentage rates for patients who would be subject to general guideline recommendations and assuming a non-adherence rate to screening in accordance with current guidelines of 37%, which we estimated based on ACS Facts and Figures 2017-2019), the U.S. market offers an opportunity to grow test volumes for Epi proColon, increase revenue and introduce additional products to the market.

Since FDA approval of Epi proColon was granted in April 2016, we have made significant progress in achieving U.S. nationwide availability of Epi proColon, which is needed to increase acceptance and awareness of the product. Four of the top national reference laboratories in the United States are now offering Septin9 testing. On May 9, 2016, Laboratory Corporation of America Holdings, Burlington, North Carolina, United States ("**LabCorp**"), the world's leading healthcare diagnostics company (source: LabCorp Company Website), became the first laboratory network in the United States to offer Epi proColon, and it was followed by ARUP Laboratories, Inc., Salt Lake City, Utah, United States. We continue to focus on laboratory adoption by those laboratories that have not yet adopted Epi proColon. In this regard, we aim to leverage our Epi proColon test by offering automation solutions for Epi proColon processing to our Laboratory Customers. Our R&D team recently developed a pipetting-robot platform, which makes it possible to automate the processing of 48 or 96 plasma samples in parallel through robots, which we believe improves precision and may increase processing speed of the tests up to sixfold.

To promote Epi proColon sales in the United States, in 2018, we entered into the Sales Partnership Agreement with Polymedco, pursuant to which Polymedco acts as an exclusive sales and marketing agent for Epi proColon. We are permitted to continue to distribute Epi proColon ourselves, however, any commercial sales incur commission fees payable to Polymedco and count towards Polymedco's minimum sales requirement under the agreement. For details, see *11.1. "Material Agreements — Sales Partnership Agreement with Polymedco"*.

We, together with Polymedco, target Laboratory Customers that have a significant outpatient business and an established sales force to sell their test offerings. These Laboratory Customers perform PCR assays as part of their offered services. The experienced sales teams of our Laboratory Customers negotiate with the healthcare providers that generate screening assay volumes, while their reimbursement and billing departments negotiate arrangements and collect payments from third-party payors, including government programs such as Medicare and Medicaid, private insurance plans and managed care programs. We believe that involving the

molecular diagnostics Laboratory Customers in the United States and leveraging the sales and marketing efforts of these Laboratory Customers will help ensure rapid and broad commercial adoption of Epi proColon testing. In addition, we work with key medical opinion leaders in order to increase the adoption of our test across healthcare providers and ensure its favorable recommendation in the CRC screening guidelines issued by leading medical societies.

Prior to the FDA approval and commercialization of our Epi proColon product, we historically granted licenses to certain certified laboratories in the United States and Canada in order to enable them to offer their LDTs for Septin9 as a service and an aid in the diagnosis of colorectal cancer. Currently, Quest Diagnostics, Inc., Madison, New Jersey, United States ("**Quest**") is the only laboratory offering a LDT version of our Septin9 test. We believe that Quest may switch to the FDA-approved version of the test after a positive reimbursement decision so that they can actively market it as a screening product which they cannot do for LDTs.

10.6.2. Europe

The European market for IVD products is highly fragmented. Further, in most European countries, colorectal cancer screening is organized on a governmental level and the barriers to entry into such systems are typically very high, whereas self-payor segments are small and costly to service (see *9.3.2. "Markets and Competitive Environment — Cancer Diagnostics Markets by Geography — The Cancer Diagnostics Market in Europe").* Therefore, for the time being, we have a very limited focus on the European commercialization of Epi proColon. The test is sold, as Epi proColon 2.0 CE, in Germany, Austria and Switzerland, Spain, France, Luxembourg, Turkey, Estonia, the Czech Republic and Slovakia. We are seeing a slow but steady increase in the numbers of tests sold throughout the countries in which we market the product ourselves or through local distributors. We expect minor increased interest by physicians and patients in the future, based on the regulatory approval in the United States by the FDA.

10.6.3. Other International Markets

There are other attractive markets for the commercialization of our product. However, since we are not directly present in these markets, most notably in a number of Asian countries, Australia and New Zealand, Canada and Mexico, we seek to address these markets through various partnerships with locally active companies specializing in the commercialization of IVD products in their respective home markets. So far, such partnerships have only accounted for an immaterial portion of our revenues. We expect to continue to analyze the potential introduction of our HCCBloodTest in other international markets in the future.

With respect to China in particular, after we had initially entered into the BioChain Colon Agreement with BioChain (see *11.2.1.1. "Material Agreements — License Agreements — BioChain Agreements — License for Septin9 Biomarker"*), an exclusive patent licensing agreement pursuant to which BioChain marketed and sold their own version of our product in China and paid us royalties on our patents, we terminated such agreement on March 6, 2019 because BioChain did not meet certain minimum sales requirements. BioChain has since contested the termination, and we are currently in mediation proceedings (see *10.18.2. "— Material Legal Disputes and Administrative Proceedings — BioChain Dispute"*). In addition, following a request for invalidation by Jiangsu Weizhen Biomedical Technology, Inc. ("**Weizhen**"), on July 15, 2019, the Reexamination and Invalidation Department of the China National Intellectual Property Administration ("**CNIPA**") deemed our Septin9 patent in China partially invalid. Pursuant to the decision, our Epi proColon 2.0 CE product, as well as HCCBloodTest, are no longer patent-protected in China. The decision is not yet legally effective and we filed an appeal on October 10, 2019, but reversal of the decision could take several years (if ever). In light of this

situation, we have decided to discontinue our efforts to commercialize Epi proColon in China for the foreseeable future.

10.7. Epi proColon Reimbursement and Price Determination

In the United States, Epi proColon is marketed to Laboratory Customers that currently perform molecular diagnostic testing in an outpatient setting throughout the United States. These Laboratory Customers generate revenue by testing patient samples and then billing the patient or, more commonly, their insurers, for this service. In general, these Laboratory Customers have a dedicated billing department to ensure timely and appropriate payment. Their ability to collect payments from healthcare payors will determine the demand from these Laboratory Customers for our product. Therefore, the ability of the Laboratory Customers that perform our test to receive reimbursement is very important to our commercial success.

For the methylated Septin9 test, the U.S. Laboratory Customers bill private insurance companies and government intermediaries known as Medicare Administrative Contractors ("**MACs**") for their testing with Epi proColon, depending on the age of the patient. With respect to the methylated Septin9 test, which is appropriate for patients' aged 50 to 75, private insurance companies and private payors are billed for the testing of patients under the age of 65, and the MACs and Medicare Advantage Plans (private insurance plans that contract with Medicare) are billed for the testing of patients over the age of 65. Therefore, decisions such as NCDs by the CMS and reimbursement rate decisions have a significant impact on the revenue that our Laboratory Customers are able to generate by performing the test. Medicare reimbursement is particularly crucial in this regard, since typically the Medicare reimbursement status and rate set the industry benchmark that is also adopted by private payors (*i.e.*, private insurance companies). Large scale commercial adoption in the United States is thus highly dependent upon achievement of reimbursement, specifically, Medicare reimbursement. While Medicare reimbursement for Epi proColon on the U.S. market remains our most significant milestone in the near future, we aim to continue to strive for favorable reimbursement decisions by other third-party payors.

In Europe, most health care payors are not prepared to cover the expenses of screening products or have protracted and time-consuming decision-making processes in place to make reimbursement decisions. Furthermore, these decisions are taken on a country-by-country basis. Therefore, we have decided not to actively pursue the reimbursement of Epi proColon 2.0 CE in European markets at this time.

In the United States, the two critical factors for Medicare reimbursement are rate and coverage.

10.7.1. Medicare Rate

The amount our Laboratory Customers will be paid by third-party payors for executing the test and producing a result for each patient is referred to as the reimbursement rate, and it depends on the Current Procedural Terminology ("**CPT**") codes (national billing codes) of each product. Laboratory Customers submit invoices citing a specific CPT code for each test performed in the laboratory to the respective healthcare payors. CMS establishes the Medicare reimbursement rate for individual tests that are covered by the CPT, considering the combination of supply cost and labor. While private payors make their own decisions regarding payment levels, such Medicare rate is considered the industry benchmark for such rates and typically adopted by private payors (*i.e.*, private insurance companies) within a range of 80% - 120%.

As Epi proColon had not yet received a CPT code, in late 2016, it was "crosswalked" to an existing CPT code, meaning CMS considered the Epi proColon similar to other products classified under this code, which received a rate of USD 83.67, despite Epigenomics, CMS' expert panel and

numerous industry groups recommending a rate of approximately USD 160.00 per test. After we filed for reconsideration, in June 2018, CMS issued the preliminary gapfill rate of USD 192.00 for Septin9 (Epi proColon). On October 22, 2018, CMS announced the final reimbursement rate of USD 192.00 per Epi proColon test. On December 14, 2018, CMS published the official Clinical Lab Fee Schedule for 2019, which includes this same rate as the final reimbursement rate with effect from January 1, 2019.

Under the U.S. Protecting Access to Medicare Act, the rate of USD 192.00 per test will remain unchanged for at least three years after taking effect on January 1, 2019. After three years, under the U.S. Protecting Access to Medicare Act, the rate can be reduced by a maximum of 10% per year for the following three years.

10.7.2. Medicare Coverage

There are two ways to achieve Medicare coverage: (i) legislation or (ii) an NCD by the CMS.

As many screening tests received Medicare coverage through legislation, we are monitoring a bipartisan bill which has been introduced in the U.S. House of Representatives, mandating Medicare coverage for FDA-approved blood tests for colorectal cancer screening, and expect a similar bill to be introduced in the U.S. Senate. We believe that these are positive steps towards legislative approval with regard to reimbursement.

Additionally, we continue to seek an NCD. An NCD would be preferable for us as it would be limited to our test, whereas legislation mandating Medicare coverage (which would render an NCD irrelevant) would apply to other blood tests as well. In this regard, on May 3, 2019, CMS accepted our application to review Epi proColon as part of an NCD. Once CMS starts the review process (which they have not done yet due to limited resources), CMS must generally reach a decision within nine months: First, within six months from the start of the review process, CMS must issue a proposed determination (unless a "Medicare Evidence Development & Coverage Advisory Committtee" (MEDCAC) or "External Technical Assessment" (TA) is required, which CMS has indicated they do not believe will be the case or, if it will be, would not affect the six-month time frame). Once a proposed decision is issued, CMS must then issue a final determination within ninety days.

In connection with the acceptance of Epi proColon as part of an NCD, CMS indicated that an important factor in the NCD process is the inclusion in guidelines issued by medical professional societies, such as the CRC screening guidelines of the ACS. In addition, publications on the test during CMS' review process will be taken into account. To that end, we are working towards inclusion in such guidelines and the publication of a microsimulation study, as described in *10.8. "—Epi proColon Medical Guideline Inclusion in the United States and Selected International Markets"*.

10.8. Epi proColon Medical Guideline Inclusion in the United States and Selected International Markets

Incorporating a new diagnostic test into medical guidelines is an important step for any new screening product, given the influence guidelines have on physicians. Medical guidelines are developed by professional medical associations for the reference and guidance of healthcare providers, in order to assist them in making decisions regarding the diagnosis and treatment of diseases at various stages. In addition, in connection with the acceptance of Epi proColon for an NCD review, CMS has indicated that guideline inclusion would be an important factor considered by them in making a Medicare coverage decision for Epi proColon.

Current medical guidelines for colorectal cancer screening have developed from three main sources: (i) ACS, a U.S. nationwide, community-based voluntary health organization dedicated to eliminating cancer as a major health problem by preventing cancer, contributing to the treatment of cancer and diminishing suffering from cancer, through research, education, advocacy, and service; (ii) medical professional societies committed to screening and care standards within the gastrointestinal field such as the American Gastroenterology Association, the American College of Gastroenterology, and the American Society of Gastroenterological Endoscopy; and (iii) the USPSTF.

We are working with different professional societies and associations that issue guidelines on colorectal screening in an attempt to include blood-based Septin9 testing on the list of recommended screening methods. The timing for the inclusion of Epi proColon in screening guidelines depends on how frequently each group updates its guidelines, which can be anywhere from annually to every five years, and on the outcome of the medical or technical assessment of the medical experts seated on the committees that take decisions for such guideline bodies.

Contrary to our expectations, Epi proColon was not included in the updated ACS CRC screening guidelines published on May 30, 2018. We believe that this was at least in part due to the fact that our tests and technology are relatively new and there were no microsimulation models on its benefits, which we believe are taken into account in the development of screening guidelines.

As such, in order to obtain guideline inclusion and to support a favorable NCD by CMS, in 2018 we commissioned an advanced microsimulation model from Harvard Medical School evaluating the long-term benefits and harms of Epi proColon screening, since so far, none of the microsimulation models utilized by the various medical guideline groups have included Septin9. We announced the completion in January 2019 with favorable results for Epi proColon, in particular confirming that Epi proColon improves CRC screening participation rates among people who have not made regular use of screening despite applicable recommendations in medical guidelines. We submitted our results to a peer-reviewed scientific journal for publication and aim to present the publication to guideline groups to further push for inclusion of our tests in the guidelines. Although the publication has taken longer than expected and is not yet completed, once published, we believe the results will convince guideline groups and CMS of the benefits of Epi proColon in terms of performance and increased screening rates in the United States. One of the authors of the microsimulation model, Dr Elvira D'Andrea, MD, MPH, is expected to present a summary of the results at the 12th European Public Health Conference of the European Public Health Association on November 21, 2019, held in Marseille (France). We aim to continue to work with ACS and other guideline groups for potential future inclusion.

In the European Union, medical guidelines are issued, but not binding and not followed consistently by all European countries. Guidelines prepared on a national level result in a different approach regarding the diagnosis and treatment of colorectal cancer throughout the European Union. Due to the complicated and different methods of issuing guidelines in Europe, we consider it unlikely that Septin9 tests will be included in any guideline within the next five to ten years. Once the product is further developed, however, we will strive to obtain guideline inclusion this as well as for future products and product candidates.

10.9. Manufacturing Relationships

In addition to our commercial partnerships for the development and commercialization of our products and product candidates, we have also established relationships with contract manufacturers to produce our products and product components. We believe such outsourcing of production allows us to reduce our production costs by avoiding a costly setup of our own

production sites and the maintenance of such facilities and qualified staff necessary to meet required U.S. current good manufacturing practice, as laid out in the FDA's Quality System Regulation, 21 CFR Part 820.

In particular, in October 2015, we entered into a global manufacturing services agreement for our Epi proColon product with Sentinel CH SpA, Milan, Italy ("**Sentinel**"), a company mainly focusing on the development and production of diagnostic kits. Under the terms of the agreement, Sentinel manufactures the Epi proColon test kit on a price-per-kit basis for worldwide markets in accordance with International Organization for Standardization ("**ISO**") standard 13485 ("**ISO 13485**") and 21 CFR Part 820 requirements. Sentinel manufactures the kits at its facility in Milan, Italy. The site successfully passed a FDA inspection in September 2017 and in February 2018 and is approved to manufacture the Epi proColon product for the U.S. market. The facility in Milan is suited to manufacture large volumes using, *e.g.*, automated filling and labeling processes.

10.10. Research and Development

Our research and development efforts are focused on enhancing existing tests and developing new diagnostic tests that use our proprietary DNA methylation biomarkers. Our research and development team also has the expertise necessary to set and maintain relevant standards for regulatory evaluation regimes and complex clinical documentation required to bring these products to market. These standards also apply when meeting ongoing regulatory requirements after approval. We began as a pioneer in DNA methylation, exploiting this natural phenomenon through our proprietary technologies as a rich source of biomarkers. Today, we focus on developing molecular diagnostic products for cancer and bringing them to markets in highly regulated environments.

The development of IVD products requires an in-depth understanding of the stringent regulatory standards and extensive clinical documentation requirements for the introduction and maintenance of these products on the market. We have developed this skill-set within our Company and have proven our ability to effectively apply this knowledge in the development of IVD products based on our proprietary technology, which according to our estimate few companies of our size have. We have also successfully developed products for other emerging companies on a service basis, thus validating the unique nature of our know-how in this area.

We have assembled an experienced research and development team with the scientific, engineering, biostatistics, regulatory, quality assurance, and process talent that we believe is required to successfully grow our business. As of June 30, 2019, there were 22 full-time employees engaged in research and development, quality assurance, manufacturing, regulatory affairs and customer service. This team is headed by our Executive Board member Jorge Garces, Ph.D., who has extensive experience in molecular and cancer diagnostics, see also *16.2.2. "Governing Bodies — Current Members of the Executive Board"*.

We have started a post-approval study for Epi proColon, which is intended to establish the long-term, repeat performance of the test for detecting the colorectal cancer biomarker Septin9. In addition, the post-approval FDA study will establish data regarding patients' adherence to follow-up with a colonoscopy upon receiving a positive result from the Epi proColon test and the compliance rate for continued participation in colorectal cancer screening programs that use Epi proColon as a screening option.

We intend to continue improving our Epi proColon test, with a particular focus on developing automated versions that should enable more Laboratory Customers to run the test in a cost-effective manner. In this regard, we completed the development of an automated process for

labor-intensive portions relating to the production of bisulfate converted DNA in June 2018, see also *10.5.3. "— Our Products — Epi BiSKit*". The automated methods have been developed on an automated Tecan liquid handling robot and are available for research purposes only at this time. Details of these methods have been published in scientific journals.

In 2016, we also began with the implementation of targeted bisulfite NGS technology, which enables the user to analyze one patient sample with multiple biomarkers at the same time. The technology is established in most molecular diagnostics laboratories where initially tissue samples were used for analysis, and it has gradually been extended into liquid biopsy samples including blood plasma and urine. We are exploring various liquid biopsy products via NGS based on our own proprietary biomarkers, and have completed the first proof-of-concept studies for this technology. We believe NGS technology offers promising potential for the development of new and improved cancer tests, in particular for colon and lung cancer, and also for generating valuable clinical data that could be used to develop tests for other types of cancer, such as liver, bladder and prostate cancer. We therefore expect NGS to be a focus of our research and development efforts in the future. We have achieved a number of key milestones in our NGS research program:

- We have developed a prototype CRC/liver cancer panel consisting of multiple methylation and single nucleotide polymorphism biomarkers which is ready for further validation on clinical samples. We are looking to use this approach to distinguish CRC from inflammatory diseases of the gut and potentially HCC from liver cirrhosis and liver cirrhosis itself;
- We have developed a prototype multiplexed-comprehensive NGS panel consisting of 56 markers, which we plan to partner with other collaborators for further development;
- A sensitive panel for the detection of bladder/prostate/kidney cancer from urine is also under development; and
- We have preliminary data on head and neck cancer markers that, with further testing and optimization, may add to our existing IP portfolio in the near future.

In addition to these initiatives, we constantly review and evaluate various other product opportunities focused on maximizing the value of our validated biomarkers for further clinical applications.

We manage our research and development expenditures on a global basis and, as a general matter, do not break down research and development expenditures by project. Further, the majority of the research we conduct applies to all or multiple of our projects rather than specific projects.

10.11. Quality Management

With respect to our current products and product candidates, as well as our research and development efforts, we operate under a quality management system certified according to ISO 13485 for the design, development, manufacturing and distribution of IVD products. ISO 13485 is an internationally recognized quality management standard developed for medical devices and diagnostics by the ISO, a worldwide federation of national standards bodies, and we passed our ISO 13485 inspection in May 2019 without any major findings. Our quality management system is also designed to comply with U.S. current good manufacturing practices ("**cGMP**"), as laid out in 21 CFR Part 820. Both 21 CFR Part 820 and ISO 13485 specify requirements for quality management systems that are meant to demonstrate an organization's ability to provide medical devices and diagnostics that consistently meet customer and applicable

regulatory requirements. We believe our implementation of such a system demonstrates our ongoing commitment to developing safe and effective diagnostic products.

10.12. Intellectual Property

Our success depends in part on our ability to obtain and maintain proprietary protection for our products and product candidates, technology and know-how, to operate without infringing the proprietary rights of others and to prevent others from infringing our proprietary rights. We seek to protect our proprietary position, among other methods and where patent protection is available, by maintaining our issued patents and filing and defending new world-wide patent applications related to our proprietary technology, inventions and improvements that are important to the development of our business. This will provide us with national patent protection in the United States, European countries participating in the European Patent Convention ("**EPC**"), China and other jurisdictions. Since, over recent years, we have moved our business from only developing new products to also marketing and selling our existing products, patent protection is now even more important to prevent competitors from launching competitive products based on our biomarkers. To this end, we have conducted extensive freedom-to-operate analyses, including for the U.S. version of our Epi proColon product, and we consider the results of such analyses thus far to have been satisfactory. As a precautionary measure, we continuously monitor the status of patent applications deemed to be relevant to our business and consult our IP lawyers with the aim of achieving the best possible protection of our IP rights. We also rely upon trade secrets, know-how, continuing technological innovation and in-licensing opportunities to develop and maintain our proprietary position.

10.12.1. Owned and Licensed Patents

Our business relies heavily on our owned or licensed patents and patent applications. Therefore, any adverse changes to the scope or term of our patent rights, the geographic scope of our patent protection, and our ability to enforce our patent rights and prevent others from infringing our intellectual property would negatively impact our business, including our competitive position as well as our ability to commercialize our products and enter into collaborations or other arrangements with third parties. Our revenue, earnings and overall commercial success depend on the successful protection of our intellectual property. In addition, pursuant to the German Act on Employees' Inventions (*Arbeitnehmererfindergesetz*), ownership or co-ownership in certain of our patents and patent applications we depend upon could be challenged by employee inventors. If such challenges were to be successful, we may lose valuable intellectual property rights and may be required to provide additional compensation to such employee inventors, which could have a material adverse effect on our business. For further discussion of the risks relating to our intellectual property position (see *1.2. "Risk Factors — Risks Related to Intellectual Property*" and *12.2.6. "Regulation — Regulatory Framework for our Operations and Products in the European Union and Germany and Other International Laws — German Employee Inventor's Act").*

We maintain a patent portfolio with 36 owned patent families and two exclusively in-licensed patent families (data as of June 30, 2019). Summarized below are the patent rights relating to Methylation Analysis and PCR Analysis Technology, Epi proColon, HCCBloodTest and Epi proLung, which cover three biomarkers. In addition to the three core biomarkers used in these products, we have an additional pipeline of 24 proprietary biomarkers. Eight biomarkers or the use thereof regarding diagnostic assays are protected by 66 issued patents and 17 biomarkers or the use thereof regarding diagnostic assays are claimed in eight pending patent applications including one for a biomarker panel.

We hold and maintain 31 issued national patents in Germany. Furthermore we have filed seven additional European patent applications that will be nationalized, when granted, *inter alia*, in Germany.

Note that all intellectual property and trademark-related data referred to in this section and the following sub-sections is reported to the Company as of August 2019 if not indicated otherwise.

10.12.1.1. Methylation Analysis of Septin9 Gene

Our patent portfolio relating to our methods for analyzing methylation of the Septin9 gene includes five distinct patent families that we own.

The first of these patent families relates to our methods, kits and composition of matter for methylation analysis of Septin9 by bisulfite analysis. The patent family includes one issued patent in the United States scheduled to expire in 2021.

The second of these patent families relates to the diagnosis of colorectal carcinoma and/or liver cancer on the basis of methylation analysis of the Septin9 gene. The patent family includes three issued patents for Septin9 in the United States, 22 patents granted under the EPC, two granted patents in China and two granted patents in Hong Kong, twelve granted patents outside of the U.S., EPC member states and China, one patent application in the United States, one patent application in China and four patent applications in countries other than the United States, EPC member states and China. The issued patents are scheduled to expire in 2026.

The third of these patent families relates to the diagnosis of non-cancerous hyper-proliferative disorders on the basis of methylation analysis of the Septin9 gene. The patent family includes one patent application in the United States and three patents outside of the U.S. and EPC member states. The patents and patent applications, if issued, are expected to expire in 2027.

The fourth of these patent families relates to methods using primer sets specific for bisulfite converted Septin9 gene as well as kits comprising such primers. The patent family includes one issued patent in the United States, 34 issued patents under the EPC or in Hong Kong and two patent applications under the EPC or in Hong Kong. The issued U.S. patent is scheduled to expire in 2027 and the foreign patents are expected to expire in 2028.

The fifth of these patent families relates to methods for prognosis and treatment success of hyper-proliferative diseases, in particular of colorectal carcinoma on the basis of methylation analysis of the Septin9 gene. The patent family includes one patent application in the United States, 22 granted patents under the EPC, as well as seven granted patents, one patent application in China and seven patent applications in countries other than the United States, EPC member states and China. These issued patents and the patent applications, if issued, are expected to expire in 2032.

10.12.1.2. Methylation Analysis of the SHOX2 and PTGER4 genes

Our patent portfolio relating to our methods for analyzing methylation of the SHOX2 and PTGER4 genes includes two distinct patent families that we own.

The first of these patent families relates to the diagnosis of lung, breast or bladder cancer on the basis of methylation analysis of the SHOX2 and/or PTGER4 genes. The patent family includes one patent application in the United States, 32 granted patents under the EPC and six granted patents in countries other than the United States or EPC member states directed to analysis of the SHOX2 gene. In addition, this patent family includes one application in the United States, six granted patents under the EPC, and one granted patent and one patent application in countries other than the United States or EPC member states directed to analysis of the PTGER4 gene. The patents and patent applications, if issued, are expected to expire in 2028.

The second of these patent families relates to the diagnosis of hyper-proliferative diseases on the basis of certain assays and/or the combined methylation analysis of the SHOX2, Forkhead Box L2 ("**FOXL2**") and PTGER4 genes. The patent family includes one granted Patent in the United States and 22 granted patents under the EPC comprising composition of matter for Epi proLung 2.0 assays and five patent applications in the United States, EPC member states, China, Hong Kong and Japan. The patent and patent applications, if granted, are expected to expire in 2035.

10.12.1.3. Methylation Analysis Technology

Our patent portfolio relating to the methylation analysis technology we use includes five distinct patent families that we own or license.

The first of these patent families, exclusively licensed from the University of Southern California; Los Angeles, California, United States ("**USC**"), relates to methods for the detection of methylation of regions of DNA where a cytosine nucleotide is followed by a guanine nucleotide ("**CpG**" sites) using a displacement probe covering the CpG site in a PCR that allows real-time detection of methylated or unmethylated CpG sites. The patent family includes four issued patents in the United States, 31 issued patents under the EPC and four issued patents in other countries. The issued U.S. patents are scheduled to expire in 2020.

The second of these patent families relates to the use of the scavenger Trolox in bisulfite conversion of DNA. The patent family includes two issued patents in the United States, and 12 issued patents in EPC member states. These patents are scheduled to expire 2026.

The third of these patent families relates to the use of a blocker probe to increase sensitivity for methylated CpGs present in small amounts in samples. The patent family includes one issued patent in the United States, 18 patents issued under the EPC and eight patents issued in countries outside of the U.S., EPC member states and China. The issued patents are scheduled to expire between 2021 and 2023. One patent issued in China has been declared partially invalid on July 15, 2019, see *10.18.1. "— Material Legal Disputes and Administrative Proceedings — China IP Issue"*.

The fourth of these patent families relates to a method of desulfonating bisulfite treated DNA without an intermediate step between the bisulfite treatment and the DNA amplification reaction. The patent family includes one granted patent in the United States, 15 granted patents under the EPC and three granted patents in other countries. The granted patents are scheduled to expire in 2025.

The fifth of these patent families, non-exclusively licensed from Qiagen GmbH, Hilden, Germany ("**Qiagen**"), relates to the use of THFA in bisulfite conversion reactions. The patent family includes one issued patent in the U.S, five issued patents under the EPC and one in Japan. The issued U.S. patent is scheduled to expire in 2028 and the other patents are scheduled to expire in 2027.

10.12.2. Trademarks

We own one U.S. trademark related to our product Epi proColon that is registered with the United States Patent and Trademark Office ("**USPTO**"). We also registered HCCBloodTest in the United States. In addition, we own eight registered trademarks in Germany, eight Union trademarks (EM) in the EU, three registered trademarks in China (CN), and Epi proColon trademarks registered in Argentina, Brazil, Chile and Russia.

10.12.3. Licenses

We are party to license agreements with third parties pursuant to which we obtain rights to certain intellectual property that we believe may be necessary or useful to make, use and sell our

products and product candidates, including a license agreement with USC (for details see *11.2. "Material Agreements — License Agreements"*).

10.13. Real Estate and Leases

We do not own any real estate. We lease facilities in Berlin, Germany, as well as in Germantown, MD and San Diego, CA in the United States. For our headquarters in Berlin, we lease a total of approximately 1,100 square-meters of laboratory and office space under a lease agreement which commenced on April 1, 2014 and is scheduled to terminate on April 30, 2023. We have the option to extend the lease by three more years. In San Diego, we lease a total of approximately 8,300 square-feet of office and laboratory space under a lease agreement which commenced on July 9, 2018, and has a term until December 21, 2021. In Germantown, we lease a total of approximately 50 square-meters of office space under a lease agreement which commenced on January 1, 2014 and is automatically renewed on a monthly basis.

We believe that our existing facilities are adequate to meet our current and mid-term needs, and that suitable additional or alternative spaces will be available in the future on commercially reasonable terms.

10.14. Other Key Relationships with Academic Partners and Clinical Networks

The development of innovative biomedical products would not be possible without input from scientific thought leaders and key medical opinion leaders in the disease areas concerned. We have built an extensive network of clinicians and medical institutions with which we are able to run well-designed clinical studies under the Good Clinical Practice ("**GCP**") standard, as set forth in the International Conference on Harmonization of Technical Requirements for Registration of Pharmaceuticals for Human Use harmonized tripartite guideline for good clinical practice E6(R1). These studies are at the core of our biomarker research and IVD development. To perform these studies, we collaborate with a global network of clinical and academic sites, including gastroenterology clinics, academic medical centers, regional cancer centers and oncology clinics. Along with these sites, we sponsor clinical studies involving a collection of biospecimens and clinical data compliant with GCP and International Council for Harmonization of Technical Requirements for Pharmaceutical Use in Humans requirements, which are used to support product research, development and validation activities. Over the course of ten years, we have collaborated with over 200 individual investigators and institutions.

10.15. Environmental Matters

Our operations require the use of certain materials, primarily human blood samples and solvents, which, among other matters, subject us to a variety of federal, state, local and foreign environmental, health and safety laws, regulations and permitting requirements, including those relating to the handling, storage, transportation and disposal of biological materials and wastes. We believe we comply with all such regulations that we are aware of, but in case of non-compliance, could be held liable for fines and damages, including as a result of our, or others', operations or activities should contamination of the environment or individual exposure to such substances occur. For risks associated with environmental matters, see also *1.3.6. "Risk Factors — Regulatory Compliance Risks — We are subject to environmental, health and safety laws and regulations and may become exposed to liability and substantial expenses in connection with environmental compliance and remediation activities."*

10.16. Insurances

We maintain comprehensive business liability insurance coverage (*Betriebshaftpflichtversicherung*) for our business operations, including product liability. Our other main insurance policies include business interruption, general and property damage, loss of business income and D&O. Our insurance policies are subject to customary exclusions, limits and deductibles. At the same time, we have identified several risks that cannot be insured on economically feasible terms and for which, therefore, no insurance cover has been purchased. These risks include, among other risks, acts of war, political unrest, or certain cyber breaches and nuclear catastrophes.

We believe that we have adequate insurance coverage against all material risks that are typically insured against by similar companies with comparable risk exposure. Insurance coverage is regularly verified and adjusted when necessary. However, we may incur losses that are not covered by existing policies or may exceed the coverage level stipulated in the insurance contracts. Furthermore, we may not be able to maintain adequate insurance coverage at appropriate premiums in the future.

10.17. Employees

As of June 30, 2019, we employed 44 employees (headcount), excluding trainees, apprentices, short-term employees (*Aushilfen*), interns, temporary agency employees (*Leiharbeitnehmer*) and freelancers. This headcount includes our three members of the Executive Board. Since June 30, 2019, until the date of the Prospectus, three employees left the Company.

After having obtained FDA approval for our Epi proColon test, we increased the headcount of our location in Germantown, MD, United States, to support our joint activities with Polymedco regarding the market preparation and market entry for our colorectal cancer test in the United States and to fulfill our commitment towards post-approval studies. Contrary to our expectations, in 2018 there was no further increase in the headcount in the United States as additional activities planned around preparing Epi proColon for market entry in the United States have been limited due to delays in reimbursement decisions and are therefore expected as soon as we receive a positive reimbursement decision.

The following table shows our number of employees (headcount) as of June 30, 2019, as well as December 31, 2018 and 2017, broken down by function:

	As of June 30,	As of December 31,	
	2019	2018	2017
	(unaudited)	(audited)	
Research, product development, IP, regulatory affairs, quality assurance and manufacturing[1]	22	21	24
Business and commercial development, customer and technical service, accounting, finance, legal, human resources, IT, investor relations and general management[1]	22	23	22
Total employees[1]	**44**	**44**	**46**

[1] Headcount includes Executive Board members.

The following table shows our number of employees (headcount) as of June 30, 2019, as well as December 31, 2018 and 2017 broken down by regions:

	As of June 30,	As of December 31,	
	2019	2018	2017
		(unaudited)	
Germany[1]	31	31	36
United States[1]	13	13	10
Total employees[1]	**44**	**44**	**46**

[1] Headcount includes Executive Board members.

None of our employees are covered under a collective bargaining agreement and we are not subject to co-determination under German law. A new works council under German law was installed in March 2018.

10.18. Material Legal Disputes and Administrative Proceedings

We are occasionally involved in legal disputes and administrative proceedings within the scope of our business activities, and this will likely occur in the future as well. Proceedings relating to our operative business have in the past and will likely in the future include, among others, disputes with licensees, partners, manufacturers or suppliers, as well as disputes relating to intellectual property rights.

It is impossible to determine or predict the outcome of pending or threatened cases. We nevertheless believe that, other than the proceedings described below, during a period covering the previous twelve months, no governmental, legal or arbitration proceedings (including any proceedings which are pending or threatened of which we are aware) have, or have had in the recent past, significant effects on the Group's or the Company's financial position or profitability.

10.18.1. China IP Issue

In late 2017, the Chinese company Weizhen was found to be developing, manufacturing, and marketing kits for the detection of Septin9 in colon cancer. In response, our then-Chinese partner BioChain filed an infringement suit against Weizhen based on BioChain's exclusive license for a certain patent under Chinese law which we had granted to them. Weizhen filed a request for invalidation of that patent in November 2017. In May 2018, the Chinese patent re-examination board determined that our patent was invalid, which we appealed in August 2018. Following an amendment of our agreement with BioChain, we took control of the legal management and protection of our IP in China and filed a second lawsuit against Weizhen based on our core Septin9 Chinese patents in August 2018 before the Shanghai Intellectual Property Court, based on the following:

- Manufacturing and sale of infringing products (Septin9 kits) by Weizhen;
- Offering for sale the infringing products by Weizhen; and
- Use of infringing products (providing detection service) by Duwei (a subsidiary lab testing service of Weizhen located in Shanghai) and Weizhen;

According to our analysis and based on current evidence, the infringing product is identical or equal to 16 claims outlined in our Septin9 patent even without knowledge of the sequences of the primer/blocker/probe used.

On July 15, 2019 however, the Reexamination and Invalidation Department of the CNIPA deemed our Septin9 patent in China partially invalid. The patent was declared invalid for the detection of hepatocellular cancer and for the detection of colorectal cancer based on body fluids (urine, blood

plasma, blood serum, whole blood, isolated blood cells, cells isolated from the blood and combinations thereof). Epi proColon 2.0 CE, as a blood-based screening test for colorectal cancer, is affected by this invalidation and no longer patent-protected, as is the HCCBloodTest as a test for the detection of hepatocellular cancer. Other parts of our Chinese patents, *e.g.*, the detection of colorectal cancer based on biological samples consisting of cell lines, histological slides, biopsies, paraffin-embedded tissue, stool, colonic effluent and combinations thereof, were not subject of the proceedings and remain unaffected. The decision has no impact on our Septin9 patents in other parts of the world.

The decision of the CNIPA Reexamination and Invalidation Department is not yet legally effective and we filed an appeal on October 10, 2019, but reversal of the decision could take several years (if ever). In light of the decision of the CNIPA Reexamination and Invalidation Department, we have withdrawn our (second) infringement lawsuit against Weizhen and we intend to file a new infringement lawsuit against Weizhen in case the invalidation appeal is resolved in our favor.

For a description of the risks resulting from our dependency on patents in foreign markets, see *1.1.10. "Risk Factors — Risks Related to our Business and the Industry in which we Operate — We might not be successful in commercializing blood-based Septin9 testing in certain markets, in particular, China."*

10.18.2. BioChain Dispute

We are in a dispute with BioChain regarding the termination of the BioChain Colon Agreement, under which we had granted a patent license to BioChain to, among other things, sell its own blood-based colorectal cancer screening IVD products utilizing the Septin9 biomarker in China.

In 2018, BioChain started withholding certain payments due under the BioChain Colon Agreement, citing, *inter alia*, the competition from and (alleged) patent infringement by Weizhen. In response, we sent a "breach notice" to BioChain and threatened termination of the BioChain Colon Agreement. BioChain then paid the license fees due.

In January 2019, we informed BioChain of our intention to terminate the BioChain Colon Agreement by way of a "warning notice" and, after expiry of a 45-day period that was prescribed in the BioChain Colon Agreement, sent a termination notice on March 6, 2019. Our termination was based on a provision in the BioChain Colon Agreement which grants us a termination right in case royalty payments made by BioChain do not exceed certain minimum thresholds in three consecutive years, which we believe was the case. BioChain has since contested the termination, disputing our right to terminate due to, among other things, a certain payment BioChain made upon our warning notice and force majeure, because the Chinese market allegedly changed dramatically since entering into the agreement in 2013. Given that BioChain did not pay the due minimum royalty and deliver a sales report for the fourth quarter of 2018, we sent another termination notice of the BioChain Colon Agreement (for precautionary purposes) in April 2019, preceded by a breach notice in February 2019. The proceedings are currently in mediation and we are confident, in light of the current status of the discussions, to reach a consensual settlement agreement in the near future on the basis of which we might receive some partial payments from BioChain.

A motion for injunctive relief by BioChain to enjoin us from, *inter alia*, re-licensing the patents that were subject to the BioChain Colon Agreement pending resolution of the mediation proceedings was denied by a U.S. federal district court on June 12, 2019.

For a description of risks resulting from our dependency on commercial partners to commercialize blood-based Septin9 testing in foreign markets, see *1.1.10. "Risk Factors — Risks Related to our*

Business and the Industry in which we Operate — We might not be successful in commercializing blood-based Septin9 testing in certain markets, in particular, China." and for a description of the BioChain Colon Agreement, see *11.2.1.1. "Material Agreements — License Agreements — BioChain Agreements — License for Septin9 Biomarker".*

10.18.3. BaFin Investigations

BaFin is currently investigating two incidents in connection with the suspicion of untimely publication requirements pursuant to the German Securities Trading Act (*Wertpapierhandelsgesetz*).

On July 4, 2019, the Company received a hearing letter from BaFin pursuant to Section 55 of the German Act on Regulatory Offences (*Gesetz über Ordnungswidrigkeiten*) because BaFin is investigating the suspicion of an untimely publication of the total number of voting rights following the implementation of a capital measure in 2017. The hearing letter is based on the following circumstances:

On October 6, 2017, a capital increase of the Company was entered into the commercial register, whereby the total number of issued shares changed from 22,735,260 to 24,014,360. On October 12, 2017, the Company received a notice from BaFin to publish the change in the total number of voting rights, which the Company complied with on the same day. BaFin alleges that the publication on October 12 violated Section 26a para. 1 sent. 1 of the German Securities Trading Act (*Wertpapierhandelsgesetz*) (old version), according to which an issuer is obliged to publish the total number of voting rights and the effective date of the increase or decrease without delay, at the latest within two trading days after the entry of the capital increase into the commercial register. In the opinion of BaFin, the notification should have been made by October 10, 2017 at the latest pursuant to this provision. According to Section 39 para. 4 sent. 1 of the German Securities Trading Act (*Wertpapierhandelsgesetz*) (old version), an intentionally late notification can be punished with a fine of up to EUR 2,000,000, or by a fine of up to EUR 1,000,000 if the offence is committed recklessly (*leichtfertigt*).

On September 23, 2019, the Company received a second hearing letter from BaFin pursuant to Section 55 of the German Act on Regulatory Offences (*Gesetz über Ordnungswidrigkeiten*) because BaFin is investigating the suspicion of an untimely publication of a voting right notification. The hearing letter is based on the following circumstances:

On March 8, 2019, a shareholder of the Company notified BaFin in accordance with Sections 33 et seqq. of the German Securities Trading Act (*Wertpapierhandelsgesetz*) that its voting rights had reached a notifiable threshold. On March 18, 2019, after telephone inquiry by BaFin, the Company published the respective voting rights notification. BaFin alleges that the publication on March 18 violated Section 40 para. 1 sent. 1 of the German Securities Trading Act (*Wertpapierhandelsgesetz*), according to which an issuer is obliged to publish a voting right notification without delay, at the latest within three trading days upon receipt of the notification. In the opinion of BaFin, the notification should have been made by March 13, 2019, at the latest pursuant to this provision. According to Section 120 para. 17 sent. 1 of the German Securities Trading Act (*Wertpapierhandelsgesetz*), an intentionally late publication can be punished with a fine of up to EUR 2,000,000.

In our opinion, the Company, represented by its Executive Board members, did not act intentionally or recklessly in both incidents, but rather with due diligence. The Company delegated its disclosure and publication obligations under the German Securities Trading Act (*Wertpapierhandelsgesetz*) to a qualified and reliable employee respectively a reliable investor relation agency, who both until the respective incident had always worked reliably and without any

mistakes. In our opinion the merely negligent misconduct of the employee respectively the investor relation agency cannot therefore be attributed to the Company. With regard to the suspicion of an untimely publication of the total number of voting rights, we have communicated this legal opinion to BaFin in our written statement and we will also pursue this legal view in appeal proceedings, if necessary. With regard to the suspicion of an untimely publication of a voting right notification we will communicate our legal opinion to BaFin in a written statement and we will also pursue this legal view in appeal proceedings, if necessary.

10.18.4. Dispute With Shareholder Regarding Issuance of Convertible Bonds 2013

We were a party to legal proceedings brought by one of our shareholders (which we understand currently owns less than 3% of our ordinary shares) before the Regional Court of Berlin. The shareholder claimed that the issuance of 25 convertible bonds by us on December 19, 2013, and the subsequent reduction of the conversion price as of November 3, 2014, violated certain of its shareholder rights. The claimant requested, among other things, compensation of damages incurred in the course of the conversion of seven convertible bonds in the amount of approximately EUR 265 thousand. In addition thereto, the claimant requested the declaration that we are liable for any further damages incurred by claimant in the course of the conversion of additional 18 convertible bonds. The Regional Court dismissed the case due to the claimant having failed to timely bring its action before the court. The decision of the Regional Court has been confirmed upon appeal by the Higher Regional Court of Berlin. The claimant further appealed this decision, but the Federal Supreme Court dismissed the appeal in its judgment of May 7, 2019.

11. MATERIAL AGREEMENTS

11.1. Sales Partnership Agreement with Polymedco

On September 28, 2018, we entered into the Sales Partnership Agreement with Polymedco, which includes an amendment dated June 26, 2019. The Agreement is an amended and restated version of a previous joint commercialization agreement with Polymedco entered into in 2013. Pursuant to the Sales Partnership Agreement, Polymedco acts as an exclusive sales and marketing agent for Epi proColon in the United States (and Canada and Mexico, to the extent regulatory approvals are obtained) and receives a commission per test sold. We may continue to distribute Epi proColon ourselves, however, any commercial sales by our own sales representative also incur commission fees payable to Polymedco and count towards Polymedco's minimum sales requirement (see below).

Polymedco's obligations under the agreement include the promotion (*e.g.*, advertising), marketing and sales support for Epi proColon according to an agreed commercialization plan. Our responsibilities include, among other things, invoicing and customer service, as well as medical marketing (*e.g.*, conducting studies and presentating to guideline bodies and medical societies) and interactions with CMS regarding reimbursement. The Sales Partnership Agreement provides for certain minimum sales requirements each year; in case Polymedco fails to fulfill these requirements in any year, beginning in 2020, we may terminate the agreement. The agreement has an initial term until December 31, 2023, with automatic extension for five years if the parties timely agree on minimum sales and a commercialization plan for such extension period, and subject to extraordinary termination by either party.

Under the previous version of our agreement with Polymedco, which we entered into in 2013 and which was in effect until 2018, Polymedco purchased Epi proColon from us and resold it to customers. As consideration for the distribution rights, we participated in the profits from product sales to customers. In March 2018, we issued a notice of termination for breach of this agreement to Polymedco, which Polymedco disputed. As a result of the ensuing mediation, we entered into the Sales Partnership Agreement in effect today. As Polymedco's role has been reduced to that of a sales agent, we have taken over a number of responsibilities from Polymedco, including customer service, logistics, warehousing, delivery and billing. We believe this change has brought us closer to the customer than before and gives us greater economic efficiency (for risks associated with this change, see *1.1.14. "Risk Factors — Risks Related to our Business and the Industry in which we Operate — We may not be able to expand and efficiently manage our organization in the future and scale our operations for our anticipated future growth."*).

11.2. License Agreements

11.2.1. BioChain Agreements

11.2.1.1. License for Septin9 Biomarker

In October 2013, we entered into the BioChain Colon Agreement with BioChain, pursuant to which, as amended, we granted BioChain and BioChain Beijing Science & Technology, Inc., an affiliate of BioChain, an exclusive license to, among other things, commercialize blood-based colorectal cancer screening IVD products utilizing certain of our patents and know-how, in particular in China. We declared the termination of the BioChain Colon Agreement in March 2019 because BioChain's royalty payments did not exceed certain minimum thresholds for three consecutive years, and sent another termination notice, for precautionary purposes, in April 2019.

BioChain is contesting the termination (see *10.18.2. "Business — Material Legal Disputes and Administrative Proceedings — BioChain Dispute*").

Under the BioChain Colon Agreement, we received a low six digit upfront fee and mid single digit percentage royalties on net revenues from the sale of the licensed products. BioChain's obligation to pay us such royalties was to continue until the later of 15 years after the first commercial sale of such licensed products or the fifth anniversary of the expiration of the last-to-expire licensed patent (subject to an earlier termination for cause). BioChain was required to make a minimum annual payment to us based on a minimum number of its tests sold, and a specified royalty per test sold. If BioChain failed to meet these minimum annual sales and payment requirements, we had the option to terminate BioChain's exclusivity; and further, should any such payment-related breach not be cured within the stipulated time, we retained the right to terminate the agreement in its entirety. Furthermore, either party was entitled to terminate the BioChain Colon Agreement for cause in case of a breach of any material provision by the other party, subject to a 45-day cure period. If the royalty payments made by BioChain did not exceed an agreed minimum annual payment for three consecutive years, this also constituted a reason justifying such termination for cause.

11.2.1.2. License for Epi proLung

In March 2016, we entered into a strategic licensing agreement with BioChain under which we granted BioChain an exclusive (subject to existing non-exclusive rights granted to other licensing partners) license of certain of our patents and know-how to develop, obtain regulatory approval for, manufacture certain components of, and sell, certain products, including BioChain's own blood-based lung cancer IVD products, for use with the SHOX2, FOXL2 and PTGER4 biomarkers in particular in China (the "**BioChain Lung Agreement**").

Under the BioChain Lung Agreement, BioChain was required to make a minimum annual payment to us in an amount ranging from the mid six digits to the low seven digits, depending on the number of years the BioChain Lung Agreement has been in effect. Because BioChain failed to make these minimum annual payments, we terminated the BioChain Lung Agreement on November 16, 2018.

11.2.2. In-Bound License Agreement with USC

We are also party to license agreements with third parties pursuant to which we obtain rights to certain intellectual property that we believe may be necessary or useful to make, use and sell our products and product candidates, including a license agreement with USC.

Pursuant to an amended and restated license agreement effective as of January 1, 2008, USC granted us a worldwide exclusive license, with rights to sub-license, to make, have made, use, sell, offer to sell, import, distribute or otherwise transfer products covered by certain USC patents and patent applications. The licensed patent rights relate to biomarkers and methods for the detection of CpG methylation using a displacement probe covering the CpG site in a PCR that allows real-time detection of methylated or unmethylated CpG sites. Both Epi proColon and Epi proLung use the technology licensed under this agreement. USC and the inventors of the licensed patent rights retain the right to use the technology covered by the licensed patent rights for educational and research purposes. We are obligated to exercise our best efforts in introducing the licensed products into the commercial market as soon as possible and to keep such licensed products reasonably available to the public. Pursuant to the agreement, we are obligated to pay USC a low single digit royalty on net revenues of the licensed products, subject to a low six digit minimum annual royalty amount for certain groups of licensed patent rights, as well as royalties on any sublicense revenue.

As the key patent licensed under the license agreement expires in May 2020, we decided to terminate the agreement on that date, which we are entitled to do for any reason upon 90 days' written notice. In addition, the agreement may be terminated by either party for the other party's breach of or default under the agreement upon 45 days' written notice, unless the breaching party remedies such breach during such period. The agreement may also be terminated immediately by USC upon written notice for our insolvency or bankruptcy or if we fail to comply with insurance obligations or attempt to use, sublicense, transfer or assign our rights or obligations under the agreement in a manner contrary to the terms of the agreement or USC's proprietary rights.

11.3. Cooperative Regulatory and Marketing Agreement with Life Technologies, Inc.

In July 2011, we entered into a cooperative regulatory and marketing agreement with Life Technologies, a wholly owned subsidiary of Thermo Fisher Scientific, Inc., which enabled us to obtain FDA approval and subsequently commercialize Epi proColon in the U.S. market on Life Technologies' AB 7500 Fast Dx platform. In addition, Life Technologies is the sole validated supplier of the magnetic beads used in our Epi proColon test, which are supplied under a separate supply and license agreement entered between the companies in April 2011. Both agreements had initial terms of five years and automatically extend for subsequent periods of 12 months unless we or Life Technologies give notice that the respective agreement should not be so extended. We and Life Technologies each have the right to terminate the agreements for breach by the other party if the breach is not cured within a reasonable period and following written notice of such breach, and in the event either we or Life Technologies reasonably determine that an agreement will compromise such party's good standing, regulatory clearance or approval with the FDA for any product of such party.

12. REGULATION

12.1. Regulatory Framework for our Operations and Products in the United States

12.1.1. Federal Food, Drug, and Cosmetic Act

In the United States, IVDs are regulated by the FDA as medical devices under the Federal Food, Drug, and Cosmetic Act ("**FDCA**").

12.1.2. Marketing Pathways

There are three main regulatory pathways to receive authorization to market IVDs in the United States: a 510(k) premarket notification, a PMA, and a De Novo request. The FDCA establishes risk-based standards for determining the pathway to eligibility for a particular IVD device.

The information that must be submitted to the FDA in order to obtain clearance or approval to market a new medical device varies depending on how the medical device is classified by the FDA. Medical devices are classified into one of three classes on the basis of the controls necessary to reasonably ensure their safety and effectiveness. Class I devices are subject to general controls, including labeling and adherence to the FDA's Quality System Regulation ("**QSR**", 21 CFR Part 820), which establishes device-specific cGMP requirements. Class II devices are subject to general controls and special controls, including performance standards and post-market surveillance. Class III devices are subject to these requirements as well as to PMA. Most Class I devices are exempt from premarket submissions to the FDA; most Class II devices require the submission of a 510(k) premarket notification or a De Novo request (when no predicate device exists); and Class III devices require submission of a PMA application. Our Epi proColon test is, and we expect that our HCCBloodTest (liver cancer test) and Epi proLung product will be, a Class III device. We may also explore a De Novo path for these and other future products.

12.1.3. Premarket Approval

The PMA process, which we completed for Epi proColon and through which we will seek marketing authorization for our future products, is complex, costly and time-consuming. A PMA application must be supported by detailed and comprehensive scientific evidence, including clinical data, to demonstrate the safety and efficacy of the medical device for its intended use. If the device is determined to present a "significant risk," the sponsor may not begin a clinical trial until it submits an investigational device exemption ("**IDE**"), to the FDA and obtains approval from the FDA to begin the trial.

After the PMA application is submitted, the FDA has 45 days to make a threshold determination that the application is sufficiently complete to permit a substantive review. If the application is complete, the FDA will accept it for filing. The FDA is subject to a non-binding performance goal review time for a PMA application of 180 days from the date of filing, although in practice this review time is often longer. Questions from the FDA, requests for additional data and referrals to advisory panels may delay the process considerably. Indeed, the total process may take several years and there is no guarantee that the PMA application will ever be approved. Even if approved, the FDA may limit the indications for which the device may be marketed. The FDA may also request additional clinical data as a condition of approval or after the PMA is issued. Any changes affecting the safety and efficacy of the medical device may require a PMA Supplement to be submitted, reviewed and approved. The time for approval of a PMA Supplement varies based on the significance of the change to the medical device. The FDA is subject to non-binding performance goal review times for a PMA Supplement of 90, 180, and 320 days (depending on the

type of supplement) from the date of filing although in practice these review times may take longer and there is no certainty of approval.

12.1.4. De Novo Request

In some cases, we may seek marketing authorization of our products through a De Novo Request. This regulatory path is designed for new devices for which there is no predicate, an existing regulatory classification, or an approved PMA similar to the new device. Without a valid predicate, FDA automatically classifies a new device into the highest risk category (Class III) because there is no precedent for safety or efficacy. The De Novo process allows FDA to classify a device from Class III ("high risk") to Class II or I ("moderate" to "low" risk). For this "down classification" to be granted, a manufacturer must demonstrate that benefits and risks of the new device are well understood and general and special controls are sufficient to provide a reasonable assurance of safety and efficacy based on intended use. A De Novo Request is submitted to FDA to make a classification determination of the new device and obtain a "grant" or "decline" decision from the FDA. Similar to a PMA application, a De Novo Request is supported by detailed and comprehensive scientific evidence, including clinical data, to demonstrate the safety and efficacy of the medical device for its intended use. Compiling the required evidence to support a De Novo Request can be costly and time-consuming.

After a De Novo request is submitted, the FDA has 15 days to make a threshold determination that the application is sufficiently complete to permit a substantive review. If the application is complete, the FDA will accept it for substantive review. The FDA is subject to a non-binding performance goal review time for a De Novo request of 150 days from the date of filing, although in practice this review time is often longer. Questions from the FDA and requests for additional data may delay the process considerably. Additionally, there is no guarantee that the De Novo request will be granted. Even if granted, the FDA may limit the indications for which the device may be marketed.

12.1.5. Quality System Regulation and Inspection Requirements

All medical device manufacturers are required to be in compliance with FDA's QSR, which sets forth cGMP requirements. For a Class III device, a pre-approval inspection is required. In addition, clinical data for a PMA application is also audited by FDA in bioresearch monitoring inspections which include on-site inspections of some clinical trial sites. Routine post-market FDA inspections are conducted while a medical device is on the market. Violations of applicable regulations noted by the FDA during inspections of our manufacturing facilities could adversely affect the continued marketing of our tests.

12.1.6. Post-Marketing Regulations and Controls

The FDA also enforces post-marketing controls that include the requirement to submit Medical Device Reports ("**MDRs**"), to the FDA when a manufacturer becomes aware of information suggesting that any of its marketed products may have caused or contributed to a death, serious injury or serious illness or any of its products has malfunctioned and that a recurrence of a malfunction would likely cause or contribute to a death or serious injury or illness. The FDA relies on MDRs to identify product problems and utilizes these reports to determine, among other things, whether it should exercise its enforcement powers. The FDA also enforces the requirement that manufacturers submit reports of recalls and field actions to the FDA if the actions are initiated to reduce a risk to health posed by the device or to remedy a violation of the FDCA that may present a risk to health. The FDA may also require post-market surveillance studies for specified devices.

FDA regulations also govern, among other things, the preclinical and clinical testing, manufacture, distribution, labeling and promotion of medical devices. In addition to compliance with good manufacturing practices and medical device reporting requirements, we are required to comply with the FDCA's general controls, including establishment registration, device listing and labeling requirements. If we fail to comply with any requirements under the FDCA, we could be subject to, among other things, fines, injunctions, civil penalties, recalls or product corrections, total or partial suspension of production and distribution, denial of premarket notification clearance or approval of products, rescission or withdrawal of clearances and approvals, and criminal prosecution. We cannot assure you that any final FDA policy, once issued, or future laws and regulations concerning the manufacture or marketing of medical devices will not increase the cost and time to market of new or existing tests. If we fail to comply with these FDA regulations or guidelines, we may be subject to warnings from, or enforcement action by, the FDA.

12.1.7. U.S. Federal and State Anti-kickback statute.

The federal Anti-Kickback Statute prohibits persons from knowingly and willfully soliciting, receiving, offering or paying remuneration, directly or indirectly, to induce either the referral of an individual, or the furnishing, recommending, or arranging for a good or service, for which payment may be made under a federal healthcare program, such as the Medicare and Medicaid programs. The term "remuneration" is not defined in the federal Anti-Kickback Statute and has been broadly interpreted to include anything of value, including for example, gifts, discounts, the furnishing of supplies or equipment, credit arrangements, payments of cash, waivers of payment, ownership interests and providing anything at less than its fair market value.

Many states have also adopted laws similar to the federal Anti-Kickback Statute, some of which apply to the referral of patients for healthcare items or services reimbursed by any source, not only the Medicare and Medicaid programs, and do not contain identical safe harbors.

If we or our operations are found to be in violation of any of the laws described above or any other governmental regulations that apply to us, we may be subject to penalties, including civil and criminal penalties, damages, fines, exclusion from participation in U.S. federal or state healthcare programs, and the curtailment or restructuring of our operations. We may also be subject to similar foreign laws and regulations.

12.1.8. U.S. Federal and State Self-referral law.

We are subject to a federal "self-referral" law, commonly referred to as the "Stark" law, which provides, unless a specific exception applies, that physicians who, personally or through a family member, have ownership interests in or compensation arrangements with a laboratory are prohibited from making a referral to that laboratory for laboratory tests reimbursable by Medicare, and also prohibits laboratories from submitting a claim for Medicare payments for laboratory tests referred by physicians who, personally or through a family member, have ownership interests in or compensation arrangements with the testing laboratory.

We are subject to comparable state laws, some of which apply to all payors regardless of source of payment, and do not contain identical exceptions to the Stark law. Providers are subject to sanctions for claims submitted for each service that is furnished based on a referral prohibited under the federal self-referral laws. These sanctions include denial of payment, obligation to issue refunds, civil monetary payments and exclusion from participation in federal healthcare programs and civil monetary penalties. They may also include penalties for applicable violations of the False Claims Act, which may require payment of up to three times the actual damages sustained by the government, plus civil penalties for each separate false claim.

12.1.9. U.S. Healthcare Reform

In March 2010, the U.S. Patient Protection and Affordable Care Act ("**ACA**"), was enacted, which includes measures that have or may significantly change the way healthcare is financed by both governmental and private insurers. Since August 2013, the Physician Payment Sunshine Act, enacted as part of the ACA, and its implementing regulations require medical device manufacturers to track certain financial arrangements with physicians and teaching hospitals, including any "transfer of value" made or distributed to such entities, as well as any investment interests held by physicians and their immediate family members. Various states have also implemented regulations prohibiting certain financial interactions with healthcare professionals and/or mandating public disclosure of such financial interactions. We may incur significant costs to comply with such laws and regulations now or in the future. While the ACA has been subject to ongoing calls for repeal and replacement, we cannot predict the likelihood of any such action or the effect that changes in the law would have on our business and prospects.

12.1.10. Other laws

We are also subject to numerous U.S. federal, state and local laws as well as international laws relating to such matters as safe working conditions, manufacturing practices, environmental protection, fire hazard control, and transportation and disposal of blood and hazardous or potentially hazardous substances. We may incur significant costs to comply with such laws and regulations now or in the future.

12.2. Regulatory Framework for our Operations and Products in the European Union and Germany and Other International Laws

12.2.1. Overview

The currently applicable regulatory framework for our operations and products in the European Union ("**EU**") and Germany is essentially laid down in the EU's IVD Directive (see *12.2.2. "— Directive No. 98/79/EC (IVD Directive)"*) and corresponding national legislation of the EU member states, in particular including the Federal Medical Devices Act (*Medizinproduktegesetz*, "**MPG**") in Germany (see *12.2.3. "— Implementing National Legislation in Germany: Federal Medical Devices Act"*). The IVD Directive is binding upon the EU member states, having required implementation into national law until December 7, 1999. It was repealed by Regulation (EU) 2017/746 on IVD medical devices ("**IVD Regulation**") with effect from 26 May 2017 (see *12.2.4. "— Recent Reforms of EU Legislation: Regulation (EU) 2017/746 (IVD Regulation) and Regulation (EU) 2017/745 (MD Regulation)"*), being directly applicable in the EU member states (without conversion into national law) and with a transitional period until May 26, 2022 to come into force. Therefore, manufacturers of already approved medical devices must ensure compliance with the new requirements implemented under the IVD Regulation within five years. Products that have already been certified by a Notified Body may then be marketed for a further two years, provided they meet certain criteria. Moreover, our cooperation with healthcare professionals is subject to German anti-bribery laws and regulations, in particular including the new penal provisions against bribery and corruption in the medical devices sector in Germany (see *12.2.5. "— German Anti-Bribery and Anti-Corruption Legislation in the Medical Devices Sector"*). Rights to inventions made in the context of employment relationships must be assumed in accordance with the mandatory procedures set out in the German Employee Inventor's Act (see *12.2.6. "— German Employee Inventor's Act"*).

12.2.2. Directive No. 98/79/EC (IVD Directive)

The IVD Directive has the purpose to ensure safety, quality and performance of IVD medical devices. Generally, IVD medical devices may only be placed on the market or put into service if they comply with the requirements set out in Annex I of the IVD Directive (essential requirements) when duly supplied and properly installed, maintained and used in accordance with their intended purpose. Accordingly, the EU member States are obliged to monitor the security and quality of IVD medical devices. The essential requirements of the IVD Directive relate to, *inter alia*, product safety conditions and certain product-related information to be provided by the manufacturer. IVD medical devices considered to meet the essential requirements must in principle bear the CE marking of conformity when they are placed on the market. In order to affix the CE marking, before placing the devices on the market the manufacturer is obliged to follow certain procedures to declare conformity with the IVD Directive (conformity assessment procedures). As a general rule, IVD medical devices must be designed and manufactured in such a way that, when used under the conditions and for the purposes intended, they will not compromise, directly or indirectly, the clinical condition or the safety of the patients, the safety or health of users or, where applicable, other persons, or the safety of property. Any risks which may be associated with their use must be acceptable when weighed against the benefits to the patient and be compatible with a high level of protection of health and safety.

12.2.2.1. Classification of Our Products

The IVD Directive provides for individual conformity assessment procedures for different categories of IVD medical devices. The classification of an IVD medical device according to these categories is primarily based upon the intended use of the device and the risks or dangers it constitutes to patients, users and third parties.

- Annex II List A devices (high risk devices) are, *inter alia*, reagents and reagent products including related calibrators and control materials for determining blood groups (ABO system, rhesus (C, c, D, E, e), anti-Kell) and for the detection, confirmation and quantification in human specimens of markers of HIV infection (HIV 1 and 2), HTLV I and II and hepatitis B, C and D.
- Annex II List B devices comprise, for example, reagents and reagent products for the detection and quantification in human samples of congenital rubella and toxoplasmosis, for determining the human infections cytomegalovirus and chlamydia or for determining the tumoral marker PSA.
- Devices for self-testing are devices intended by the manufacturer to be able to be used by lay persons in a home environment.
- Other IVD medical devices not covered by Annex II of the IVD Directive and not intended to be used as devices for self-testing represent a large part of devices covered by the IVD Directive. Such devices do not constitute a direct risk to patients, are primarily used by trained professionals and as such do not require the intervention of a notified body within the conformity assessment procedures.

We believe that our products do not qualify as Annex II List A devices, Annex II List B devices or devices for self-testing and therefore fall into the category of other IVD medical devices. However, with the new IVD Regulation a risk-based classification system is taking over the former IVD classification and there is the need for re-classifying our products.

12.2.2.2. Conformity Assessment of Our Products

Prior to placing (potential) IVD medical devices on the EU market, we or our respective business partners are required to issue a declaration of conformity. The declaration of conformity is the procedure whereby the manufacturer or his authorized representative ensures and declares that the products concerned meet the essential requirements of the IVD Directive.

In light of the conformity assessment procedures applicable to our products, we are required to prepare certain technical documentation, which must in particular provide for a general description, the documentation of the quality system and other essential information on the product, including risk analysis, test reports, labels and instructions for use. Furthermore, we are required to ensure that the clinical validation studies and the manufacturing process follow the principles of quality assurance as appropriate for these products. Additionally, we are required to institute and maintain up to date systematic procedures to review experience gained from the IVD medical devices in the post-production phase. In order to establish such proof, we will be required to provide a performance evaluation based on suitable data, such as scientific literature, a critical analysis of the data or the results of all performance evaluations or other suitable examinations.

Additional requirements have to be met in case (i) this performance evaluation involves invasive sample collection solely or to a significant extent for the purpose of performance evaluation, (ii) in the course of the performance evaluation additional invasive or other burdensome measures are carried out, or (iii) the results gained in the course of the performance evaluation are to be used for diagnostics and cannot be confirmed by an established method. *Inter alia*, it is then necessary to apply for the consent of the competent ethical committee (*Ethikkommission*) and to obtain a permit from the competent higher federal authority. Depending on the intended use of the IVD medical device the competent higher federal authority is either the Federal Institute for Drugs and Medical Devices (*Bundesinstitut für Arzneimittel und Medizinprodukte*, "**BfArM**") at Bonn or the Paul-Ehrlich-Institute (*Paul-Ehrlich-Institut*, "**PEI**") at Langen (near Frankfurt/Main). An application would have to be filed via a central registration system controlled by the German Institute for Medical Documentation and Information (*Deutsches Institut für Medizinische Dokumentation und Information*, "**DIMDI**"). Under certain circumstances, however, it is possible to file for an exemption from the permit requirement.

Based on the classification of our products, we are entitled to self-declare conformity with the relevant essential requirements of the IVD Directive. Thus, we will not be required to involve a notified body for conformity assessment. However, there is no guarantee that this will not change in the future. In particular, the new IVD Regulation or a change of the scope of our products may affect the applicable conformity assessment procedures. Such a change may also require the involvement of a notified body resulting in higher costs and delays to CE mark.

12.2.2.3. Our Certifications

In compliance with the IVD Directive, we are certified to EN ISO 13485: 2016, which represents the current recommended international standard for the design, development, manufacture, installation and servicing of medical devices, including IVD medical devices. Failure to maintain our certification in good standing could prevent us from marketing our products in the EU.

12.2.3. Implementing National Legislation in Germany: Federal Medical Devices Act

A directive shall be binding, as to the result to be achieved, upon each EU member state to which it is addressed, but shall leave to the national authorities the choice of form and methods. In Germany, the requirements set forth in the IVD Directive are transferred into national law by the MPG and certain related laws and regulations. Under the MPG, in line with the regulatory

framework provided for in the IVD Directive, IVD medical devices are required, *inter alia*, to meet the applicable essential requirements and to be labeled with the CE marking of conformity when being placed on the market. On the federal level, the supervision of manufacturers is carried out by the competent higher federal authorities (BfArM or PEI). In the State of Berlin, the competent supervisory authority is the State Authority for Health and Social Matters (*Landesamt für Gesundheit und Soziales*). In addition to the declaration of conformity, the manufacturer or his/her authorized representative having its registered place of business in Germany and placing IVD medical devices on the market has to notify the competent authority along with appropriate information (including information relating to the reagents, reagent products and calibration and control materials in terms of their common technological specifications). The competent authority shall transmit such information to the DIMDI for central processing and use. In addition, immediately upon commencement of activities, the manufacturer or his/her authorized representative has to appoint a person who is sufficiently reliable and possesses the expert knowledge necessary for the fulfillment of his/her functions as the safety officer for medical devices. Any changes in the person of the safety officer have to be notified to DIMDI and the respective ISO certifier.

12.2.4. Recent Reforms of EU Legislation: Regulation (EU) 2017/746 (IVD Regulation) and Regulation (EU) 2017/745 (MD Regulation)

The essential aspects of the upcoming regulatory framework for IVD medical devices set out by the IVD Regulation (and Regulation (EU) 2017/745 (the "**MD Regulation**")) can be outlined as follows:

- Extended scope of application: The IVD Regulation includes a wide range of diagnostics, in particular (i) tests that provide information on the predisposition to a medical condition or a disease, such as genetic tests, (ii) tests that provide information to predict treatment response or reactions, such as companion diagnostics, or (iii) IVD medical devices manufactured and used within a single health institution only.

- Revised product classification and conformity assessment regime: According to the IVD Regulation, all currently approved in vitro diagnostic medical devices must be re-certified according to the new requirements. Manufacturers of IVDs currently on the market must demonstrate compliance with the new IVD Regulation requirements within five years. The IVD Regulation introduces a new risk-based classification system based on the principles of the Global Harmonization Task Force. The IVD Regulation classifies devices in four risk classes (A to D) and establishes a set of robust risk-based classification rules, taking into account the intended use of the IVD medical devices and their inherent risks. As a general rule, the conformity assessment procedure for class A devices is carried out under the sole responsibility of manufacturers as such devices pose only a low risk to patients. For class B, class C and class D devices, the involvement of notified bodies (which is generally stronger and closer than under the current regime) is required. Moreover, the competent authorities and reference laboratories may be involved in the conformity assessment of products of the category D or C. This will extend the duration of the conformity assessment procedures. The stricter designation rules for Notified Bodies may lead to fewer Notified Bodies for IVD in the future. We currently expect that any future Epigenomics product for the diagnosis of cancer will fall at least into class C and as such requires the involvement of a notified body.

- Person responsible for regulatory compliance: Under the IVD Regulation, manufacturers shall have available within their organization at least one person responsible for regulatory compliance who possesses the requisite expertise in the field of IVD medical devices.

- Particularly strict surveillance assessments to class C and D devices: The notified body shall randomly perform at least once every five years unannounced audits on the site of the manufacturer and, where appropriate, the site of the manufacturer's suppliers and/or subcontractors.

- Additional requirements as to the compliance management, *inter alia*, more detailed technical documentation, more comprehensive quality management system, new labeling obligations ("unique device identification"). In particular, under the IVD Regulation, the technical documentation will have to be more detailed in the future. The IVD Regulation requires manufacturers to perform clinical trials and demonstrate that the safety and performance of products are appropriate for the risk class of the product. In addition, manufacturers must collect and retain clinical data as part of an ongoing assessment of potential safety risks. Additionally, under the MD Regulation, the manufacturer must set up and maintain a post-market monitoring system appropriate to the class of risk and the nature of the product.

We believe the revision of the legislation introduces significant changes for IVD manufacturers that currently hold a CE Mark or plan to market their products in Europe. However, having an FDA-approved product in our portfolio we consider ourselves to be in a good position to manage the new regulatory landscape.

12.2.5. German Anti-Bribery and Anti-Corruption Legislation in the Medical Devices Sector

In Germany, new penal provisions against bribery and corruption in the healthcare sector have come into force on June 4, 2016 (*Gesetz zur Bekämpfung von Korruption im Gesundheitswesen*). According to the new anti-corruption law, the offering, promising or granting of benefits to healthcare professionals (*Angehörige der Heilberufe*) may, under certain circumstances, be punishable if this potentially creates an improper influence on their prescription or procurement decisions, in particular with regard to the purchase of medical devices. Content and scope of the new anti-corruption law are largely unclear, in particular as the German legislator has introduced a number of vague and undefined legal terms. About two years after implementation of the reform, no reliable conclusions can be drawn from the existing prosecution practice yet. In particular, as far as can be seen, there are still no criminal judgments based on the new anti-corruption law.

12.2.6. German Employee Inventor's Act

Under German law, rights to an invention made in the context of an employment relationship do not upon their creation automatically vest in or transfer to the employer. Instead, the employer must assume ownership in accordance with the mandatory procedures set out in the German Act on Employees' Inventions (*Arbeitnehmererfindungsgesetz*, "**ArbEG**"). Under the law applicable until October 1, 2009, the employer had to claim the rights to an invention in writing within four months of being notified of such invention by the employee inventor(s). If the employer failed to do so, the invention became a "free invention" solely owned by the employee inventor(s). Such ownership essentially extends to any patents or patent applications derived from such invention (even if registered in the name of the employer). Moreover, the employee inventor(s) being the true owner(s) can assert claims for patent infringement against the employer and any third party using a patented invention. The employer could also be held liable by its customers under warranty and indemnity provisions if the customers are sued for patent infringement by the employee inventor(s). For inventions made after October 1, 2009, the employer no longer has to explicitly claim the invention within four months following notification. Rather, assumption of ownership is presumed, unless the employer has explicitly released the invention within four

months following notification. With regard to inventions made by managing directors the ArbEG is not applicable. Such inventions must be assigned to the company by assignment agreement.

If an employer claims the rights to an invention in accordance with the ArbEG, the employee has a claim against the employer to receive reasonable compensation which is specified by the Guidelines for the Compensation of Employee Inventions (*Richtlinien für die Vergütung von Arbeitnehmererfindungen*). Such compensation payment is calculated by taking into account the value of the invention for the employer's business and the contribution of the employer to such invention. Typically, compensation is paid in the form of a running royalty on the basis of generated turnover. The applied royalty rate is typically lower than what a third-party licensee would have to pay taking into account the relevant market conditions. However, if the invention is very important the remuneration payable to the employee inventor can, nevertheless, be quite substantial, see *1.2.8. "Risk Factors — Risks Related to Intellectual Property — Under German law, employee inventors may own or co-own their inventions and intellectual property rights and may be entitled to receive compensation."*).

12.2.7. International Medical Device Regulations

Outside of the European Union, regulatory pathways for the marketing of medical devices vary greatly from country to country. In many countries, local regulatory agencies conduct an independent review of IVD medical devices prior to granting marketing approval. For example, in China, approval by the NMPA must be obtained prior to marketing an IVD medical device. In Japan, approval by the Ministry of Health, Labor and Welfare following review by the Pharmaceuticals and Medical Devices Agency is required prior to marketing an IVD medical device. The process in such countries may be costly, lengthy and require the expenditure of significant resources, including the conduct of clinical trials to generate local data. In other countries, the regulatory pathway may be shorter and/or less costly. The timeline for the introduction of new IVD medical devices is heavily impacted by these various regulations on a country-by-country basis, which may become more lengthy and costly over time. Epi proColon 2.0 CE has been approved by the NMPA.

13. GENERAL INFORMATION ON EPIGENOMICS AG AND THE EPIGENOMICS GROUP

13.1. Formation, Incorporation, Entry in the Commercial Register, Commercial Name, Financial Year, Corporate Purpose and Registered Office

The Company was founded on April 30, 1997 as a German limited liability company (*GmbH*) under the name "O.N.M.L. Beteiligungs GmbH" with its seat in Frankfurt a.M., Germany, and a share capital (nominal capital) of DM 50,000.00 (Articles of Association, dated April 30, 1997). The Company was registered with the commercial register of the local court (*Amtsgericht*) Frankfurt a.M., Germany, under the number HRB 43193 on June 11, 1997.

By shareholders' resolution of November 6, 1998, the Company's name was changed to "Epigenomics GmbH" and its seat was moved to Berlin, Germany. The change was registered with the commercial register of the local court (*Amtsgericht*) Charlottenburg, Germany, on March 25, 1999, under HRB 70313.

By shareholders' resolution of February 25, 2000, entered into the commercial register on June 29, 2000, the Company was transformed into a stock corporation (*Aktiengesellschaft*). From this date on, the Company's legal name is "Epigenomics AG" and its commercial name is "Epigenomics". The Company is registered with the commercial register of the local court (*Amtsgericht*) Charlottenburg, Germany, under HRB 75861. The Company's Legal Entity Identifier (LEI) is 549300X1C4U862NDLN97.

As a German stock corporation, the Company is governed by German law. The financial year of Epigenomics AG is the calendar year. The current financial year is the full financial year beginning on January 1, 2019.

The general purpose of the Company is the development and marketing of procedures and apparatus for the extraction of biological, diagnostic and pharmalogical parameters, in particular epigenetic parameters, for example, the DNA-methylation sample, and of the information technology bases required to create and evaluate these.

The Company can be contacted at Geneststrasse 5, 10829 Berlin, Germany, by telephone: +49-30-24345-0, or via its website: www.epigenomics.com. Information contained on any website mentioned in the Prospectus, including our website, is not incorporated by reference in the Prospectus and is not part of the Prospectus, unless otherwise explicitly indicated.

13.2. History and Development of the Business

After the Company's foundation in 1997, its transformation into a stock corporation (*Aktiengesellschaft*) and change of legal name, it acquired all shares of Seattle-based ORCA Biosciences, Inc. in 2000 and renamed it to Epigenomics, Inc.

On July 19, 2004, the Company went public.

Important milestones concerning the Company's future are the spreading and implementation of Epi proColon as an integral part of intestinal cancer screening, including its approval by the FDA in April 2016 and subsequent efforts in commercialization of Epi proColon in the United States.

13.3. Structure of the Epigenomics Group and Information on Major Holdings

The Company is the parent company of the consolidated Group. The consolidated Group consists of the Company and Epigenomics, Inc. (registered office: c/o BTA Legal, 31811 Pacific Highway South, B101, Federal Way, Washington 98003, United States), as its sole subsidiary. Epigenomics Inc. additionally operates an office in Germantown, MD, United States and in San Diego, CA. United States. The Company owns 100% of the share capital and the voting rights of Epigenomics, Inc. and is mainly active in developing our business and commercial activities in North America and in international markets outside of Europe.

Name and registered office	Subscribed capital as of December 31, 2018 (in EUR thousand)[1]	Capital reserves as of December 31, 2018 (in EUR thousand)[1]	Receivables/(payables) of the Company towards affiliate as of December 31, 2018 (in EUR thousand)[1]	Annual profit/(loss) in the financial year ended December 31, 2018 (in EUR thousand)[2]	Dividends received by the Company in the financial year ended December 31, 2018 (in EUR thousand)[2]
Epigenomics, Inc., Federal Way, WA, USA	0	3,573	(10,169)	(3,054)	0

(1) Converted from U.S. Dollar at the applicable exchange rate as of December 31, 2018, *i.e.*, USD 1.1450 per EUR 1.

(2) Converted from U.S. Dollar at the average rate for the financial year 2018, *i.e.*, USD 1.1793 per EUR 1.

13.4. Auditor

The Company appointed Baker Tilly as auditor of the Audited Consolidated Financial Statements 2018 and 2017 prepared in accordance with IFRS and of the Audited Unconsolidated Financial Statements 2018 prepared in accordance with the German Commercial Code (*Handelsgesetzbuch*).

Baker Tilly conducted its audits in accordance with Section 317 German Commercial Code (*Handelsgesetzbuch*) and German generally accepted standards for the audit of financial statements promulgated by the Institute of Public Auditors in Germany (*Institut der Wirtschaftsprüfer*) and issued an unqualified auditor's report (*uneingeschränkter Bestätigungsvermerk*). The audit report for the financial year 2017 contains the additional remark that the Company's ability to continue as a going concern is dependent on future cash inflows outside the operating business, see also pages F-147 to F-152 (Independent Auditor's Report to the Audited Consolidated Financial Statements 2017) and *2.7. "General Information — Note on Financial Information"*.

Baker Tilly is member of the German Chamber of Auditors (*deutsche Wirtschaftsprüferkammer*) and member of the Institute of Public Auditors in Germany (*Institut der Wirtschaftsprüfer*).

13.5. Publications, Paying Agent, Designated Sponsor

In accordance with its Articles of Association, announcements of the Company are published in the German Federal Gazette (*Bundesanzeiger*).

Announcements in connection with the approval of the Prospectus or any supplements thereto are to be made in accordance with the regulations of Delegated Regulation (EU) 2019/979 and in the form of publications stipulated for in the Prospectus, in particular through publication on the

Company's website (http://www.epigenomics.com/news-investors/capital-increase). Printed copies of the Prospectus will be available for distribution at the office of the Company (Geneststrasse 5, 10829 Berlin, Germany, phone: +49-30-24345-0) during regular business hours.

The paying agent is Deutsche Bank AG, Theodor-Heuss-Allee 70, 60486 Frankfurt a.M., Germany.

The designated sponsor of the Company's Shares is equinet Bank AG, Gräfstr. 97, 60487 Frankfurt a.M.

13.6. Overview of Regulatory Disclosures

The following table presents a summary of the the information we disclosed under Regulation (EU) No. 596/2014 over the last 12 months which is relevant as at the date of the prospectus.

13.6.1. Notifications of Financial Reports

No.	Publication date	Title
1.	July 30, 2019	Notification of Half-Year Financial Report from January 1, 2019 to June 30, 2019
2.	April 15, 2019	Notification of Interim Management Statement from January 1, 2019 to March 31, 2019
3.	March 19, 2019	Notification of Annual Financial Report from January 1, 2018 to December 31, 2018
4.	November 5, 2018	Notification of Interim Management Statement from January 1, 2018 to September 30, 2018

13.6.2. Ad-Hoc Notifications

No.	Publication date	Title
1.	July 15, 2019	Chinese Patent Reexamination Department partially invalidates Epigenomics' patent claims for Septin9
2.	May 3, 2019	CMS accepts Epigenomics' application for NCD review
3.	March 6, 2019	Epigenomics AG terminates collaboration with Chinese licensing partner and announces anticipated revenue growth in 2019 outlook
4.	October 23, 2018	Epigenomics AG successfully completes capital increase; gross proceeds of EUR 22.3 million
5.	October 16, 2018	Epigenomics AG sets subscription price at EUR 1.86 per new share

13.6.3. Notifications of Transactions by Persons Discharging Managerial Responsibilities and Persons Closely Associated With Them

No.	Publication date	Transaction date	Name of person	Transaction description
1.	August 12, 2019	August 8, 2019	Dr. Helge Lubenow	Share acquisition (EUR 12,005.00)

No.	Publication date	Transaction date	Name of person	Transaction description
2.	August 12, 2019	August 8, 2019	Heino von Prondzynski	Share acquisition (EUR 104,027.56)
3.	August 12, 2019	August 9, 2019	Gregory Hamilton	Share acquisition (EUR 2,296.13)
4.	August 12, 2019	August 9, 2019	Gregory Hamilton	Share acquisition (EUR 13,457.71)
5.	June 3, 2019	May 30, 2019	Armin M. Kessler and Ann C. Kessler Family Trust	Share acquisition (USD 39,898.35; equals approximately EUR 35,770.44 as of the transaction date)
6.	May 23, 2019	May 20, 2019	Franz Walt	Share acquisition (EUR 29,968.43)
7.	May 9, 2019	May 9, 2019	Heino von Prondzynski	Share acquisition (EUR 56,900.85)
8.	April 2, 2019	March 29, 2019	Armin M. Kessler and Ann C. Kessler Family Trust	Share acquisition (USD 49,986.78; equals approximately EUR 44,492.02 as of the transaction date)
9.	December 14, 2018	December 13, 2018	Heino von Prondzynski	Share acquisition (EUR 67,368.30)
10.	December 14, 2018	December 12, 2018	Heino von Prondzynski	Share acquisition (EUR 26,383.59)
11.	October 26, 2018	October 24, 2018	Jorge Garces	Share acquisition (EUR 1,860.00)
12.	October 26, 2018	October 24, 2018	Gregory Hamilton	Share acquisition (EUR 4,650.00)
13.	October 26, 2018	October 24, 2018	Armin M. Kessler and Ann C. Kessler Family Trust	Share acquisition (EUR 50,861.70)
14.	October 26, 2018	October 24, 2018	Heino von Prondzynski	Share acquisition (EUR 195,300.00)

13.6.4. Voting Rights Notifications

No.	Publication Date	Date on which Threshold was Crossed or Reached*	Person subject to Notification Obligation	Description
1.	August 5, 2019	July 30, 2019	Morgan Stanley	Acquisition/disposal of shares with voting rights New total voting rights: 0.09%
2.	May 3, 2019	February 13, 2019	Ari Zweiman	Acquisition/disposal of shares with voting rights New total voting rights: 3.75%

No.	Publication Date	Date on which Threshold was Crossed or Reached*	Person subject to Notification Obligation	Description
3.	December 20, 2018	December 18, 2018	Yong Yu	Lapse of instruments due to early redemption of convertible bonds New total voting rights: 4.84%
4.	December 19, 2018	October 24, 2018	Digital Time Investment Limited	Change of breakdown of voting rights New total voting rights: 2.36%
5.	November 27, 2018	November 2, 2018	BioChain Institute Inc.	Change of breakdown of voting rights New total voting rights: 2.81%
6.	November 22, 2018	October 24, 2018	Deutsche Balaton AG	Announcement of objectives pursued with the acquisition of voting rights and origin of funds for the acquisition of voting rights
7.	November 7, 2018	October 29, 2018	Roberto Mignone	Acquisition/disposal of shares with voting rights New total voting rights: 3.75%
8.	November 5, 2018	October 24, 2018	CIGOGNE MANAGEMENT S.A.	Change of breakdown of voting rights New total voting rights: 1.91%
9.	November 5, 2018	October 24, 2018	CIGOGNE UCITS	Change of breakdown of voting rights New total voting rights: 1.91%
10.	October 31, 2018	October 24, 2018	Wilhelm K. T. Zours	Acquisition/disposal of shares with voting rights; change of breakdown of voting rights New total voting rights: 13.57%
11.	October 24, 2018	October 24, 2018	Epigenomics AG	Publication of total number of voting rights New total number of voting rights: 36,021,540

* Only relevant notifications as of the date of the Prospectus are listed, *i.e.*, the most recent notification by each person subject to notification obligation.

14. MAJOR SHAREHOLDERS

The following list gives an overview of the natural persons and legal entities who, based on the information notified to the Company as of the date of the Prospectus, in accordance with Section 33 et seq. of the German Securities Trading Act (*Wertpapierhandelsgesetz*), directly or indirectly hold voting rights in the Company. Changes in the voting rights percentages, however, could remain unknown to the Company if they occurred between the thresholds of Section 33 para. 1 sent. 1 of the German Securities Trading Act (*Wertpapierhandelsgesetz*) (3%, 5%, 10%, 15%, 20%, 25%, 30%, 50% and 75%) or above the threshold of 75% or the proper notifications were omitted. In view of this, it is possible, and in some cases also probable, that the notifications available to the Company do not in every case reflect the actual number of voting rights.

The trigger for the described statutory notification obligation in accordance with Section 33 et seq. of the German Securities Trading Act (*Wertpapierhandelsgesetz*, "**WpHG**") is the exceeding, attaining and falling below certain thresholds of voting rights. As of the date of the Prospectus, the following shareholders had reported notifiable holdings in the Company above the respective initial notification thresholds:

	Major Shareholdings in %[1]		
Name of shareholder (ultimate controlling person)	**Shareholdings[2]**	**Instruments[3]**	**Total**
Wilhelm K. T. Zours[4]	13.57%	–	13.57%
Shaoqing Zhang[5]	5.53%	–	5.53%
Yong Yu[6]	4.84%	–	4.84%
Ari Zweiman[7]	3.74%	0.01%	3.75%
Roberto Mignone[8]	3.75%	–	3.75%

1 The percentage of voting rights has been calculated on the basis of the Company's total number of voting rights (as published pursuant to Section 41 WpHG) on the date of the respective shareholding notification.

2 Based on the respective shareholding notifications, all listed shareholdings are indirect shareholdings pursuant to Sections 33, 34 WpHG.

3 Includes directly and indirectly held instruments pursuant to Section 38 WpHG.

4 Based on a shareholding notification dated October 31, 2018; including attributed shareholdings held by Heidelberger Beteiligungsholding AG (4.37%) and ABC Beteiligungen AG (5.86%). Based on the respective shareholding notification, the remaining 3.34% are also indirect shareholdings and are attributed to Wilhelm K. T. Zours via his controlled undertakings.

5 Based on a shareholding notification dated July 11, 2017; including attributed shareholdings held by Can Reach International Limited (5.53%).

6 Based on a shareholding notification dated December 20, 2018; including attributed shareholdings held by Cathay Fortune International Company Limited (4.84%).

7 Based on a shareholding notification dated April 30, 2019; including attributed shareholdings held by 683 Capital Partners, LP (3.74%).

8 Based on a shareholding notification dated November 6, 2018, including attributed shareholdings held by Bridger Healthcare Ltd (3.75%).

15. INFORMATION ON THE SHARE CAPITAL OF EPIGENOMICS AG AND APPLICABLE REGULATIONS

15.1. Current Share Capital and Shares

The Company's share capital currently amounts to EUR 36,021,540.00, divided into 36,021,540 no par-value ordinary registered Shares, representing a notional portion of the share capital of EUR 1.00 each. We have one series of Shares, which entitles holders to equal voting rights in our Company. The Company's Shares are freely transferable and our share capital is denominated in Euros. The share capital has been fully paid up. The Shares were created pursuant to German law. Since July 19, 2004, the Company's Shares have been listed in the Prime Standard segment of the Frankfurt Stock Exchange (trading symbol: ECX).

15.1.1. Foundation and Capital Measures

On April 30, 1997, the Company was incorporated in the legal form of a limited liability company (*Gesellschaft mit beschränkter Haftung*) under German law with a share capital of DM 50,000.00. Since January 1, 2017, the Company's share capital has developed as follows:

- Based on the authorization to increase the share capital of the Company by resolution of the shareholders' meeting of the Company held on May 2, 2012, amended by resolutions of the shareholders' meeting of the Company held on May 6, 2013 and May 13, 2015, the Company's share capital was increased by EUR 681,255.00 from EUR 22,054,005.00 to EUR 22,735,260.00. The capital increase was registered with the commercial register on January 27, 2017.
- Based on the authorization to increase the share capital of the Company granted by resolution of the shareholders' meeting of the Company held on May 30, 2017, the Company's share capital was increased by EUR 1,279,100.00 from EUR 22,735,260.00 to EUR 24,014,360.00. The capital increase was registered with the commercial register on October 6, 2017.
- Based on the authorization to increase the share capital of the Company granted by resolution of the shareholders' meeting of the Company held on May 30, 2018, the Company's share capital was increased by EUR 12,007,180.00 from EUR 24,014,360.00 to EUR 36,021,540.00. The capital increase was registered with the commercial register on October 24, 2018.

15.1.2. Description of Shares

Each Share entitles the shareholder to one vote at the general shareholders' meeting of the Company. There are no restrictions on voting rights. Voting rights are the same for all of the Company's shareholders. Voting rights, however, do not attach until the respective capital contribution has been fully paid up. The Shares carry full dividend rights as from January 1, 2019, *i.e.*, for the full financial year ending December 31, 2019 and for all subsequent financial years. In the event of the Company's liquidation, the Company's assets remaining after satisfaction of all liabilities of the Company will be distributed to the shareholders in proportion to their interest in the Company's share capital.

As of the date of the Prospectus, the Company and its subsidiary hold no Shares in the Company.

15.2. Certification and Transferability of the Shares

The form of the share certificates, the dividend coupons and the renewal coupons, if any, are determined by the Company's Executive Board upon the approval of the Supervisory Board. The

Company is entitled to issue share certificates embodying individual Shares or multiples of Shares. Section 6(2) of the Company's current Articles of Association stipulates that the shareholders' right to the issuance of share certificates representing their respective Shares shall be excluded to the extent legally permissible, unless such issuance is required in accordance with regulations applicable at a stock exchange to which the Shares are admitted for trading.

The Shares of the Company are represented by one global share certificate without dividend coupons, which is deposited with Clearstream.

There are no restrictions on the transferability of the Company's Shares other than the lock-up agreements described under *3.13. "The Offering — Lock-Up Agreements".*

15.3. Authorized Capital

15.3.1. Authorized Capital 2019/I

Our Executive Board, with the consent of our Supervisory Board, is authorized to increase the Company's share capital once or several times by up to a total of EUR 3,602,154.00 against contribution in cash and/or in kind by issuing new non-par value registered Shares until May 14, 2024 ("**Authorized Capital 2019/I**"). In general, subscription rights shall be granted to the shareholders. The Company's new shares may be subscribed by credit institutions or companies within the meaning of Section 186 para. 5 sent. 1 of the German Stock Corporation Act (*Aktiengesetz*) with the obligation to offer them to the shareholders. Our Executive Board, with the consent of our Supervisory Board, is permitted to refrain from granting subscription rights to the shareholders in the following circumstances:

- For fractional amounts;
- If the new Shares are issued according to Section 186 para. 3 sent. 4 German Stock Corporation Act (*Aktiengesetz*) against contribution in cash at an issue price not significantly below the stock exchange price of the Shares already listed, and the *pro rata* notional portion of the share capital represented by the new Shares does not exceed ten percent (10%) of our share capital at the time this authorization is registered with the commercial register, or, if lower, at the time when the authorization is exercised. The 10% limit includes other Shares newly issued by way of a capital increase against contribution in cash during the term of this authorization or which have been sold following a repurchase, in each case to the extent subscription rights were excluded, as well as Shares in relation to which there is an option or conversion right or obligation, or a Share delivery right based on bonds with warrants, convertible bonds or participation rights that have been issued by the Company or its subordinated affiliated companies during the term of this authorization to the extent subscription rights were excluded; and
- To the extent necessary to grant subscription rights for such a number of new Shares to holders or creditors of option rights or creditors of convertible bonds or participation rights issued by the Company or its subordinated affiliated companies to which the holders or creditors would be entitled had they already exercised their rights or options.

Our Executive Board, with the consent of our Supervisory Board, is further authorized to determine the dividend rights of the new Shares and any further details for the implementation of capital increases from Authorized Capital 2019/I.

15.3.2. Authorized Capital 2019/II

Our Executive Board, with the consent of our Supervisory Board, is authorized until May 14, 2024 to increase the share capital of the Company once or several times by up to a total of EUR 14,408,616.00 against contribution in cash by issuing new non-par value registered Shares ("**Authorized Capital 2019/II**"). In general, subscription rights shall be granted to the shareholders. The Company's new shares may be subscribed by credit institutions or companies within the meaning of Section 186 para. 5 sent. 1 of the German Stock Corporation Act (*Aktiengesetz*) with the obligation to offer them to the shareholders. But our Executive Board, with the consent of our Supervisory Board, is permitted to refrain from granting subscription rights to the shareholders for fractional amounts.

Our Executive Board, with the consent of our Supervisory Board, is further authorized to determine the dividend rights of the new Shares and any further details for the implementation of capital increases from Authorized Capital 2019/II.

15.4. Conditional Capital

15.4.1. Conditional Capital IX

Our share capital is conditionally increased by up to EUR 521,095.00 by issuance of up to 521,095 new non-par value ordinary registered Shares ("**Conditional Capital IX**"). The conditional capital increase serves the purpose of granting shares to the holders or creditors of bonds or participation rights issued by the Company or by a group company of the Company within the meaning of Section 18 AktG, in which the Company has a direct and/or indirect holding of at least 90 %, on the basis of the authorization resolution of the General Shareholders' Meeting of May 15, 2019 prior to the end of May 14, 2024 if option or conversion rights are exercised, if option or conversion obligations are fulfilled or if the Company exercises its optional right to deliver shares of the Company instead of payment of the cash amount due (or parts thereof). The conditional capital increase is only to be implemented if bonds or participation rights are issued in accordance with the authorization resolution of the General Shareholders' Meeting of May 15, 2019, and only to the extent that:

- option or conversion rights are exercised ; or
- holders or creditors of bonds or participation rights who are under an obligation to exercise an option or under a conversion obligation fulfill their obligation to exercise the option or their conversion obligation ; or
- the Company exercises its optional right to deliver shares of the Company instead of paying the cash amount due (or parts thereof),

and to the extent that no cash settlement is granted and no Shares from the authorized capital, treasury Shares or shares of another listed company are delivered.

The issuance of the new Shares occurs at the respective option or conversion price as determined in accordance with the authorization resolution of the general shareholders' meeting of May 15, 2019. The newly issued Shares bear dividend rights from the commencement of the financial year in which the Shares are issued. However, our Executive Board may, with the consent of the Supervisory Board, as far as legally permissible, determine that, if no resolution on the allocation of the profit of the financial year immediately preceding the year of the issuance has been adopted when the new Shares are issued, the new Shares shall bear dividend rights from the commencement of the financial year immediately preceding the year of the issuance. Our

Executive Board, with the consent of our Supervisory Board, is further authorized to determine the further details for the implementation of capital increases from Conditional Capital IX.

15.4.2. Conditional Capital X

Our share capital is conditionally increased by up to EUR 14,468,610.00 by the issuance of up to 14,468,610 new non-par value ordinary registered Shares ("**Conditional Capital X**"). The Conditional Capital X serves the purpose of granting shares to the holders or creditors of bonds or participation rights issued by the Company or by a group company of the Company within the meaning of Section 18 AktG, in which the Company has a direct and/or indirect holding of at least 90 %, on the basis of the authorization resolution of the General Shareholders' Meeting of May 15, 2019 prior to the end of May 14, 2024 if option or conversion rights are exercised, if option or conversion obligations are fulfilled or if the Company exercises its optional right to deliver shares of the Company instead of payment of the cash amount due (or parts thereof). The conditional capital increase is to be implemented if bonds or participation rights are issued in accordance with the authorization resolution of the General Shareholders' Meeting of May 15, 2019, and only to the extent that:

- option or conversion rights are exercised; or
- holders or creditors of bonds or participation rights who are under an obligation to exercise an option or under a conversion obligation fulfill their obligation to exercise the option or their conversion obligation; or
- the Company exercises its optional right to deliver shares of the Company instead of paying the cash amount due (or parts thereof),

and to the extent that no cash settlement is granted and no Shares from an authorized capital, treasury Shares or shares of another listed company are delivered.

The newly issued Shares are issued at the respective option or conversion price to be determined in accordance with the authorization resolution of the General Shareholders' Meeting of May 15, 2019. The newly issued Shares bear dividend rights from the commencement of the financial year in which the Shares are issued. However, our Executive Board may, with the consent of our Supervisory Board, as far as legally permissible, determine that, if no resolution on the allocation of the profit of the financial year immediately preceding the year of the issuance of the new Shares has been adopted when the new Shares are issued, the new Shares shall bear dividend rights from the commencement of the financial year immediately preceding the year of the issuance. Our Executive Board, with the consent of our Supervisory Board, is further authorized to determine the further details for the implementation of capital increases from Conditional Capital X.

15.4.3. Conditional Capital XI

Our share capital is conditionally increased by up to EUR 1,000,000.00 by issuance of up to 1,000,000 new Shares ("**Conditional Capital XI**"). This conditional capital increase will only be implemented to the extent that subscription rights are issued under our stock option program 16-18, as approved by the general shareholders' meeting on May 25, 2016 (see *16.5.1.1. "Governing Bodies — Stock Option Programs – Phantom Stock Programs — Stock Option Programs — SOP 16-18"*), prior to the end of April 30, 2018, the holders of these subscription rights exercise them and the Company does not grant any treasury Shares or cash compensation to fulfill these subscription rights.

The new Shares will be issued against payment of the respective exercise price to be determined in accordance with the resolution on the Company's stock option program 16-18 by the shareholders' meeting held on May 25, 2016.

The newly issued Shares bear dividend rights from the commencement of the financial year in which the Shares are issued. However, our Executive Board may, with the consent of our Supervisory Board, as far as legally permissible, determine that, if no resolution on the allocation of the profit of the financial year immediately preceding the year of the issuance of the new Shares has been adopted when the new Shares are issued, the new Shares shall bear dividend rights from the commencement of the financial year immediately preceding the year of the issuance; if the new Shares are issued to members of the Executive Board, the Supervisory Board shall be authorized to do so. Our Supervisory Board is also authorized to determine the further details of the implementation of the conditional capital increase where the granting of subscription rights to members of the Executive Board is concerned. In all other cases and subject to the terms of the Company's stock option program 16-18, our Executive Board is authorized to determine these details.

15.4.4. Conditional Capital XII

Our share capital is conditionally increased by up to EUR 1,000,000.00 by issuance of up to 1,000,000 new Shares ("**Conditional Capital XII**"). This conditional capital increase will only be implemented to the extent that subscription rights are issued under our stock option program 17-19, as approved by the general shareholders' meeting on May 30, 2017 (see *16.5.1.2. "Governing Bodies — Stock Option Programs – Phantom Stock Programs — Stock Option Programs — SOP 17-19"*), prior to the end of May 31, 2019, the holders of these subscription rights exercise them and the Company does not grant any treasury Shares or cash compensation to fulfill these subscription rights.

The new Shares will be issued against payment of the respective exercise price to be determined in accordance with the resolution on the Company's stock option program 17-19 by the shareholders' meeting held on May 30, 2017.

The newly issued Shares bear dividend rights from the commencement of the financial year in which the Shares are issued. However, our Executive Board may, with the consent of our Supervisory Board, as far as legally permissible, determine that, if no resolution on the allocation of the profit of the financial year immediately preceding the year of the issuance of the new Shares has been adopted when the new Shares are issued, the new Shares shall bear dividend rights from the commencement of the financial year immediately preceding the year of the issuance; if the new Shares are issued to members of the Executive Board, the Supervisory Board shall be authorized to do so. Our Supervisory Board is also authorized to determine the further details of the implementation of the conditional capital increase where the granting of subscription rights to members of the Executive Board is concerned. In all other cases and subject to the terms of the stock option program 17-19, our Executive Board is authorized to determine these details.

15.4.5. Conditional Capital XIII

Our share capital is conditionally increased by up to EUR 1,000,000.00 by issuance of up to 1,000,000 new Shares ("**Conditional Capital XIII**"). The conditional capital increase is to be implemented only if subscription rights are issued in accordance with the authorization resolution on the Company's Stock Option Program 19-21 by the General Shareholders' Meeting of May 15, 2019 and only to the extent that the holders of these subscription rights exercise them and the Company does not grant any treasury shares or cash compensation to fulfill these subscription rights.

The newly issued Shares bear dividend rights from the commencement of the financial year in which they are created. The Executive Board may determine, as far as legally permissible and with the consent of the Supervisory Board, that, if no resolution on the application of the profit of the financial year immediately preceding the year of the issuance of the new shares has been adopted when the new shares are issued, the new shares shall be entitled to dividends from the commencement of the financial year immediately preceding the year of the issuance; if the new shares are issued to members of the Executive Board, the Supervisory Board shall be authorized to do so. The Supervisory Board is also authorized to determine the further details concerning the implementation of the conditional capital increase where the granting of subscription rights to members of the Executive Board is concerned. In all other cases, the Executive Board is authorized to determine such details.

15.5. Authorization to Acquire and Use Treasury Shares

We may not acquire our own Shares unless authorized by the shareholders' meeting or in other very limited circumstances as set out in the German Stock Corporation Act (*Aktiengesetz*). Shareholders may not grant a share repurchase authorization for a period of more than five years. The rules of the German Stock Corporation Act (*Aktiengesetz*) generally limit repurchases to 10% of our share capital and re-sales must generally be made either on a stock exchange, in a manner that treats all shareholders equally or in accordance with the rules that apply to subscription rights relating to a capital increase.

Currently, the shareholders' meeting of the Company has not granted an authorization to acquire treasury shares.

15.6. General Rules on Allocation of Profits and Dividend Payments

Shareholders have a share in the Company's distributable profits determined in proportion to their interest in the Company's share capital. According to Sections 5(7), 5(8) and 20(3) of the Articles of Association, the participation of new Shares in the profits may be determined in a deviating manner. Distributions of dividends on Shares for a given financial year are generally determined by the Executive Board and the Supervisory Board submitting a proposal for the distribution of dividends to the ordinary general shareholders' meeting (*Hauptversammlung*) held in the subsequent financial year. The general shareholders' meeting then adopts a resolution on such distribution without being bound by the proposal of the Executive Board and the Supervisory Board. Under the Articles of Association, the general shareholders' meeting may, to the extent legally permissible, approve non-cash dividends in addition to, or instead of, cash dividends. Under the rules applicable to the Company, resolutions regarding the distribution of dividends can only be adopted based on the distributable profits (*Bilanzgewinn*) shown in the Company's audited unconsolidated financial statements in accordance with the German Commercial Code (*Handelsgesetzbuch*). The audited unconsolidated financial statements of the Company are approved by the Executive Board and the Supervisory Board unless the approval is referred to the general shareholders' meeting by the Executive Board and the Supervisory Board. In determining the distributable profits, the profit or loss for the financial year is adjusted for profits or losses carried forward from previous financial years as well as for withdrawals from and transfers to reserves. Certain reserves are required to be formed by law and must be deducted when calculating the distributable profits. Subject to certain statutory restrictions, the general shareholders' meeting is entitled to transfer additional amounts to the reserves or carry them forward. If the Executive Board and the Supervisory Board approve the annual financial statements, they may, pursuant to the Articles of Association, transfer the net profit for the year,

which remains after deduction of the amounts to be transferred to the statutory reserve and any loss carried forward, to other revenues reserves in whole or in part. The transfer of more than half of the net profit for the year shall not be permitted if the other revenue reserves exceed half the amount of the share capital or would do so following the transfer. The New Shares will be entitled to profit participation beginning January 1, 2019, *i.e.*, for the full financial year ending December 31, 2019 and for all subsequent financial years. The dividends will be paid out in accordance with the rules of the clearing system of Clearstream. Details on dividend payments and the respective payment agent will be published in the German Federal Gazette (*Bundesanzeiger*). Neither German law nor the Articles of Association provide for a special procedure for the exercise of dividend rights by shareholders not resident in Germany. Under German law, the right to dividend payments is generally time-barred after three years for the benefit of the Company.

15.7. General Provisions Governing a Liquidation of the Company

Besides liquidation as a result of insolvency proceedings, the Company may be liquidated, in particular by a resolution of the general shareholders' meeting to dissolve the Company followed by a liquidation procedure. The resolution of the general shareholders' meeting requires a simple majority of the votes cast, as well as a majority of at least three quarters of the share capital represented at the time the resolution is adopted. In the liquidation procedure, the assets remaining after all Company liabilities have been satisfied are divided among the shareholders in proportion to their interest in the Company's share capital. Certain restrictions, in particular restrictions for the benefit of creditors, must be observed.

15.8. General Provisions Governing a Change in the Share Capital

The share capital of the Company may be increased against cash contributions or against contributions in kind by a resolution of the general shareholders' meeting. According to the German Stock Corporation Act (*Aktiengesetz*), such resolution requires a simple majority of the votes cast, as well as a majority of at least three quarters of the share capital represented at the time the resolution is adopted, unless the stock corporation's articles of association provide for a different majority. Section 18(4) of the Articles of Association generally provides for a simple majority of the votes cast. In cases where the majority of the share capital represented during the adoption of the resolution is required by statutory law, the simple majority of the represented share capital shall be sufficient unless a larger majority is stipulated by mandatory statutory law.

In addition, the general shareholders' meeting may create authorized capital by a resolution requiring a simple majority of the votes cast as well as a majority of at least three quarters of the share capital represented at the time the resolution is adopted. The authorized capital gives the Executive Board authority to issue Shares up to a certain amount within a period of not more than five years after registration of the authorization with the commercial register with the approval of the Supervisory Board. The notional value of the authorized capital may not exceed one-half of the share capital in existence at the time the authorization is registered with the commercial register. For details on the Company's authorized capital see *15.3.* "*— Authorized Capital"*.

Furthermore, the general shareholders' meeting may resolve to create conditional capital with a simple majority of the votes cast as well as a majority of at least three quarters of the share capital represented at the time the resolution is adopted. Conditional capital can, in principle, only be created in order to grant exchange or subscription rights on the basis of convertible bonds (or similar instruments, including, in particular, participation rights), to prepare for a business combination with one or more other companies or to grant subscription rights to employees and

members of the management of our Group. In case conditional capital is created for the purpose of granting subscription rights to employees and members of the management, its nominal amount may not exceed 10% of the share capital in existence at the time the resolution is adopted, in all other cases, the nominal amount must not exceed 50%, provided, however, in both cases that it does not exceed 50% in the aggregate. For details on the Company's conditional capital see *15.4. "— Conditional Capital".*

The general shareholders' meeting may also resolve to decrease the share capital of the Company. Again, such resolution requires a simple majority of the votes cast as well as a majority of at least three quarters of the share capital represented at the time the resolution is adopted. A decrease of the share capital is also possible upon cancellation of treasury Shares if the authorization granted to the Executive Board by the general shareholders' meeting to acquire treasury Shares explicitly allows for such cancellation.

15.9. General Provisions on Subscription Rights

According to the German Stock Corporation Act (*Aktiengesetz*), each shareholder is generally entitled to subscription rights to new shares to be issued in a capital increase (as well as convertible bonds, warrant bonds, profit participation rights and participating bonds). Subscription rights are freely transferable. During a specified period prior to the expiration of the subscription period, there may be trading in subscription rights on German stock exchanges. The general shareholders' meeting may exclude subscription rights in whole or in part when resolving upon a capital increase or an authorized capital. In case of authorized capital, the general shareholders' meeting may also authorize the management board to exclude the subscription rights. All such resolutions by the general shareholders' meeting require a simple majority of the votes cast as well as a majority of at least three quarters of the share capital represented at the time the resolution is adopted. In addition, the exclusion of subscription rights requires a report by the management board demonstrating the reasons for such exclusion as well as the reasons for the proposed issue price. In particular, the exclusion of subscription rights for a new share issue is permissible if the Company is increasing its capital against cash contributions, the amount of the capital increase does not exceed 10% of the existing share capital, and the issue price of the new shares is not significantly lower than the stock exchange price.

15.10. Exclusion of Minority Shareholders

According to Sections 327a et seq. German Stock Corporation Act (*Aktiengesetz*) which govern the so-called "squeeze-out under stock corporation law", the general shareholders' meeting of a stock corporation is able, at the request of a shareholder holding at least 95% of the share capital (principal shareholder), to resolve the transfer of the shares of the minority shareholders to the principal shareholder against payment of an adequate cash settlement. The amount of cash compensation to be granted to the minority shareholders has to take into account the situation of the company on the date of the resolution of the shareholders' meeting. The true value of the company determines the amount of cash compensation, which is generally calculated using the capitalized earnings method (*Ertragswertmethode*) or similar generally recognized valuation methods, provided however that, in the absence of certain circumstances, the compensation must not fall short of the weighted average stock price over the last three months prior to the publication of the intention to have a "squeeze-out" resolution be passed. The minority shareholders are entitled to initiate valuation proceedings (*Spruchverfahren*), in the course of which the adequateness (*Angemessenheit*) of the cash compensation is reviewed.

If the majority shareholder of the stock corporation is a stock corporation, a partnership limited by shares (*Kommanditgesellschaft auf Aktien*), or a Societas Europaea (European company), in each case having its registered office in Germany, a squeeze-out in accordance with Sections 327a et seq. German Stock Corporation Act (*Aktiengesetz*) can be effectuated, under certain circumstances, in order to facilitate an upstream merger of the stock corporation into the majority shareholder. Pursuant to Section 62 German Transformation Act (*Umwandlungsgesetz*), providing for this so-called "squeeze-out under transformation law", the majority shareholder holding at least 90% of the share capital is able to request the general shareholders' meeting to approve the squeeze-out within three months of the conclusion of the merger agreement.

In addition, Sections 39a and 39b German Securities Acquisition and Takeover Act (*Wertpapiererwerbs- und Übernahmegesetz*) provide for a so-called "squeeze-out under takeover law". A bidder who holds at least 95% of the voting share capital of a target company (as defined in the German Securities Acquisition and Takeover Act) after a takeover or mandatory public tender offer, may within three months after the expiry of the deadline for acceptance of its offer, request the transfer of the remaining voting shares to it against payment of an adequate compensation by applying to the Regional Court (*Landgericht*) of Frankfurt am Main for a court order. If the bidder holds shares representing 95% of the target company's share capital, the remaining non-voting preference shares shall also be transferred to the bidder upon his request. The compensation granted as part of the takeover or mandatory public tender offer is deemed to be adequate if the bidder has acquired, on the basis of the offer, shares representing at least 90% of the share capital affected by the offer. Furthermore, according to Section 39c German Securities Acquisition and Takeover Act, the shareholders of a target company who have not accepted the offer may accept it within further three months after the acceptance period of the takeover or mandatory public tender offer has expired ("sell-out"), if the bidder is entitled to file an application for the transfer of the outstanding shares in accordance with Section 39a German Securities Acquisition and Takeover Act.

The provisions for a squeeze-out under stock corporation law cease to apply once an offeror has petitioned for a squeeze-out under takeover law, and only apply again when these proceedings have been completed.

In addition to the legal provisions on the exclusion of minority shareholders, in Sections 319 et seq., the German Stock Corporation Act (*Aktiengesetz*) provides for what is called the integration of stock corporations (*Eingliederung*). According to these provisions, the general shareholders' meeting of a stock corporation can approve the integration of a company if 95% of the shares of the company to be integrated are held by the future principal company. The former shareholders of the integrated company are entitled to an adequate compensation that generally must be granted in the form of shares of the principal company while, if the principal company is a controlled company (*i.e.*, a legally separate company over which another company is able to exert, directly or indirectly, a controlling influence), the former shareholders may also demand an adequate compensation in cash instead of a compensation in the form of shares. Such integration is, however, only possible if the future principal company is a stock corporation with its registered office in Germany.

15.11. Mandatory Takeover Bids

Pursuant to the German Securities Acquisition and Takeover Act (*Wertpapiererwerbs- und Übernahmegesetz*), every person whose share of voting rights directly or indirectly reaches or exceeds 30% of the voting shares of the Company must publish this fact, including the percentage of its voting rights, without undue delay, but not later than within seven calendar days by

publication on the Internet and through electronic media for disseminating financial information. Subsequently, such person must submit a mandatory public tender offer to all shareholders of the Company unless an exemption from this obligation has been granted by BaFin. The German Securities Acquisition and Takeover Act contains several rules that provide for an attribution and aggregation of voting rights in order to ensure that the shares are attributed to the person actually controlling the voting rights attached thereto. If a person fails to give notice of reaching or exceeding the 30% threshold or fails to submit a mandatory public tender offer, shareholder rights (including voting rights and, in certain cases, the right to collect dividends and liquidation proceeds) are suspended for the duration of non-compliance under certain circumstances. In addition, a fine may be imposed.

15.12. Disclosure Requirements for Shareholdings

As the Company's Shares are admitted to trading on the regulated market segment of the Frankfurt Stock Exchange, the provisions of the German Securities Trading Act (*Wertpapierhandelsgesetz*) apply.

Section 33 para. 1 of the German Securities Trading Act (*Wertpapierhandelsgesetz)* requires that anyone who acquires, sells or whose shareholding in any other way reaches, exceeds or falls below 3%, 5%, 10%, 15%, 20%, 25%, 30%, 50% or 75% of the voting rights in an issuer whose home country is Germany and whose shares are admitted to trading on an organized market must immediately, but no later than within four trading days, notify the issuer and at the same time BaFin. The notice period commences as soon as the person obliged to notify (*Meldepflichtiger*) knows, or, under the circumstances of the case should know, that his or her voting rights reach, exceed or fall below the abovementioned thresholds. The German Securities Trading Act stipulates a conclusive presumption that the person or entity obliged to notify has knowledge at the latest two trading days after reaching, exceeding or falling below the threshold. Only in case that the voting rights reach, exceed or fall below the thresholds as a result of an event affecting the total number of voting rights, the notice period might then commence at a later stage, *i.e.*, at the time the person obliged to notify knows of reaching such threshold or at the latest at the time of publication of the notification of the total number of voting rights by the issuer. The notification requirement is triggered by the establishment of ownership or an obligation to transfer such ownership which is unconditional and due without delay.

The notice may only be issued via the use of a standard form as set forth in the Annex to the German Securities Trading Notification Regulation (*Wertpapierhandelsanzeigeverordnung*). It must include the address of the individual or entity, the share of voting rights held and the date of reaching, exceeding, or falling below the respective threshold. As a domestic issuer, the Company must publish such notices it receives from shareholders immediately, but no later than within three trading days after receiving them, via such media bundle that it can be assumed that the notice will be disseminated as fast and as simultaneously as possible in the EU and the non-European Union parties to the agreement on the EEA (so-called *Medienbündel*). The Company must also transmit the notice to BaFin and to the German Company Register (*Unternehmensregister*) for storage.

For purposes of the notification requirements, Section 34 of the German Securities Trading Act contains various rules that require the attribution (*Zurechnung*) of voting rights of certain persons associated with the shareholder or acting together with the shareholder. For example, shares held by a subsidiary (as defined in the German Securities Trading Act) are generally attributed to the parent company; similarly, shares held by a third company for the account of another company are attributed to the latter. Shares or financial instruments held for trading by a credit institution or a securities services company are not taken into account for determining the notification obligation if

it is ensured that the voting rights held by them are not exercised, and that they amount to no more than 5% of the voting shares, or do not grant the right to purchase more than 5% of the voting shares.

Furthermore, any kind of co-operation among shareholders that is intended to effect a permanent and material change in the business strategy of the Company can result in an attribution of voting rights. This means that the co-operation does not necessarily have to concern the exercise of voting rights specifically; coordination in individual cases, however, will not trigger the attribution of voting rights.

Pursuant to Section 38 of the German Securities Trading Act, similar obligations to notify the Company and BaFin for reaching, exceeding or falling below the abovementioned thresholds (other than the 3% threshold) apply to direct and indirect holders of certain instruments other than shares. This applies to instruments which (i) grant upon maturity an unconditional right to acquire already issued voting shares of the Company, or grant discretion to acquire such shares, or (ii) relate to such shares and have a comparable economic effect as the aforementioned instruments. Such instruments include, *inter alia*, transferable securities, options, futures contracts, swaps, forward rate agreements and contracts for difference. The number of voting rights relevant for the notification requirement will generally be calculated by reference to the full nominal amount of shares underlying the instrument except where the instrument provides exclusively for a cash settlement. Details for such calculations are laid down in regulatory technical standards drafted by the European Securities and Markets Authority ("**ESMA**").

The notification requirement under Section 33 of the German Securities Trading Act applies mutatis mutandis to holders of voting rights within the meaning of Section 33 of the German Securities Trading Act and instruments within the meaning of Section 38 of the German Securities Trading Act if the aggregate total of voting rights held in a single issuer to be taken into account pursuant to Section 33 and Section 38 of the German Securities Trading Act reaches, exceeds or falls below the thresholds set forth in Section 33, with the exception of the 3% threshold.

In case the disclosure requirements are not complied with by the person obliged to notify (*Meldepflichtiger*), shareholder rights (including voting rights and, in certain cases, the right to receive dividends and liquidation proceeds) are, subject to certain exceptions, suspended for the duration of non-compliance. If the failure to comply with the disclosure requirements specifically relates to the share of voting rights and is the result of a willful or grossly negligent conduct, the suspension period is extended by six months after the person obliged to notify (*Meldepflichtiger*) files the required notification, except the incorrect notification deviates no more than 10% from the actual voting right proportion and no notification with regard to reaching, exceeding or falling below the abovementioned thresholds. In addition, a fine may be imposed if a required notification is not at all, incorrectly or incompletely made, or not made in the appropriate manner or a timely fashion. Moreover, BaFin shall, unless certain limited circumstances apply, publish such fine and set forth, in particular, the name of the person on whom the fine is imposed.

Furthermore, according to Section 43 of the German Securities Trading Act, a person obliged to notify (*Meldepflichtiger*) who reaches or exceeds the threshold of 10% of the voting rights, or a higher threshold, is obligated to notify the issuer within 20 trading days regarding the objective being pursued through the acquisition of voting rights as well as regarding the source of the funds used for the purchase. Changes in those objectives must also be notified within 20 trading days. An issuer may stipulate in its articles of association that the aforementioned disclosure requirement does not apply. However, the Company has not made use of this option.

15.13. Disclosure of Transaction of Persons Holding Management Responsibilities

Pursuant to Article 19 of the Market Abuse Regulation, persons discharging managerial responsibilities ("**Executives**") shall notify the Company and BaFin of every transaction conducted on their own account relating to the shares or debt instruments of the Company or to derivatives or other financial instruments linked thereto (so-called directors' dealings). The same applies to persons closely associated with Executives who must notify the Company and BaFin if they enter into such transactions. Transactions that must be notified include, among others, pledging or lending of financial instruments, transactions undertaken by any person professionally arranging or executing transactions on behalf of an Executive or a closely associated person, including where discretion is exercised, as well as transactions made under a life insurance policy. The notification requirement shall apply to any subsequent transaction once a total amount of EUR 5,000.00 has been reached within a calendar year. BaFin may decide to increase the threshold to EUR 20,000.00. Notification shall be made promptly and no later than three business days after the date of the transaction.

For the purposes of the Market Abuse Regulation, Executive means a person within the Company who is a member of the administrative, management or supervisory body of the Company or a senior executive who is not such member but who has regular access to inside information relating directly or indirectly to the Company and who has power to take managerial decisions affecting the future developments and business prospects of the Company. A person closely associated with an Executive means a spouse, or a partner considered to be equivalent to a spouse in accordance with national law, a dependent child as well as a relative who has shared the same household as the Executive for at least one year on the date of the transaction concerned. A person closely associated also includes a legal person, trust or partnership, the managerial responsibilities of which are discharged by the Executive or by a person closely associated with him. Finally, the term includes a legal person, trust or partnership, which is directly or indirectly controlled by an Executive or by a person closely associated with him, which is set up for the benefit of such a person, or the economic interests of which are substantially equivalent to those of the Executive or a person closely associated.

The Company shall ensure that the transaction of which it is notified is promptly made public. In any case, it shall be made public no later than three business days after the transaction in a manner which enables fast access to this information on a non-discriminatory basis in accordance with ESMA's implementing technical standards. Furthermore, according to the German Securities Trading Act (*Wertpapierhandelsgesetz*), the Company shall without undue delay transmit the information to the German Company Register (*Unternehmensregister*) and notify BaFin. Non-compliance with the notification requirements may result in a fine, and BaFin shall, unless certain limited circumstances apply, publish the fine indicating, in particular, the name of the person on whom the fine is imposed.

15.14. EU Short Selling Regulation

Pursuant to Regulation (EU) No. 236/2012 of the European Parliament and of the Council of March 14, 2012 on short selling and certain aspects of credit default swaps (the "**EU Short Selling Regulation**"), the European Commission's delegated regulation for the purposes of detailing the EU Short Selling Regulation, and the German EU Short Selling Implementation Act (*EU-Leerverkaufs-Ausführungsgesetz*) of November 15, 2012, the short-selling of the Company's shares is only permitted under certain conditions. Additionally, under the provisions of the EU Short Selling Regulation, significant net-short selling positions in the Company's shares must be

reported to BaFin and published if they exceed a specific percentage. The reporting and publication process is detailed in the German Regulation on Net-Short Positions (*Netto-Leerverkaufspositionsverordnung*) of December 17, 2012. The net short-selling positions are calculated by offsetting the short positions of a natural person or legal entity in the Company's shares with its long positions in such shares. The details are regulated in the EU Short Selling Regulation and the other regulations the European Commission enacted on short-selling. In certain situations described in the EU Short Selling Regulation, BaFin may restrict short-selling and comparable transactions.

15.15. Disclosure Requirements for Holdings of Shares and Other Instruments

The legal disclosure requirements for German stock corporations listed on a public exchange include, among others, periodic financial reporting (disclosure of annual and half-year financial reports), regular calls with securities and industry analysts, and other required disclosures according to the German Securities Trading Act (*Wertpapierhandelsgesetz*) as well as disclosure requirements under the Market Abuse Regulation. The Company will also be obliged under the Listing Rules of the Frankfurt Stock Exchange (*Börsenordnung für die Frankfurter Wertpapierbörse*) as amended from time to time to publish quarterly statements, as the Company's Shares are listed on the Prime Standard sub-segment of the regulated market of the Frankfurt Stock Exchange.

Pursuant to Section 17 of the Market Abuse Regulation the Company shall inform the public as soon as possible of inside information (as defined below) which directly concerns the Company. In such case the Company shall also, prior to informing the public, inform BaFin and the management of the trading venues and facilities (*Geschäftsführungen der Handelsplätze*) where financial instruments of the Company have been admitted to trading or been included in such trading, and, after publication, without undue delay transmit the information to the German Company Register (*Unternehmensregister*).

Inside information is any information of a precise nature, which has not been made public, relating, directly or indirectly, to one or more issuers or to one or more financial instruments, and which, if it were made public, would be likely to have a significant effect on the prices of those financial instruments or on the price of related derivative financial instruments.

The Company may, on its own responsibility, delay disclosure if (i) immediate disclosure is likely to prejudice the legitimate interests of the Company, (ii) delay of disclosure is not likely to mislead the public, and (iii) the Company is able to ensure that the inside information will remain confidential. In such case, the Company shall also inform BaFin that disclosure of the information was delayed and shall provide a written explanation of how the conditions set out in the preceding sentence were met, immediately after the information is disclosed to the public. Where disclosure of inside information has been delayed and the confidentiality of that inside information is no longer ensured, the Company shall disclose such inside information to the public as soon as possible.

16. GOVERNING BODIES

16.1. Overview

The governing bodies of the Company are the Executive Board (*Vorstand*), the Supervisory Board (*Aufsichtsrat*) and the general shareholders' meeting (*Hauptversammlung*). The responsibilities and powers of these corporate bodies are determined by the German Stock Corporation Act (*Aktiengesetz*), the Articles of Association (*Satzung*) and the rules of procedure for the Executive Board (*Geschäftsordnung für den Vorstand*) and the Supervisory Board (*Geschäftsordnung für den Aufsichtsrat*).

The Executive Board conducts the business of the Company in accordance with the applicable laws, the Articles of Association of the Company and the rules of procedure for the Executive Board, including the schedule of responsibilities (*Geschäftsverteilungsplan*). The Executive Board represents the Company when dealing with third parties.

The Executive Board must ensure that appropriate risk management and risk controlling mechanisms are established and maintained within the Company, its subsidiaries and associated companies. This is to ensure that any developments endangering the continuing existence of the Company can be identified at an early stage. The Executive Board is also required to regularly report to the Supervisory Board, at least on a quarterly basis, on the status of our business, in particular on turnover and earnings, and the condition of the Company. Furthermore, the Executive Board reports to the Supervisory Board at least once a year, unless changes in circumstances or new matters necessitate an immediate report, on the intended business policy and other key issues relating to corporate planning and the future course of our business (especially on finance, investment and human resources planning), as well as on the Company's risk position and risk management. This report must include a discussion of any deviations between actual developments and objectives previously reported on, including the reasons for such deviations. In addition, the Executive Board must submit a budget for the following financial year. In the meeting of the Supervisory Board where the annual financial statements are discussed, the Executive Board also has to report on the profitability of the Company, especially in relation to the return on equity. The Executive Board shall submit to the Supervisory Board, in due course, the various financial reports, including the annual financial statements and the management report as well as the consolidated annual financial statements and consolidated management report of the Company, the half-yearly and quarterly consolidated financial report of the Company and the monthly reporting package, including monthly management accounts of the Company. As a general rule, the Executive Board is required to report events which could have a material effect on the Company, and transactions which could be of material importance, especially in relation to the Company's profitability or liquidity, and to do so in a timely manner. This is to ensure that the Supervisory Board is able to assess such transactions and to express its opinion thereon prior to any such action being taken. In addition, the chairperson of the Supervisory Board shall be informed of any other significant developments, in particular including circumstances concerning the business of an undertaking affiliated with the Company which become known to the Executive Board and which may have a material impact upon the condition of the Company. Finally, any member of the Supervisory Board may request a report regarding the affairs of the Company at any time. In addition, the Executive Board and the Supervisory Board report annually in the annual report about the corporate governance of the Company and explain any deviations from the recommendations of the German Corporate Governance Code (*Deutscher Corporate Governance Kodex*) which was adopted in February 2002 and last amended on February 7, 2017 by the Government Commission German Corporate Governance Code (the "**Governance Code**").

Simultaneous membership on the Executive Board and the Supervisory Board of a German stock corporation is not permitted under German law; however, simultaneous membership that results from a member of the supervisory board taking a seat on the management board of the same German stock corporation for a maximum period of up to one year is permissible in exceptional cases. During this period, the board member may not perform any duties for the supervisory board.

The Supervisory Board appoints the members of the Executive Board and is entitled to dismiss them for good cause. Under German Stock Corporation law, the supervisory board advises and oversees the management board on the management of the Company, but is not itself authorized to manage the company. The articles of association or the Supervisory board must, however, require that the management obtains the approval of the supervisory board before entering into certain transactions.

According to the Articles of Association, the Supervisory Board shall determine that its approval shall be required for certain measures of the Executive Board. As of the date of the Prospectus, matters of the Company subject to the consent of the Supervisory Board as set forth in the rules of procedure for the Executive Board include the following:

a. The approval of the annual budget, including revenue and earnings plan, investment plan, liquidity and financial plan and the underlying partial plans, and including the budgeted balance sheet and the budgeted profit and loss statement, in consolidated form, for the company and its subsidiaries;
b. Fundamental changes of the existing production and/or service programs, material changes to business policy or strategy and internal changes of the organization of material importance;
c. Incorporation, purchase and sale of companies, either by means of acquisition of shares or by acquisition of businesses/operations or parts thereof, the incorporation of subsidiaries and the formation, opening and closing of branches and of foreign representations;
d. The purchase, sale and encumbrance of real property owned by the Company and of similar rights or the creation of obligations to effect such transactions, if in an individual case or in the aggregate in the course of a business year an amount of EUR 500,000.00 is exceeded;
e. Conclusion, amendment or termination of agreements regarding the granting or the purchase of important industrial property rights (*Gewerbliche Schutzrechte*);
f. The conclusion, amendment or termination of lease and tenancy agreements which obligate the company to payments of more than EUR 500,000.00 in an individual case or which have a term of more than two years;
g. The arrangement of development projects with a total volume exceeding EUR 500,000.00 thousand per individual case;
h. The entering into, granting, extension or prolongation of credits and credit lines, as the case may be, the issuance of bonds and the assumption of guarantees, joint liabilities or similar transactions, if and to the extent in an individual case or in the aggregate an amount of EUR 500,000.00 is exceeded in the course of a business year and unless it is a transaction between the Company and its subsidiaries;
i. Capital expenditures with a total volume of more than EUR 500,000.00;
j. Forward transactions regarding foreign currencies, securities and goods and rights traded on a stock exchange, if and to the extent they are not determined to cover/hedge firmly concluded, Company specific orders or the financing of subsidiaries;
k. The filing of complaints or the taking of actions in court regarding court proceedings with an estimated dispute value of more than EUR 500,000.00 in each individual case;

l. The conclusion, amendment and termination of agreements with shareholders or with members of the Executive or the Supervisory Board, their family members, partners and close relatives, unless the Company is already represented in their transactions by the Supervisory Board, and the taking on of sideline activities, in particular supervisory board mandates outside the Company, by Executive Board members;
m. Pension commitments of any manner whatsoever;
n. The conclusion, amendment or termination of agreements with employees or employee-type persons (such as freelance workers), if the annual gross remunerations and benefits exceed or would exceed EUR 150,000.00, and the increase of the salary of an employee already employed including bonus payments by more than EUR 25,000.00 per annum;
o. The granting of certain statutory powers of attorney (*Prokura* and *Generalvollmacht*) to represent the Company;
p. The issuance of new shares of the Company (also indirectly via convertible instruments), the redemption of issued shares as well as the issuance or repayment of corporate bonds and/or similar debt instruments;
q. The conclusion and termination of intercompany agreements pursuant to Sections 291, 292 of the German Stock Corporation Act (*Aktiengesetz*); and
r. All other transactions and measures which materially change the business, financial condition or results of operations of the Company or of its material subsidiaries, or which for other reasons are of fundamental importance for the Company.

All transactions referred to above under b. through r. require the consent of the Supervisory Board only if they have not been approved beforehand by the Supervisory Board's consent to the annual budget under a. above.

The consent of the Supervisory Board has to be obtained before the execution of the transaction or measure. This does not apply to transactions or measures not to be delayed, provided that the obtaining of a resolution of the Supervisory Board or the responsible committee is not possible and the Executive Board, after due diligence of the circumstances of the individual case and after notifying the chairperson of the Supervisory Board, or the responsible committee, may assume that the Supervisory Board or the responsible committee will give its consent to the transaction or the measure. In this case, a ratifying resolution of the Supervisory Board must be passed without delay.

Each member of the Executive Board shall forthwith disclose to the Supervisory Board any conflict of interest and shall inform the other members of the Executive Board accordingly. Any business between the Company and members of the Executive Board or persons or entities affiliated with them must meet arm's length standards.

The members of the Executive Board may only engage in side-line activities, including memberships in supervisory or advisory boards or comparable corporate bodies outside the Epigenomics Group, with prior written approval of the Supervisory Board.

Members of the Executive Board and Supervisory Board owe a duty of care and a duty of loyalty to the Company. Board members must consider the various interests of the Company, including those of its shareholders, employees and creditors. The Executive Board must also take into consideration shareholders' rights to equal treatment and equal access to information. Should members of the Executive Board or Supervisory Board breach these duties, they will be jointly and severally liable to the Company for compensatory damages. Members of the Executive Board and Supervisory Board are covered by directors' and officers' liability insurance for their activities as members of management up to a certain amount. The Company bears the cost of these insurance policies. However, it should be noted that applicable German law requires that each member of our Executive Board remains personally responsible in the case of any finding of personal liability

of such member for 10% of the amount of the individual damage, up to an amount that equals up to 150% of such member's total annual fixed compensation from Epigenomics AG.

Under German law, a shareholder generally cannot take direct legal action against a member of the management board or the supervisory board of a German stock corporation if the shareholder believes that such member or members have violated their duties towards the company and this has caused damage to the company. Claims for compensatory damages against members of the management board or the supervisory board may, as a rule, only be asserted by the company itself, in which case the company is represented by the management board when claims are made against members of the supervisory board and the supervisory board when claims are made against members of the management board. According to a ruling of the German Federal Court of Justice (*Bundesgerichtshof*) (April 21, 1997; II ZR 175/95; BGHZ 135, 244), the supervisory board is obligated to assert claims for compensatory damages against the management board that are likely to be successful, unless important company interests conflict with such an assertion of claims and such grounds outweigh, or are at least comparable to, the grounds in favor of asserting the claims. In the event that the relevant body with powers to represent the company decides not to pursue such claims, then such claims of the company for compensatory damages must nevertheless be asserted against members of the management board or the supervisory board if the general shareholders' meeting of the company passes a resolution to this effect by a simple majority vote. Such general shareholders' meeting of a company may appoint a special representative (*besonderer Vertreter*) to assert such claims. Shareholders whose aggregate holdings amount to at least 10% or EUR 1,000,000.00 of a company's share capital may apply to the court to appoint a special representative to assert claims for compensatory damages. In the event of such an appointment, the special representative becomes solely responsible for asserting the claims of the company for compensatory damages in lieu of the otherwise competent governing body of the company. In addition, if there are facts supporting the claim that the company has been damaged by fraud or gross breaches of duty, shareholders whose aggregate holdings amount to at least 1% or EUR 100,000.00 of the company's share capital have the option, under certain circumstances, of being granted permission by the competent court to file a lawsuit in their own name, but on account of the company for compensatory damages to the company against members of the governing bodies. Such a lawsuit will be dismissed if the company itself files a lawsuit for compensatory damages.

A company may only waive claims for compensation against members of the management board and the supervisory board, or settle such claims, three years after such claim has arisen but only (a) if the shareholders resolve to do so in a shareholders' meeting by resolution with simple majority and (b) where a majority of the shareholders, together holding shares which represent at least 10% of the share capital, do not object to this in the minutes of the meeting.

Under Section 142 of the German Stock Corporation Act (*Aktiengesetz*), the general shareholders' meeting of the company may appoint, by a majority resolution, an auditor (a "**Special Auditor**", *Sonderprüfer*) to review procedure, in particular in relation to management. If the general shareholders' meeting of the company rejects a motion to appoint a Special Auditor, the court must appoint a Special Auditor at the request of shareholders whose aggregate holdings amount to at least 1% or EUR 100,000.00 of the company's share capital in case the facts justify the suspicion that irregularities or gross violations of the law or of the articles of association have been committed. If the general shareholders' meeting of the company does appoint a Special Auditor, the court, however, must appoint a second Special Auditor if such appointment appears to be appropriate considering the qualifications of the first auditor and is requested by shareholders whose aggregate shareholding amounts to at least 1% or EUR 100,000.00 of the company's share capital.

In accordance with Section 127a of the German Stock Corporation Act (*Aktiengesetz*), shareholders and shareholder associations can use the shareholder forum (*Aktionärsforum*) of the German Federal Gazette (*Bundesanzeiger*), which is available through the Company Register's (*Unternehmensregister*) website, to call upon other shareholders to jointly, or through third-party representation, request a special audit, appoint a special representative, demand that a general shareholders' meeting of the Company is convened or exercise their voting rights in a general shareholders' meeting of the Company.

Under German law, it is not permitted for shareholders or any other individuals to attempt to influence members of the management board or the supervisory board, authorized representatives (*Prokurist*) or other persons holding a commercial power of attorney to act in a way harmful to the company. Shareholders with a controlling influence may not use such influence to cause the company to act against its own best interests, unless there is a control agreement between the shareholders and the company and the influence exerted is within the limits of certain statutory mandatory provisions or any damages are compensated. Any person who uses his or her influence to cause a member of the company's management board or supervisory board, authorized representative or persons holding a commercial power of attorney to act in a manner harmful to the company or its shareholders is obligated to compensate the company and its shareholders for any resulting damage. In addition, members of the management board and supervisory boards may be jointly and severally liable for breach of their duties.

With resolution dated February 6, 2017, the Supervisory Board determined a share of one third of female members for the Supervisory Board to be reached until December 31, 2021. Currently, the Supervisory Board has two female members. This corresponds to a proportion of women of 50%.The target for female participation in the Executive Board was set at 0% until December 31, 2021. As the Executive Board consists of three members who have just recently been appointed and as it is currently not intended to enlarge the Executive Board, an increase in the share of female members is not expected within the next years.

16.2. Executive Board

16.2.1. General

Pursuant to Section 7(2) of our Articles of Association, the Supervisory Board determines in accordance with the German Stock Corporation Act (*Aktiengesetz*) the number of members of the Executive Board. The Supervisory Board may appoint one Executive Board member as chairperson and another member as deputy chairperson. Currently, the Executive Board consists of three members. On June 30, 2016, the Supervisory Board appointed Gregory Hamilton as Chief Executive Officer ("**CEO**") with effect from July 1, 2016. The Supervisory Board appointed Jorge Garces, Ph.D., as President and Chief Scientific Officer ("**CSO**") with effect from December 1, 2017 and Albert Weber as Executive Vice President Finance with effect from January 1, 2018. Dr. Uwe Staub, who has served as our Chief Operative Officer ("**COO**") and member of the Executive Board since 2013 has left the Company with effect March 31, 2018.

The Supervisory Board appoints the members of the Executive Board for a maximum term of five years. Reappointments or extensions of the term of office are permissible for up to five years each. Prior to the expiration of the term, the Supervisory Board may revoke the appointment of an Executive Board member for good cause (*wichtiger Grund*), such as for gross breach of fiduciary duties, inability of proper management or if the general shareholders' meeting of the Company passes a vote of no-confidence with respect to such member, unless the no-confidence vote was clearly unreasonable. The Supervisory Board is also responsible for entering into, amending and terminating service agreements with the Executive Board members and, in general, for

representing the Company in and out of court against the Executive Board. The Supervisory Board may assign some of these duties to a committee of the Supervisory Board.

The members of our Executive Board conduct the daily business of our company in accordance with applicable laws, our Articles of Association and the rules of procedure for the Executive Board as adopted by our Supervisory Board. They are generally responsible for the management of our Company and for handling our daily business relations with third parties, the internal organization of our business and communications with our shareholders. In addition, they have primary responsibility for (i) the preparation of our annual financial statements, (ii) the proposal for the Supervisory Board's recommendation to our shareholders' meeting on how our profits (if any) should be allocated, and (iii) regular reporting to the Supervisory Board on our current operating and financial performance, our budgeting and planning processes and our performance under them, and on future business planning.

Notwithstanding the collective responsibility for the management of the Company overall, the rules of procedure for the Executive Board provide that the members of our Executive Board will unanimously adopt, with the approval of the Supervisory Board, a schedule of responsibilities (*Geschäftsverteilungsplan*) that assigns specific duties to each member of our Executive Board. A responsibility assigned to an individual member of our Executive Board will be that member's own responsibility subject to decisions taken by our Executive Board as a whole. The members of our Executive Board will decide as a group on matters not allocated to one of them under the schedule of responsibilities and whenever any one of them indicates that a matter should be decided as a group. The rules of procedure for the Executive Board also contain rules about the composition, duties, overall responsibilities and responsibility for the departments as well as the internal arrangements of the Executive Board.

A member of the Executive Board may not deal with or vote on matters relating to proposals, arrangements or contractual agreements between himself or herself and our company and may be liable to us if he or she has a material interest in any contractual agreement between our company and a third party which is not disclosed to and approved by our Supervisory Board.

Our Executive Board makes decisions by a simple majority of the votes cast. A proposal will be regarded as rejected in case of an equality of votes. If the Executive Board has more than two members, the chairperson of the Executive Board shall have the deciding vote in the event of a tie.

Executive Board members are subject to extensive non-competition obligations for the duration of their work for the Company. They are required to disclose any conflict of interest to the Supervisory Board without delay and are not allowed to either engage in any trade or enter into any transaction in our line of business on their own behalf or on behalf of others without the prior consent of the Supervisory Board. In addition, members of the Executive Board may not become a (i) member of a management board, (ii) member of the board of directors (*Geschäftsführer*), or (iii) general partner (*persönlich haftender Gesellschafter*) of another commercial enterprise without the prior consent of the Supervisory Board. The members of the Executive Board may not hold shares in a competitor of the Company or an enterprise with whom the Company entered into direct or indirect business relations without the prior consent of the Supervisory Board.

Pursuant to our Articles of Association, the Company is represented by one member of the Executive Board alone in case the Executive Board consists of one member only and in all other cases by two members of the Executive Board or by one member of the Executive Board acting jointly with a holder of a general power of attorney (*Prokurist*). Our Supervisory Board may also grant each member of the Executive Board sole power of representation. The Supervisory Board may release all or single members of the Executive Board from the prohibition of multiple

representation in accordance with Section 181 of the German Civil Code (*Bürgerliches Gesetzbuch*).

16.2.2. Current Members of the Executive Board

The following table lists the members of the Executive Board as of the date of the Prospectus, their age, the date on which they were first appointed, their term of appointment and their internal responsibilities:

Name	Age	Position	Date of first appointment	End of term of office
Gregory Hamilton	49	Chief Executive Officer (CEO)	July 1, 2016	December 31, 2021
Jorge Garces, Ph.D.	48	Chief Scientific Officer (CSO)	December 1, 2017	December 31, 2020
Albert Weber	56	Executive Vice President (EVP Finance)	January 1, 2018	December 31, 2020

The expiration dates of the service agreements for each individual member of the Executive Board corresponds with their respective terms in office.

The following is a brief summary of the business experience of our Executive Board members.

Gregory Hamilton (49). Chief Executive Officer. Mr. Hamilton has been our CEO since July 1, 2016. He received his MBA from the University of Chicago and his Bachelor of Science in Finance from Purdue University. He has been responsible for multiple FDA-cleared products including a Human Papilloma Virus ("**HPV**") High Risk Screening assay and the first ever cleared HPV genotyping assay. Prior to joining Epigenomics, Mr. Hamilton was Chief Executive Officer and Director of AltheaDx Inc., Chief Operating Officer and Chief Financial Officer of Enigma Diagnostics Inc., Vice President of Operations and Finance at Third Wave Technologies Inc. and Vice President of Operations at Hologic Inc.

The following table shows the positions Mr. Hamilton has held as a member of a management, administrative or supervisory body in companies or as a partner in partnerships outside our Group in the last five years, as well as positions he currently holds in material companies within our Group:

Positions held in companies and partnerships outside the Epigenomics Group in the last five years	Positions currently held in material companies within the Epigenomics Group
• AltheaDX (Chief Executive Officer, Director)	• (Chairman of the Board) Member of the board of directors of Epigenomics Inc.

Jorge Garces, Ph.D. (48). President and Chief Scientific Officer. Mr. Garces was appointed to the Executive Board effective December 1, 2017. Mr. Garces, has been our President and Chief Scientific Officer since December 2017. Mr. Garces earned his doctorate in Cell and Molecular Biology from the City University of New York and received an MBA from the Kellogg Graduate School of Management at Northwestern University. Mr. Garces has developed and launched multiple FDA-approved and CE marked products in oncology including tests for cervical cancer screening. In addition, Mr. Garces has developed and commercialized numerous laboratory developed and CLIA regulated diagnostic tests in oncology including assays for lung cancer, breast cancer, and dozens of other assays relating to the diagnosis, prognosis, minimal residual disease or recurrence risk of carcinomas, lymphomas, and leukemias. In addition, he has been involved in the development of NGS panels for cancer detection and the launch of companion

diagnostic technologies for therapy selection and other applications such as chimerism analysis and drug resistance. He has over 20 years of management experience in the molecular diagnostics and life sciences industries. Prior to joining Epigenomics, Mr. Garces served as CEO and President of AltheaDx Inc. and previously at Enigma Diagnostics, Inc. in the same capacity. Mr. Garces was also Vice President and Site Operations Manager at Hologic, Inc., where he led the development and submission to FDA for approval of their Cystic Fibrosis and HPV products.

The following table shows the positions Mr. Garces has held as a member of a management, administrative or supervisory body in companies or as a partner in partnerships outside our Group in the last five years, as well as positions he currently holds in material companies within our Group:

Positions held in companies and partnerships outside the Epigenomics Group in the last five years	Positions currently held in material companies within the Epigenomics Group
• AltheaDX (Chief Executive Officer, Director)	• (Director of the Board) Member of the board of directors of Epigenomics Inc.

Albert Weber (56). Executive Vice President Finance. Mr. Weber was appointed to the Executive Board effective January 1, 2018. Mr. Weber has more than 25 years of corporate finance experience including the last nineteen years at Epigenomics. Prior to this recent appointment Mr. Weber was the Senior Vice President of Finance, Accounting and Controlling for Epigenomics. Prior to joining the company, Mr. Weber served as Manager Controlling of Pironet AG, a Cologne based IT start-up and previously at EMI Group Germany as the Manager Treasury and Corporate Accounting. Mr. Weber has experience in capital raises, all corporate finance functions and IPOs. He has a degree in Business Administration from Cologne University and is certified in IFRS accounting.

Apart from his position as Executive Vice President, Mr. Weber has not had any functions as a member of a management, administrative or supervisory body in companies or as a partner in partnerships outside our Group in the last five years nor in material companies within our Group.

Positions held in companies and partnerships outside the Epigenomics Group in the last five years	Positions currently held in material companies within the Epigenomics Group
n/a	• (Secretary of the Board) Member of the board of directors of Epigenomics Inc.

The Executive Board was complemented in the business year 2018 by Dr. Uwe Staub, who had been the Company's Chief Operating Officer (COO) since April 2013. Dr. Staub's service agreement expired as of March 31, 2018.

The members of the Executive Board can be contacted under the Company's address.

16.2.3. Compensation, Other Benefits, Share Ownership

The aggregate compensation paid and benefits in kind granted by us to our CEO, Greg Hamilton, our CSO, Jorge Garces, Ph.D., our EVP Finance, Albert Weber and our former COO, Dr. Staub, including share-based compensation, for the year ended December 31, 2018, was EUR 2,376,000.00, based on the granted benefits, or EUR 1,732,000.00, based on the allocations (cash payments) made in 2018, respectively. Total remuneration of the members of our Executive Board is reviewed by the Supervisory Board annually and is compared to national and international benchmarks. Remuneration takes into account the economic and financial situation of the Company as well as size and complexity of international operations and responsibilities. The remuneration package is composed on the one hand of a fixed and a variable component. The

variable amount is determined on the basis of a variety of criteria, which are set by the Supervisory Board on a yearly basis, *e.g.*, the achievement of individual performance goals and/or Company performance goals.

Apart from the fixed and the variable component, a third remuneration component comprises a long-term performance-based compensation in the form of stock options or PSRs, respectively. Such rights are granted under our stock option programs and our PSPs, respectively, which are described in detail below (see *16.5. "— Stock Option Programs – Phantom Stock Programs"*).

As of October 11, 2019, the shareholdings and the respective rights under the stock option program and the phantom stock program of the members of the Executive Board were as follows:

Executive Board member	Shares	Stock option program	Phantom stock program
Greg Hamilton	12,500	391,580	0
Jorge Garces, Ph.D	1,000	170,000	0
Albert Weber	100	170,000	10,000
Total	**13,600**	**731,580**	**10,000**

As of the date of the Prospectus, the total individual position of Greg Hamilton, Jorge Garces, Ph.D., and Albert Weber with regard to these rights has not changed.

A further detailed overview of the total individual position of Greg Hamilton, Jorge Garces, Ph.D., Albert Weber and our former COO Dr. Staub with regard to these rights is shown in the following tables:

Member of the Executive Board	Program	As of	Rights granted	Total rights owned	Exercise price (weighted average)	Vested rights	Exercise price (weighted average)
					(in EUR)		
Greg Hamilton [1]							
	SOP 16-18	June 30, 2019	0	227,500	4.94	79,770	5.08
		December 31, 2018	67,500	227,500	4.94	62,895	5.34
	SOP 17-19	June 30, 2019	100,000	164,080	2.97	16,020	4.60
		December 31, 2018	32,500	64,080	4.60	7,895	5.10
	SOP 19-21	June 30, 2019	0	0	n/a	0	n/a
		December 31, 2018	n/a	n/a	n/a	n/a	n/a
Total stock options		**June 30, 2019**	**100,000**	**391,580**	**4.11**	**95,790**	**5.00**
		December 31, 2018	**100,000**	**291,580**	**4.87**	**70,790**	**5.31**

[1] Member of the Executive Board since July 1, 2016.

Member of the Executive Board	Program	As of	Rights granted	Total rights owned	Exercise price (weighted average)	Vested rights	Exercise price (weighted average)
				(in EUR)			
Jorge Garces, Ph.D.[1]	SOP 17-19	June 30, 2019	85,000	170,000	3.02	21,250	4.12
		December 31, 2018	85,000	85,000	4.12	0	n/a
	SOP 19-21	June 30, 2019	0	0	n/a	0	n/a
		December 31, 2018	n/a	n/a	n/a	n/a	n/a
Total stock options		**June 30, 2019**	**85,000**	**170,000**	**3.02**	**21,250**	**4.12**
		December 31, 2018	**85,000**	**85,000**	**4.12**	**0**	**n/a**

[1] Member of the Executive Board since December 1, 2017.

Member of the Executive Board	Program	As of	Rights granted	Total rights owned	Exercise price (weighted average)	Vested rights	Exercise price (weighted average)
				(in EUR)			
Albert Weber [1]	PSP 03–15	June 30, 2019	0	0	n/a	0	n/a
		December 31, 2018	0	0	n/a	0	n/a
	PSP 2014	June 30, 2019	0	30,000	3.23	30,000	3.23
		December 31, 2018	0	30,000	3.23	30,000	3.23
	PSP 2015	June 30, 2019	0	10,000	5.05	10,000	5.05
		December 31, 2018	0	10,000	5.05	10,000	5.05
	SOP 16-18	June 30, 2019	0	30,000	5.10	7,500	5.10
		December 31, 2018	30,000	30,000	5.10	7,500	5.10
	SOP 17-19	June 30, 2019	70,000	140,000	3.02	17,500	4.12
		December 31, 2018	70,000	70,000	4.12	0	n/a
	SOP 19-21	June 30, 2018	0	0	n/a	0	n/a
		December 31, 2018	n/a	n/a	n/a	n/a	n/a
Total PSRs		**June 30, 2019**	**0**	**40,000**	**3.69**	**40,000**	**3.69**
		December 31, 2018	**0**	**40,000**	**3.69**	**40,000**	**3.69**
Total stock options		**June 30, 2019**	**70,000**	**170,000**	**3.39**	**25,000**	**4.41**
		December 31, 2018	**70,000**	**100,000**	**4.41**	**7,500**	**5.10**

[1] Member of the Executive Board since January 1, 2018.

Member of the Executive Board	Program	As of	Rights granted	Total rights owned	Exercise price (weighted average)	Vested rights	Exercise price (weighted average)
				(in EUR)			
Dr. Uwe Staub [1]	PSP 03–15	Jun 30, 2019	0	0	n/a	0	n/a
		December 31, 2018	0	0	n/a	0	n/a
	PSP 2013	June 30, 2019	0	0	n/a	0	n/a
		December 31, 2018	0	20,000	6.15	20,000	6.15
	PSP 2014	June 30, 2019	0	0	n/a	0	n/a
		December 31, 2018	0	0	n/a	0	n/a
	PSP 2015	June 30, 2019	0	14,400	5.05	14,400	5.05
		December 31, 2018	0	14,400	5.05	14,400	5.05
	SOP 16-18	June 30, 2019	0	22,500	5.43	22,500	5.43
		December 31, 2018	0	22,500	5.43	22,500	5.43
	SOP 17-19	June 30, 2019	0	0	n/a	0	n/a
		December 31, 2018	0	0	n/a	0	n/a
Total PSRs		**June 30, 2019**	**0**	**14,400**	**5.05**	**14,400**	**5.05**
		December 31, 2018	**0**	**34,400**	**5.69**	**34,400**	**5.69**
Total stock options		**June 30, 2019**	**0**	**22,500**	**5.43**	**22,500**	**5.43**
		December 31, 2018	**0**	**22,500**	**5.43**	**22,500**	**5.43**

[1] Member of the Executive Board since April 1, 2013 until March 31, 2018 (service agreement ended on the same date).

As of the date of the Prospectus, the total individual position of Greg Hamilton, Jorge Garces, Ph.D., and our former COO Dr. Staub with regard to these rights has not changed. The individual position of Albert Weber with regard to his rights under the PSP 2014 (as defined in section *16.5.2.3 "— Phantom Stock Program 2014 (PSP 2014)"*) has decreased due to the expiration of 30,000 rights under under the PSP 2014 since June 30, 2019.

The exercise price of the PSRs held by our former COO Dr. Uwe Staub is EUR 5.05. The exercise prices of the PSRs held by Albert Weber range from EUR 3.23 to EUR 5.05. No PSRs were

exercised by the Executive Board members in 2015 and 2014. The following table shows the exercised PSRs of the respective Executive Board member:

Dr. Uwe Staub (COO from April 1, 2013 until March 31, 2018):

PSP	Date	Rights exercised	Base price in EUR	Strike price in EUR	Premium per PSR in EUR	Total amount in EUR
PSP 2013	Sep 12, 2016	95,000	1.62	4.97	3.35	318,250
PSP 2014	May 31, 2018	60,000	3.23	3.72	0.44 (Cap)	26,400

Albert Weber (Executive Vice President since January 1, 2018):

PSP	Date	Rights exercised	Base price in EUR	Strike price in EUR	Premium per PSR in EUR	Total amount in EUR
PSP 2013	Aug 11, 2016	40,000	1.62	4.59	2.97	118,800
PSP 03-15	Mar 25, 2014	3,650	2.51	8.05	5.54	20,221
PSP 03-15	Jun 28, 2017	16,350	2.51	7.23	4.72	77,172

All rights granted under the PSPs already vested remain unaffected by the termination of Dr. Staub's service contract by mutual agreement.

The exercise prices of the stock options granted to Greg Hamilton under the SOP 16-18 and SOP 17-19 range from EUR 1.92 to EUR 5.43. The exercise price of the stock options granted to Dr. Staub under the SOP 16-18 amounts to EUR 5.43. The exercise prices of the stock options granted to Jorge Garces under the SOP 17-19 range from EUR 1.92 to EUR 4.12. The exercise prices of the stock options granted to Albert Weber under the SOP 16-18 and SOP 17-19 range from EUR 1.92 to EUR 5.10. No stock options were exercised in 2019, 2018, 2017 and 2016.

In addition to the aforementioned remuneration components, the Executive Board members are beneficiaries of a directors' and officers' insurance with excess according to the statutory minimum amount and receive full reimbursement of their business travel expenses by the Company according to its general travel policy. Greg Hamilton and Jorge Garces, Ph.D., participate in the 401k plan (U.S. benefits) of the Company with an annual contribution of USD 16,500.00 and 50%-matching of the Company and receive furthermore an annual car allowance of USD 11,000.00 and various assurance contracts each.

The total individual remuneration of, Greg Hamilton, Jorge Garces, Ph.D. and Albert Weber for the financial year 2018 was as described below. Our former COO Dr. Staub, whose appointment to the Executive Board ended on March 31, 2018, received a fixed *pro rata* remuneration for the financial year 2018 in the amount of EUR 57,500, a variable *pro rata* compensation for the financial year in the amount of EUR 64,000 (total allocations in the amount of EUR 121,500) and EUR 172,500 in compensation following the end of his term in 2018 for a post-contractual non-compete covenant still in effect in the financial year 2018. The first table shows all benefits promised or granted to the Executive Board, whereas the second table points out the actual compensations which have been effectively paid by the Company:[1]

Benefits granted	Greg K. Hamilton	Jorge Garces, Ph.D.	Albert Weber,
in EUR	CEO	CSO	EVP Finance
	since July 1, 2016	since December 1, 2017	since January 1, 2018

	2018	2018 (min)	2018 (max)	2018	2018 (min)	2018 (max)	2018	2018 (min)	2018 (max)
Fixed compensation	349,345	349,345	349,345	331,878	331,878	331,878	200,000	200,000	200,000
Fringe benefits	167,454	167,454	167,454	155,164	155,164	155,164	4,072	4,072	4,072
Total	516,799	516,799	516,799	487,042	487,042	487,042	204,072	204,072	204,072
One-year variable compensation	296,070	0	355,284	248,079	0	258,865	120,000	0	120,000
Multi-year variable compensation	149,384	n/a	n/a	199,521	*n/a*	*n/a*	97,933	n/a	n/a
** share-based compensation*	*149,384*	*n/a*	*n/a*	*119,474*	*n/a*	*n/a*	*97,933*	*n/a*	*n/a*
- PSP 03/15	*0*	*n/a*	*n/a*	*0*	*n/a*	*n/a*	*0*	*n/a*	*n/a*
- PSP 2013	*0*	*n/a*	*n/a*	*0*	*n/a*	*n/a*	*0*	*n/a*	*n/a*
- PSP 2014	*0*	*n/a*	*n/a*	*0*	*n/a*	*n/a*	*0*	*n/a*	*n/a*
- PSP 2015	*0*	*n/a*	*n/a*	*0*	*n/a*	*n/a*	*0*	*n/a*	*n/a*
- SOP 16/18	*100,834*	*n/a*	*n/a*	*0*	*n/a*	*n/a*	*0*	*n/a*	*n/a*
- SOP 17/19	*48,550*	*n/a*	*n/a*	*119,474*	*n/a*	*n/a*	*97,933*	*n/a*	*n/a*
** non-share-based compensation*	*0*	*0*	*0*	*80,047*	*0*	*80,047*	*0*	*0*	*0*
Total	962,253	516,799	872,083	934,641	487,042	825,953	422,005	204,072	324,072
Service cost	0	0	0	0	0	0	0	0	0
Total	**962,253**	**516,799**	**872,083**	**934,641**	**487,042**	**825,953**	**422,005**	**204,072**	**324,072**

Allocations	**Greg K. Hamilton**	**Jorge Garces, Ph.D.**	**Albert Weber**
in EUR	**CEO**	**CSO**	**EVP Finance**
	since July 1, 2016	since December 1, 2017	since January 1, 2018
	2018	2018	2018
Fixed compensation	349,345	331,878	200,000
Fringe benefits	167,454	155,164	4,072
Total	516,799	487,042	204,072
One-year variable compensation	228,646	174,672	0
Multi-year variable compensation	0	0	0
** share-based compensation*	*0*	*0*	*0*
- PSP 03/15	*0*	*0*	*0*
- PSP 2013	*0*	*0*	*0*
- PSP 2014	*0*	*0*	*0*
- PSP 2015	*0*	*0*	*0*
- SOP 16/18	*0*	*0*	*0*
- SOP 17/19	*0*	*0*	*0*
** non-share-based compensation*	*0*	*0*	*0*
Total	**745,445**	**661,714**	**204,072**

Service cost	0	0	0
Total	**745,445**	**661,714**	**204,072**

[1] The value of the share-based compensation in the table is measured by the fair value of the issued rights at their grant dates. Granted PSRs cannot be exercised before the end of a waiting period of three years after their issuance. Granted SOP rights cannot be exercised before the end of a waiting period of four years after their issuance.

The shareholdings of Greg Hamilton, Jorge Garces, Ph.D., and Albert Weber, as of October 11, 2019 were as follows:

Executive Board member	**Number of Shares held as of October 11, 2019**
Greg Hamilton	12,500
Jorge Garces, Ph.D.	1,000
Albert Weber	100
Total	**13,600**

As of the date of the Prospectus, the respective shareholding in the Company has remained unchanged. None of the Executive Board members has committed to the Company to participate in the Offering.

16.2.4. Term and Termination of Service Agreements

The service agreement of Mr. Hamilton provides for a definite term ending on December 31, 2018. Mr. Hamilton has been re-appointed as member of the Executive Board in June 2018, and the term of his service agreement has been extended ending on December 31, 2021. The service agreements of Mr. Garces and Mr. Weber provide for a definite term ending on December 31, 2020. In the case that the appointment of a member of the Executive Board as member of the Executive Board is revoked for good cause, the Company may terminate the service agreement of the relevant member of the Executive Board for good cause. In case of a premature termination of the respective service agreement without good cause, the Executive Board member is entitled to receive a severance payment in an amount that does not exceed two years' total annual compensation, but payment is limited to the value of its claims arising during the remaining time of the service agreement.

The employment agreements (*Dienstverträge*) of all Executive Board members contain post-contractual non-compete provisions with a non-compete period of one year following the termination of the applicable employment agreement. During such period, the Executive Board member is entitled to 100% of his recent fixed compensation as a non-competition payment.

In the event of a change of control, as defined by the German Securities Acquisition and Takeover Act (*Wertpapiererwerbs- und Übernahmegesetz)*, which occurs after October 1, 2018, Mr. Hamilton is entitled to receive a Value Enhancement Bonus in cash which is equal to the lower of (i) 3.0% of the amount by which the aggregate purchase price or any other compensation paid to the shareholders of the Company in connection with the change of control exceeds the amount of the number of shares issued by the Company multiplied with the closing price of the shares on the Frankfurt stock exchange on June 29, 2016; or (ii) USD 7,000,000.00.

In the event of a change of control, as defined by the German Securities Acquisition and Takeover Act (*Wertpapiererwerbs- und Übernahmegesetz)*, Mr. Garces is entitled to receive a Value Enhancement Bonus in cash which is equal to the lower of (i) 3.0% of the amount by which the aggregate purchase price or any other compensation paid to the shareholders of the Company in connection with the change of control exceeds the amount of the number of shares issued by the Company multiplied with the closing price of the shares on the Frankfurt stock exchange on

December 1, 2017; or (ii) USD 3,000,000.00. Further, within one year after a change of control occurred, all members of the Executive Board are entitled to terminate their service contracts and to resign from office within a period of six months. In the event of such a termination of service contracts, the fixed compensation and bonus, if any, will be paid to the members of the Executive Board for the remaining term of the service contract. The compensation is, however, capped at a maximum of 150% of the severance payment cap pursuant to section 4.2.3 of the Governance Code for the remaining term of the service contract.

16.3. Supervisory Board

16.3.1. General

In accordance with the Articles of Association as well as Sections 95 and 96 of the German Stock Corporation Act (*Aktiengesetz*), the Supervisory Board of the Company now consists of five members. The number of Supervisory Board seats was increased from four to five by the annual general shareholders' meeting in Berlin on May 15, 2019. Mr. Franz Thomas Walt was elected by the shareholders as new member of the Supervisory Board. The further four members of the Supervisory Board were re-elected by the general shareholders' meeting on May 30, 2018.

A person may not become a member of the Supervisory Board who (i) is already a member of the supervisory board in ten commercial enterprises which are required by law to form a supervisory board, (ii) is the legal representative of a controlled enterprise of the Company, (iii) is the legal representative of another company whose supervisory board includes a member of the Executive Board, or (iv) was a member of the Executive Board during the past two years, unless he was elected upon nomination by shareholders holding more than 25% of the voting rights in the Company. The Supervisory Board should not comprise more than two former members of the Executive Board.

Members of the Supervisory Board are appointed at the general shareholders' meeting with a simple majority of the votes cast as set out by Section 101 German Stock Corporation Act (*Aktiengesetz*). At the same time as appointing the members of the Supervisory Board, the general shareholders' meeting of the Company may appoint substitute members for each Supervisory Board member, who, in accordance with specific determinations by the general shareholders' meeting of the Company, may become members of the Supervisory Board if elected Supervisory Board members leave office before the end of their term and no successor has been appointed. The term of the substitute member expires at the end of the general shareholders' meeting of the Company during which a successor for the departing Supervisory Board member is appointed, but no later than the expiration of the departing Supervisory Board member's term. The election of a successor for a member leaving his or her office before the end of his or her term of office is valid for the remainder of the term of office of the departing member.

In general, the term of office of each Supervisory Board member, as well as the term of each substitute member, expires at the end of the annual general shareholders' meeting approving the activities of the Supervisory Board for the fourth financial year following the commencement of the member's term of office, not including the financial year in which the term commences. Reelection, including repeated reelection, is permissible. The shareholders' meeting may specify a term of office for individual members or all of the members of our Supervisory Board, which is shorter than the standard term of office and, subject to statutory limits, for different start and end dates of their term. In accordance with the Governance Code, the Supervisory Board has determined a regular limit to Supervisory Board members' term of office. Pursuant to this determination a Supervisory Board member shall not be reelected if he or she has been, at the time of the reelection, a Supervisory Board member for 20 years.

Supervisory Board members elected by the general shareholders' meeting of the Company may be removed by a resolution of the general shareholders' meeting of the Company which requires, in principle, a majority of 3/4 of the votes cast. In deviation from that standard rule the Articles of Association provide that a resolution of the general shareholders' meeting on the removal of a Supervisory Board member shall be adopted with a simple majority of the votes cast. In addition, the Articles of Association provide that regular members and substitute members of the Supervisory Board may resign with a four-week notice period, without good cause, by providing written notice to the Executive Board and informing the chairperson of the Supervisory Board.

Should the number of Supervisory Board members drop below four members, the court will appoint a replacement member upon application of the Executive Board, a member of the Supervisory Board or any of our shareholders. This member will serve until the next annual general shareholders' meeting or extraordinary general shareholders' meeting, where a new Supervisory Board member will be elected.

Our Supervisory Board elects a chairperson and one or several deputy chairpersons from among its members. The deputy chairperson exercises the chairperson's rights and obligations at any time when the chairperson is prevented from doing so.

On May 30, 2018, our general shareholders' meeting re-elected Heino von Prondzynski, Ann Clare Kessler, Prof. Dr. Günther Reiter, and Dr. Helge Lubenow as members of our Supervisory Board. The members of our Supervisory Board have reelected Heino von Prondzynski as chairperson and Ann Clare Kessler and Prof. Dr. Günther Reiter as vice chairpersons, each for the term of their membership in our Supervisory Board. Furthermore, on May 15, 2019, our general shareholders' meeting elected Franz Thomas Walt as member of our Supervisory Board. According to the resolutions of the shareholders' meeting on May 30, 2018 and May 15, 2019 respectively, the term of office of all five members of the Supervisory Board is scheduled to expire upon the end of the ordinary general shareholders' meeting in 2021.

Under mandatory statutory provisions and the Articles of Association, the Supervisory Board is authorized to establish internal rules of procedure and form committees among its members. The internal rules of procedure of the Supervisory Board are dated May 25, 2016. In addition to the functions and tasks of the Supervisory Board described above (see *16.1. "— Overview"*) the Supervisory Board is authorized to make amendments to the Articles of Association that only affect their wording.

German law provides that at least one member of the Supervisory Board of publicly traded companies has to be considered an expert with expertise in the fields of accounting or auditing. On the Supervisory Board, Prof. Dr. Reiter is considered to be such an expert. Furthermore, the members of the Supervisory Board as a whole shall have competence relevant to that sector in which the Company is operating. Our Supervisory Board members fulfill this requirement.

As a rule, the Supervisory Board must hold at least one meeting within each calendar quarter. Our Supervisory Board must meet at least once per calendar quarter. A meeting of the Supervisory Board shall also be convened whenever this is requested by a member of the Supervisory Board or by the Executive Board, stating purpose and reasons for the meeting. Meetings of the Supervisory Board are convened in text form by its chairperson or if it is prevented from doing so, by the deputy observing a notice period of fourteen days. The day of dispatch of the convening notice and the day of the meeting itself are not included when calculating this period. In urgent cases, a later notification as well as a notification made orally or by telephone is permissible.

The Articles of Association provide that on the chairperson's instruction, resolutions may be passed without a meeting in writing, by telegraph, by telex (by telex or fax), by e-mail or any other

customary means of communication, *i.e.*, in particular by video-conference, if no member objects to this procedure without undue delay. Such an objection cannot be raised if all members of the Supervisory Board can see and hear each other in real time conditions and can thus discuss the matter on which the resolution is to be passed.

The Supervisory Board has a quorum if at least three of its members participate in voting on a resolution. Absent members may participate in the casting of votes by having their votes submitted in writing, by another member of the Supervisory Board who is present, orally, by telephone, by telegraph, by telex (by telex or fax), by e-mail or any other customary means of communication, in particular by video-conference, either during the meeting or after a meeting within an adequate period of time to be determined by the chairperson of the Supervisory Board, if no member attending the meeting in person objects. However, an objection to the method of participation cannot be raised if all members of the Supervisory Board can see and hear each other at the same time. Unless otherwise required by law or the Articles of Associations, resolutions of the Supervisory Board are passed by a simple majority of the votes cast. For the purposes of passing a resolution, abstentions do not count as votes cast. In the event of a tie, the chairperson has a casting vote. The Articles of Association provide that on the chairperson's instruction, resolutions may be passed without a meeting in writing, by telegraph, by telex (by telex or fax), by e-mail or any other customary means of communication, in particular by video-conference, if no member objects to this procedure without undue delay. Such an objection cannot be raised if all members of the Supervisory Board can see and hear each other in real time conditions and can thus discuss the matter on which the resolution is passed.

16.3.2. Current Members of the Supervisory Board

The following table sets forth the current members of the Supervisory Board. Mr. Heino von Prondzynski is the current chairperson of our Supervisory Board.

Name	Age	Position	Date of appointment	End of term of office
Heino von Prondzynski[1]	70	Chairman	May 2, 2012[1]	2021
Ann Clare Kessler, Ph.D.	76	Vice Chairwoman	June 28, 2005	2021
Prof. Dr. Günther Reiter	65	Vice Chairman	June 28, 2005	2021
Dr. Helge Lubenow	51	Member	May 25, 2016	2021
Franz Thomas Walt	60	Member	May 15, 2019	2021

[1] Mr. von Prondzynski was a Supervisory Board member from May 2007 to March 2010 and since May 2012.

The following table shows the names of the members of the Supervisory Board of the Company, as well as – where applicable – their further positions as members of a management, administrative or supervisory board in companies or as partners in partnerships. Positions held in companies or partnerships outside the Epigenomics Group in the last five years but no longer current, are also reflected in the following table:

Name	Further positions as a member of a management, administrative or supervisory body in companies or as a partner in partnerships[1]
Heino von Prondzynski	• HTL-Strefa S.A. • Koninklijke Philips Electronics N.V. • The Binding Site Group, UK (ongoing) • Quotient Ltd. (ongoing) • Hospira, Inc. • I-MED Network

Ann Clare Kessler, Ph.D.	•	EraCal Therapeutics Ltd. (ongoing)
	•	EyeTracking LLC (ongoing)
	•	AltheaDx, Inc.
	•	MedGenesis Therapeutix, Inc.
	•	Scripps Translational Science Institute
Prof. Dr. Günther Reiter	•	CSA Verwaltungs GmbH
Dr. Helge Lubenow	•	ProteoMediX AG (ongoing)
	•	tesa Labtec GmbH (ongoing)
	•	Indical TopCo AB (ongoing)
	•	QIAGEN GmbH
Franz Thomas Walt	•	Quotient Ltd. (ongoing)
	•	Walt Consulting (ongoing)
	•	Siemens Healthcare

[1] Positions that are not labeled “ongoing” have been terminated.

We have a Supervisory Board with strong experience in our industry. The following is a brief summary of the business experience of our Supervisory Board members. The business address for our Supervisory Board members is the Company’s address.

Heino von Prondzynski (70) Chairman. Mr. von Prondzynski studied mathematics, geography and history at the Westfälische Wilhelms University, Münster, Germany. He previously worked at Bayer AG in several positions (1985 to 1995), served as CEO of Chiron Behring GmbH (1996-2000), as CEO of the diagnostics division of F. Hoffmann-La Roche Ltd (2000 to 2006) and as a member of the supervisory board of Koninklijke Philips Electronics N.V. (2007-2019). He was also a member of the corporate executive committee of Roche. Since 2006, he has served as an independent business consultant. Mr. von Prondzynski is an expert and business leader in the field of molecular diagnostics with an extensive network of contacts in the United States, Asia and Europe. Mr. von Prondzynski is also Chairman of Quotient Ltd (Jersey) and a member of the supervisory board of The Binding Site Group Ltd. (UK).

Ann Clare Kessler, Ph.D. (76) Vice Chairwoman. Dr. Kessler holds a Bachelor of Science degree in Biology (Notre Dame University) and a Master of Science (Northwestern University) as well as a Ph.D. in Biochemistry (New York University). For more than twenty years, she held a number of senior positions at Hoffmann-La Roche Inc. in the United States (1969 to 1989), including Vice President and Head of Drug Discovery and Exploratory Research and VP of Pharmacology and Chemotherapy, prior to moving to Switzerland in January 1990, where she was in charge of Global Project Management and Head of the Global Portfolio Management Board of F. Hoffmann-La Roche Ltd.in Basel for five years until 1995. From 1998 to 2019, Dr. Kessler has served on numerous boards in the biopharmaceutical and molecular diagnostics fields, including AltheaDx, Inc. (United States) and MedGenesis Therapeutix, Inc. (Canada) and is currently a member of the board of directors of EraCal Therapeutics Ltd. (Switzerland) and EyeTracking LLC (United States).

Prof. Dr. Günther Reiter (65) Vice Chairman. Prof. Dr. Reiter studied Business, Economics and Mathematics at the University of Tuebingen (Germany). After his graduation, he worked for University of Tuebingen’s research department for industrial economics and earned his doctorate degree (1981 to 1986). Subsequently, he held several managing positions such as Manager Business Administration and Controlling at Trumpf GmbH & Co. in Ditzingen (Germany) (1988 to 1990) and later as an executive member of the Hofkammer of the House of Wuerttemberg (1998 to 2001). As a Dean and Vice-Dean, Prof. Dr. Reiter was actively involved in the development of the ESB Business School in Reutlingen (Germany) in the 1990s and, beginning in 2001, has taught there as a professor.

Dr. Helge Lubenow (51) Member. Dr. Lubenow earned her doctorate degree in Genetics from the University of Cologne and the Max Planck Institute for Plant Breeding, Cologne, Germany in 1997. Subsequently, she held several positions at Qiagen GmbH, Hilden, Germany, including senior Vice President and head of the molecular diagnostic business (2011 to 2015). During this time, Dr. Lubenow assumed positions in enterprises newly acquired by Qiagen GmbH, such as Corbett Life Science in Sydney and Brisbane (Australia) and Digene Inc. in Gaithersburg (United States) and was responsible for restructuring or integration of the respective enterprise. In February 2016, Dr. Lubenow founded AGOS Consulting (Germany). Dr. Lubenow is also a member of the board of ProteoMediX AG (Switzerland), as well as tesa Labtec GmbH and Indical TopCo AB. Since January 2018 she serves as managing director of tesa Labtec GmbH, Langenfeld, Germany a wholly owned subsidiary of tesa SE (Germany).

Franz Thomas Walt (60) Member. Mr. Walt holds an MBA of City University, Bellevue, Washington and completed executive programs at Columbia University, IMD, Switzerland, London Business Scholl and INSEAD, France. Mr. Walt spent over 30 years in leadership roles at two of the world's largest healthcare companies, Siemens Healthineers and Roche. Between 1989 and 2011 he held various positions of increasing responsibility in pharma and diagnostics, which includes CEO, Managing Director and President roles, in various geographic regions for Roche Diagnostics. Most recently, he worked at Siemens Healthineers AG (2012 and 2017) as President of Laboratory Diagnostics. Since 2018, he has been Chief Executive Officer of NASDAQ-listed Quotient Ltd. Eysins, Switzerland.

16.3.3. Compensation, Other Benefits, Share Ownership

The remuneration structure for the Supervisory Board is based on an annual cash retainer for the membership in the Supervisory Board as well as in committees, if any (fixed remuneration), and attendance fees (variable remuneration). The remuneration does not comprise any performance-related elements or long-term incentive components.

The remuneration of the members of the Supervisory Board for the financial year 2018 was as follows:

	Business year	Fixed (in EUR)	Variable remuneration (attendance fee)	Total
Heino von Prondzynski	2018	90,000	12,000	102,000
Ann C. Kessler, Ph.D.	2018	40,000	12,000	52,000
Prof. Dr. Günther Reiter	2018	40,000	12,000	52,000
Dr. Helge Lubenow	2018	35,000	12,000	47,000
Total Supervisory Board[1]	**2018**	**205,000**	**48,000**	**253,000**

In addition, the members of the Supervisory Board were reimbursed for directly incurred expenses in connection with their attendance of Supervisory Board meetings totaling EUR 35,000.00 in 2018 (2017: EUR 77,000.00).

As of October 11, 2019, the shareholdings and the respective rights under the stock option program and the phantom stock program of the members of the Supervisory Board were as follows:

Supervisory Board member	Shares	Stock option program	Phantom stock program
Heino von Prondzynski	395,000	0	0
Ann Clare Kessler, Ph.D.	105,852	0	0

Supervisory Board member	Shares	Stock option program	Phantom stock program
Prof. Dr. Günther Reiter	0	0	0
Dr. Helge Lubenow	13,500	0	0
Franz Thomas Walt	15,000	0	0
Total	**529,352**	**0**	**0**

As of the date of the Prospectus, no member of the Supervisory Board increased or decreased its shareholdings in the Company. None of the Supervisory Board members has committed to the Company to participate in the Offering.

Members of the Supervisory Board that were not members of the Supervisory Board or had a position as chairperson or deputy chairperson for the whole financial year receive the aforementioned compensation *pro rata temporis* in the amount of the twelfth part per month or part thereof.

In addition, we have obtained directors' and officers' liability insurance, which covers liabilities and expenses, capped at a certain amount, that our Supervisory Board members may incur in connection with their conduct as directors or officers of our company.

16.3.4. Committees

Under the Articles of Association, the Supervisory Board may form committees from among its members and authorize such committees to perform specific tasks. In 2016, our Supervisory Board established an audit committee with mere consultative functions.

16.3.4.1. Audit Committee

In June 2016, we established an advisory audit committee. Prof. Dr. Reiter, Dr. Lubenow and Franz Thomas Walt are members of the advisory audit committee. At least one member of the audit committee must have expertise knowledge in the fields of accounting or annual auditing within the meaning of Section 100 German Stock Corporation Act (*Aktiengesetz*). Prof. Dr. Reiter is such an "audit committee financial expert". In addition, the members of the audit committee as a whole shall have competence relevant to the sector in which the Company is operating. Prof. Dr. Reiter, Dr. Lubenow and Franz Thomas Walt have this kind of expertise.

The Governance Code contains the recommendations that the chairman of the Supervisory Board and the chairperson of the audit committee shall be different members of the Supervisory Board and that the chairmen of the audit committee shall be independent and shall not have been a member of our Executive Board within two years prior to his appointment. Prof. Dr. Reiter, the chairman of our audit committee, fulfills these recommendations. Further, Prof. Dr. Reiter has specialist knowledge and experience in the application of accounting principles and internal control processes.

Meetings of the audit committee take place prior to the approval of the annual financial statements and of the consolidated financial statements as well as prior to the publication of the half-year financial report of the Company and, beyond that, as and when required.

Our audit committee deals with:

- accounting issues;
- the monitoring of the accounting process. Thereby the audit committee can submit recommendations and proposals to the supervisory board which are aimed at securing the integrity of the accounting process;

- the effectiveness of the internal control system, of the risk management system and of the internal audit system; and
- aspects of compliance.

Moreover, our audit committee also deals with the audit of the annual financial statements, such as the choice and the independence of the auditor, the non-audit services rendered by the auditor, the issuing of the audit mandate to the auditor, the determination of auditing focal points and the fee agreement. Further, the audit committee has the following tasks:

- The audit committee shall obtain a statement from the proposed auditor within the meaning of Section 7.2.1 Governance Code;
- The audit committee prepares the decisions of the Supervisory Board, to the extent required by statutory law, on the approval of non-audit services by the auditor;
- The Supervisory Board shall agree with the auditor that the chairman of the audit committee will be informed immediately of any grounds for disqualification or partiality occurring during the audit, unless such grounds are eliminated immediately; and
- The audit committee should issue a recommendation for the election of the auditor. The proposal of the Supervisory Board to the shareholder meeting for the election of the auditor shall be based on the recommendation of the audit committee.

Furthermore, the audit committee prepares the decisions of the Supervisory Board on the approval of the annual financial statements and of the consolidated financial statements as well as the preparation of the corporate governance report, including the remuneration report. To this effect, the audit committee reviews the documents set forth in the foregoing sentence as well as the management report and the consolidated management report and the proposal for the attribution of profits. The auditor shall attend the discussions of the audit committee on these issues.

16.3.4.2. Compensation Committee

We have not established a compensation committee. Our Supervisory Board also performs the roles and responsibilities of a compensation committee. In this capacity, the Supervisory Board determines the compensation of each of the members of our Executive Board. The Supervisory Board has designated Dr. Kessler as the main expert on compensation and nomination matters.

Upon the completion of the Offering, the Supervisory Board will be responsible for:

- Identifying, reviewing and approving corporate goals and objectives relevant to Executive Board compensation;
- Analyzing the possible outcomes of the variable remuneration components and how they may affect the remuneration of the members of our Executive Board;
- Evaluating each member of our Executive Board's performance in light of such goals and objectives and determining the compensation of each member of our Executive Board based on such evaluation;
- Determining any long-term incentive component of the compensation of each member of our Executive Board in line with the remuneration policy and reviewing our Executive Board compensation and benefits policies generally;
- Periodically reviewing, in consultation with our CEO, our management succession planning; and

- Reviewing and assessing risks arising from our compensation policies and practices for our employees and whether any such risks are reasonably likely to have a material adverse effect on us.

Our Supervisory Board will also exercise the authority normally vested in a nominating and governance committee.

16.4. Certain Information on the Members of the Executive Board and the Supervisory Board

During the last five years, no current member of the Executive Board or current or aforementioned member of the Supervisory Board has been convicted of any fraudulent offenses. In addition, during the last five years, no current member of the Executive Board or current or aforementioned member of the Supervisory Board has been publicly incriminated or sanctioned by statutory or regulatory authorities (including professional associations).

From September 2012 to February 2015, Prof. Dr. Reiter (current member of our Supervisory Board) was a member of the supervisory board of CSA Verwaltungs GmbH, a limited liability company under German law. On February 10, 2015 the insolvency court (*Insolvenzgericht*) of the local court (*Amtsgericht*) of Würzbug received the request to open insolvency proceedings and on June 1, 2015 resolved to open insolvency proceedings.

No other current member of the Executive Board or Supervisory Board acting in the capacity of a member of a management or supervisory entity or as senior manager, has been associated with any bankruptcies and/or insolvencies, receiverships or liquidations.

No current member of the Executive Board or Supervisory Board has ever been deemed by a court to be unfit for membership in a management or supervisory entity of a company or to be unfit to exercise management duties for or manage the business of an issuer during the past five years. At the date of the Prospectus, no family relationships exist among the members of the Executive Board, among the members of the Supervisory Board and among the members of the Executive Board on the one hand and the members of the Supervisory Board on the other hand.

All members of our Executive Board, *i.e.*, Gregory Hamilton, Jorge Garces, Ph.D., and Albert Weber, as well as our Supervisory Board members Heino von Prondzynski, Ann Clare Kessler, Ph.D., Dr. Helge Lubenow, and Franz Thomas Walt directly or indirectly hold shares in the Company. As a result, they have financial and economic interests, separately from their positions in the respective governing body, that may diverge from the Company's and, thus, may constitute a potential conflict of interest. In other respects, no conflicts or potential conflicts exist with regard to obligations owed to the Company as of the date of the Prospectus that could result from their private interests or other obligations, except as described in *3.15. "The Offering — Interest of Persons Participating in the Offering and the Listing"* and *17.* "*Transactions and Relationships with Related Parties*". See also *16.2.3. "— Executive Board — Compensation, Other Benefits, Share Ownership"* and *16.3.3. "— Supervisory Board — Compensation, Other Benefits, Share Ownership".*

16.5. Stock Option Programs – Phantom Stock Programs

16.5.1. Stock Option Programs

As of the date thereof, we had three stock option programs in place:

16.5.1.1. SOP 16-18

On May 25, 2016, our general shareholder's meeting resolved to authorize our Executive Board and Supervisory Board until April 30, 2018 to issue stock options in respect of up to 1,000,000 Shares on basis of the Conditional Capital XI (the "**SOP 16-18**"). Eligible beneficiaries of this program are our Executive Board members and employees (and the executives and employees of our subsidiaries) who have a service or employment agreement.

The SOP 16-18 contemplates a vesting of the options in four equal annual tranches after the issuance of the options, except that the Supervisory Board or the Executive Board, with the consent of the Supervisory Board, respectively, may, however, declare certain options vested before such time. Vested options can be exercised from the fourth anniversary of the issue date (waiting period). The options expire seven years after their issue date. Options that are not exercised during their term will expire without compensation.

The options may generally only be exercised by their holders upon payment to us of the exercise price which equals 110% of the non-volume weighted average XETRA closing rates on the Frankfurt Stock Exchange on the ten trading days preceding the issue date of the tranche at the Frankfurt Stock Exchange.

Further, options may be exercised only if the XETRA closing price on the Frankfurt Stock Exchange exceeds the original price by at least 10% on at least one trading day in the period between the issue date of the tranche and the expiration of the waiting period. If this target has not been reached upon expiration of the waiting period, the options will expire without compensation.

Any unvested option will generally expire without compensation upon termination by the holder thereof of his or her service or employment contract with us or if we terminate such contract for cause. Any option that has vested but not yet been exercised will generally expire without compensation upon termination by us of the option holder's service or employment contract with us for cause.

16.5.1.2. SOP 17-19

On May 30, 2017, our general shareholder's meeting resolved to authorize our Executive Board and Supervisory Board until May 31, 2019 to issue stock options in respect of up to 1,000,000 Shares on basis of the Conditional Capital XII (the "**SOP 17-19**"). Eligible beneficiaries of this program are our Executive Board members and employees (and the executives and employees of our subsidiaries) who have a service or employment agreement.

The SOP 17-19 contemplates a vesting of the options in four equal annual tranches after the issuance of the options, except that the Supervisory Board or the Executive Board, with the consent of the Supervisory Board, respectively, may, however, declare certain options vested before such time. Vested options can be exercised from the fourth anniversary of the issue date (waiting period). The options expire seven years after their issue date. Options that are not exercised during their term will expire without compensation.

The options may generally only be exercised by their holders upon payment to us of the exercise price, which equals 110% of the non-volume weighted average XETRA closing rates on the Frankfurt Stock Exchange on the ten trading days preceding the issue date of the tranche at the Frankfurt Stock Exchange.

Further, options may be exercised only if the XETRA closing price on the Frankfurt Stock Exchange exceeds the original price by at least 10% on at least one trading day in the period

between the issue date of the tranche and the expiration of the waiting period. If this target has not been reached upon expiration of the waiting period, the options will expire without compensation.

Any unvested option will generally expire without compensation upon termination by the holder thereof of his or her service or employment contract with us or if we terminate such contract for cause. Any option that has vested but not yet been exercised will generally expire without compensation upon termination by us of the option holder's service or employment contract with us for cause.

16.5.1.3. SOP 19-21

On May 15, 2019, our general shareholder's meeting resolved to authorize our Executive Board and Supervisory Board until May 31, 2021 to issue stock options in respect of up to 1,000,000 Shares on basis of the Conditional Capital XIII (the "**SOP 19-21**"). Eligible beneficiaries of this program are our Executive Board members and employees (and the executives and employees of our subsidiaries) who have a service or employment agreement.

The SOP 19-21 contemplates a vesting of the options in four equal annual tranches after the issuance of the options, except that the Supervisory Board or the Executive Board, with the consent of the Supervisory Board, respectively, may, however, declare certain options vested before such time. Vested options can be exercised from the fourth anniversary of the issue date (waiting period). The options expire seven years after their issue date. Options that are not exercised during their term will expire without compensation.

The options may generally only be exercised by their holders upon payment to us of the exercise price, which equals 110% of the non-volume weighted average XETRA closing rates on the Frankfurt Stock Exchange on the ten trading days preceding the issue date of the tranche at the Frankfurt Stock Exchange.

Further, options may be exercised only if the XETRA closing price on the Frankfurt Stock Exchange exceeds the original price by at least 10% on at least one trading day in the period between the issue date of the tranche and the expiration of the waiting period. If this target has not been reached upon expiration of the waiting period, the options will expire without compensation.

Any unvested option will generally expire without compensation upon termination by the holder thereof of his or her service or employment contract with us or if we terminate such contract for cause. Any option that has vested but not yet been exercised will generally expire without compensation upon termination by us of the option holder's service or employment contract with us for cause.

16.5.1.4. Details on Stock Options Issuances

16.5.1.4.1. Stock Options Issued under the SOP 16-18

SOP 16–18

Option holder	Options issued as of December 31, 2017	Options newly issued in 2018	Options forfeited in 2018	Expired Options in 2018	Exercised Options in 2018	Options reclassified to 2018	Options issued as of December 31, 2018
Greg Hamilton (CEO)	160,000	67,500	0	0	0	0	227,500
Jorge Garces (CSO)	0	0	0	0	0	0	0

Albert Weber (EVP since January 1, 2018)	0	0	0	0	0	30,000	30,000
Dr. Uwe Staub (COO) from April 1, 2013 until 31, March 2018	22,500	0	0	0	0	-22,500	0
Other option holders	455,250	298,750	56,250	0	0	-7,500	690,250
-of which subsidiary employees	*201,500*	*182,500*	*4,375*	*0*	*0*	*0*	*379,625*
Options total	**637,750**	**366,250**	**56,250**	**0**	**0**	**0**	**947,750**
Average exercise price (in EUR)	**5.22**	**4.12**	**4.80**	**n/a**	**n/a**	**n/a**	**4.86**

16.5.1.4.2. Stock Options Issued under the SOP 17-19

SOP 17–19

Option holder	**Options issued as of December 31, 2017**	**Options newly issued in 2018**	**Options forfeited in 2018**	**Expired Options in 2018**	**Exercised Options in 2018**	**Options reclassified to 2018**	**Options issued as of December 31, 2018**
Greg Hamilton (CEO)	31,580	32,500	0	0	0	0	64,080
Jorge Garces (CSO)	0	85,000	0	0	0	0	85,000
Albert Weber (EVP since January 1, 2018)	0	70,000	0	0	0	0	70,000
Dr. Uwe Staub (COO) from April 1, 2013 until 31, March 2018	0	0	0	0	0	0	0
Other option holders	51,000	131,250	7,500	0	0	0	174,750
-of which subsidiary employees	*51,000*	*60,000*	*0*	*0*	*0*	*0*	*111,000*
Options total	**82,580**	**318,750**	**7,500**	**0**	**0**	**0**	**393,830**
Average exercise price (in EUR)	**5.10**	**4.12**	**4.12**	**n/a**	**n/a**	**n/a**	**4.33**

Between December 31, 2018 and June 30, 2019, 611,170 new stock options were granted but no options were exercised. 8,750 options expired during this period. As of June 30, 2019, the total number of stock options stil outstanding amounted to 1,944,000 with an average strike price of EUR 3.81.

16.5.2. Phantom Stock Programs

As of the date hereof, we have four PSPs in place as incentive schemes for management and staff. These programs grant PSRs to the beneficiaries and define a PSR as a conditional claim of its holder against us for a future payment in cash at a premium to the benefit of the holder.

16.5.2.1. Phantom Stock Program 03-15 (PSP 03-15)

PSP 03-15 was established in 2013 to migrate certain of our then outstanding stock options into a new program. The Executive Board and Supervisory Board decided to offer up to 370,587 PSRs from the PSP 03-15 to all stock option holders who were employees or members of the Executive Board at that time, and to a dedicated number of our former employees who still held stock options. For each stock option right that was returned to us in connection with an exchange offer, one PSR from PSP 03-15 was granted to its holder. Each PSR from PSP 03-15 immediately became the legal successor of the returned stock option right and was on equal terms with the returned stock option's economic value. Therefore, the term of each PSR from PSP 03-15 equals the remaining term of the returned stock option right. These PSRs will expire without compensation when the returned stock option right would have expired. After the exchange, the vesting rules of the underlying Stock Option Programs ("**SOPs**") applies equally with respect to the vesting of the PSRs. PSRs which were issued in exchange for vested stock options, vested immediately.

The exercise price of a PSR from PSP 03-15 equals the exercise price of the stock option right returned in exchange. Upon the exercise of a PSR, the holder of a PSR is not entitled to obtain a share of our stock by the exercise of a PSR. Rather, the holder is entitled to the PSR Premium, a claim against us for the payment of the absolute difference between the market share price of our stock at the time of the exercise of the PSR and the exercise price of the PSR. The holder of a PSR is entitled to exercise his right during the exercise period when the strike price on the exercise date is higher than the base value. The exercise of PSR is not compulsory or subject to pre-defined exercise periods ("trading windows") and can take place at any time throughout the year. Nevertheless, the Executive Board and the Supervisory Board may stipulate compulsory exercise periods for holders of PSRs for our current employees. It is at the sole discretion of our Executive Board to define and announce such exercise periods to our employees holding PSRs. If any such exercise period is announced, it will also simultaneously apply to our Executive Board members.

In the event of a takeover or a mandatory offer for the Company's Shares, as defined by the German Securities Acquisition and Takeover Act (*Wertpapiererwerbs- und Übernahmegesetz*), the holders of vested PSRs are entitled to the immediate exercise of their rights, even if the waiting period for these rights has not yet expired. The exercise right for the PSR holder will only apply if the offered consideration is exclusively comprised of a cash settlement and if the bidder has gained control over us. In this event, the PSR premium will equal the difference between the final cash amount offered to the shareholders as part of the takeover or the mandatory offer and the exercise price of the PSR.

As PSRs are settled in cash at their exercise, we record a provision based on the fair values of the outstanding rights.

16.5.2.2. Phantom Stock Program 2013 (PSP 2013)

PSP 2013 was approved by our Executive Board and Supervisory Board in May 2013. A total number of up to 740,000 PSRs were issued under the PSP 2013, and the program expired in March 2014. The rights under this program expire between June 30, 2018 and March 31, 2019.

Eligible beneficiaries of the program were our Executive Board members and our employees (and the executives and employees of our subsidiary) who had a service or employment agreement at that time. The Executive Board authorized the issuance of PSRs from this program to our employees and to executives and employees of the subsidiary and the Supervisory Board authorized the issuance of PSRs from this program to our Executive Board members.

PSRs from each tranche issued to our non-executive employee beneficiaries began to vest from the first full calendar quarter over the three years following their issuance, in five equal parts, beginning with the first day of the fifth full calendar quarter from when the tranche was issued. Thereafter, the further four of the five parts each vest after the following four six month periods. Thus, the last of the five parts vests after the twelfth full calendar quarter from when the tranche was issued (at the end of a three-year waiting period). PSRs of each tranche may not be exercised after they vest until the waiting period expires. The term of the PSRs begins at the issue date and ends five years after the beginning of the applicable vesting period. Rights which are not exercised upon the end of their term will expire without compensation. Our Executive Board and Supervisory Board may impose timing restrictions in the exercise periods. Our Executive Board reserves the right to establish and announce such timing restrictions for any exercise period for rights holders who are our employees at that point in time. If any such exercise period is announced, it will also simultaneously apply to PSRs held by the Executive Board members.

At the time a PSR tranche was issued, a so-called “base value” was determined for the rights. This base value equaled the average of the XETRA closing rates on the Frankfurt Stock Exchange for the last five consecutive trading days prior to the issuance of the PSR. The holder of a PSR is entitled to exercise his right during the exercise period when the strike price on the exercise date is higher than the base value. By exercising the PSR, the holder is entitled to obtain the PSR Premium from us. The PSR premium equals the absolute difference between the strike price and the base value of the right up to a maximum of EUR 8.00.

Upon termination of a service or employment agreement by the beneficiary or for cause by us, any PSRs held by such beneficiary that have not yet vested will expire without compensation. Upon termination of a service or employment agreement by us for any other reason, such as for business purposes, any PSRs held by a beneficiary that have not yet vested shall remain valid. In cases where the service or employment agreement is terminated by mutual consent, the Executive Board or the Supervisory Board, as applicable, has sole discretion to decide whether the beneficiary’s PSRs that have not vested at that point in time shall remain valid.

In the event of a takeover or a mandatory offer for the Company’s Shares, as defined by the German Securities Acquisition and Takeover Act (*Wertpapiererwerbs- und Übernahmegesetz*), the holders of vested PSRs are entitled to the immediate exercise of their rights, even if the waiting period for these rights has not yet expired. The exercise right for the PSR holder will only apply if the offered consideration is exclusively comprised of a cash settlement and if the bidder has gained control over us. In this event, the PSR premium will equal the difference between the final cash amount offered to the shareholders as part of the takeover or the mandatory offer and the base value of the PSR, but at a maximum EUR 8.00.

As PSRs are settled in cash at their exercise, we record a provision based on the fair values of the outstanding rights.

16.5.2.3. Phantom Stock Program 2014 (PSP 2014)

PSP 2014 was approved by our Executive Board and Supervisory Board in May 2014. A total of up to 344,833 PSRs were issued under the PSP 2014. Eligible beneficiaries of the program were Executive Board members and employees of the Company and executives and employees of its

subsidiary with an unterminated service or employment agreement with a Group company. The Executive Board was authorized to issue PSRs to our employees and to executives and employees of the subsidiary and the Supervisory Board was authorized to issue PSRs to the members of the Executive Board.

Timing and vesting of each tranche is the same as for PSP 2013.

Base value and strike price are determined in the same way as for PSP 2013. The PSR premium for PSP 2014 equals the absolute difference between the strike price and the base value of the right up to a maximum of EUR 12.00.

If a holder of vested PSR leaves the Company or the subsidiary, respectively, before the expiration date of these rights, he remains entitled to these vested rights until the expiration date. In such case, the strike price of his rights will be limited to the average of the XETRA closing rates on the Frankfurt Stock Exchange for the five consecutive trading days prior to the termination date of his employment contract with us. However, upon termination of a service or employment agreement by the beneficiary or for cause by us, any PSRs held by such beneficiary that have not yet vested will expire without compensation. Upon termination of a service or employment agreement by us for any other reason, such as for business operations purposes, any PSRs held by a beneficiary that have not yet vested shall remain valid. In cases where the service or employment agreement is terminated by mutual consent, the Executive Board or the Supervisory Board, as applicable, has sole discretion to decide whether the beneficiary's PSRs that have not vested at that point in time will remain valid.

In the event of a takeover or a mandatory offer for the Company's Shares, as defined by the German Securities Acquisition and Takeover Act, the same policy applies as for PSP 2013, provided that the PSR Premium is limited to EUR 12.00.

As PSRs are settled in cash at their exercise, we record a provision based on the fair values of the outstanding rights.

16.5.2.4. Phantom Stock Program 2015 (PSP 2015)

PSP 2015 was approved by our Executive Board and Supervisory Board in September 2015. A total number of up to 108,000 PSRs were issued under the PSP 2015 before December 31, 2015. Eligible beneficiaries of the program were our Executive Board members and employees (and the executives and employees of our subsidiary) who had a service or employment agreement at that time. The Executive Board authorized the issuance of PSRs from this program to our employees and to executives and employees of the subsidiary and the Supervisory Board authorized the issuance of PSRs from this program to our Executive Board members.

Timing and vesting of each tranche is the same as for PSP 2013 and PSP 2014.

Base value and strike price are determined in the same way as for PSP 2013 and PSP 2014. The PSR premium for PSP 2015 equals the absolute difference between the strike price and the base value of the right up to a maximum of EUR 15.00.

If a holder of vested PSR leaves the Company or the subsidiary, respectively, before the expiration date of these rights, he remains entitled to these vested rights until the expiration date. In such case, the strike price of his rights will be limited to the average of the XETRA closing rates on the Frankfurt Stock Exchange for the five consecutive trading days prior to the termination date of his employment contract with us. However, upon termination of a service or employment agreement by the beneficiary or for cause by us, any PSRs held by such beneficiary that have not yet vested will expire without compensation. Upon termination of a service or employment agreement by us

for any other reason, such as for business operations purposes, any PSRs held by a beneficiary that have not yet vested shall remain valid. In cases where the service or employment agreement is terminated by mutual consent, the Executive Board or the Supervisory Board, as applicable, has sole discretion to decide whether the beneficiary's PSRs that have not vested at that point in time will remain valid.

In the event of a takeover or a mandatory offer for the Company's Shares, as defined by the German Securities Acquisition and Takeover Act, the same policy applies as for PSP 2013 and PSP 2014, provided that the PSR Premium is limited to EUR 15.00.

As PSRs will be settled in cash at their exercise, the company recorded a provision based on the fair values of the outstanding rights.

16.5.2.5. Details on Phantom Stock Rights Issuances

16.5.2.5.1. Phantom Stock Program 03-15 (PSP 03-15)

PSR holder	PSR issued as of December 31, 2017	PSR newly issued in 2018	PSR forfeited in 2018	Expired PSR in 2018	Exercised PSR in 2018	PSR reclassified to 2018	PSR issued as of December 31, 2018
Albert Weber (EVP since January 1, 2018)	0	0	0	0	0	0	0
Dr. Uwe Staub (COO) from April 1, 2013 until 31, March 2018	22,400	0	0	22,400	0	0	0
Other PSR holders	75,800	0	0	55,800	0	0	20,000
-of which subsidiary employees	*43,800*	*0*	*0*	*23,800*	*0*	*0*	*20,000*
PSR total	**98,200**	**0**	**0**	**78,200**	**0**	**0**	**20,000**
Average exercise price (in EUR)	**5.98**	**n/a**	**n/a**	**6.87**	**n/a**	**n/a**	**2.51**

16.5.2.5.2. Phantom Stock Program 2013 (PSP 2013)

PSR holder	PSR issued as of December 31, 2017	PSR newly issued in 2018	PSR forfeited in 2018	Expired PSR in 2018	Exercised PSR in 2018	PSR reclassified to 2018	PSR issued as of December 31, 2018
Albert Weber (EVP since January 1, 2018)	0	0	0	0	0	0	0
Dr. Uwe Staub (COO) from April 1, 2013 until 31, March 2018	20,000	0	0	0	0	-20,000	0
Other PSR holders	78,000	0	0	10,000	65,000	20,000	23,000
-of which subsidiary employees	*75,000*	*0*	*0*	*10,000*	*65,000*	*0*	*0*
PSR total	**98,000**	**0**	**0**	**10,000**	**65,000**	**0**	**23,000**
Average exercise price (in EUR)	**2.70**	**n/a**	**n/a**	**1.64**	**1.62**	**6.15**	**6.19**

16.5.2.5.3. Phantom Stock Program 2014 (PSP 2014)

PSR holder	PSR issued as of December 31, 2017	PSR newly issued in 2018	PSR forfeited in 2018	Expired PSR in 2018	Exercised PSR in 2018	PSR reclassified to 2018	PSR issued as of December 31, 2018
Albert Weber (EVP since January 1, 2018)	0	0	0	0	0	30,000	30,000
Dr. Uwe Staub (COO) from April 1, 2013 until 31, March 2018	60,000	0	0	0	0	-60,000	0
Other PSR holders	263,833	0	0	0	69,000	30,000	224,833
-of which subsidiary employees	*65,250*	*0*	*0*	*0*	*0*	*0*	*65,250*
PSR total	**323,833**	**0**	**0**	**0**	**69,000**	**0**	**254,833**
Average exercise price (in EUR)	**3.23**	**n/a**	**n/a**	**n/a**	**3.23**	**3.23**	**3.23**

16.5.2.5.4. Phantom Stock Program 2015 (PSP 2015)

PSR holder	PSR issued as of December 31, 2017	PSR newly issued in 2018	PSR forfeited in 2018	Expired PSR in 2018	Exercised PSR in 2018	PSR reclassified to 2018	PSR issued as of December 31, 2018
Albert Weber (EVP since January 1, 2018)	0	0	0	0	0	10,000	10,000
Dr. Uwe Staub (COO) from April 1, 2013 until 31, March 2018	14,400	0	0	0	0	-14,400	0
Other PSR holders	84,000	0	0	0	0	4,400	88,400
-of which subsidiary employees	*15,000*	*0*	*0*	*0*	*0*	*0*	*15,000*
PSR total	**98,400**	**0**	**0**	**0**	**0**	**0**	**98,400**
Average exercise price (in EUR)	**5.05**	**n/a**	**n/a**	**n/a**	**n/a**	**5.05**	**5.05**

Between December 31, 2018 and June 30, 2019, no further phantom stock rights were issued. As of June 30, 2019, the total number of phantom stock rights amounted to 98,400 from PSP 2015 and 254,833 from PSP 2014. As of June 30, 2019, the phantom stock programs PSP 2013 and PSP 03-15 have expired.

16.6. General Shareholders' Meeting

Pursuant to the Articles of Association, the general shareholders' meeting of the Company takes place at the registered office of the Company or at the registered office of a German stock exchange. The invitation to general shareholders' meeting of the Company is published in the Federal Gazette (*Bundesanzeiger*) together with the agenda of the meeting and proposals for

voting by the Executive Board and/or the Supervisory Board. The annual or ordinary general shareholders' meeting of the Company is held within the first eight months of each financial year.

Only those shareholders who are registered in the Company's stock register and have duly submitted notification of attendance in a timely manner prior to the meeting shall be entitled to attend the general shareholders' meeting and to exercise their voting rights. Such notification of attendance shall be made in German or English language and must be received by the Company at the address specified for this purpose in the notice of the meeting no less than six days prior to the general shareholders' meeting. A shorter time limit to be expressed in days may be stipulated in the notice of the meeting. The day of receipt of the notification of attendance and the day of the general shareholders' meeting shall not be taken into account for the purpose of calculating this time limit. The Executive Board is authorized to determine that the shareholders may also attend the general shareholders' meeting without being present at the place where it is held and without a proxy and may exercise their rights in whole or in part by means of electronic communication (online participation) or may submit their votes, without attending the meeting, in writing or by means of electronic communication (absentee voting). Should the Executive Board use this authorization, it will specify the details of this procedure at the time of convening the general shareholders' meeting.

A general shareholders' meeting of the Company must be called at least 30 days prior to the date of the meeting, excluding the day the notice is sent and the day of the general shareholders' meeting of the Company itself, unless a shorter period is permitted by law. This notice period shall be extended by the days of the attendance notification period described in the preceding paragraph.

If the interests of the Company so require, the general shareholders' meeting of the Company can also be convened by the Supervisory Board. Pursuant to the German Stock Corporation Act (*Aktiengesetz*), shareholders whose shares constitute at least 5% of the share capital of the Company may demand that the general shareholders' meeting of the Company be convened; this demand must be made in writing, stating the purpose of the meeting and be directed to the Executive Board. Using the same procedure, shareholders whose aggregated shares constitute at least 5% of the Company's share capital or an interest of EUR 500 thousand may demand that items be added to the agenda of a general shareholders' meeting of the Company. In addition, shareholders must prove that they have owned their shares for at least three months and that they will hold their shares until their motion has been decided upon. If the demand is not met by the Company, a court may authorize the shareholders who issued the demand to convene the general shareholders' meeting of the Company. The convening notice or publication must make reference to such authorization. Shareholders or shareholders' associations can use the shareholder forum of the German Federal Gazette (*Bundesanzeiger*), which is available through the Company Register's (*Unternehmensregister*) website, to either put forward a joint request or to put forward a request on behalf of the shareholders for a general shareholders' meeting.

The general shareholders' meeting of the Company votes on the appropriation of the distributable profit (*Bilanzgewinn*) and on the approval of the actions (*Entlastung*) of the Executive Board members and of the Supervisory Board members for the financial year prior to the respective general shareholders' meeting of the Company. The general shareholders' meeting of the Company also appoints an external auditor for the respective current financial year and the members of the Supervisory Board.

Each Share entitles its holder to one vote at the general shareholders' meeting of the Company. The voting right enters into effect upon full payment of the contribution. Voting rights can be exercised through a proxy holder. Authority to vote by proxy must be granted in text form

(*Textform*) in accordance with Section 126b of the German Civil Code (*Bürgerliches Gesetzbuch*). According to the Articles of Association, resolutions of the general shareholders' meeting of the Company are adopted by a simple majority of the votes cast, unless stipulated otherwise by mandatory statutory law.

In cases where the majority of the share capital represented during the adoption of the resolution is required by statutory law, the Articles of Association stipulate that the simple majority of the share capital represented at the adoption of the resolution shall be sufficient, unless a larger majority is stipulated by mandatory statutory law. Pursuant to the German Stock Corporation Act (*Aktiengesetz*), resolutions of fundamental importance (*grundlegende Bedeutung*) mandatorily require – in addition to a majority of the votes cast – a majority of at least three quarters of the registered share capital represented at the time the resolution is adopted. Resolutions of fundamental importance include:

- changes to the Articles of Association regarding the purpose/objects of the Company;
- capital increases with an exclusion of the subscription rights;
- capital decreases;
- the creation of authorized or conditional capital;
- restructurings and transformations pursuant to the German Transformation Act (*Umwandlungsgesetz*), including mergers, divisions, certain transfers of assets and changes in legal form;
- an agreement to transfer all of the Company's assets pursuant to Section 179a of the German Stock Corporation Act (*Aktiengesetz*);
- the execution of inter-company agreements (in particular control and profit and loss transfer agreements);
- the dissolution of the Company.

Neither German law nor the Articles of Association of the Company limit the rights of shareholders who do not reside in Germany or who are foreign shareholders in relation to holding Shares and exercising the voting rights pertaining to the Shares.

The rights of the shareholders can generally only be amended with the consent of the affected shareholders. However there are circumstances, set out by law, in which a majority of at least three fourths is sufficient. Currently, there are no provisions in the Articles of Association that deviate from the statutory provisions regarding the scope of amending shareholders rights.

16.7. Corporate Governance and Compliance

16.7.1. Corporate Governance

The Company takes good corporate governance to mean responsible enterprise management and supervision geared to sustainable value creation. In particular, the Company strives to further foster the trust placed in our Group by investors, business partners and employees, and the public at large. The Company also attaches great importance to the efficient conduct of the work by the Executive Board and Supervisory Board, good cooperation between these bodies and with the Company's staff, and to open and maintain transparent corporate communications.

The corporate structure of the Company is based on the responsible, transparent and efficient leadership and control of the Company. The Company therefore identifies itself with the objectives

of the Governance Code. The Executive Board and the Supervisory Board as well as all management personnel and employees of the Company are required to comply with these objectives. The Executive Board of the Company is responsible for compliance with the principles of corporate governance.

The Governance Code includes recommendations (*Empfehlungen*), that the Company "shall" (*soll*) follow, and suggestions (*Anregungen*), that the Company "should" (*sollte or kann*) follow, for the management and supervision of companies listed on German stock exchanges with regard to good corporate governance. Topics include shareholders and general shareholders' meetings, management and supervisory boards, transparency, accounting and the auditing of financial statements. The current version of the Governance Code is available on the website of the Commission of the German Corporate Governance Code (http://www.corporate-governance-code.de). While suggestions of the Governance Code are not mandatory, Section 161 of the German Stock Corporation Act (*Aktiengesetz*) requires the management and supervisory boards of a listed company to annually disclose which recommendations have been and will be complied with, and in the event of non-compliance, to provide the reason for such non-compliance. This declaration must be made permanently accessible to shareholders. The contents of the declaration do not bind the management or Supervisory Board for the future, however, any deviation from the previous declaration triggers the obligation to submit, publish and provide shareholders with an amended declaration in due course. In contrast, deviations from the suggestions contained in the Governance Code need not be disclosed.

The Executive Board and the Supervisory Board issued the last declaration of compliance in accordance with Section 161 of the German Stock Corporation Act (*Aktiengesetz*) in October 2019. The Company declared to comply with, currently complies with and intends to comply with, all recommendations in the Governance Code, with the following exceptions:

16.7.1.1. Section 3.8 para. 3 Governance Code

We have taken out a D&O policy. The policy includes as insured persons also the members of the Supervisory Board. Deviating from Section 3.8 paragraph 3 Governance Code, the D&O policy does not provide for a deductible for members of the Supervisory Board. We consider such a deductible as inadequate taking into account the nature of the office as members of the Supervisory Board and the function of the Supervisory Board.

16.7.1.2. Section 4.1.3 sentence 3 Governance Code

At Epigenomics there exists no separate system which the employees can use to report, in a protected manner, suspected breaches of the law within the company. Owing to its size and organization, the Company does not believe that it is necessary to implement such a system. Accordingly, the Company deviates from the recommendation pursuant to Section 4.1.3 sentence 3 Governance Code.

16.7.1.3. Section 5.1.2 paragraph 1 sentence 2 and paragraph 2 sentence 3 and Section 5.4.1 paragraph 2 sentences 1 and 2 and paragraph 4 Governance Code

In the past, when filling the positions in its bodies, the Executive Board and the Supervisory Board considered the company-specific situation, and also made allowances for potential conflicts of interest as well as the international activities of the Company through an appropriate diversity of their members as well as the appointment of an adequate number of independent Supervisory Board members. Furthermore, the Supervisory Board determined a maximum term of membership and prepared a profile of skills and expertise for the entire Supervisory Board. In deviation from the recommendations in Section 5.1.2 paragraph 2 sentence 3 and in Section 5.4.1 paragraph 2

sentence 2 Governance Code, we however consider the commitment to institute special age limits for members of the Executive Board and the Supervisory Board as an inadequate limitation of the voting rights of our shareholders. In addition, we are convinced that sweeping requirements for the composition of the Executive Board as requested in Section 5.1.2 paragraph 1 sentence 2 Governance Code constrain the Supervisory Board inadequately in its selection of suitable members of the Executive Board. The same applies accordingly to the specification of sweeping objectives regarding the composition of the Supervisory Board, as required in Section 5.4.1 paragraph 2 sentences 1 and 2 Governance Code and assumed in Section 5.4.1 paragraph 4 Governance Code. We strive to achieve an appropriate diversity in the Executive Board and the Supervisory Board and to ensure that an adequate number of independent Supervisory Board members is elected. However, it is ultimately in the corporate interest to appoint as members of the Executive Board and the Supervisory Board the most suitable male or female candidates. Furthermore, the Supervisory Board has defined gender diversity objectives for the proportion of women in both the Executive Board and the Supervisory Board in accordance with Section 111 paragraph 5 of the German Stock Corporation Act (*Aktiengesetz*). We therefore believe that (additional) sweeping requirements constitute an inadequate limitation of the individual selection of suitable male and female candidates for the Executive Board or the Supervisory Board. Furthermore, a target requirement regarding the composition of the Supervisory Board also inadequately impairs our shareholders' right to elect the Supervisory Board members. Accordingly, we did not and will not comply with these recommendations of the Governance Code.

16.7.1.4. Sections 5.3.1 sentence 1 and 5.3.3 Governance Code

Due to the size of the company, the Supervisory Board did not and does not believe that it is necessary to form a Nomination Committee composed exclusively of shareholder representatives which recommends suitable Supervisory Board candidates for the proposals of the Supervisory Board to the general shareholders' meeting. Rather, this task is being performed by the full Supervisory Board. Owing to the size of the company and of the Supervisory Board, the Supervisory Board considers it adequate and appropriate to form only an audit committee. In contrast, the implementation of further committees was and is in the opinion of the Supervisory Board not necessary. Hence, the recommendations pursuant to Sections 5.3.1 sentence 1 and 5.3.3 Governance Code continue not to be complied with.

16.7.2. Group Compliance

We have established a comprehensive system to identify, assess, communicate and manage opportunities and risks across all of our operations. The principles and guidelines underlying our risk management are documented in a group-wide policy. The purpose of this policy is to help identify risks systematically at the earliest possible stage, estimate their likelihood of occurrence as well as potential qualitative and quantitative impact, and design and implement effective countermeasures. We regularly review our risk management system at the operational level and at the Executive Board and Supervisory Board levels.

We have adopted a Code of Business Conduct and Ethics (the "**Code of Conduct**") which is applicable to all of our employees and executive officers as well as to third parties commissioned by employees of Epigenomics. The Code of Conduct covers a broad range of matters, including advertising for diagnostic medical devices and the regulated cooperation of the Company with healthcare professionals in the areas of research, development, manufacturing and the distribution of diagnostic products.

17. TRANSACTIONS AND RELATIONSHIPS WITH RELATED PARTIES

In accordance with IAS 24, transactions with persons or companies which are, *inter alia*, members of the same group as the Company or which are in control of or controlled by the Company must be disclosed, unless they are already included as consolidated companies in Epigenomics Group's audited consolidated financial statements. Control exists if a shareholder owns more than one half of the voting rights in the Company or, by virtue of an agreement, has the power to control the financial and operating policies of the Company's management. The disclosure requirements under IAS 24 also extend to transactions with associated companies (including joint ventures) as well as transactions with persons who have significant influence on the Company's financial and operating policies, including close family members and intermediate entities. This includes the members of the Executive Board and Supervisory Board and close members of their families, as well as those entities over which the members of the Executive Board and Supervisory Board or their close family members are able to exercise a significant influence or in which they hold a significant share of the voting rights.

The Company compensates the members of its Executive Board and Supervisory Board in cash and, with respect to the members of the Company's Executive Board, stock options (see *16.2.3. "Governing Bodies — Executive Board — Compensation, Other Benefits, Share Ownership"* and *16.3.3. "Governing Bodies — Supervisory Board — Compensation, Other Benefits, Share Ownership"*). Other than such compensation, there have been no transactions with related parties in the financial year 2019 up to and including the date of the Prospectus.

18. TAXATION OF SHAREHOLDERS IN GERMANY

The following section presents a number of key German taxation principles which generally are or can be relevant to the acquisition, holding or transfer of shares or subscription rights both by a shareholder (an individual, a partnership or corporation) that has a tax domicile in Germany (that is, whose place of residence, habitual abode, registered office or place of management is in Germany) and by a shareholder without a tax domicile in Germany. The information is not exhaustive and does not constitute a definitive explanation of all possible aspects of taxation that could be relevant for shareholders. The information is based on the tax laws in force in Germany as of the date of the Prospectus (and their interpretation by administrative directives and courts) as well as typical provisions of double taxation treaties that Germany has concluded with other countries. Tax law can change – sometimes retrospectively. Moreover, it cannot be ruled out that the German tax authorities or courts may consider an alternative interpretation or application to be correct that differs from the one described in this section.

This section cannot serve as a substitute for tailored tax advice to individual shareholders. Shareholders are therefore advised to consult their tax advisers regarding the tax implications of the acquisition, holding or transfer of shares or subscription rights and regarding the procedures to be followed to achieve a possible reimbursement of German withholding tax (Kapitalertragsteuer). Only such advisers are in a position to take the specific tax-relevant circumstances of individual shareholders into due account.

18.1. Income Tax Implications of the Holding, Sale and Transfer of Shares and Subscription Rights

In terms of the taxation of shareholders of the Company, a distinction must be made between taxation in connection with the holding of shares (*18.2. "— Taxation of Dividends")* and taxation in connection with the sale of shares or subscription rights (*18.3. "— Taxation of Capital Gains"*) and taxation in connection with the gratuitous transfer of shares or subscription rights (*18.5."— Inheritance and Gift Tax"*). The granting of subscription rights does not, by itself, trigger immediate income tax consequences for the shareholder.

18.2. Taxation of Dividends

18.2.1. Withholding Tax

As a general rule, dividends distributed to the shareholder are subject to a withholding tax (*Kapitalertragsteuer*) of 25% and a solidarity surcharge of 5.5% thereon (*i.e.*, 26.375% in total plus church tax, if applicable). This, however, will not apply if and to the extent that dividend payments are funded from the Company's contribution account for tax purposes (*steuerliches Einlagekonto; § 27 Körperschaftsteuergesetz*, "**KStG**"); in this case no withholding tax will be withheld. However, these payments will reduce the acquisition costs of the shares and may, consequently, result in or increase a taxable gain upon the disposal of the shares (see *18.3. "— Taxation of Capital Gains"*). The assessment basis for the withholding tax is the dividend approved by the general shareholders' meeting. The coalition agreement signed on March 12, 2018 among the German parties Christian Democratic Union (*CDU*), Christian Social Union (*CSU*) and the Social Democratic Party (*SPD*) for the formation of a new German federal government provides that the solidarity surcharge shall be abolished in stages provided that the individual income does not exceed certain thresholds. On August 12, 2019 the German Federal Ministry of Finance published a proposal for draft law regarding a significant reduction of the solidarity surcharge (*Entwurf eines*

Gesetzes zur Rückführung des Solidaritätszuschlags 1995). According to the proposed draft the threshold as of which solidarity surcharge shall only be levied shall be significantly increased so that the solidarity surcharge would be abolished in full for approx. 90% of the German taxpayers and partly for a further 6.5% of the German taxpayers. If adopted, the new rules would apply as of 2021. According to the current legislative drafts the solidarity surcharge will still apply if German taxes are withheld in form of the withholding tax (*Kapitalertragsteuer*). Shareholders are advised to monitor future developments.

If shares – as it is the case with the shares in the Company – are admitted for collective custody by a central securities depository (*Wertpapiersammelbank*) pursuant to Section 5 German Act on Securities Accounts (*Depotgesetz – DepotG*) and are entrusted to such bank for collective custody (*Sammelverwahrung*) in Germany, the withholding tax is withheld and passed on for the account of the shareholders (i) by the domestic credit or financial services institution (*inländisches Kredit- oder Finanzdienstleistungsinstitut*) (including domestic branches of such foreign enterprises), by the domestic securities trading company (*inländisches Wertpapierhandelsunternehmen*) or the domestic securities trading bank (*inländische Wertpapierhandelsbank*) which keeps or administers the shares and disburses or credits the dividends to the shareholder or disburses the dividends to a foreign agent, (ii) by the central securities depository (*Wertpapiersammelbank*) to which the shares were entrusted for collective custody if the dividends are disbursed to a foreign agent by such central securities depository (*Wertpapiersammelbank*), or (iii) by the Company itself if and to the extent shares held in collective custody (*Sammelverwahrung*) by the central securities depository (*Wertpapiersammelbank*) are treated as so-called "*abgesetzte Bestände*" (stock being held separately) (hereinafter in all cases, the "**Dividend Paying Agent**"). Aside from the case of stock being held separately, the Company does not assume any responsibility for the withholding of the withholding tax.

In general, the withholding tax must be withheld without regard as to whether and to which extent the dividend is exempt from (corporate) income tax at the level of the shareholder and whether the shareholder is domiciled in Germany or abroad.

However, withholding tax on dividends distributed to a company domiciled in another EU Member State (please note that the UK may be no EU Member State) within the meaning of Article 2 of the Council Directive 2011/96/EU of November 30, 2011, as amended ("**Parent-Subsidiary Directive**"), may be refunded upon application and subject to further conditions. This also applies to dividends distributed to a permanent establishment of such a parent company in another EU Member State or to a parent company that is subject to unlimited tax liability in Germany, provided that the participation in the Company is actually part of such permanent establishment's business assets. Further requirements for the refund of withholding tax under the Parent-Subsidiary Directive are that the shareholder has directly held at least 10% of the Company's registered share capital continuously for one year and that a respective application is filed with the German Federal Central Tax Office (*Bundeszentralamt für Steuern, Hauptdienstsitz Bonn-Beuel*, An der Küppe 1, 53225 Bonn, Germany). If, in the case of a holding of at least 10% of the Company's registered share capital, shares held in collective custody (*Sammelverwahrung*) by the German central securities depository (*Wertpapiersammelbank*) Clearstream are treated as so-called "*abgesetzte Bestände*" (stock being held separately), the German tax authorities will not object when the main paying agent (*Hauptzahlstelle*) of the Company upon presentation of a valid exemption certificate (*Freistellungsbescheinigung*) and of a proof that this stock has been held separately, disburses the dividend without deducting withholding tax. An exemption certificate can be granted upon application (using official application forms) with the German Federal Central Tax Office (*Bundeszentralamt für Steuern)* (at the above address).

With respect to distributions made to shareholders not tax resident in Germany, the withholding tax may be at least partially refunded in accordance with an applicable double taxation treaty Germany has entered into with the respective shareholder's country of residence if the shares neither form part of the assets of a permanent establishment or a fixed place of business in Germany, nor form part of business assets for which a permanent representative in Germany has been appointed. The withholding tax refund is generally granted by the German Federal Central Tax Office (at the above address) upon application in such a manner that the difference between the total amount withheld, including the solidarity surcharge, and the reduced withholding tax actually owed under the relevant double taxation treaty (generally 15%) is refunded by the German Federal Central Tax Office. A refund is not required if the Federal Central Tax Office has, upon application on the officially prescribed form, issued an exemption certificate (*Freistellungsbescheinigung*) which documents that the prerequisites for the application of the reduced withholding tax rates have been met. Dividends covered by the exemption certificate of the shareholder are then only subject to the reduced withholding tax rates stipulated in the exemption certificate.

Forms for the reimbursement and the exemption from the withholding at source procedure are available at the German Federal Central Tax Office (at the above address or online at http://www.bzst.bund.de) as well as at German embassies and consulates.

If dividends are distributed to corporations subject to non-resident taxation in Germany, *i.e.*, corporations with no registered office or place of management in Germany and if the shares neither belong to the assets of a permanent establishment or fixed place of business in Germany nor are part of business assets for which a permanent representative in Germany has been appointed, two-fifths of the tax withheld at the source can generally be refunded even if not all of the prerequisites for a refund under the Parent-Subsidiary Directive or an applicable double taxation treaty are fulfilled. The relevant application forms are available at the German Federal Central Tax Office (at the above address).

The aforementioned possibilities for an exemption from or a refund of withholding tax depend on certain other conditions being met (particularly the fulfillment of so-called substance requirements – *Substanzerfordernisse*).

Pursuant to a special rule, the aforementioned withholding tax reliefs as well as the credit of withholding tax described in the section *18.2.2. "— Taxation of Dividends of Shareholders with a Tax Domicile in Germany"* below for shares held as non-business and as business assets will only be granted if the shareholder (i) has been the economic owner of the shares for a continuous period of at least 45 days during the period starting 45 days prior to the date when the dividend becomes due and ending 45 days after such date (the "**Minimum Holding Period**" (*Mindesthaltedauer*)), (ii) has been exposed (if taking into account claims of the shareholder from transactions reducing the risk of changes of the market value of the shares and corresponding claims of related parties of the shareholder) to at least 70.0% of the risk resulting from a decrease-in-value of the shares continuously during the Minimum Holding Period (the minimum change-in-value risk (*Mindestwertänderungsrisiko*)), and (iii) is not obliged to forward (*vergüten*) these dividends, directly or indirectly, in total or to more than 50.0% to another person.

In the event that a shareholder tax resident in Germany does not meet the aforementioned three requirements, three fifths of the withholding tax levied on the dividends (*i.e.*, 15% of the dividends) is not creditable, but may, upon application, be deducted when determining the shareholder's taxable income in an assessment procedure. Shareholders who do not meet the requirements but who have, nevertheless, not suffered a withholding tax deduction on the dividends (for example, due to the presentation of a non-assessment certificate) or have already obtained a refund of the

taxes withheld, are obliged to notify their competent tax office thereof and to make the payment of an amount corresponding to the amount which would otherwise be withheld. The special rule on the restriction of withholding tax credit does not apply to a shareholder if either (i) his or her amount of dividend income on shares (including shares of the Company) and certain profit participation rights (*Genussrechte*) does not exceed an amount of EUR 20,000.00 in a given tax assessment period or if (ii) he or she has been, upon actual receipt of the dividend, the economic owner of the shares for a continuous period of at least one year, whereby shares of the shareholder acquired first are deemed to be sold first (first in – first out).

In the event that a shareholder not tax resident in Germany does not meet the aforementioned three requirements, a refund of the withholding tax pursuant to a double taxation treaty is not available. This restriction only applies if (i) the applicable double taxation treaty provides for a tax reduction leading to an applicable tax rate of less than 15%, (ii) the shareholder is not a corporation that directly holds at least a participation of 10% of the equity capital of the Company and is subject to tax on its income and profits in its state of residence without being exempt, and (iii) the shareholder has not been, upon actual receipt of the dividend, the economic owner of the shares for a continuous period of at least one year, whereby shares of the shareholder acquired first are deemed to be sold first (first in – first out).

18.2.2. Taxation of Dividends of Shareholders with a Tax Domicile in Germany

This section applies to shareholders with a tax domicile in Germany (*i.e.*, persons whose residence, habitual abode, statutory seat, or place of effective management and control is located in Germany).

18.2.2.1. Shares Held as Non-Business Assets

Dividends distributed to shareholders with a tax domicile in Germany whose shares are held as non-business assets form part of their taxable capital investment income, which is subject to a special uniform income tax rate (*Abgeltungsteuersatz*) of 25% plus solidarity surcharge of 5.5% thereon (*i.e.*, 26.375% in total plus church tax, if applicable). The income tax owed for this dividend income is in general satisfied by the withholding tax withheld by the Dividend Paying Agent (flat-rate withholding tax (*Abgeltungsteuer*)). Income-related expenses cannot be deducted from the shareholder's capital investment income (including dividends), except for an annual lump-sum deduction (*Sparer-Pauschbetrag*) of EUR 801 (EUR 1,602 for married couples and registered partners jointly assessed). However, the shareholder may request that his capital investment income (including dividends) along with his other taxable income be subject to progressive income tax rate (instead of the uniform tax rate (*Abgeltungsteuersatz*) for capital investment income) if this results in a lower tax burden. In this case also, income-related expenses cannot be deducted from the capital investment income, except for the aforementioned annual lump-sum deduction.

If the withholding tax deduction does not satisfy the tax liability of the shareholder, the withholding tax will generally be credited against the progressive income tax and any excess amount will be refunded if the requirements of the special rule on the restriction of withholding tax credit (see *18.2.1. "— Withholding Tax"*) are fulfilled.

Exceptions from the flat-rate withholding tax also apply upon application for shareholders who have a shareholding of at least 25% in the Company and for shareholders who have a shareholding of at least 1% in the Company and are able to entrepreneurially influence the business activities of the company through a professional work for the Company (the latter alternative is applicable for tax assessment periods from 2017 onwards). In this situation, the tax treatment described at *18.2.2.2.2. "— Shares Held as Business Assets — Sole Proprietors"* applies.

The church tax in the case of taxpayers subject to church tax will be withheld by way of an automated procedure and remitted to the religious community levying the tax. Church tax withheld at source may not be deducted as a special expense (*Sonderausgabe*) in the course of the tax assessment, but the Dividend Paying Agent may reduce the standard withholding tax rate (including the solidarity surcharge of 26.375%) by the church tax to be withheld on the dividends. Where shareholders have lodged a timely written objection with the German Federal Central Tax Office (*Bundeszentralamt für Steuern* (at the above address)) (so-called blocking notice (*Sperrvermerk*)) as regards the automated retrieval of data on their religious affiliation, church tax will not be automatically deducted. In this case, a shareholder subject to church tax is obliged to declare the dividends in his income tax return. The church tax on the dividends is then levied by way of a tax assessment.

Shareholders who are subject to German tax residents taxation and hold their shares as non-business assets may be paid the dividends without deduction of withholding tax if certain prerequisites are met, in particular, if the shareholder has provided a non-assessment certificate (*Nichtveranlagungs-Bescheinigung*) or an exemption instruction (*Freistellungsauftrag*) and the exempt amount indicated therein has not yet been exhausted.

As an exemption, dividend payments that are funded from the Company's contribution account for tax purposes (*steuerliches Einlagekonto; § 27 KStG*) and are paid to shareholders with a tax domicile in Germany whose shares are held as non-business assets, do – contrary to the above – not form part of the shareholder's taxable income but reduce the acquisition costs for the underlying shares. This results in a higher capital gain in case of the shares' disposal (see *18.3. "— Taxation of Capital Gains"*). However, this will not apply if (i) the shareholder or, in the event of a gratuitous transfer, its legal predecessor, or, if the shares have been gratuitously transferred several times in succession, one of his legal predecessors at any point during the five years preceding the (deemed, as the case may be,) disposal directly or indirectly held at least 1% of the share capital of the Company (a "**Qualified Holding**") and (ii) the dividend payment funded from the Company's contribution account for tax purposes exceeds the actual acquisition costs of the shares. In such a case of a Qualified Holding, a dividend payment funded from the Company's contribution account for tax purposes is deemed a sale of the shares and is taxable as a capital gain if and to the extent the dividend payment funded from the Company's contribution account for tax purposes exceeds the acquisition costs of the shares. In this case the taxation corresponds with the description in the section *18.3.1.1. "— Taxation of Capital Gains — Taxation of Capital Gains of Shareholders with a Tax Domicile in Germany — Shares and Subscription Rights Held as Non-Business Assets*" made with regard to shareholders maintaining a Qualified Holding.

18.2.2.2. Shares Held as Business Assets

Dividends from shares held as business assets of a shareholder with a tax domicile in Germany are not subject to the flat-rate withholding tax. However, dividends are generally subject to the withholding tax on capital investment income of 25% plus 5.5% solidarity surcharge thereon, resulting in an aggregate tax rate of 26.375%, plus church tax for individuals, if applicable. The withholding tax (including the solidarity surcharge and church tax, if applicable) withheld and paid by the Dividend Paying Agent will generally be credited against the shareholder's income or corporate income tax liability (including the solidarity surcharge and church tax, if applicable) or refunded in the amount of any excess if the requirements of the special rule on the restriction of withholding tax credit (see *18.2.1. "— Withholding Tax"*) are fulfilled. The taxation depends on whether the shareholder is a corporation, a sole proprietor or a partnership (co-entrepreneurship).

Dividend payments that are funded from the Company's contribution account for tax purposes (*steuerliches Einlagekonto; § 27 KStG*) and are paid to shareholders with a tax domicile in

Germany whose shares are held as business assets, are generally fully tax-exempt in the hands of such shareholder but reduce the acquisition costs for the underlying shares. To the extent the dividend payments funded from the Company's contribution account for tax purposes exceed the actual acquisition costs of the shares, a taxable capital gain occurs. The taxation of such gain corresponds with the description in the section *18.3.1.1. "— Taxation of Capital Gains — Taxation of Capital Gains of Shareholders with a Tax Domicile in Germany — Shares and Subscription Rights Held as Non-Business Assets*" made with regard to shareholders whose shares are held as business assets.

18.2.2.2.1. Corporations

If the shareholder is a corporation with a tax domicile in Germany, dividends paid out are in general effectively 95% exempt from corporate income tax and the solidarity surcharge. 5% of the dividends are treated as non-deductible business expenses and are therefore subject to corporate income tax (plus the solidarity surcharge) at a total tax rate of 15.825%. In other respects, business expenses actually incurred in direct relation to the dividends may be deducted. However, dividends are not exempt from corporate income tax (including solidarity surcharge thereon) if the shareholder only holds a direct participation of less than 10% in the Company's registered share capital at the beginning of the calendar year ("**Portfolio Participation**" - *Streubesitzbeteiligung*). Participations of at least 10% acquired during a calendar year are deemed to have been acquired at the beginning of the calendar year. Participations which a shareholder holds through a partnership (including those that are co-entrepreneurships (*Mitunternehmerschaften*)) are attributable to the shareholder only on a *pro rata* basis at the ratio of the interest share of the shareholder in the assets of the relevant partnership.

Dividends (after deducting business expenses economically related to the dividends) are subject to trade tax in the full amount, unless the shareholder held at least 15% of the Company's registered share capital at the beginning of the relevant tax assessment period . In the latter case, the dividends are not subject to trade tax; however, trade tax is levied on the amount considered to be a non-deductible business expense (amounting to 5.0% of the dividend). Trade tax depends on the municipal trade tax multiplier applied by the relevant municipal authority.

Special rules apply to dividends received by companies active in the financial and insurance sectors, as well as pension funds (see *18.4. "— Special Treatment of Companies in the Financial and Insurance Sectors and Pension Funds"*).

18.2.2.2.2. Sole Proprietors

If the shares are held as business assets by a sole proprietor with a tax domicile in Germany, only 60.0% of the dividends are subject to a progressive income tax (plus the solidarity surcharge) at a total tax rate of up to approximately 47.5%, known as the partial income method (*Teileinkünfteverfahren*). The partial income method does not apply with respect to church tax (if applicable). Only 60.0% of the business expenses economically related to the dividends are tax-deductible. If the shares belong to a domestic permanent establishment in Germany of a business operation of the shareholder, the dividend income (after deducting business expenses economically related thereto) is not only subject to income tax but is also fully subject to trade tax, unless the shareholder held at least 15% of the Company's registered share capital at the beginning of the relevant tax assessment period. In this latter case, the net amount of dividends, *i.e.*, after deducting directly related expenses, is exempt from trade tax. As a rule, trade tax can be credited against the shareholder's personal income tax, either in full or in part, by means of a lump-sum tax credit method, depending on the level of the municipal trade tax multiplier and certain individual tax-relevant circumstances of the taxpayer.

18.2.2.2.3. Partnerships

If the shareholder is a partnership with a tax domicile in Germany, the income or corporate income tax, as the case may be, and the solidarity surcharge are not levied at the level of the partnership but at the level of the respective partner. The taxation for every partner depends on whether the partner is a corporation or an individual. If the partner is a corporation, the dividends contained in the profit share of the shareholder will be taxed in accordance with the principles applicable for corporations (see *18.2.2.2.1. "— Corporations"*). If the partner is an individual, the taxation is in line with the principles described for sole proprietors (see *18.2.2.2.2. "— Sole Proprietors"*). Upon application and subject to further conditions, an individual as a partner can have his personal income tax rate lowered for earnings not withdrawn from the partnership.

In addition, the dividends are generally subject to trade tax in the full amount at the level of a commercial or deemed commercial partnership if the shares are attributed to a German permanent establishment of the partnership. If a partner of the partnership is an individual, the portion of the trade tax paid by the partnership pertaining to his profit share will generally be credited, either in full or in part, against his personal income tax by means of a lump-sum method – depending on the level of the municipal trade tax multiplier and certain individual tax-relevant circumstances of the taxpayer. Due to a lack of case law and administrative guidance, it is unclear how the rules for the taxation of dividends from Portfolio Participations (see *18.2.2.2.1. "— Corporations"*) might impact the trade tax treatment at the level of the partnership. Shareholders are strongly recommended to consult their tax advisers.

18.2.3. Taxation of Dividends of Shareholders with a non-German Tax Domicile

Shareholders without a tax domicile in Germany, whose shares are attributable to a German permanent establishment or fixed place of business or are part of business assets for which a permanent representative in Germany has been appointed, are liable for tax in Germany on their dividend income. In this respect the provisions outlined above for shareholders with a tax domicile in Germany whose shares are held as business assets apply accordingly (see *18.2.2.2. "— Shares Held as Business Assets"*). The withholding tax (including the solidarity surcharge) withheld and passed on will generally be credited against the income or corporate income tax liability or refunded in the amount of any excess if the requirements of the special rule on the restriction of withholding tax credit (see *18.2.1. "— Withholding Tax*") are fulfilled.

In all other cases, any tax liability in Germany for dividends received by shareholders resident outside of Germany will be discharged through the withholding of the withholding tax by the Dividend Paying Agent. A refund or exemption is granted only as discussed under *18.2.1. "— Withholding Tax*".

Dividend payments that are funded from the Company's contribution account for tax purposes (*steuerliches Einlagekonto; § 27 KStG*) are generally not subject to German taxation.

18.3. Taxation of Capital Gains

18.3.1. Taxation of Capital Gains of Shareholders with a Tax Domicile in Germany

This section applies to shareholders with a tax domicile in Germany (*i.e.*, persons whose residence, habitual abode, statutory seat, or place of effective management and control is located in Germany).

18.3.1.1. Shares and Subscription Rights Held as Non-Business Assets

Gains on the disposal of shares acquired after December 31, 2008 by a shareholder with a tax domicile in Germany and held as non-business assets are generally – regardless of the holding period – subject to a uniform tax rate (*Abgeltungsteuersatz*) on capital investment income in Germany (25% plus the solidarity surcharge of 5.5% thereon, *i.e.*, 26.375% in total plus any church tax, if applicable). The same applies to capital gains from the sale of subscription rights which have been granted for such shares.

By contrast, gains from the sale of shares that were acquired by the shareholder prior to January 1, 2009 and gains from the sale of subscription rights that were granted for such shares are not taxable. If the shareholder acquired shares before January 1, 2009 as well as on or after January 1, 2009 and if these shares are kept in the same custodial account, it will be deemed that those shares that were acquired first are sold first.

The taxable capital gain is equal to the difference between (a) the proceeds of the disposal and (b) the acquisition costs of the shares or subscription rights plus the expenses related directly and materially to the disposal. Dividend payments that are funded from the Company's contribution account for tax purposes (*steuerliches Einlagekonto; § 27 KStG*) reduce the original acquisition costs; if dividend payments that are funded from the Company's contribution account for tax purposes exceed the acquisition costs, negative acquisition costs – which can increase a capital gain – can arise in case of shareholders, whose shares are held as non-business assets and do not qualify as a Qualified Holding. The acquisition costs for subscription rights originally granted by the Company are deemed to be EUR 0.00 if the subscription rights are granted for shares that were acquired after December 31, 2008. If subscription rights are acquired against payment, the expenses incurred for the acquisition constitute the acquisition costs. According to the tax authorities' view, the exercise of subscription rights is not considered a sale of such subscription rights. Rather, the shares obtained through the exercise of subscription rights are considered to be acquired at subscription price (plus acquisition costs of subscription rights acquired against payment, if any) and at the time of the exercise of the subscription rights.

Only an annual lump-sum deduction of EUR 801 (EUR 1,602 for married couples and registered partners jointly assessed) may be deducted from the entire capital investments income. It is generally not possible to deduct income-related expenses in connection with capital gains, except for the expenses directly related in substance to the disposal which can be deducted when calculating the capital gains. Losses from the disposal of shares may only be offset against profits from capital investments arising from the disposal of the Company's shares or other shares in stock corporations during the same assessment period or in future assessment periods. Losses on disposals of subscription rights may be offset against positive capital investment income without restrictions (*i.e.,* including such from the disposal of shares in stock corporations).

If the shares or subscription rights are held in custody or administered by a domestic credit or financial services institution, domestic securities trading company or a domestic securities trading bank, including domestic branches of foreign credit institutions or financial service institutions, or if such an office executes the disposal of the shares or subscription rights and pays out or credits the capital gains (each a "**Domestic Paying Agent**"), the tax on the capital gains will generally be satisfied by the Domestic Paying Agent withholding the withholding tax on investment income in the amount of 26.375% (including the solidarity surcharge, but plus any church tax, if applicable) on the capital gain and transferring it to the tax authority for the account of the seller. If the shares or subscription rights were held in custody or administered by the respective Domestic Paying Agent continuously after acquisition, the amount of tax withheld is generally based on the difference between the proceeds from the sale, after deducting expenses directly related to the

sale, and the amount paid to acquire the shares or subscription rights. However, the withholding tax rate of 25% plus the 5.5% solidarity surcharge thereon and any church tax (if applicable), will be applied to 30% of the gross sales proceeds if the shares or subscription rights were not administered by the same custodian bank since acquisition and the original cost of the shares or subscription rights cannot be verified or such verification is not admissible. In this case, the shareholder is entitled to, and in case the actual gain is higher than 30% of the gross proceeds must, verify the original costs of the shares or subscription rights in his or her annual income tax return.

The church tax deduction for capital gains is performed by way of standardized tax withholding procedure by the Domestic Paying Agent withholding such tax. The principles outlined above for church tax on dividend income (see *18.2.2.1. "— Taxation of Dividends — Taxation of Dividends of Shareholders with a Tax Domicile in Germany — Shares Held as Non-Business Assets"*) apply accordingly.

The shareholder can apply for his total capital investment income, together with his other taxable income, to be subject to progressive income tax rate as opposed to the uniform tax rate on investment income (*Abgeltungsteuersatz*), if this results in a lower tax liability. In this case, the withholding tax is credited against the progressive income tax and any resulting excess amount will be refunded. Limitations on offsetting losses are applicable. Further, income-related expenses are non-deductible, except for the annual lump-sum deduction. Shareholders who are subject to German residents taxation and hold their shares or subscription rights as non-business assets may realize capital gains without deduction of tax on capital investment income and solidarity surcharge if certain prerequisites are met, particularly if the shareholder has provided a non-assessment certificate (*Nichtveranlagungs-Bescheinigung*) or an exemption instruction (*Freistellungsauftrag*) and the exempt amount indicated therein has not yet been exhausted.

If the withholding tax or, if applicable, the church tax on capital gains is not withheld by a Domestic Paying Agent, the shareholder is required to declare the capital gains in his income tax return. The income tax and any applicable church tax on the capital gains will then be collected by way of assessment.

In case of a "**Qualified Holding**", the capital gain deriving from the disposal of the shares or subscription rights is not subject to the flat-rate withholding tax, but to the progressive income tax regime. In this case the partial income method applies to gains on the disposal of shares, which means that only 60% of the capital gains are subject to tax and only 60% of the losses on the disposal and expenses economically related thereto are tax deductible. In case of a Qualified Holding, the partial income method should apply accordingly to gains or losses from the disposal of subscription rights. In case of a Qualified Holding, acquisition costs for subscription rights are determined by the total value approach (*Gesamtwertmethode*), which takes into account that the acquisition of subscription rights can be traced back to the acquisition costs of the existing shares. Therefore, the granting of subscription rights causes part of the original acquisition costs of the existing shares to be split off, *i.e.,* the acquisition costs of the existing shares are reduced by the amount which is attributable and split off to the subscription rights. The exercise of subscription rights should, also in the case of a Qualified Holding, not be considered a sale of such subscription rights. Rather, the acquisition costs of the subscription rights increase the acquisition costs of the newly acquired shares. Even though withholding tax is withheld by a Domestic Paying Agent in the case of a Qualified Holding, this does not satisfy the tax liability of the shareholder. Consequently, a shareholder must declare his capital gains in his income tax returns. The withholding tax (including the solidarity surcharge and church tax, if applicable) withheld and paid will be credited

against the shareholder's income tax liability on his tax assessment (including the solidarity surcharge and any church tax if applicable) or refunded in the amount of any excess.

18.3.1.2. Shares and Subscription Rights Held as Business Assets

Gains on the sale of shares or subscription rights held as business assets of a shareholder with a tax domicile in Germany are not subject to uniform withholding tax. Withholding tax may only be withheld in the case the shares are kept with a Domestic Paying Agent. Subject to certain prerequisites, the tax on capital investment income withheld and remitted to the tax authorities will be imputed towards the shareholder's income tax liability and any excess amount paid will be refunded. Subject to certain requirements, however, the Domestic Paying Agent may refrain from deducting tax on capital investment income if (i) the shareholder is a corporation subject to German residents taxation, an association of individuals or an estate or (ii) the shares or subscription rights form part of the business assets of a business operation in Germany and the shareholders declares such to the Domestic Paying Agent in the officially prescribed form. Should the Domestic Paying Agent nonetheless have withheld tax on capital investment income, the tax withheld and remitted to the tax authorities (including solidarity surcharge, and church tax, if applicable) will be credited against the shareholder's personal income tax or corporate income tax liability and any excess amount paid will be refunded.

The taxation of the capital gains depends on whether the shareholder is a corporation, a sole proprietor or a partnership (co-entrepreneurship). Dividend payments that are funded from the Company's contribution account for tax purposes (*steuerliches Einlagekonto; § 27 KStG*) reduce the original acquisition costs. In case of disposal, a higher taxable capital gain can arise therefrom. If the dividend payments exceed the shares' book value for tax purposes, a taxable capital gain can arise.

In the case of shares held as business assets, acquisition costs for subscription rights are determined by the total value approach (*Gesamtwertmethode*), according to which the granting of subscription rights causes part of the original acquisition costs of the existing shares to be split off, *i.e.,* the acquisition costs of the existing shares are reduced by the amount which is attributable and split off to the subscription rights. The exercise of subscription rights, also in the case of shares held as business assets, should not be considered a sale of such subscription rights.

18.3.1.2.1. Corporations

If the shareholder is a corporation with a tax domicile in Germany, the gains on the disposal of shares are, in general, effectively 95.0% exempt from corporate income tax (including the solidarity surcharge) and trade tax, regardless of the size of the participation and the holding period. 5.0% of the gains are treated as non-deductible business expenses and are therefore subject to corporate income tax (plus the solidarity surcharge) at a tax rate amounting to 15.825% and trade tax (depending on the municipal trade tax multiplier applied by the respective municipal authority). As a rule, losses on disposals and other profit reductions in connection with shares (for example, from a write down) cannot be deducted as business expenses.

Contrary to that, capital gains from the sale of subscription rights are fully subject to corporate income tax (plus solidarity surcharge thereon) and trade tax. Losses from the sale of subscription rights and other reductions in profit in connection with the subscription rights are – subject to general restrictions – deductible as business expenses.

Special rules apply to capital gains realized by companies active in the financial and insurance sectors, as well as pension funds (see *18.4. "— Special Treatment of Companies in the Financial and Insurance Sectors and Pension Funds"*).

18.3.1.2.2. Sole Proprietors

If the shares are held as business assets by a sole proprietor with a tax domicile in Germany, only 60.0% of the gains on the disposal of the shares are subject to a progressive income tax (plus the solidarity surcharge) at a total tax rate of up to approximately 47.5% (partial-income method). Only 60.0% of the losses on the disposal and expenses economically related thereto are tax deductible. The partial income method does not apply with respect to church tax (if applicable). If the shares belong to a German permanent establishment of a business operation of the sole proprietor, 60.0% of the gains of the disposal of the shares are, in addition, subject to trade tax.

The partial income method should also apply to capital gains or losses from the sale of subscription rights held as business assets by a sole proprietor. Otherwise, the entire capital gains would be subject to income tax (plus solidarity surcharge and plus church tax, if applicable) and trade tax. In this case, losses and other expenses related to the subscription rights would be tax deductible in full.

Trade tax can be credited towards the shareholder's personal income tax, either in full or in part, by means of a lump-sum tax credit method – depending on the level of the municipal trade tax multiplier and certain individual tax-relevant circumstances of the taxpayer.

18.3.1.2.3. Partnerships

If the shareholder is a partnership with a tax domicile in Germany, the income or corporate income tax is not levied at the level of the partnership but at the level of the respective partners. The taxation depends on whether the partner is a corporation or an individual. If the partner is a corporation, the gains on the disposal of the shares as contained in the profit share of the partner will be taxed in accordance with the principles applicable for corporations (see *18.3.1.2.1. "— Corporations"*). For capital gains in the profit share of a partner that is an individual, the principles outlined above for sole proprietors apply accordingly (partial-income method, see *18.3.1.2.2. "— Sole Proprietors"*). Upon application and subject to further conditions, an individual as a partner can obtain a reduction of his personal income tax rate for earnings not withdrawn from the partnership.

In addition, gains on the disposal of shares or subscription rights are subject to trade tax at the level of a commercial or deemed commercial partnership, if the shares or subscription rights are attributed to a domestic permanent establishment of a business operation of the partnership: Generally, at 60% as far as they are attributable to the profit share of an individual as the partner of the partnership, and, currently, at 5% as far as they are attributable to the profit share of a corporation as the partner of the partnership. Losses on disposals and other profit reductions in connection with the shares are currently not considered for the purposes of trade tax if they are attributable to the profit share of a corporation, and are taken into account at 60% in the context of general limitations if they are attributable to the profit share of an individual.

Contrary thereto, gains or losses on the disposal of subscription rights are – subject to general restrictions – fully taken into account for trade tax purposes to the extent they are attributable to the profit share of a corporation as the partner of the partnership. As far as capital gains on the disposal of subscription rights are attributable to the profit share of an individual as the partner of the partnership, they should only be subject to trade tax in the amount of 60%; losses and reductions in profit in connection with the sale of subscription rights should – subject to general subscriptions – in this case be deductible only in the amount of 60%.

If the partner of the partnership is an individual, the portion of the trade tax paid by the partnership attributable to his profit share will generally be credited, either in full or in part, against his personal

income tax by means of a lump-sum method – depending on the level of the municipal trade tax multiplier and certain individual tax-relevant circumstances of the taxpayer.

18.3.2. Taxation of Capital Gains of Shareholders with a non-German Tax Domicile

Capital gains derived from the disposal of shares or subscription rights by shareholders with no tax domicile in Germany are only subject to German tax if the selling shareholder has a Qualified Holding in the Company or the shares or subscription rights belong to a domestic permanent establishment or fixed place of business or are part of business assets for which a permanent representative in Germany has been appointed.

In the case of a Qualified Holding, the full gain from the disposal of subscription rights is in general subject to corporate income tax plus the solidarity surcharge, if the shareholder is a corporation. Pursuant to a decision of the German Federal Fiscal Court (*Bundesfinanzhof*) dated May 31, 2017 (Federal Tax Gazette (*Bundessteuerblatt*), part II of 2018, p. 144), in case of a Qualified Holding, the capital gain on the disposal of shares is not subject to German taxation if the shareholder is a corporation but no tax resident in Germany and neither maintains a permanent establishment nor has appointed a permanent representative in Germany.

If the shareholder is a private individual, only 60.0% of the gains on the disposal of the shares are subject to progressive income tax plus the solidarity surcharge thereon and church tax, if applicable. The partial income method should also apply to gains from the disposal of subscription rights by individual shareholders. However, most double taxation treaties provide for a partial or full relief from German taxation and assign the right of taxation to the shareholder's country of residence. Based on German domestic law, subscription rights should generally equal shares in companies for purposes of double taxation treaties. Where a Domestic Paying Agent is involved, withholding tax on capital gains is generally levied at a rate of 25.0% (plus 5.5% solidarity surcharge thereon, resulting in an aggregate withholding tax rate of 26.375%). However, if (i) the shares or subscription rights are not held through a permanent establishment or fixed place of business or as business assets for which a permanent representative is appointed in Germany and (ii) a Domestic Paying Agent is involved, then, pursuant to a tax decree issued by the German Federal Ministry of Finance on January 18, 2016, the Domestic Paying Agent will in general not be required to withhold the tax on capital investment income (plus solidarity surcharge thereon). In the case of a Qualified Holding, the capital gains must be declared in a tax return and will be taxed via an assessment procedure if no exemption under a double taxation treaty or under domestic law applies.

With regard to gains or losses on the disposal of shares or subscription rights belonging to a domestic permanent establishment or fixed place of business, or which are part of business assets for which a permanent representative in Germany has been appointed, the above-mentioned provisions pertaining to shareholders with a tax domicile in Germany whose shares or subscription rights are business assets apply accordingly (see *18.3.1.2. "—Shares and Subscription Rights Held as Business Assets"*The Domestic Paying Agent can refrain from deducting the withholding tax if the shareholder declares to the Domestic Paying Agent on theofficially prescribed form that the shares or subscription rights form part of domestic business assets and certain other requirements are met.

18.4. Special Treatment of Companies in the Financial and Insurance Sectors and Pension Funds

If credit institutions (*Kreditinstitute*) or financial services institutions (*Finanzdienstleistungsinstitute*) hold or sell shares or subscription rights that are allocable to their trading portfolio

(*Handelsbestand*) pursuant to Section 340e para. 3 of the German Corporate Code (HGB), they will neither be able to benefit from the partial income method nor be entitled to the effective 95% exemption from corporate income tax plus the solidarity surcharge and any applicable trade tax. Thus, dividend income and capital gains are fully taxable. The same applies to shares or subscription rights acquired by financial institutions in the meaning of the German Banking Act (KWG) held in the majority by credit institutions or financial services institutions and where the shares are to be allocated to the current assets (*Umlaufvermögen*) as of the date of acquisition. The preceding sentence applies accordingly for shares and subscription rights held in a permanent establishment in Germany by financial institutions, financial service institutions and financial institutions tax resident in another EU Member State or in other signatory states of the Treaty on the EEA.

Likewise, the tax exemption described earlier afforded to corporations for dividend income and capital gains from the sale of shares does not apply to shares that qualify as a capital investment in the case of life insurance and health insurance companies, or those which are held by pension funds.

However, an exemption to the foregoing, and thus a 95% effective tax exemption, applies to dividends obtained by the aforementioned companies, to which the Parent-Subsidiary Directive applies.

18.5. Inheritance and Gift Tax

The transfer of shares or subscription rights to another person or by way of inheritance or gift is generally subject to German inheritance or gift tax if:

(i) the place of residence, habitual abode, place of management or registered office of the decedent, the donor, the heir, the donee or another acquirer is, at the time of the asset transfer, in Germany, or such person, as a German national, has prior to the transfer not spent more than generally five consecutive years outside of Germany without maintaining a place of residence in Germany, or

(ii) the decedent's or donor's shares or subscription rights belonged to business assets for which there had been a permanent establishment in Germany or a permanent representative had been appointed; or

(iii) the decedent or the donor, at the time of the succession or gift, held a direct or indirect interest of at least 10% of the Company's share capital either alone or jointly with other related parties.

The small number of double taxation treaties in respect of inheritance and gift tax which Germany has concluded to date usually provide for German inheritance or gift tax only to be levied in the cases under (i) and, subject to certain restrictions, in the cases under (ii). Special provisions apply to certain German nationals living outside of Germany and to former German nationals.

18.6. Other Taxes

No German capital transfer taxes, value-added-tax, stamp duties or similar taxes are currently levied on the purchase or disposal or other forms of transfer of the shares or subscription rights. However, an entrepreneur may opt to subject disposals of shares or subscription rights, which are in principle exempt from value-added-tax, to value-added-tax if the sale is made to another entrepreneur for the entrepreneur's business. Wealth tax is currently not levied in Germany.

On February 14, 2013, the EU Commission adopted a proposal for a Council Directive (the "**Draft Directive**") on a common financial transaction tax. According to the Draft Directive, the FTT shall be implemented in eleven EU member states (Austria, Belgium, Estonia, France, Germany, Greece, Italy, Portugal, Spain, Slovakia and Slovenia). The FTT as provided under the Draft Directive was originally scheduled to be applicable as of January 1, 2014. In 2015, Estonia stated that it will not participate in implementing the proposed FTT.

The proposed FTT has a very broad scope and could, if introduced in the form of the proposal, apply to certain dealings in the shares or subscription rights in certain circumstances.

Nevertheless, the FTT remains subject to negotiation between the participating member states and was (and most probably will be) the subject of legal challenge. It may still be adopted and altered prior to its adoption. Moreover, once any directive has been adopted, it will need to be implemented into the respective domestic laws of the participating member states, and the domestic provisions implementing the directive might deviate from the directive itself. Finally, additional EU member states may decide to participate in or to dismiss the implementation.

Prospective holders of the shares or subscription rights should consult their own tax advisers in relation to the consequences of the FTT.

19. FINANCIAL INFORMATION

Unaudited Consolidated Interim Financial Statements of Epigenomics AG Prepared in Accordance with IFRS as of and for the Six-Month Period Ended June 30, 2019

QUARTERLY DEVELOPMENT OF KEY FIGURES (unaudited)

in EUR thousand except where indicated	Q2 2018	Q3 2018	Q4 2018	Q1 2019	Q2 2019
Statement of Profit or Loss					
Revenue	462	544	218	331	348
Gross profit	337	416	66	238	276
EBIT	-2,578	-3,038	-4,029	-3,313	-4,666
EBITDA	-2,502	-2,961	-3,949	-3,210	-4,528
EBITDA before share-based payment costs	-2,200	-2,618	-3,433	-2,958	-4,287
Net loss for the period	-2,554	-2,974	-3,944	-3,018	-4,398
Balance Sheet (at the respective reporting dates)					
Non-current assets	3,189	3,372	3,553	4,472	4,985
Current assets	10,977	9,116	18,274	14,185	10,562
Non-current liabilities	43	44	47	646	851
Current liabilities	9,083	10,067	3,167	2,226	2,993
Equity	5,040	2,377	18,613	15,785	11,703
Equity ratio (in %)	35.6	19.0	85.3	84.6	75.3
Total assets	14,166	12,488	21,827	18,657	15,547
Statement of Cash Flows					
Cash flow from operating activities	-1,763	-2,674	-3,531	-4,305	-3,468
Cash flow from investing activities	7	-17	775	-27	-17
Cash flow from financing activities	-2	-65	13,413	-190	-77
Net cash flow	-1,758	-2,755	10,656	-4,522	-3,563
Cash consumption	-1,756	-2,691	-2,756	-4,332	-3,485
Cash and cash equivalents at the end of the period	8,579	5,829	16,487	12,126	8,437
Stock					
Weighted-average number of shares issued	24,014,360	24,014,360	36,021,540	36,021,540	36,021,540
Earnings per share (basic and diluted, in EUR)	-0.11	-0.12	-0.11	-0.08	-0.12
Share price at the end of the period (in EUR)	2.21	2.19	1.77	1.80	1.79
Number of employees at the end of the period	42	43	44	43	44

Epigenomics AG – Report on the First Six Months of 2019

DEAR SHAREHOLDERS,

REIMBURSEMENT FOR EPI PROCOLON The first major progress in the first half of 2019 was the announcement of positive results from a microsimulation model at the beginning of January. Microsimulation models are important because many of the key guideline groups, whose opinions are highly valued by CMS, utilize these models to evaluate the effectiveness of a cancer screening test. We then submitted the results to a scientific journal for publication. Although, contrary to our expectations, the publication has taken longer than expected, we are very optimistic that the results will convince CMS and relevant clinical groups of the benefits of Epi proColon in terms of performance and increased screening rates in the U.S..

In March, U.S. Congressmen Donald Payne Jr. and Kenny Marchant introduced the "Donald Payne Sr. Colorectal Cancer Detection Act" (HR 1765) into the House of Representatives. The reintroduction of the bipartisan draft bill is a necessary step towards the reimbursement of our test via the legislative route. Meanwhile, the law has won numerous supporters on both sides of the aisle and especially in the key committees of Congress, which is why we are optimistic that the law will be voted on – if not individually, then as part of a larger legislative package.

On May 3, we achieved an important milestone. CMS accepted our application to review Epi proColon as part of a National Coverage Determination (NCD). With this step, no decision has yet been made on coverage. However, CMS are required to reach a final reimbursement decision within a maximum of nine months once they open the review process. Due to limited resources, CMS has not yet started the review process. We hope, however, that it will start soon so that we have a fixed timeframe, at the end of which there will be clarity about the reimbursement of Epi proColon.

Medicare reimbursement remains our key focus. Regretfully, the process is taking longer than we would like but we still remain optimistic and will continue to pursue all available paths to achieve coverage for Epi proColon.

RESEARCH AND DEVELOPMENT We continue to progress the development of our hepatocellular carcinoma (HCC – the most common type of liver cancer) test. The cross-sectional study in the United States is on track to be completed this year as well as the initiation of the FDA prospective study by year-end. Additionally, our automation project has been successfully completed with publication of the methods in the journal of a leading instrument manufacturer (Tecan). We are also tracking well with our FDA post-approval study. These R&D efforts will broaden the application of our core DNA methylation technologies for liquid biopsy
solutions.

FINANCIAL SITUATION After a reported loss of EUR 7.4 million at the end of the first half of the year, our liquidity fell to EUR 9.1 million compared with December 31, 2018. We still have adequate cash for the remainder of 2019 but as we have disclosed numerous times, we will need to raise funds in the second half of 2019 for 2020.

LOOKING AHEAD Due to the above-mentioned delays in the reimbursement decision in the U.S., we are adjusting our sales target of EUR 3 million to EUR 6 million for 2019, to EUR 2 million to EUR 4 million. We still expect to be within our estimated adjusted EBITDA range. We have important 2019 milestones to be achieved in the second half of 2019, specifically the publication of the microsimulation model and the opening of the NCD review process. We remain confident that we will achieve these goals.

Yours sincerely,

Greg Hamilton	Jorge Garces	Albert Weber
(CEO)	(CSO)	(EVP Finance)

– OUR STOCK

–

– Epigenomics AG – Common Shares	– Frankfurt Stock Exchange, Regulated Market (Prime Standard)
– ISIN	– DE000A11QW50
– Security code number	– A11QW5
– Ticker symbol	– ECX
– Reuters	– ECXG.DE
– Bloomberg	– ECX:GR
– Designated sponsor	– Pareto Securities AS
– Analysts	– Pareto Securities AS (Dennis Berzhanin) – First Berlin Equity Research GmbH (Simon Scholes) – goetzpartners (Martin Brunninger)

– Market data (Xetra/Frankfurt)	**June 30, 2018**	**Sept 30, 2018**	**Dec 31 2018**	**Mar 31, 2019**	**June 30, 2019**
– Numbers of shares outstanding	24,014,360	24,014,360	36,021,540	36,021,540	36,021,540
– Closing price (in EUR)	2.21	2.19	1.77	1.80	1.79
– Market capitalization (in EUR)	53,071,736	52,591,448	63,758,126	64,838,772	64,478,557

	Q2 2018	**Q3 2018**	**Q4 2018**	**Q1 2019**	**Q2 2019**
Average daily trading volume (units)	57,687	17,722	86,486	52,498	49,648
Highest closing price (in EUR)	4.02	2.49	2.70	2.00	2.08
Lowest closing price (in EUR)	1.89	2.11	1.70	1.57	1.77

– Epigenomics AG – American Depositary Receipts (ADRs)	– OTCQX Trading
– Structure	– Sponsored Level 1 ADR
– Ratio	– 1 ADR = 5 shares
– Ticker symbol	– EPGNY
– CUSIP	– 29428N102
– ISIN	– US29428N1028
– Depository bank/PAL	– BNY Mellon

Financials

FINANCIAL POSITION AND CASH FLOW

In the first half of 2019, cash outflow from operating activities increased by EUR 3,626 thousand from EUR 4,147 thousand in the first half of 2018 to EUR 7,773 thousand due to higher operating costs in the first six months of 2019. In addition, the receipt of payments for third-party projects in the previous year led to a lower cash outflow in 6M 2018.

Cash outflow from investing activities increased insignificantly in the first half of 2019 by EUR 11 thousand to EUR 44 thousand (6M 2018: EUR 33 thousand).

Cash outflow from financing activities amounted to EUR 268 thousand in the first half of 2019 (6M 2018: EUR 73 thousand). Included are payments for leasing contracts in the amount of EUR 94 thousand in accordance with the application of IFRS 16.

Our net cash outflow for the first six months of 2019 was EUR 8,085 thousand (6M 2018: EUR 4,253 thousand). Cash consumption increased to EUR 7,817 thousand in the first half of 2019, compared to EUR 4,180 thousand in the same period of the previous year.

Cash and cash equivalents amounted to EUR 8,437 thousand at the reporting date (December 31, 2018: EUR 16,487 thousand).

– RESULTS OF OPERATIONS

In the second quarter of 2019, we recorded revenue of EUR 348 thousand, a decrease compared to the second quarter of 2018 (EUR 462 thousand). In the first six months of 2019, total revenue decreased by 12% from EUR 771 thousand in the first half of 2018 to EUR 679 thousand. This was due to lower licensing revenue, which could not be fully offset by higher product revenue.

Product revenue increased by 36% – from EUR 250 thousand in the second quarter of 2018 to EUR 339 thousand in the second quarter of 2019 – and by 84% – from EUR 358 thousand in the first six months of 2018 to EUR 660 thousand in the first six months of 2019 – respectively. Licensing revenue decreased from EUR 212 thousand in the second quarter of 2018 to EUR 9 thousand in the second quarter of 2019, and from EUR 413 thousand in the first six months of 2019 to EUR 19 thousand in the first six months of 2019. The main reason for the decrease was the termination of the contract with our Chinese licensing partner.

Cost of sales amounted to EUR 72 thousand in the second quarter of 2019 (Q2 2018: EUR 125 thousand) and to EUR 165 thousand in the first half of 2019 (6M 2018: EUR 160 thousand). Our gross margin increased from 73% in the second quarter of 2018 to 79% in the same period of 2019 and decreased slightly from 79% in the first half of 2018 to 76% in the first half of 2019.

Other income of EUR 269 thousand in the second quarter of 2019 (Q2 2018: EUR 482 thousand) was mainly due to exchange rate gains from currency translation.

R&D costs increased from EUR 1,497 thousand in the second quarter of 2018 to EUR 2,284 thousand in the second quarter of 2019. In the six-month period, R&D costs increased by EUR 824 thousand from EUR 3,043 thousand in the previous year to EUR 3,867 thousand in the reporting period, which resulted from expenses in connection with the post-approval study for Epi proColon and the HCC study in the U.S.A..

Our selling and administrative expenses increased to EUR 2,465 thousand in the second quarter of 2019 from EUR 2,069 thousand in the comparable period of 2018. In the six-month period, selling and administrative expenses rose by EUR 976 thousand from EUR 3,883 thousand in the previous year to EUR 4,859 thousand in the reporting period, resulting from increased costs for legal advice and an increase in sales and marketing activities. In addition, the valuation of phantom stock rights in 2018 led to a reduction in costs.

Other expenses of EUR 462 thousand in the second quarter of 2019 (Q2 2018: EUR -169 thousand) were mainly due to exchange rate losses from currency translation.

In total, our operating costs increased to EUR 5.3 million in the second quarter of 2019 for the reasons mentioned above, compared to EUR 3.5 million in the same period of the prior year. Total operating costs rose from EUR 7.1 million to EUR 9.4 million in the first half of the year, which was less than planned.

The reported tax income of EUR 232 thousand in the second quarter of 2019 (Q2 2018: EUR 161 thousand) and of EUR 482 thousand in the first half of the year (6M 2018: EUR 328 thousand) relates exclusively to deferred taxes on the loss carryforwards of our U.S. subsidiary.

In the second quarter of 2019, a net loss of EUR 4.4 million (Q2 2018: EUR 2.6 million) was recognized. This resulted in a net loss of EUR 7.4 million for the first half of 2019 (6M 2018: EUR 5.8 million). The net loss per share for the quarter increased slightly from EUR 0.11 to EUR 0.12 and fell to EUR 0.21 (6M 2018: EUR 0.24) for the first half of 2019 due to the increase in the number of shares (as a result of the capital increase in the second half of 2018).

– NET ASSET POSITION

As of the reporting date, non-current assets rose from EUR 3.6 million as of December 31, 2018 to EUR 5.0 million; this was due to the increase in deferred tax assets and the first-time application of the new accounting standard IFRS 16, under which rights of use from rental agreements were capitalized. Current assets decreased from EUR 18.3 million at the beginning of the reporting period to EUR 10.6 million as of June 30, 2019 – largely due to the use of cash and cash equivalents during this period.

Due to the net loss for the period, total equity decreased by EUR 6.9 million to EUR 11.7 million as of the reporting date (December 31, 2018: EUR 18.6 million).

The equity ratio decreased to 75.3% as of the reporting date (December 31, 2018: 85.3%).

Compared to the closing balance sheet of 2018, non-current liabilities increased to EUR 851 thousand as of June 30, 2019 (December 31, 2018: EUR 47 thousand). Due to the first-time application of IFRS 16, this includes liabilities from rental and leasing agreements in the amount of EUR 804 thousand.

Current liabilities fell slightly from EUR 3.2 million as of December 31, 2018 to EUR 3.0 million as of June 30, 2019.

Employees

The total headcount of the Company as of June 30, 2019, was 44 (December 31, 2018: 44) and comprised 22 employees in R&D and 22 employees in SG&A functions.

Opportunities and Risks

Opportunities and risks in relation to the Company's business operations are described in detail in the management report published with our 2018 consolidated financial statements, which are available on the Company's website (*www.epigenomics.com*). There were no significant changes to the opportunities and risks during the reporting period.

Outlook

After estimating at the beginning of the year sales in the 2019 financial year in a range of EUR 3.0 million to EUR 6.0 million, we have to reduce our expectations due to the delays in the reimbursement decision in the U.S.A. and now regard a range of EUR 2.0 million to EUR 4.0 million as achievable. On the other hand, the aforementioned delays also lead to lower costs on the marketing and sales side, e.g. as a result of postponed marketing measures or positions to be filled later in the sales area. This will enable us to continue to meet our initial forecast for EBITDA before share-based payments while at the same time narrowing our bandwidth. We now expect EBITDA before share-based payments for 2019 to range from EUR -12.5 million to EUR -14.0 million. In the first quarter of 2019, adjusted EBITDA of EUR -3.0 million was offset by cash consumption of EUR 4.3 million. This was mainly due to payments for which the corresponding expenses had already been incurred in 2018. This period effect led to the unusually large gap between adjusted EBITDA and cash consumption. We currently assume that this effect will not be compensated in the second half of the year, so that our cash compensation will be correspondingly higher in 2019, which means a range of EUR -13.5 million to EUR -15.0 million.

Corporate Governance

ANNUAL GENERAL SHAREHOLDERS' MEETING 2019

Epigenomics AG held this year's Annual General Shareholders' Meeting (AGM) in Berlin on May 15, 2019. Of the share capital, 25% was represented. The shareholders approved the management's amended proposals on all items of the agenda. The actions of the members of the Company's Executive Board and the Supervisory Board in the 2018 fiscal year were ratified.

– SUPERVISORY BOARD

In addition, the number of Supervisory Board seats was increased to five. The expansion is intended to gain additional expertise for the Company – also taking into account the constantly increasing demands on the Supervisory Board's activities and with a view to the operational and financial challenges facing the Company and the goals the Company is pursuing with regard to the reimbursement and marketing of Epi proColon in the U.S. as well as the development and marketing of additional products.

Mr. Franz Thomas Walt was elected by the shareholders as a new member of the Company's Supervisory Board. Mr. Walt has been Chief Executive Officer since 2018 of NASDAQ-listed Quotient Ltd., a diagnostics company headquartered in Newtown, PA, U.S.A.. He is also the owner of Walt Consulting, a consulting firm. He is not a member of any other statutory Supervisory Boards or comparable domestic or foreign supervisory bodies of commercial enterprises. Mr. Walt has over 30 years of experience in ex-ecutive positions with two of the world's largest healthcare companies, Siemens Healthineers and Roche, and as an expert in the in vitro diagnostics industry. Mr. Walt has particular expertise in the areas of innovation, launch and commercialization of new products, quality management and restructuring.

– AUTHORIZED AND CONDITIONAL CAPITAL

The new Authorized Capitals 2019/I and 2019/II were created as part of the resolutions passed at the Annual General Meeting. Conditional Capitals IX and X were amended. Conditional Capital VII was cancelled and Conditional Capital XIII was created. Further information on these resolutions can be found in the invitation to the 2019 Annual General Meeting and in the documentation of the amended resolution proposals of the Management Board and Supervisory Board on items 7, 9 and 10 of the agenda, which are published on the Company's website (*www.epigenomics.com/news-investors/general-shareholder-meeting/*).

– CONSOLIDATED STATEMENT OF PROFIT OR LOSS AND OTHER COMPREHENSIVE INCOME

FOR THE PERIOD FROM JANUARY 1 TO JUNE 30 (UNAUDITED)

(1) EUR thousand	Q2 2018	Q2 2019	6M 2018	6M 2019
– Revenue	462	348	771	679
– Cost of sales	-125	-72	-160	-165
– Gross profit	337	276	611	514
– *Gross margin (in %)*	*72.9*	*79.3*	*79.2*	*75.7*
– Other income	482	269	492	768
– Research and development costs	-1,497	-2,284	-3,043	-3,867
– Selling, general and administrative costs	-2,069	-2,465	-3,883	-4,859
– Other expenses	169	-462	-6	-536
– Operating result/Earnings before interest and taxes (EBIT)	-2,578	-4,666	-5,829	-7,980
– Interest income	4	55	9	112
– Interest expenses	-141	-18	-281	-29
– Other financial result	0	-1	-1	-1
– Net loss for the period before taxes on income	-2,715	-4,630	-6,102	-7,898
– Taxes on income	161	232	328	482
– Net loss for the period	-2,554	-4,398	-5,774	-7,416
– Items that may be reclassified subsequently to profit or loss:				
– Exchange rate differences from the conversion of foreign entities	-317	132	-198	-37
– Fair value adjustment of financial instruments measured at fair value through other comprehensive income	-116	-47	-124	47
– Other comprehensive income for the period	-433	85	-322	10
– Total comprehensive income for the period	-2,987	-4,313	-6,096	-7,406
Earnings per share (basic and diluted, in EUR)	-0.11	-0.12	-0.24	-0.21

– CONSOLIDATED BALANCE SHEET AS OF JUNE 30 (UNAUDITED)

ASSETS EUR thousand	Dec 31, 2018	June 30, 2019
Non-current assets		
Intangible assets	474	412
Property, plant and equipment	701	1,686
Deferred taxes	2,378	2,887
Total non-current assets	3,553	4,985
Current assets		
Inventories	364	422
Trade receivables	164	326
Marketable securities	653	700
Cash and cash equivalents	16,487	8,437
Other current assets	606	677
Total current assets	18,274	10,562
Total assets	21,827	15,547

EQUITY AND LIABILITIES EUR thousand	Dec 31, 2018	June 30, 2019
Equity		
Subscribed capital	36,022	36,022
Capital reserve	68,802	69,299
Retained earnings	-73,115	-85,807
Net loss for the period	-12,692	-7,416
Other comprehensive income	-404	-395
Total equity	18,613	11,703
Non-current liabilities		
Liabilities from leasing contracts	0	804
Provisions	47	47
Total non-current liabilities	47	851
Current liabilities		
Trade payables	1,411	1,503
Liabilities from leasing contracts	0	205
Deferred income	23	23
Other liabilities	771	762
Provisions	962	500
Total current liabilities	3,167	2,993

Total equity and liabilities	21,827	15,547

– CONSOLIDATED CASH FLOW STATEMENT FOR THE PERIOD FROM JANUARY 1 TO JUNE 30 (UNAUDITED)

(2) EUR thousand	6M 2018	6M 2019
– Cash and cash equivalents at the beginning of the period	12,826	16,487
– *Operating activities*		
– Net loss for the period	-5,774	-7,416
– Adjustments for:		
Share-based payment expenses	558	507
Amortization of intangible assets	96	99
Depreciation of property, plant and equipment	55	141
Foreign currency exchange results	0	-30
Financial income	-9	-112
Financial expenses	282	30
Taxes	-328	-481
– Operating result before changes in operating assets and liabilities	-5,120	-7,262
– *Changes in operating assets and liabilities:*		
Inventories	-65	-66
Trade receivables	413	-162
Other assets	1,171	-71
Non-current and current provisions	-541	-460
Trade payables and other liabilities	-62	263
Deferred income	65	1
Tax paid	-8	-16
– Cash flow from operating activities	-4,147	-7,773
– *Investing activities*		
Payments to acquire intangible assets	-3	-32
Payments to acquire property, plant and equipment	-48	-56
Interest received	18	44
– Cash flow from investing activities	-33	-44

(3)	EUR thousand	6M 2018	6M 2019
–	*Financing activities*		
	Payments from the issue of new shares	-71	-174
	Payments from conversion of convertible notes	-2	0
	Payments from leasing contracts	0	-94
–	Cash flow from financing activities	-73	-268
–	Net cash flow	-4,253	-8,085
–	Currency translation effects	6	35
–	Cash and cash equivalents at the end of the period	8,579	8,437

At the reporting date, EUR 24 thousand of cash and cash equivalents included restricted cash.

– CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

AS OF JUNE 30 (UNAUDITED)

(4) EUR thousand	(5) (6) Subscribed capi	(7) (8) Capital rese	(9) (10) Retained earn	(11) (12) Net loss for t	(13) (14) Other co	(17) (18) Group equi
– Dec 31, 2017	24,014	59,509	-62,880	-10,235	169	10,577
– Total comprehensive income	0	0	0	-5,774	-322	-6,096
Transfer of net loss for the year 2017 to retained earnings	0	0	-10,235	10,235	0	0
Share-based payment expenses	0	558	0	0	0	558
– June 30, 2018	24,014	60,067	-73,115	-5,774	-153	5,040
– Dec 31, 2018	36,022	68,802	-73,115	-12,692	-404	18,613
– Total comprehensive income	0	0	0	-7,416	10	-7,406
Transfer of net loss for the year 2018 to retained earnings	0	0	-12,692	12,692	0	0
Costs for the creation of new shares	0	-10	0	0	0	-10
Share-based payment expenses	0	507	0	0	0	507
– June 30, 2019	36,022	69,299	-85,807	-7,416	-395	11,703

– NOTES

TO THE INTERIM CONSOLIDATED FINANCIAL STATEMENTS

–

BASIC INFORMATION, PRINCIPLES AND METHODS

CORPORATE INFORMATION AND DESCRIPTION OF BUSINESS ACTIVITY

Epigenomics AG („Epigenomics“, the „Group“, or the „Company“) was founded in 1998 as a limited liability company (Gesellschaft mit beschränkter Haftung – GmbH) under German law with its registered office in Berlin, Germany. It was converted into a stock corporation (Aktiengesellschaft – AG) under German law in 2000 and has been listed in the Prime Standard segment of the Frankfurt Stock Exchange since July 19, 2004 (stock exchange symbol: ECX). The Company is entered in the commercial register (Handelsregister) of Charlottenburg under HRB 75861. Its registered business address is Geneststrasse 5, 10829 Berlin, Germany.

Epigenomics is a molecular diagnostics company focused on blood-based cancer detection. Detection is performed by proprietary biomarkers identified by Epigenomics’ proprietary DNA methylation technology. The Company develops and markets diagnostics for oncological indications in which there is a high unmet medical need.

GENERAL PRINCIPLES

This unaudited interim report of the Epigenomics Group comprises the condensed interim consolidated financial statements and the interim Group management report in accordance with Section 115 of the German Securities Trading Act (WpHG). The condensed consolidated interim financial statements have been prepared in accordance with the International Financial Reporting Standards (IFRS) of the Inter-national Accounting Standards Board (IASB), London, and the interpretations of the International Financial Reporting Interpretations Committee (IFRIC), taking into account IAS 34 Interim Financial Reporting, which were effective as of the reporting date June 30, 2019 and which are mandatory in the European Union. The interim financial statements also comply with the German Accounting Standards (DRS) and DRS 16 Interim Financial Reporting, which were in force and applicable as of the reporting date June 30, 2019.

These condensed consolidated interim financial statements are based on the reporting period from January 1 to June 30, 2019. The Group currency is the euro (EUR).

This interim report should be read in conjunction with the annual report for the 2018 financial year, which contains a more detailed description of the Group’s business activities and explanatory notes on the Group’s accounting policies for the reporting period.

The Consolidated Statement of Comprehensive Income (Consolidated Statement of Profit or Loss and Other Comprehensive Income) has been prepared using the cost of sales method.

This interim report of the Company has been reviewed by the Company’s auditors.

APPLICATION OF NEW AND REVISED IFRSs AND INTERPRETATIONS IN THE REPORTING PERIOD AND EFFECTS ON THE COMPANY’S INTERIM CONSOLIDATED FINANCIAL STATEMENTS FOR THE FIRST HALF OF 2019

In the reporting period, the Group made use of the following new and revised IFRS and interpretations issued by the IASB, adopted by the European Union and mandatory for the accounting period from 1 January 2019. In general, the amendments listed below require prospective application.

- IFRS 16 Leases (endorsed by the EU on October 31, 2017)
- IFRIC 23 Income Tax Liabilities (endorsed by the EU on October 23, 2018)
- Amendments to IFRS 9 Early repayment options with negative early repayment penalty (endorsed by the EU on March 22, 2018)
- Amendments to IAS 19 Plan amendments, curtailments or settlements (endorsed by the EU on March 13, 2019)
- Amendments to IAS 28 Non-current Investments in Associates and Joint Ventures (endorsed by the EU on February 8, 2019)
- Annual improvements to IFRS (2015–2017 cycle) (endorsed by the EU on March 14, 2019)

The application of IFRS 16 has had the expected effect on the Company’s financial statements since the beginning of the 2019 financial year. The Company opted for the modified retrospective model when applying it for the first time and is making use of the transitional relief for short-term leases and low-value assets. As a result of this new standard for leases, the rental agreements of the Company for office and laboratory premises at its headquarters in Berlin and at its subsidiary in the U.S.A. are no longer treated as off-balance-sheet obligations, but were recognized as liabilities as of January 1, 2019 (Berlin) and April 2019 (San Diego), respectively. Correspondingly, based on the current contractual situation and parameters, the rental agreement of the parent company was capitalized as a non-current asset in the amount of EUR 685 thousand as of January 1, 2019. This value takes into account the contractually agreed extension option for the Company during the term of the contract. The rental agreement of the subsidiary was capitalized as a non-current asset in the amount of EUR 393 thousand in April 2019. Earlier capitalization was omitted as the contract had a term of only a few months and was not expected to be extended by the landlord until April 2019. These reclassifications led to an extension of the balance sheet and a reduction in the equity ratio compared with the closing balance sheet for the 2018 financial year. The statement of comprehensive income now shows amortization and interest expense from the leases in question instead of the rental expense previously recognized, which led to a slight improvement in EBIT, EBITDA and EBITDA before share-based payment expenses. The discount rates applied were 6.25% (Berlin) and 8.75% (San Diego).

As expected, the adoption of all other new or amended standards has not had a material impact on the Company's financial statements. The application of all new or amended standards is not expected to have a material impact on the Company's accounting in the future.

SCOPE OF CONSOLIDATION

The scope of consolidation remained unchanged compared to December 31, 2018, and comprises the two companies Epigenomics AG, Berlin, Germany, and Epigenomics, Inc., Seattle, WA, U.S.A. (business address: San Diego, CA, U.S.A.).

FAIR VALUE MEASUREMENT

These consolidated financial statements have been prepared on the historical cost basis except for certain financial instruments that are measured at revalued amounts or their fair values at the end of each reporting period.

For determining and disclosing the fair value of financial instruments, the Company uses the following hierarchy in accordance with IFRS 13 *Fair Value Measurement:*

Level 1: Quoted (unadjusted) prices in active markets for identical assets or liabilities

Level 2: Inputs other than quoted prices included within level 1 that are observable for assets or liabilities, either directly (as prices) or indirectly (derived from prices)

Level 3: Inputs for assets or liabilities that are not based on observable market data (unobservable inputs).

The carrying amounts of financial assets and liabilities such as cash and cash equivalents, marketable securities, trade receivables, trade payables, convertible notes and other current liabilities approximate their fair values due to their short-term maturities. The fair value of marketable securities is based on quoted market prices (level 1). There were no transfers between level 1 and level 2 fair value measurements, and no transfers into or out of level 3 fair value measurements during the reporting period.

CURRENCY TRANSLATION

Foreign currency exchange rates applied in the reporting period are as follows:

Closing rates	**Dec 31, 2018**	**June 30, 2019**
EUR/USD	1.1450	1.1380

Average rates	**6M 2018**	**6M 2019**
EUR/USD	1.2071	1.1315

NOTES TO THE CONSOLIDATED STATEMENT OF PROFIT OR LOSS AND OTHER COMPREHENSIVE INCOME

REVENUE

Revenue by type:

	Q2 2018		Q2 2019	
	EUR thousand	in %	EUR thousand	in %
Product sales (own and third party)	250	54.1	339	97.3
Licensing income	212	45.9	9	2.7
Total revenue	462	100.0	348	100.0

	6M 2018		6M 2019	
	EUR thousand	in %	EUR thousand	in %
Product sales (own and third party)	358	46.5	660	97.2
Licensing income	413	53.5	19	2.8
Total revenue	771	100.0	679	100.0

Revenue by geographical market

	Q2 2018		Q2 2019	
	EUR thousand	in %	EUR thousand	in %
Europe	60	12.9	61	17.6
North Amerika	200	43.2	287	82.4
Rest of the world	202	43.9	0	0.0
Total revenue	462	100.0	348	100.0

	6M 2018		6M 2019	
	EUR thousand	in %	EUR thousand	in %
Europe	128	16.6	139	20.4
North Amerika	247	32.0	504	74.3
Rest of the world	396	51.4	36	5.3

Total revenue	771	100.0	679	100.0

OTHER INCOME

EUR thousand	Q2 2018	Q2 2019	6M 2018	6M 2019
Foreign exchange rate gains	247	210	247	689
Correction of deferred liabilites	20	25	20	25
Recoveries and refunds	1	25	9	25
Income from the reversal of provisions	183	0	183	20
Third-party research grants	24	9	26	9
Adjustment	3	0	3	0
Other	4	0	4	0
Total other income	482	269	492	768

COST ALLOCATION BY FUNCTION

Q2 2018 EUR thousand	Cost of sales	R&D costs	SG&A costs	Other expenses	Total
Materials and consumables	121	53	2	0	176
Depreciation and amortization	0	55	21	0	76
Personnel costs	0	708	1,069	0	1,777
Other costs	4	681	977	-169	1,493
Total	125	1,497	2,069	-169	3,522

Q2 2019 EUR thousand	Cost of sales	R&D costs	SG&A costs	Other expenses	Total
Materials and consumables	69	362	7	0	438
Depreciation and amortization	0	67	70	0	137
Personnel costs	0	678	1,154	0	1,832
Other costs	3	1,177	1,234	462	2,876
Total	72	2,284	2,465	462	5,283

This page has been left blank intentionally.

6M 2018 EUR thousand	Cost of sales	R&D costs	SG&A costs	Other expenses	Total
Materials and consumables	153	213	3	0	369
Depreciation and amortization	0	110	41	0	151
Personnel costs	0	1,318	1,959	0	3,277
Other costs	7	1,402	1,880	6	3,295
Total	160	3,043	3,883	6	7,092

6M 2019 EUR thousand	Cost of sales	R&D costs	SG&A costs	Other expenses	Total
Materials and consumables	158	463	9	0	630
Depreciation and amortization	0	138	103	0	241
Personnel costs	0	1,357	2,365	0	3,722
Other costs	7	1,909	2,382	536	4,834
Total	165	3,867	4,859	536	9,427

Personnel costs in Q2 2019 included share-based payment expenses of EUR 241 thousand (Q2 2018: EUR 302 thousand) and in 6M 2019 of EUR 494 thousand (6M 2018: EUR 293 thousand).

OPERATING RESULT (EBIT) AND EBITDA

EUR thousand	Q2 2018	Q2 2019	6M 2018	6M 2019
Operating result/earnings before interest and taxes (EBIT)	-2,578	-4,666	-5,829	-7,980
Depreciation of property, plant and equipment	28	89	55	141
Amortization of intangible assets	48	49	96	99
EBIT before depreciation and amortization (EBITDA)	-2,502	-4,528	-5,678	-7,740
Share-based payment expenses	302	241	293	494
EBITDA before share-based payment expenses	-2,200	-4,287	-5,385	-7,246

EARNINGS PER SHARE

The earnings per share (basic and diluted) are calculated by dividing the Group's net loss for the period by the weighted-average number of shares issued and admitted to trading in the respective period. The outstanding stock options and convertible notes issued by the Company are anti-dilutive according to IAS 33.41 and 33.43. Therefore, the earnings per share (diluted) equal the earnings per share (basic).

	Q2 2018	Q2 2019	6M 2018	6M 2019
Net loss for the period (in EUR thousand)	-2,554	-4,398	-5,774	-7,416
Weighted average number of shares issued	24,014,360	36,021,540	24,014,360	36,021,540
Earnings per share (basic and diluted, in EUR)	-0.11	-0.12	-0.24	-0.21

Notes to the Consolidated Balance Sheet

NON-CURRENT ASSETS

(19)	EUR thousand	Dec 31, 2018	June 30, 2019
–	Software	132	141
–	Licenses, patents	12	0
–	Development costs	331	271
–	Total intangible assets	475	412
–	Fixtures/leasehold improvements	342	1,311
–	Technical equipment	319	338
–	Other fixed assets	39	37
–	Total property, plant and equipment	700	1,686
–	Deferred tax assets	2,378	2,887
–	Total non-current assets	3,553	4,985

CURRENT ASSETS

(20)	EUR thousand	Dec 31, 2018	June 30, 2019
–	Inventories	364	422
–	Trade receivables	164	326
–	Marketable securities	653	700
–	Cash and cash equivalents	16,487	8,437
–	Prepaid expenses	338	391
–	Receivables from tax authorities	197	165
–	Interest receivables	9	76
–	Claims from granted projects	1	5
–	Other	61	40
–	Total other current assets	606	677
–	Total current assets	18,274	10,562

EQUITY

As of June 30, 2019, the share capital of Epigenomics AG exclusively comprised 36,021,540 no-par value ordinary registered shares. In 6M 2019, total equity decreased by EUR 6.9 million to EUR 11.7 million at the reporting date (December 31, 2018: EUR 18.6 million).

CURRENT LIABILITIES

Other liabilities

EUR thousand	Dec 31, 2018	June 30, 2019
Payables due to staff	512	640
Accrued audit fees	127	73
Payables due to tax authorities	100	37
Advance payments received from customers	27	0
Payables to social security institutions	0	7
Other	5	5
Total other liabilities	771	762

Provisions

EUR thousand	Dec 31, 2018	June 30, 2019
Payroll provisions	879	443
Contract-related provisions	50	50
Provisions for claims from phantom stock rights	20	1
Other provisions	13	6
Total provisions	962	500

FINANCIAL INSTRUMENTS

			as of Dec 31, 2018		as of June 30, 2019	
EUR thousand	Measurement principle	Fair value hierarchy level	Carrying amount	Fair value	Carrying amount	Fair value
Assets						
Marketable securities	FVOCI	1	653	653	700	700
Cash and cash equivalents	n/a		16,487	16,487	8,437	8,437

FVOCI = measured at fair value through other comprehensive income
n/a = not applicable

NOTES TO THE CONSOLIDATED STATEMENT OF CASH FLOWS

Cash consists of bank deposits and cash in hand. Cash equivalents are defined as instruments convertible to a known amount of cash on a short-term basis and carrying a very low risk of changes in value.

Cash flow from operating activities is derived indirectly from the net result for the period.

Cash flow from investing activities is calculated based on actual payments.

Cash flow from financing activities is calculated based on actual payments.

CASH CONSUMPTION

Cash flow from operating activities and cash flow from investing activities less transactions in securities is monitored by the Company as "cash consumption". Until December 31, 2018, this key figure comprised also payments from operating leasing contracts, which are now included in cash flow from financing activities in accordance with IFRS 16.

Cash consumption amounted to EUR 7.8 million in the first six months of 2019 (6M 2018: EUR 4.2 million). In the first six months of 2019, cash outflow from leasing contracts amounted to EUR 0.1 million.

OTHER INFORMATION

INFORMATION ON STOCK OPTIONS

611,170 new stock options were granted in the reporting period. No options were exercised in the reporting period. 8,750 options expired during the period under review. The total number of stock options still outstanding as of June 30, 2019, amounted to 1,944,000 with an average strike price of EUR 3.81.

INFORMATION ON PHANTOM STOCK PROGRAMS

No further phantom stock rights were issued in the reporting period.

The number of outstanding phantom stock rights from the Company's phantom stock programs amounted to 98,400 from PSP 2015, 254,833 from PSP 2014. The phantom stock programs PSP 2013 and PSP 03–15 have expired.

DIRECTORS' DEALINGS

In the first half of 2019, the following reportable securities transactions were published by executives of the Company:

- March 29, 2019: Purchase of 24,852 shares for USD 49,986.78 by Dr. Ann Clare Kessler (member of the Supervisory Board)
- May 9, 2019: Purchase of 30,000 shares for EUR 56,900.85 by Mr. Heino von Prondzynski (chairman of the Supervisory Board)
- May 20, 2019: Purchase of 15,000 shares for EUR 29,968.43 by Mr. Franz Walt (member of the Supervisory Board)
- May 30, 2019: Purchase of 18,000 shares for USD 39,898.35 by Dr. Ann Clare Kessler (member of the Supervisory Board)

HOLDINGS OF EPIGENOMICS AG'S EQUITY INSTRUMENTS AND PHANTOM STOCK RIGHTS BY MEMBERS OF THE COMPANY'S EXECUTIVE BOARD AND SUPERVISORY BOARD AND DISCLOSU RES ON DIRECTORS' DEALINGS

(in units as of June 30, 2019)	Shares	Stock options	Phantom Stock Rights
Greg Hamilton (CEO)	2,500	391,580	0
Jorge Garces, Ph.D. (CSO)	1,000	170,000	0
Albert Weber (EVP Finance)	100	170,000	40,000
Total Executive Board	3,600	731,580	40,000
Heino von Prondzynski (Chairman)	275,000	0	0
Dr. Ann Clare Kessler (Vice Chairwoman)	105,852	0	0
Dr. Helge Lubenow	6,000	0	0
Franz Thomas Walt	15,000	0	0
Total Supervisory Board	401,852	0	0

REPORT ON POST-REPORTING DATE EVENTS

On July 15, 2019 – after the end of the reporting period – we announced that the Reexamination and Invalidation Department of the Patent office, China National Intellectual Property Administration (CNIPA) has, today, deemed Epigenomics' Septin9 patent in China only partially valid. It has not been recognized for the detection of hepatocellular cancer. For the detection of colorectal cancer it has been recognized to the extent the detection is based on biological samples consisting of cell lines, histological slides, biopsies, paraffin-embedded tissue, stool, colonic effluent and combinations thereof, but not for detections based on body fluids (urine, blood plasma, blood serum, whole blood, isolated blood cells, cells isolated from the blood and combinations thereof). The decision is not yet legally effective. Epigenomics will appeal.

This decision of the CNIPA has no impact on revenue estimates for 2019 as Epigenomics did not include any Chinese licensing revenue in 2019 guidance. The decision by the CNIPA in China has no impact on Epigenomics' Septin9 patents in other parts of the world.

This interim report was approved and cleared for publication by the Executive Board of the Company on August 7, 2019.

Berlin, August 7, 2019

The Executive Board

—

RESPONSIBILITY STATEMENT

To the best of our knowledge, and in accordance with the applicable accounting principles for interim reporting, the consolidated interim financial statements give a true and fair view of the assets, liabilities, financial position and profit or loss of the Group, and the interim Group management report includes a fair review of the development and performance of the business and the position of the Group, together with a description of the principal opportunities and risks associated with the expected development of the Group in the remaining months of the current fiscal year.

Berlin, August 7, 2019

The Executive Board

Audited Consolidated Financial Statements of Epigenomics AG Prepared in Accordance with IFRS as of and for the financial year ended December 31, 2018

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME (CONSOLIDATED STATEMENT OF PROFIT OR LOSS AND OTHER COMPREHENSIVE INCOME) FOR THE PERIOD FROM JANUARY 1 TO DECEMBER 31

EUR thousand	Note	2017	2018
Revenue	1	1,864	1,533
Cost of sales	3	-246	-440
Gross profit		1,618	1,093
Gross margin (in %)		*86.8*	*71.3*
Other income	2	1,054	1,441
Research and development costs	3	-4,329	-6,418
Selling, general and administrative costs	3	-8,035	-8,703
Other expenses	3, 6	-597	-308
Operating result/earnings before interest and taxes (EBIT)	7	-10,289	-12,895
Interest income	8	18	17
Interest expenses	8	-175	-550
Other financial result	8	-3	-2
Net loss for the year before taxes on income		-10,449	-13,430
Taxes on income	9	214	738
Net loss for the year		-10,235	-12,692
Items that may be reclassified to profit or loss:			
Exchange rate differences from the conversion of foreign entities	23	322	-321
Fair value adjustment of financial instruments measured at fair value through other comprehensive income	23	152	-252
Other comprehensive income for the year		474	-573
Total comprehensive income for the year		-9,761	-13,265
Earnings per share (basic and diluted, in EUR)	10	-0.44	-0.47

CONSOLIDATED BALANCE SHEET AS OF DECEMBER 31

ASSETS EUR thousand	Note	Dec 31, 2017	Dec 31, 2018
Non-current assets			
Intangible assets	11	668	474
Property, plant and equipment	12	720	701
Deferred taxes	14	1,526	2,378
Total non-current assets		2,914	3,553
Current assets			
Inventories	15	293	364
Trade receivables	16	937	164
Marketable securities	17	905	653
Cash and cash equivalents	18	12,826	16,487
Other current assets	19	1,898	606
Total current assets		16,859	18,274
Total assets		19,773	21,827

EQUITY AND LIABILITIES EUR thousand	Note	Dec 31, 2017	Dec 31, 2018
Equity			
Subscribed capital	20	24,014	36,022
Capital reserve	21	59,509	68,802
Retained earnings	22	-62,880	-73,115
Net loss for the year		-10,235	-12,692
Other comprehensive income	23	169	-404
Total equity		10,577	18,613
Non-current liabilities			
Provisions	25	43	47
Total non-current liabilities		43	47
Current liabilities			
Trade payables	26	952	1,411
Deferred income		0	23
Convertible notes issued	27	6,536	0
Other liabilities	28	562	771
Provisions	25	1,103	962
Total current liabilities		9,153	3,167
Total equity and liabilities		19,773	21,827

CONSOLIDATED STATEMENT OF CASH FLOWS FOR THE PERIOD FROM JANUARY 1 TO DECEMBER 31

EUR thousand	Note	2017	2018
Cash and cash equivalents at the beginning of the year		11,531	12,826
Operating activities			
Net loss for the year		-10,235	-12,692
Adjustments for:			
Stock option expenses	4	455	1,151
Amortization of intangible assets	5, 11	191	196
Depreciation of property, plant and equipment	5, 12	152	112
Losses from the disposal of non-current assets	6	2	0
Foreign currency exchange results		0	-4
Financial income	8	-18	-18
Financial expenses	8	177	552
Taxes	9	-214	-738
Operating result before changes in operating assets and liabilities		-9,490	-11,441
Changes in operating assets and liabilities:			
Inventories	15	-37	-66
Trade receivables	16	1,262	782
Other assets	19	-1,491	1,297
Non-current and current provisions	25	-698	-147
Trade payables and other liabilities	26, 28	891	-776
Deferred income		-6	23
Tax paid		-7	-23
Cash flow from operating activities	30	-9,576	-10,351

EUR thousand	Note	2017	2018
Investing activities			
Payments to acquire intangible assets		-37	-15
Payments to acquire property, plant and equipment		-183	-91
Payments related to capitalized development costs		-363	0
Proceeds from investment grants received	12	17	813
Interest received	8	18	17
Cash flow from investing activities	31	-548	724
Financing activities			
Proceeds from the issue of new shares	20, 21	5,475	21,253
Payments for the issue of new shares	21	-374	-1,958
Proceeds from the conversion of convertible notes	27	6,461	0
Payments for the issue of convertible notes	27	-63	-1
Payments for the redemption of convertible notes		0	-6,020
Cash flow from financing activities	32	11,499	13,274
Net cash flow		1,375	3,647
Currency translation effects		-80	14
Cash and cash equivalents at the end of the year		12,826	16,487

As of the balance sheet date, EUR 24 thousand of cash and cash equivalents included restricted cash.

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY AS OF DECEMBER 31

EUR thousand	Note	Subscribed capital	Capital reserve	Retained earnings	Net loss for the year	Other comprehensive income	Group equity
Dec 31, 2016		22,735	54,873	-51,719	-11,161	-305	14,424
Total comprehensive income 2017	23	0	0	0	-10,235	474	-9,761
Transfer of net loss for the year 2016 to retained earnings		0	0	-11,161	11,161	0	0
Capital increase without subscription rights	20	1,279	0	0	0	0	1,279
Premium from the capital increase without subscription rights	20, 21	0	4,195	0	0	0	4,195
Costs for the creation of new shares	21	0	-52	0	0	0	-52
Stock option expenses	4, 21	0	455	0	0	0	455
Option premium on convertible notes	27	0	38	0	0	0	38
Dec 31, 2017		24,014	59,509	-62,880	-10,235	169	10,577
Dec 31, 2017							
Total comprehensive income 2018	23	0	0	0	-12,692	-573	-13,265
Transfer of net loss for the year 2017 to retained earnings		0	0	-10,235	10,235	0	0
Capital increase with subscription rights	20	11,427	0	0	0	0	11,427
Premium from the capital increase with subscription rights	20, 21	0	9,827	0	0	0	9,827
Capital increase through contribution in kind	27	581	0	0	0	0	581
Premium from the capital increase through contribution in kind	27	0	485	0	0	0	485
Costs for the creation of new shares	21	0	-2,170	0	0	0	-2,170
Stock option expenses	4, 21	0	1,151	0	0	0	1,151
Dec 31, 2018		36,022	68,802	-73,115	-12,692	-404	18,613

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS 2018

BASIC INFORMATION, PRINCIPLES AND METHODS

DESCRIPTION OF BUSINESS ACTIVITY

Epigenomics ("Epigenomics", "the Group" or the "Company") was founded as a limited liability company under German law (Gesellschaft mit beschränkter Haftung – GmbH) in 1998 and has its registered office in Berlin, Germany. In 2000, the Company was converted into a stock corporation under German law (Aktiengesellschaft – AG) and entered into the commercial register (Handelsregister) of Charlottenburg under HRB 75861. It has been listed in the Prime Standard segment of the Frankfurt Stock Exchange since July 19, 2004 (ticker symbol: ECX).

In accordance with its Articles of Association, the object of the Company is the development and market---ing of procedures and devices for the production in quantity of particular epigenetic parameters such as DNA methylation patterns as well as the information technology bases necessary for their procurement and evaluation. Epigenomics AG is a molecular diagnostics company developing and commercializing a pipeline of proprietary products for screening, early detection and diagnosis of cancer. The Company's products enable doctors to diagnose cancer earlier and more accurately, leading to improved outcomes for patients.

GENERAL PRINCIPLES

The consolidated financial statements of Epigenomics AG have been prepared in accordance with section 315e of the German Commercial Code (Handelsgesetzbuch – HGB) and in application of the International Financial Reporting Standards (IFRSs) of the International Accounting Standards Board (IASB), London, in effect as of the December 31, 2018 balance sheet date, as adopted by the European Union (EU).

The Company has incurred accounting losses of EUR 73,115 thousand since being founded. The Company generated a net loss of EUR 12,692 thousand for 2018 (2017: EUR 10,235 thousand). The "going concern" principle in accordance with IAS 1.25 P*resentation of Financial Statements* was applied. With EUR 17.1 million in liquid assets (cash, cash equivalents and marketable securities) at year-end 2018, at the projected cash consumption the Company's current financial resources are sufficient to support its operations beyond 2018.

The Consolidated Statement of Comprehensive Income (Consolidated Statement of Profit or Loss and Other Comprehensive Income) has been prepared using the cost of sales method.

REPORTING PERIOD, REPORTING CURRENCY, AND ROUNDING

The reporting period (comparative period) as defined in these consolidated financial statements is the period from January 1 to December 31, 2018 (2017). The reporting currency is the euro (EUR). Many figures are rounded to the nearest thousand euros, which may give rise to rounding differences in the figures presented in these notes.

SCOPE OF CONSOLIDATION

The consolidated Group consists of Epigenomics AG as the parent company (registered office: Geneststrasse 5, 10829 Berlin, Germany) and Epigenomics, Inc., as its sole subsidiary during the reporting period. The subsidiary is registered in the U.S. state of Washington and since the reporting year has based its operations out of San Diego (11055 Flintkote Ave, Suite A, San Diego, CA 92121). Epigenomics AG held 100% of the share capital and the voting rights of Epigenomics, Inc. between January 1, 2017 and December 31, 2018.

For the reporting year and the previous year, the two companies each prepared separate financial statements which were either audited or reviewed, independent of their inclusion in the consolidated financial statements.

PRINCIPLES OF CONSOLIDATION

In acquisition accounting, the carrying amount of the investment is offset against the share of equity of the subsidiary attributable to the parent as at the date of acquisition. Any resulting difference is added to the assets and liabilities in the amount in which their market value deviates from their carrying amount at the time of the initial consolidation. Any amount in excess is recognized as goodwill.

All intercompany transactions and interim results, income and expenses, profits and losses, receivables and payables are eliminated in full on consolidation.

APPLICATION OF NEW AND REVISED IFRSs AND INTERPRETATIONS AND EFFECTS ON THE COMPANY'S CONSOLIDATED FINANCIAL STATEMENTS FOR FISCAL YEAR 2018

In the reporting year, the Group for the first time applied the following new and amended IFRSs and Interpretations issued by the IASB and endorsed by the EU that are effective for accounting periods beginning on or after January 1, 2018. Generally, the new standards and amendments mentioned below require prospective application.

IFRS 9 Financial Instruments (as revised in 2014) (endorsed by the EU on November 22, 2016)

IFRS 9 (as revised in 2014) replaced IAS 39 *Financial Instruments:* R*ecognition and Measurement* in its entirety upon its effective date. Compared to IFRS 9 (as revised in 2013), the 2014 version includes limited amendments to the classification and measurement requirements by introducing a "fair value through other comprehensive income" measurement category for certain simple debt instruments. It also adds the impairment requirements relating to the accounting for an entity's expected credit losses on its financial assets and commitments to extend credit.

IFRS 9 contains three basic categories for classifying financial assets: measured at amortized cost, measured at fair value with changes in other comprehensive income (FVOCI) and measured at fair value with changes in profit or loss (FVTPL). Financial assets are classified in accordance with IFRS 9 on the basis of the Company's business model for managing financial assets and the characteristics of contractual cash flows. The previous categorization of financial assets according to IAS 39 (held to maturity, loans and receivables and available-for-sale) is omitted. Securities held by the Company, which were previously classified as available for sale in accordance with IAS 39, are held in a separate portfolio to generate interest income, but could be sold to meet liquidity requirements arising in the ordinary course of business. The Company believes that these securities are held within the framework of a business model whose objective is achieved both through the collection of contractual cash flows and through the sale of securities. The contractual terms of these financial assets result in cash flows that represent only principal and interest payments on the outstanding principal. These assets are therefore now classified as FVOCI in accordance with IFRS 9. This new classification had no effect on the valuation of the securities. Trade receivables which have been previously classified under IAS 39 as loans and receivables are now classified as measured at amortized cost.

The Company does not engage in hedge accounting. In addition, an analysis of past developments in receivables has shown that the Company was not exposed to any notable defaults. Application of the new IFRS 9 therefore did not give rise to any material effects on the Company's financial statements for fiscal year 2018. This is particularly true of the "impairment approach" prescribed in the standard, which did not have any effect with regard to our current customer base. In addition, the new requirements for classifying financial assets depending on our business model and on classifying financial liabilities did not give rise to any changes in measurement and recognition. The Company continues to measure all financial assets previously held at fair value in accordance with IAS 39 at fair value. It made use of the exemption not to adjust comparative information for previous periods with regard to changes in classification and measurement (including impairment). To this extent, the disclosures and information on financial instruments for the previous year (2017) generally do not meet the requirements of IFRS 9, but those of IAS 39.

IFRS 15 Revenue from Contracts with Customers including the Modifications to IFRS 15 – Effective Date of IFRS 15 and the Clarifications to IFRS 15 – Revenue from Contracts with Customers (endorsed by the EU on September 22, 2016)

The new IFRS 15 establishes a single comprehensive model for entities to use in accounting for revenue arising from contracts with customers. As of its effective date, it replaced the following revenue standards and interpretations relating to revenue recognition: IAS 18 *Revenue*, IAS 11 *Construction Contracts*, IFRIC 13 *Customer Loyalty Programmes*, IFRIC 15 *Agreements for the Construction of Real Estate*, IFRIC 18 *Transfers of Assets from Customers*, and SIC-31 *Revenue – Barter Transactions Involving Advertising Services*. IFRS 15 provides a single, principles based five-step model for recognizing revenue from contracts with customers.

When transitioning to IFRS 15, the Group applied the modified retrospective method (without simplification rules), according to which the cumulative adjustment amounts were recognized as of January 1, 2018. Accordingly, the comparative information for 2017 was not adjusted, i.e. it was presented as before in accordance with IAS 18, IAS 11 and the corresponding interpretations. In addition, the disclosure requirements under IFRS 15 were generally not applied to the prior-year information. The first-time application of the new IFRS 15 did not have any material impact on the Company's financial statements for fiscal year 2018, as its business model is currently based on standardized product sales and income generated on the basis of existing licensing agreements which are not significantly affected by the new requirements. Nevertheless, the execution of new licensing agreements could impact the Company's annual financial statements going forward. Licensing agreements in the life sciences sector normally stipulate that payments to the licensor resulting from these agreements are partly due in the form of upfront fees or milestone payments. In contrast to the previous accounting policy, the application of IFRS 15 may change the time over which or the point in time at which revenue is recognized. The Company used the new five-step model to analyze its existing arrangements with its licencees and determined that IFRS 15 is not expected to have any effect on the Company's accounting.

Amendments to IFRS 2 Classification and Measurement of Share-based Payment Transactions (endorsed by the EU on February 26, 2018)

The Amendments to IFRS 2 clarify issues concerning the treatment and/or distinction between cash--settled and equity-settled share-based payments.

The first-time application of the Amendments to IFRS 2 did not have any significant effect on the Company's financial statements for fiscal year 2018, nor is the application of the Amendments to IFRS 2 expected to have any material effect on the Company's financial statements for fiscal years from 2019 onward.

Amendments to IFRS 4 applying IFRS 9 Financial Instruments with IFRS 4 Insurance Contracts (endorsed by the EU on November 3, 2017)

The Amendments to IFRS 4 clarified the scope of the standard and the applicable conditions for a temporary exemption from IFRS 9 for insurers, as well as for a temporary exemption from specific requirements under IAS 28.

The first-time application of the Amendments to IFRS 4 did not have any effect on the Company's financial statements for fiscal year 2018, nor is the application of the Amendments to IFRS 4 expected to have any effect on the Company's financial statements for fiscal years from 2019 onward.

Amendments to IAS 40 Transfers of Investment Property (endorsed by the EU on March 14, 2018)

The Amendments to IAS 40 clarify that a change in use of investment property occurs when the property meets, or ceases to meet, the definition of investment property and there is evidence of the change in use. In isolation, a change in management's intentions for the use of a property does not provide evidence of a change in use.

The first-time application of the Amendments to IAS 40 did not have any effect on the Company's financial statements for fiscal year 2018, nor is the application of the Amendments to IAS 40 expected to have any effect on the Company's financial statements for fiscal years from 2019 onward.

Annual Improvements to IFRS Standards (2014–2016 Cycle) – Amendments to IFRS 1 and IAS 28 (endorsed by the EU on February 7, 2018)

The Annual Improvements (2014–2016 Cycle) include amendments to IFRS 1 *First-time Adoption of International Financial Reporting Standards*, and to IAS 28 *Investments in Associates and Joint Ventures*. The amendments to IFRS 1 relate to the removal of short-term exemptions for first-time adopters. The amendments to

IAS 28 clarify the measurement of an associate or a joint venture at fair value.

The first-time application of the Annual Improvements to IFRS Standards (2014–2016 Cycle) did not have any effect on the Company's financial statements for fiscal year 2018 nor is the application of the Annual Improvements to IFRS Standards (2014–2016 Cycle) expected to have any effect on the Company's financial statements for fiscal years from 2019 onward.

IFRIC 22 Foreign Currency Transactions and Advance Consideration (endorsed by the EU on March 28, 2018)

The new IFRIC 22 addresses the issue of how to determine the date of the transaction for the purpose of determining which exchange rate to use when recognizing revenue in circumstances where an entity has received advance consideration in a foreign currency.

The first-time application of the new IFRIC 22 did not have any significant effect on the Company's financial statements for fiscal year 2018, nor is the application of the new IFRIC 22 expected to have any material effect on the Company's financial statements for fiscal years from 2019 onward.

New and Revised IFRSs and Interpretations that do not yet Require Mandatory Application (but Allow Early Application) for the Reporting Year

The Company intends to adopt all new and/or revised standards, amendments and interpretations as soon as their adoption is mandatory and they are endorsed by the EU. The Company had not yet applied the following new and revised IFRSs and Interpretations which had been issued but were not yet effect-ive in the reporting period, some of which had not yet been endorsed by the EU:

Mandatory application for fiscal years beginning on or after January 1, 2019:

IFRS 16 Leases (endorsed by the EU on October 31, 2017

The new IFRS 16 provides a comprehensive model for the identification of lease arrangements and their treatment in the financial statements of both lessees and lessors. Upon its effective date it will supersede IAS 17 *Leases*, IFRIC 4 *Determining Whether an Arrangement Contains a Lease*, SIC-15 *Operating Leases – Incentives* and SIC-27 *Evaluating the Substance of Transactions in the Legal Form of a Lease*. IFRS 16 introduces significant changes to lessee accounting. It removes the distinction between operating and fin-ance leases under IAS 17 and instead requires a lessee to recognize a right-of-use asset and a lease liability at lease commencement for all leases, except for short-term leases and leases of low value assets. A lessee can apply IFRS 16 either by means of a full retrospective approach or a modified retrospective approach. If the latter approach is selected, an entity is not required to restate the comparative information and the cumulative effect of initially applying IFRS 16 must be presented as an adjustment to opening retained earnings (or other component of equity as appropriate).

The application of IFRS 16 will impact the Company's financial statements from fiscal year 2019 onward. When first applying the modified retrospective model, the Company opted for the transitional relief for short-term leases and low-value assets. As a result of this new standard on leases, the Company's rental agreement for office space at its Berlin headquarters must then be recognized as a liability in the balance sheet instead of being treated as an off-balance sheet liability. Based on the current contractual situation and parameters, the rental agreement will correspondingly be recognized as a non-current asset amounting to approximately EUR 650 thousand as of January 1, 2019. This value takes into account the contractually agreed extension option for the Company during the term of the contract. From fiscal year 2019, this will increase total assets and cause a decrease in the equity ratio. Amortization and impairment, as well as the interest expense on the affected leases will in future be recognized in other comprehensive income as opposed to the current method of recognizing the lease expense, which will result in a slight improvement in EBIT, EBITDA, and EBITDA before share-based payment expenses. Currently, the annual amortization and impairment charges are expected to amount to EUR 92 thousand from January 1, 2019 onward, with the interest expense estimated at EUR 40 thousand (2019). Currently, the Company has no other lease agreements in place that would be affected by IFRS 16.

IFRIC 23 Uncertainty over Income Tax Treatments (endorsed by the EU on October 23, 2018)

The new IFRIC 23 clarifies the accounting for uncertainties in income taxes. The interpretation is to be applied to the determination of taxable profit (tax loss), tax bases, unused tax losses, unused tax credits and tax rates, when there is uncertainty over income tax treatments under IAS 12. IFRIC 23 was endorsed by the EU on October 23, 2018.

The Company is currently examining the effects of applying IFRIC 23 on the consolidated financial statements from fiscal year 2019 onwards. The Company assumes that any effects will for the time being only be reflected in the notes.

Amendments to IFRS 9 Prepayment Features with Negative Compensation (endorsed by the EU on March 22, 2018)

The Amendments to IFRS 9 contain on the one hand changes regarding symmetric prepayment options. These amend the existing requirements in IFRS 9 regarding termination rights in order to allow measurement at amortized cost (or, depending on the business model, at fair value through other comprehensive income) even in the case of negative compensation payments. On the other hand, the amendments clarify that the carrying amount of a financial liability is immediately recognized in profit or loss following modification or exchange. A retrospective change of the accounting treatment may therefore become necessary if in the past the effective interest rate was adjusted and not the amortized cost amount. The Amendments to IFRS 9 were endorsed by the EU on March 22, 2018.

The Company does not expect that the application of the Amendments to IFRS 9 will have any effect on its financial statements for fiscal years from 2019 onward.

Amendments to IAS 19 Plan Amendment, Curtailment or Settlement (not yet endorsed by the EU)

In the event a defined benefit plan is amended, curtailed or settled, the Amendments to IAS 19 require an entity to determine the current service cost and net interest for the remained to the fiscal year using the same updated actuarial assumptions used to remeasure the net defined benefit liability. In addition, the amendments clarify the effect of a plan amendment, curtailment or settlement on the requirements regarding the asset ceiling.

The Company does not expect that the application of the Amendments to IAS 19 will have any effect on its financial statements for fiscal years from 2019 onward.

Amendments to IAS 28 Long-term Interests in Associates and Joint Ventures (endorsed by the EU on February 8, 2019)

The Amendments to IAS 28 clarify that an entity applies IFRS 9, including its impairment requirements, to long-term interests in an associate or joint venture that form part of the net investment in the associate or joint venture but to which the equity method is not applied. In addition, paragraph 41 was deleted.

The Company does not expect that the application of the Amendments to IAS 28 will have any effect on its financial statements for fiscal years from 2019 onward.

Annual Improvements to IFRS Standards (2015–2017 Cycle) (not yet endorsed by the EU)

The Annual Improvements to IFRS Standards (2015–2017 Cycle) include amendments to IFRS 3 *Business Combinations*, IFRS 11 *Joint Arrangements*, IAS 12 *Income Taxes*, and IAS 23 *Borrowing Costs*. The Amendments to IFRS 3 clarify that an entity must remeasure its previously held interest in a joint operation when it obtains control of the business. The Amendments to IFRS 11 clarify that an entity does not remeasure its previously held interest in a joint operation when it obtains joint control of the business. The Amendments to IAS 12 clarify that all income tax consequences of dividend payments must be accounted for in the same way. The Amendments to IAS 23 clarify that if any borrowing used to develop an asset remains outstanding after the related qualifying asset is ready for its intended use or sale, that borrowing becomes part of the funds that an entity borrows generally when calculating the cap-italization rate on general borrowings.

The Company does not expect that the application of the Annual Improvements to IFRS Standards (2015–2017 Cycle) will have any effect on its financial statements for fiscal years from 2019 onward.

Mandatory application for fiscal years beginning on or after January 1, 2020:

Amendments to IFRS 3 Definition of a Business (not yet endorsed by the EU)

The Amendments to IFRS 3 are intended to resolve the problems that arise when an entity determines whether it has acquired a business or a group of assets. Such problems may arise due to the fact that the accounting requirements for goodwill, acquisition costs and deferred taxes differ on the acquisition of a business and on the acquisition of a group of assets.

The Company does not expect that the application of the Amendments to IFRS 3 will have any effect on its financial statements for fiscal years from 2020 onward.

Amendments to IAS 1 and IAS 8 Definition of Material (not yet endorsed by the EU)

The Amendments to IAS 1 and IAS 8 clarify the definition of "material" and align the definition used in the Conceptual Framework and the standards themselves.

The Company does not expect that the application of the Amendments to IAS 1 and IAS 8 will have any effect on its financial statements for fiscal years from 2020 onward.

Revisions to Conceptual Framework for Financial Reporting in accordance with IFRSs (not yet endorsed by the EU)

The new Conceptual Framework includes revised definitions of an asset and a liability as well as new guidance on measurement and derecognition, presentation and disclosure. These revisions result in amendments to multiple standards and interpretations that refer to the Conceptual Framework.

The Company does not expect that the Revisions to Conceptual Framework for Financial Reporting in accordance with IFRSs will have any effect on its financial statements for fiscal years from 2020 onward.

Mandatory application for fiscal years beginning on or after January 1, 2022:

IFRS 17 Insurance Contracts (not yet endorsed by the EU)

The new IFRS 17 establishes the principles for the recognition, measurement, presentation and disclos-ure of insurance contracts within the scope of the standard. The objective of IFRS 17 is to ensure that a reporting entity provides relevant information and faithfully represents those contracts.

The Company does not expect that the application of the Amendments to IFRS 17 will have any effect on its financial statements for fiscal years from 2020 onward.

MANAGEMENT'S JUDGMENT, ASSUMPTIONS AND EXPECTATIONS

The management of the Company has made several judgments in the process of applying the entity's accounting policies that have a significant effect on the amounts recognized in the financial statements. Those judgments concern the capitalization of development costs and the recognition of deferred taxes. The judgments are described for each relevant position in the enumeration of accounting and valuation principles.

Management's expectations on the future are usually based on the current economic outlook according to the consensus prognoses by leading economic and financial research institutions and independent analysts. The global economic situation is not expected to change significantly in 2019, but rather to rest on shaky ground due to the increasing political challenges around the world.

The plans of the Group's management do not expect Epigenomics to be highly dependent on the overall economic situation in the short term. The Group's operating activities are furthermore not highly dependent on the availability of or the price development for commodities or industrial supplies but rather on the individual situation of the Company and its opportunities to continue its operations by further financing transactions. Therefore, the Company is still dependent on the condition and the development of the capital markets (mainly in the U.S.A. and in Germany), particularly with regard to the life sciences industry. Additionally, the Company is strongly dependent on inclusion in the guidelines issued by medical professional societies and the reimbursement decisions by the payors in the healthcare system of the U.S.A. with regard to its lead product – Epi proColon, and subsequently on the commercial success of this product. The Company's strategy going forward assumes positive reimbursement decisions in 2019 and the years to come. The Company also assumes that the results of the trials in the U.S.A. for its new product, the HCC BloodTest, will be positive.

The Company continues to expect that the economic and fiscal policies in Germany and the U.S.A. will largely remain the same in 2019. This also applies to regulatory requirements in the countries that the Company primarily exports to, as no significant changes are anticipated in this regard in the coming year.

All future scenarios furthermore assume essentially unrestricted access to the relevant clinical and biological samples, corresponding clinical data and sufficient resources for the execution of the Company's commercial projects.

In the short to medium term, the Company expects the EUR/USD exchange rate to hover around the rate at the end of 2018, even in the case of greater volatility. The

Trump administration's policies have not always followed experts' expectations in terms of their impact on exchange rates and will most likely remain difficult to forecast. The increasing political turmoil on the world stage will time and again lead to more pronounced fluctuations in either direction. Management's plans for 2018 are based on an average exchange rate of EUR/USD 1.1403. It also took note of the predictions of financial experts and banks as of the date on which the budget was drawn up.

The preparation of the consolidated financial statements in accordance with IFRSs requires, in the case of several items, that assumptions or estimates be made that affect the carrying amounts in the consolidated balance sheet and/or the amounts recognized in the consolidated statement of comprehensive income (consolidated statement of profit or loss and comprehensive income). This also applies to the presentation of contingent assets and liabilities. The actual amounts may vary from these assumptions and estimates.

Determining the useful life of capitalized development costs of the Company's products requires a long-term estimation of the market approval timelines for the products, their market acceptance and/or the speed of their market penetration, regulatory developments in key markets, the timing and the extent of reimbursement decisions, and competition just to name some of the most important para-meters. Particularly for novel products like blood-based cancer tests there are no empirical values and less experience available, which makes any estimations difficult. The Group's management closely observes developments on the key markets and regularly reviews its own projections. Reaching or not reaching a milestone – like a market approval decision – will therefore lead to remeasurements which may possibly be decisive for a change of the previously assumed useful lives.

In particular, further assumptions and estimates are required for:

- determining the useful lives of other property, plant and equipment and non-current intangible assets,
- determining whether the criteria for the capitalization of development costs and the recoverability of internally generated intangible assets are met,
- testing assets for impairment (particularly regarding intangible assets),
- the assessment of the possible use of contractual extension options,
- determining the terms of in-licensed intellectual property rights,
- determining if deferred taxes are realizable,
- determining if financial instruments classify as "measured at amortized cost", "measured at fair value with changes in other comprehensive income (FVOCI)" or "measured at fair value with changes in profit or loss (FVTPL)",
- determining the fair value of financial instruments,
- setting the parameters regarding the measurement of share-based payment instruments, and
- accounting for provisions (particularly the determination of the likelihood of occurrence).

ACCOUNTING AND VALUATION PRINCIPLES

Fair value measurement

These consolidated financial statements have been prepared on the historical cost basis except for certain financial instruments that are measured at revalued amounts or their fair values at the end of each reporting period.

For determining and disclosing the fair value of financial instruments, the Company uses the following hierarchy in accordance with IFRS 13 *Fair Value Measurement*:

Level 1: Quoted (unadjusted) prices in active markets for identical assets or liabilities

Level 2: Inputs other than quoted prices included within level 1 that are observable for assets or liabilities, either directly (as prices) or indirectly (derived from prices)

Level 3: Inputs for assets or liabilities that are not based on observable market data (unobservable inputs)

The carrying amounts of financial assets and liabilities such as cash and cash equivalents, marketable securities, trade receivables, trade payables, convertible notes and other current liabilities approximate their fair values due to their short-term maturities. The fair value of marketable securities is based on quoted market prices (level 1). There were no transfers between level 1 and level 2 fair value measurements, and no transfers into or out of level 3 fair value measurements during the reporting period.

Revenue recognition

Revenue from contracts with customers is recognized for the sale of goods and property rights (e.g., patents) or the rendering of other services when the customer obtains the control of the distinct goods or service and the customer has the ability to direct the use of and obtain the benefits from the goods or services received. The revenue recognized is the amount of the consideration that the entity would expect to be entitled to in exchange for these goods or services. If a contract includes a series of distinct goods or services, the transaction price is allocated to each performance obligation on the basis of the respective stand-alone selling price. If a stand-alone selling price is not directly observable, the entity reasonably estimates the stand-alone selling price. Revenue is recognized for each performance obligation either at a specific point in time or over a specific period of time.

Non-refundable received upfront payments for the future delivery of goods and rendering of services, respectively, are deferred and recognized when the goods are delivered and the services are rendered, respectively. Optional prolongation terms are considered individually in accordance with the underlying exercise conditions and anticipated likelihood of their exercise.

Licensing revenue is generated by granting third parties exclusive and non-exclusive usage rights to technologies and biomarkers patented by the Company or

licensed in by the Company itself. For each grant of rights of use, it must be determined whether the transfer of control to the customer takes place at a specific point in time or in a specific period of time. Licensing revenue is then recognized on an accrual basis in accordance with the terms of the underlying contract. Period-related licensing revenue is recognized on a straight-line basis over the term of the contract. Royalty income agreed on the basis of product sales and/or other measures is recognized on the basis of the underlying contract if these measures are known reliably.

If sales are accompanied by rights of return, the full amount of revenue is not recognized until the right of return has expired. Up to this point in time, revenue is only reported in the amount of production costs less any return costs. There were no sales with return rights in the reporting year.

Cost of sales

Cost of sales includes expenses for material used in products sold, changes in inventories, services received in connection with product sales or other types of revenue, royalties to be paid to third parties and triggered by product sales or other types of revenue. In addition, cost of sales includes directly allocable portions of personnel expenses, costs of intellectual property, depreciation, amortization and impairment, as well as pro rata overheads.

Other income

Other income includes third-party research grants, currency exchange rate gains, earnings from the reversal of provisions, income from the sale of assets outside of the Company's ordinary business activities, reimbursements from suppliers and insurance companies, and other non-operating earnings.

Government grants

In individual cases, cost contributions from public authorities are granted for research projects. These grants are partially paid in advance and then reported as deferred income (see below). To some extent, grants will only be paid after the work has been performed and proven. A current asset is recorded in such cases.

Subsidies received for product development activities are deducted from capitalized development costs, and investment grants and subsidies are offset directly against the acquisition costs of the subsidized assets, i.e. in both cases the carrying amount of the asset is reduced. The grant is thus recognized as a reduced depreciation expense over the remaining useful life.

Government grants usually come with certain requirements, which have been met so far by the Company and are expected to be met going forward. Should the requirements cease to be met in the future, redemption obligations could arise which have not been recognized yet.

Research and development costs

Research and development costs (R&D costs) include the personnel expenses for the R&D staff, costs of R&D material, depreciation, amortization and impairment, service fees, licensing fees and other direct expenses in connection with the Company's research and/or development activities (including clinical studies) which cannot be classified as revenue-generating activities. In addition, R&D costs include pro rata overhead costs charged to the R&D departments.

Selling, general and administrative costs

Selling, general and administrative costs (SG&A costs) include:

- all direct personnel and material expenses of the corresponding departments,
- depreciation and amortization expenses of the corresponding departments,
- other direct expenses of the corresponding departments, and
- pro rata overheads of the corresponding departments as well as the Company's statutory costs.

Other expenses

Other expenses consist of all operating expenses which do not classify as cost of sales, R&D costs or SG&A costs as defined above. This includes in particular but not exclusively

- foreign exchange rate losses,
- losses from the disposal of assets outside of the ordinary business activities, and
- expenses due to extraordinary effects or measures such as restructuring expenses or write-downs of non-current assets (e.g., goodwill impairment).

Share-based payment expenses

The fair value of granted stock options is determined in accordance with IFRS 2 *Share-based Payment* by simulation of the future movement in the Company's share capital on the basis of market parameters (e.g., volatility and risk free rate) and normal distributed random numbers ("Monte Carlo simulation"). The fair value of the stock options is expensed over the expected option term of up to four years against the capital reserve. The measurement is based on the fair value as of the grant date.

The fair value of phantom stock rights granted in previous years is calculated using the binomial model based on the Cox-Ross-Rubinstein model in accordance with IFRS 2 *Share-based Payment*, and recognized *pro rata temporis* as expenses and as a provision due to the obligation of the Company for a cash settlement in the future. If phantom stock rights are held by current employees of the Group, the related expenses are recorded as personnel costs and included in the payroll provisions. If phantom stock rights are held by former employees of the Group, the related expenses are recorded as other costs and included in other provisions.

Intangible assets

Intangible assets other than goodwill and capitalized development costs are measured at cost less straight-line amortization. Depending on the investment, the useful life of between three years (software) and twenty years (patents) will be defined. For patents, the useful life in individual cases depends on the term of the patent protection. Amortization of intangible assets is allocated in the consolidated statement of comprehensive income (consolidated statement of profit or loss and comprehensive income) to the functional area in which they are used. IAS 38 *Intangible Assets* is applied. In accordance with this standard, an intangible asset is reported if it is likely that a future economic benefit is associated with the use of such asset and that its cost can be reliably determined.

Intangible assets with indefinite useful lives and intangible assets not yet available for use are tested for impairment annually. In addition, assets or groups of assets are tested for impairment if there are any indications at the measurement date that they may be impaired. If the carrying amount of an intangible asset exceeds the recoverable amount of this asset as of the balance sheet date, this will be taken into account by means of a write-down, the amount of which is determined by the result of the impairment test. If there is no longer any indication of impairment, the impairment loss is reversed up to a maximum of the asset's amortized cost.

Capitalized development costs

Expenditure on research activities is recognized as an expense in the period in which it is incurred. An internally generated intangible asset arising from internal development is recognized if, and only if, all of the following requirements in accordance with IAS 38.57 *Intangible Assets* have been fulfilled:

- proof of the technical feasibility of completing the intangible asset so that it will be available for use or sale;
- proof of the intention to complete the intangible asset to use or sell it;
- proof of the ability to use or sell the intangible asset;
- proof of how the intangible asset will generate probable future economic benefits;
- proof of the availability of adequate technical, financial and other resources to complete the development and to use or sell the intangible asset;
- demonstration of the ability to measure reliably the expenditure attributable to the intangible asset during its development.

The amount initially recognized for the capitalization of development costs is the sum of expenditure incurred from the date when the intangible assets first met the aforementioned recognition criteria. Where no internally generated intangible asset can be recognized, development expenditure is charged to profit or loss in the period in which it is incurred. Subsequent to initial recognition, capitalized development costs are reported at cost less accumulated amortization and impairment losses, on the same basis as intangible assets acquired separately. The useful life of such capitalized development costs is assumed under consideration of the business plan and amounts to up to ten years for the currently capitalized assets. Amortization is recorded on a straight-line basis.

Property, plant and equipment

Property, plant and equipment is measured at cost less depreciation. Apart from directly attributable costs, pro rata overhead costs and depreciation are also included in the cost of internally produced items of property, plant and equipment. The cost is reduced by public and governmental investment grants. Repair costs are immediately recorded as an expense. Leasehold improvements are depreciated on a straight-line basis over the remaining term of the underlying leases (including optional extension periods). Movable items of property, plant and equipment are depreciated on a straight-line basis. The useful life is three to ten years for technical and electronic equipment and five to ten years for operating and office equipment.

Once disposed of, the asset and its accumulated depreciation are reported as a disposal. Income or expenses resulting from the disposal of assets (proceeds less residual carrying amount) is reported in the consolidated statement of comprehensive income (consolidated statement of profit or loss and comprehensive income) under other income/other expenses.

If, based on external or internal sources of information, there are indications that the carrying amount at the balance sheet date of an item of property, plant or equipment measured as described above exceeds its recoverable amount upon disposal, the asset is tested for impairment and, if necessary, written down. The amount of the impairment is determined by the fair value of the asset less transaction cost or – if higher – the net present value of future cash flows estimated from the value in use of the asset. An impairment test will be carried out annually for assets or groups of assets for which an impairment is assumed. If there is no longer any indication of impairment, the impairment loss is reversed up to a maximum of the asset's amortized cost.

Deferred taxes

Deferred taxes are calculated in accordance with IAS 12 *Income Taxes*. They are recognized on the basis of temporary differences between the carrying amount of assets and liabilities in the financial statements in accordance with IFRS of the companies involved and in their tax accounts. Furthermore, deferred tax assets are recognized for unutilized tax loss carryforwards and unutilized tax credits to the extent that deferred tax liabilities exist, or that taxable income is likely to be available against which to utilize the benefits of the temporary differences and that these are expected to reverse in the foreseeable future. At each balance sheet date, it is determined whether or not these requirements are still met. If such a realization in the foreseeable future is not likely, a valuation allowance is recognized against the tax loss carryforwards.

Deferred tax assets and tax liabilities from temporary differences associated with investments in subsidiaries are not recognized when the timing of the reversal of the temporary difference can be controlled, and it is probable that the temporary difference will not reverse in the foreseeable future.

Deferred tax assets and liabilities are measured using the local tax rates applicable on the balance sheet date or the local tax rates which are expected to apply at the future point in time when the asset is realized or the liability settled. Tax rates are used that have been enacted or substantively enacted by the end of the reporting period. Deferred tax assets and liabilities are only offset if they relate to taxes levied by the same tax authority and if the Group intends to settle its current tax assets and liabilities on a net basis.

Inventories

Inventories consist of finished and unfinished products, raw materials, low-value consumables as well as other production supplies. They are measured at the lower of cost and net realizable value. The manufacturing costs of the finished and semi-finished products include directly attributable unit costs, depreciation, amortization of capitalized development costs and overheads attributable to the production process. For finished and semi-finished products the principle of item-by-item measurement applies.

Financial instruments

A financial instrument is a contract that gives rise to a financial asset for one contracting party and a financial liability or equity instrument for another contracting party.

Trade receivables without a significant financing component are initially recognized at their transaction price. All other financial assets and financial liabilities are initially recognized at fair value.

On initial recognition, a financial asset is classified into one of the following measurement categories:

- at amortized cost
- FVOCI debt instruments (investments in debt instruments measured at fair value with changes in other comprehensive income),
- FVOCI equity investments (equity investments measured at fair value with changes in other comprehensive income),
- FVTPL (at fair value with changes in profit or loss).

For an asset that is not measured at FVTPL, transaction costs directly attributable to its acquisition or issue are added to the measurement at initial recognition.

Financial assets are not reclassified after initial recognition unless the Company changes its business model for managing financial assets.

A financial asset is measured at amortized cost if it has not been designated as an FVTPL and both of the following conditions are met:

- It is held within the framework of a business model whose objective is to hold financial assets in order to collect the contractual cash flows, and
- the contractual terms of the financial asset give rise to cash flows at specified dates that represent only principal and interest payments on the outstanding principal.

A debt instrument is designated as an FVOCI if it has not been designated as an FVTPL and both of the following conditions are met:

- It is held under a business model whose objective is both to hold financial assets to collect contractual cash flows and to sell financial assets, and
- its terms and conditions result in cash flows at specified dates which represent only principal and interest payments on the outstanding principal.

On initial recognition of an equity investment that is not held for trading, there is an irrevocable option to show consequential changes in the fair value of the investment in other comprehensive income. This choice is made by the Company on a case-by-case basis for each investment.

All financial assets that are not measured at amortized cost or at FVOCI are measured at FVTPL. This includes all derivative financial assets. On initial recognition, the Company may irrevocably designate as FVTPL financial assets that otherwise qualify for measurement at amortized cost or at FVOCI if this results in the elimination or significant reduction of accounting mismatches.

The Company makes an assessment of the objectives of the business model in which the financial asset is held at a portfolio level as this best reflects the way the business is managed and information is provided to management. The information to be considered includes:

- the stated policies and objectives for the portfolio and the implementation of these policies in practice,
- how the results of the portfolio are evaluated and reported to management,
- the risks affecting the results of the business model (and the financial assets held under that business model) and how those risks are managed,
- frequency, extent and timing of sales of financial assets in prior periods and expectations about future sales activities.

Financial assets that are held or managed for trading and whose performance is measured at fair value are measured at FVTPL.

For the purpose of assessing whether contractual cash flows are solely principal and interest payments, the “principal amount” is defined as the fair value of the financial asset at initial recognition. “Interest” is defined as the consideration for the time value of money and for the risk of default associated with the principal outstanding over a specified period, as well as for other basic credit risks, costs (such as liquidity risk and administrative costs) and a profit margin. In assessing whether the contractual cash flows are exclusively interest and principal payments on the principal amount, the Company considers the contractual terms of the instrument. This includes an assessment of whether the financial asset contains a contractual arrangement that could change the timing or amount of the contractual cash flows so that they no longer meet these conditions. In making this assessment, the Company takes into account the following factors:

- certain events that would change the amount or timing of cash flows,
- conditions that would adjust the interest rate, including variable interest rates,
- early repayment and extension options, and
- conditions that restrict the Company’s right to receive cash flows from a particular asset.

An early redemption option is consistent with the criterion of exclusive interest and principal payments if the amount of the early redemption substantially comprises unpaid interest and principal payments on the outstanding principal, which may include appropriate additional consideration for the early termination of the contract.

Financial liabilities are measured at amortized cost or at fair value through profit or loss (FVTPL). A financial liability is classified as an FVTPL if it is classified as held for trading, is a derivative or is designated as such upon initial recognition. Financial liabilities at FVTPL are measured at fair value and net gains or losses, including interest expense, are recognized in profit or loss. Other financial liabilities are subsequently measured at amortized cost using the effective interest method. Interest expenses and foreign currency translation differences are recognized in profit or loss. Gains or losses on derecognition are also recognized in profit or loss.

The Company derecognizes a financial asset when the contractual rights to the cash flows from the financial asset expire or it transfers the rights to receive the cash flows in a transaction in which all significant risks and rewards of ownership of the financial asset are transferred. Derecognition also occurs when the Company neither transfers nor retains substantially all the risks and rewards of ownership and does not retain control of the transferred asset. The Company carries out transactions in which it transfers recognized assets but retains all or substantially all of the risks and rewards of ownership of the transferred asset. In such cases, the transferred assets are not derecognized. Trade receivables are generally written off if they are overdue by more than one year and are not subject to enforcement.

The Company derecognizes a financial liability when the contractual obligations are discharged, cancelled or expired or when the terms of the contract are modified and the cash flows of the adjusted liability are significantly different. In this case, a new financial liability is recognized at fair value based on the revised terms. When a financial liability is derecognized, the difference between the carrying amount of the liability extinguished and the consideration paid (including non-cash assets transferred or liabilities assumed) is recognized in profit or loss.

The Company invoices its customers in accordance with individual contractual agreements or the applicable general terms and conditions. Invoices are generally payable net within 30 days. New customers are generally supplied against prepayment. In the case of receivables from the granting of licenses, the payment terms are determined on the basis of the agreements from the underlying license agreements. The resulting payments are either due immediately or within a period of up to 90 days.

Cash equivalents

A cash equivalent is defined as a financial instrument which is readily convertible on a short-term basis to a known amount of cash and which is subject to an insignificant risk of changes in value (IAS 7.6 *Statement of Cash Flows*). Financial instruments generally qualify as cash equivalents when they are more closely related to the money markets than to the bond markets and have a remaining term of less than three months. They are measured at amortized cost.

Prepaid expenses

Payments before the balance sheet date in respect of expenses for a specific period after that date are deferred and reported at amortized cost as prepaid expenses in other current assets.

Deferred income

Deferred income is recognized for grants and for research and development payments ("R&D payments") received in advance. Grants received in advance for research expenses which were provided by governmental or comparable national, regional or local authorities are recognized through profit or loss as other income over the subsidized terms of each grant project according to its stage of completion. Subsidies received in advance for product development activities are deducted from capitalized development costs. Payments received in advance from customers for R&D services to be rendered by the Company in the future or for licenses are deferred and recognized through profit or loss under the terms and conditions of the contract according to the stage of project completion (percentage of completion method).

Provisions

In accordance with IAS 37 *Provisions, Contingent Liabilities and Contingent Assets*, a provision is recognized if a present obligation exists as a result of a past event, if it is probable that an outflow of resources embodying economic benefits will be required to settle this obligation and if a reliable estimate can be made of the amount of the obligation. The amount recognized as a provision is the best estimate of the expenditure required to settle the present obligation at the balance sheet date, taking into account the risks and uncertainties surrounding the obligation. When a provision is measured using the cash flows expected to be required to settle the present obligation, its carrying amount is the present value of these cash flows. Obligations arising from share-based payment programs that provide for awards payable in cash (i.e., the Company's phantom stock programs) are measured at fair value and recognized as current or non-current provisions based on the remaining term of the underlying rights until these can be exercised.

ALTERNATIVE PERFORMANCE MEASURES

Earnings before interest and taxes (EBIT) are defined as the overall result of the year/period before the other result of the year/period, income taxes, other financial result, interest expenses and interest income. EBIT before depreciation and amortization (EBITDA) is defined as EBIT before depreciation and amortization. Share-based payment is defined as the cost from total fair value changes of all stock options and phantom stock rights granted during the year/period. EBITDA before stock-based compensation is defined as EBITDA before stock-based compensation expense.

EBIT, EBITDA and EBITDA before stock-based compensation are all non-IFRS measures used and defined by Epigenomics that are commonly used in global capital market communications and are requested by analysts and investors.

CURRENCY TRANSLATION

In the separate financial statements, receivables and liabilities in foreign currencies are measured using the corresponding euro reference rate published by the European Central Bank and applicable as of the balance sheet date.

The U.S. dollar is the functional and reporting currency of our U.S. subsidiary.

For consolidation purposes, the expenses and income of the subsidiary are translated into euros at the average monthly exchange rates. Assets and liabilities of the subsidiary are translated at the end of each reporting period using the closing rate of the euro as the Group currency. Equity components that are measured in terms of historical cost in U.S. dollars are translated using the exchange rate at the date of the transaction. The resulting translation differences are accounted for separately within equity.

Foreign currency exchange rates applied in the reporting period:

Closing rates	**Dec 31, 2017**	**Dec 31, 2018**
EUR/USD	1.1993	1.1450

Average rates	**2017**	**2018**
EUR/USD	1.1370	1.1793

NOTES TO THE CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME (CONSOLIDATED STATEMENT OF PROFIT OR LOSS AND OTHER COMPREHENSIVE INCOME)

1 REVENUE

Revenue by type:

	2017		2018	
	EUR thousand	in %	EUR thousand	in %
Product sales (own and third-party)	548	29.4	808	52.7
Licensing income	1,271	68.2	636	41.5
R&D income and reimbursements	45	2.4	46	3.0
Other	0	0	43	2.8
Total revenue	1,864	100.0	1,533	100.0

Licensing income is generated by out-licensing of own intellectual property (e.g. technologies, biomarkers) to third parties. Revenue from product sales is generated by the sale of the Group's products through own sales channels, through distribution partners or by the rendering of services by third parties based on the Company's products. R&D income and reimbursements are generated by rendering services in connection with contract research and by charging pass-through costs to third parties.

Revenue by geographical market:

	2017		2018	
	EUR thousand	in %	EUR thousand	in %
Europe	280	15.0	296	19.3
North America	943	50.6	637	41.6
Asia	638	34.2	598	39.0
Rest of the world	3	0.2	2	0.1
Total revenue	1,864	100.0	1,533	100.0

In the reporting year, 81% of total revenue (2017: 81%) was generated by the Company's three largest customers.

2 OTHER INCOME

EUR thousand	2017	2018
Foreign exchange rate gains	2	704
Income from the reversal of provisions	581	564
Recoveries and refunds	59	64
Reversal of write-downs on receivables	209	0
Income from the disposal of other assets	161	1
Correction of deferred liabilities	42	23
Third-party research grants from public authorities	0	58
Other	0	27
Total other income	1,054	1,441

Income from the reversals of provisions includes an effect of EUR 554 thousand (2017: EUR 290 thousand) from fair value changes of the issued phantom stock rights.

3 COST ALLOCATION BY FUNCTION

2017 EUR thousand	Cost of sales	R&D costs	SG&A costs	Other expenses	Total
Materials and consumables	197	591	17	0	805
Depreciation and amortization	9	253	81	0	343
Personnel costs	4	2,247	3,285	0	5,536
Other costs	36	1,238	4,652	597	6,523
Total	246	4,329	8,035	597	13,207

2018 EUR thousand	Cost of sales	R&D costs	SG&A costs	Other expenses	Total
Materials and consumables	422	383	40	0	845
Depreciation and amortization	0	221	87	0	308
Personnel costs	5	2,901	4,440	0	7,346
Other costs	13	2,913	4,136	308	7,370

Total	440	6,418	8,703	308	15,869

4 PERSONNEL COSTS

EUR thousand	2017	2018
Wages and salaries	4,304	5,495
Share-based payment expenses	577	1,151
– *thereof: expenses for issuing stock options (SO)*	*162*	*371*
SO expenses for Greg Hamilton (CEO)	*99*	*211*
SO expenses for Jorge Garces (CEO since December 1, 2017)	*11*	*58*
SO expenses for Albert Weber (EVP Finance since January 1, 2018)	*n/a*	*102*
SO expenses for Dr. Uwe Staub (COO until March 31, 2018)	*52*	*0*
Social security expenses	655	700
– *thereof:*		
employer's contribution to a national pension fund (Germany)	*160*	*134*
employer's contribution to a 401(k) savings plan (U.S.A.)	*51*	*68*
Total personnel costs	5,536	7,346

The Group employed an average of 43 employees in 2018 (2017: 44). The 44 employees as of the end of 2018 included 21 employees across the areas of research, product development, IP, regulatory affairs, quality assurance and manufacturing. Their activities are reported as R&D costs in the financial statements. The remaining 23 employees reported as selling, general and administrative functions work in business and commercial development, customer and technical service, accounting, finance, legal, human resources, IT, investor relations and general management.

The share-based payment expenses for PSR in the amount of EUR 0 thousand (2017: EUR 122 thousand) resulted from cash payments for exercises of PSR and revaluations of issued PSR which had not been exercised yet, and included a fluctuation of the fair value of the rights in the amount of EUR 2 thousand (2017: EUR 109 thousand). Measurement of the stock options granted gave rise to share-based payment expenses amounting to EUR 1,151 thousand (2016: EUR 455 thousand).

5 DEPRECIATION AND AMORTIZATION

EUR thousand	2017	2018
Amortization of intangible assets	191	196
– *thereof: amortization of capitalized development costs*	*111*	*119*
Depreciation of property, plant and equipment	152	112
Total depreciation and amortization	343	308

6 OTHER EXPENSES

EUR thousand	2017	2018
Foreign exchange rate losses	595	305
Losses from the disposal of assets	1	2
Other	1	1
Total other expenses	597	308

7 OPERATING RESULT (EBIT) AND EBITDA

EUR thousand	2017	2018
Operating result/earnings before interest and taxes (EBIT)	-10,289	-12,895
Total depreciation and amortization	343	308
EBIT before depreciation and amortization (EBITDA)	-9,946	-12,587
Share-based payment expenses	577	1,151
EBITDA before share-based payment expenses	-9,369	-11,436

8 FINANCIAL RESULT

Net gains and losses on all financial instruments:

EUR thousand	2017	2018
Interest from available-for-sale financial assets	18	17
Interest and related income	18	17
Total financial income	18	17
Other interest expenses	-175	-550
Interest and related expenses	-175	-550
Other finance costs	-3	-2
Total financial expenses	-178	-552

Total financial result	-160	-535

9 TAXES ON INCOME

The reported taxes on income in the amount of EUR -738 thousand (2017: EUR -214 thousand) consist solely of taxes relating to the Company's U.S. subsidiary.

EUR thousand	2017	2018
Current tax expenses	8	23
Deferred tax income due to loss carryforwards	-222	-761
Total taxes on income	-214	-738

For the calculation of deferred taxes of the U.S. subsidiary, a local tax rate of 21% was applied from January 1, 2018 onwards.

Calculation of the applicable tax rate in Germany for the purpose of deferred taxes:

in %	2017	2018
Corporate income tax	15.0	15.0
Solidarity surcharge	5.5	5.5
Trade tax	14.35	14.35
underlying trade tax rate of assessment	*410*	*410*
Total applicable tax rate in Germany for the purpose of deferred taxes	30.2	30.2

Tax reconciliation:

EUR thousand	2017	2018
Net loss for the year before taxes on income	-10,449	-13,430
Expected tax income	3,156	4,056
applicable tax rate for the Group	*30.2%*	*30.2%*
permanent differences	*-41*	*-40*
other foreign taxes	*-7*	*-23*
effect of foreign taxes	*-313*	*-348*
unrecognized tax loss carryforwards	*-2,580*	*-2,867*
Effective tax income	214	738
Effective tax rate	2.1%	5.8%

The expected tax expense for the reporting year has been calculated by applying the individual tax rates for the Group companies to the net results before taxes on income. Permanent differences result from non-deductible expenses in accordance with German tax law.

10 EARNINGS PER SHARE

Earnings per share (basic) are calculated by dividing the net loss for the year by the weighted average number of shares issued. The outstanding stock options and convertible notes granted by the Company are antidilutive in accordance with IAS 33.41 and 33.43 *Earnings per Share*. Therefore, the earnings per share (diluted) equal the earnings per share (basic). The number of shares issued as of the balance sheet date amounted to 36,021,540 (December 31, 2017: 24,014,360).

	2017	**2018**
Net loss for the year (in EUR thousand)	-10,235	-12,692
Weighted average number of shares issued	23,161,627	27,016,155
Earnings per share (basic and diluted, in EUR)	-0.44	-0.47

NON-CURRENT ASSETS

11 INTANGIBLE ASSETS

EUR thousand		Software	Licenses/ patents	Development costs	Total intangible assets
Jan 1, 2017	Cost	758	1,151	3,586	5,495
	Additions	37	0	67	104
	Disposals	-384	-113	0	-497
	Currency translation	-1	0	0	-1
Dec 31, 2017	Cost	410	1,038	3,653	5,101
	Additions	16	0	0	16
	Disposals	0	0	-14	-14
	Currency translation	0	0	0	0
Dec 31, 2018	Cost	426	1,038	3,639	5,103
Jan 1, 2017	Accumulated amortization	594	1,068	3,078	4,740
	Additions	40	40	111	191
	Disposals	-384	-113	0	-497
	Currency translation	-1	0	0	-1
Dec 31, 2017	Accumulated amortization	249	995	3,189	4,433
	Additions	45	31	119	195
	Disposals	0	0	0	0
	Currency translation	0	0	0	0
Dec 31, 2018	Accumulated amortization	294	1,026	3,308	4,628
Dec 31, 2017	Carrying amounts	161	43	464	668
Dec 31, 2018	Carrying amounts	132	12	331	475

The capitalized development costs for Epi proColon and Epi proLung are assumed to have a useful life of ten years. The annual amortization for these assets amounted to EUR 111 thousand (Epi proColon) and EUR 8 thousand (Epi proLung).

12 PROPERTY, PLANT AND EQUIPMENT

EUR thousand		Fixtures/ leasehold improvements	Technical equipment	Other property, plant and equipment	Total property, plant and equipment
Jan 1, 2017	Cost	571	1,419	91	2,081
	Additions	0	165	3	168
	Disposals	0	-337	-4	-341
	Currency translation	-5	23	-5	13
Dec 31, 2017	Cost	566	1,270	85	1,921
	Additions	3	91	0	94
	Disposals	0	-82	0	-82
	Currency translation	0	2	1	3
Dec 31, 2018	Cost	569	1,281	86	1,936
Jan 1, 2017	Accumulated depreciation	144	1,188	36	1,368
	Additions	44	99	9	152
	Disposals	0	-336	-4	-340
	Currency translation	-5	28	-2	21
Dec 31, 2017	Accumulated depreciation	183	979	39	1,201
	Additions	44	61	8	113
	Disposals	0	-79	0	-79
	Currency translation	0	1	0	1
Dec 31, 2018	Accumulated depreciation	227	962	47	1,236
Dec 31, 2017	Carrying amounts	383	291	46	720
Dec 31, 2018	Carrying amounts	342	319	39	700

Subsidies received in previous years reduced the cost of individual items of property, plant and equipment. These subsidies constitute public financial assistance for businesses under the joint program for the improvement of regional economic structures (Gemeinschaftsaufgabe “Verbesserung der regio-nalen Wirtschaftsstruktur”) granted from German federal and state funds. The funding period ended on April 8, 2017. However, if certain conditions attaching to the funding are not complied with going forward, the funding sponsors may demand partial or full repayment of the subsidies in the following years. These conditions include preserving the current permanent jobs at the Company’s Berlin site and the obligation to keep the subsidized assets for a period of at least five years after the end of the project at the subsidized location. The Company assumes that it will be able to fulfill all of the conditions.

13 ASSETS SCHEDULE

EUR thousand		Intangible assets	Property, plant and equipment	Total intangible assets and property, plant and equipment
Jan 1, 2017	Cost	5,495	2,081	7,576
	Additions	104	168	272
	Disposals	-497	-341	-838
	Currency translation	-1	13	12
Dec 31, 2017	Cost	5,101	1,921	7,022
	Additions	16	94	110
	Disposals	-14	-82	-96
	Currency translation	0	3	3
Dec 31, 2018	Cost	5,103	1,936	7,039
Jan 1, 2017	Accumulated amortization and depreciation	4,740	1,368	6,108
	Additions	191	152	343
	Disposals	-497	-340	-837
	Currency translation	-1	21	20
Dec 31, 2017	Accumulated amortization and depreciation	4,433	1,201	5,634
	Additions	195	113	308
	Disposals	0	-79	-79
	Currency translation	0	1	1
Dec 31, 2018	Accumulated amortization and depreciation	4,628	1,236	5,864
31.12.2017	Carrying amounts	668	720	1,388
Dec 31, 2018	Carrying amounts	475	700	1,175

14 DEFERRED TAXES

For the Group, deferred taxes arise as described in the following table:

	Deferred tax assets from temporary differences		Deferred tax liabilities from temporary differences	
EUR thousand	**Dec 31, 2017**	**Dec 31, 2018**	**Dec 31, 2017**	**Dec 31, 2018**
Intangible assets and property, plant and equipment	34	20	140	100
Current assets	0	0	1	0
Current liabilities	0	0	88	117
Total	34	20	229	217
Total after offsetting	0	0	195	197

EUR thousand	**Dec 31, 2017**	**Dec 31, 2018**
Deferred tax assets due to German tax loss carryforwards	57,404	60,516
Deferred tax assets due to U.S. tax credits	2,562	2,698
Deferred tax assets due to U.S. tax loss carryforwards	1,781	2,378
Total deferred tax assets due to tax loss carryforwards	61,747	66,033
Deferred tax position (net) from temporary differences	-195	-197
Total deferred tax assets	61,552	65,836
Allowance on deferred tax assets	-60,026	-63,418
Recognized deferred tax assets	1,526	2,378

Overview of tax loss carryforwards (2018 estimated):

EUR thousand	**2017**	**2018**
Tax loss carryforwards in Germany (corporate income tax)	*190,907*	*201,287*
Tax loss carryforwards in Germany (trade tax)	*189,360*	*199,740*
Tax loss carryforwards in the U.S.A. (corporate income tax)	*7,072*	*11,324*
R&D tax credits in the U.S.A.	*2,562*	*3,139*

Since all deferred tax assets and liabilities arising from temporary differences must be settled with the same tax authority that levied the taxes to which those deferred tax assets and liabilities relate, in accordance with IAS 12.71 et seq. *Income Taxes*, only those deferred tax assets and liabilities which relate to taxes levied by the same tax authority have been offset.

Since its founding through to December 31, 2017, the Company's tax loss carryforwards in Germany amounted to EUR 191 million for corporate income tax and to EUR 189 million for trade tax. Furthermore, the Company estimates that the accumulated tax loss carryforwards in both aforementioned tax categories will increase by more than EUR 10 million when it files its tax returns for 2018. In accordance with German tax law, such tax losses have an unlimited carryforward period. As a consequence of completed tax audits, tax loss carryforwards in the amount of EUR 167 million are undisputed. The resulting deferred tax asset is therefore sufficient to offset the aforementioned deferred tax liability from temporary differences of EUR 197 thousand as of December 31, 2018. However, a future utilization of these carryforwards could become impossible under certain conditions (e.g., a major change of ownership and a change of business) based on the applicable German tax law. Due to the current financial situation of the Company, without sufficient liquidity to achieve the break-even point, valuation allowances have been recognized for the calculated exceeding amount of deferred tax assets at the balance sheet date.

The temporary differences connected with shares in subsidiaries, for which no deferred tax assets had been recognized in the reporting periods presented, amounted to a total of EUR 9,082 thousand (2017: EUR 5,655 thousand).

In the reporting year, deferred tax assets were recognized due to tax loss carryforwards of Epigenomics, Inc. and temporary differences between IFRSs and U.S. tax law. These tax loss carryforwards in the U.S.A. arising before December 31, 2018 can be utilized for up to twenty years. A utilization of the remaining tax loss carryforwards of Epigenomics, Inc. in the amount of EUR 11 million over the next three years is very likely according to the Company's business plan, which is based on favorable reimbursement decisions in the U.S.A. for Epi proColon over the course of 2019.

The deferred tax asset in the U.S.A. was remeasured as of the end of the previous year in light of the tax reform legislation passed by the U.S. Senate at the end of December 2017. The key point of this reform was to cut the tax rate for businesses from 34% to 21% from January 2018 onwards. Going forward, there will be no time limit on utilizing tax loss carryforwards arising from January 1, 2018 onwards.

The R&D tax credits in the U.S.A. expire on various dates beginning in 2022 through to 2037.

Changes in recognized deferred tax assets in the reporting year:

EUR thousand	2017	2018
January 1	1,551	1,526
Deferred tax income	1,146	761
Adjustment due to changes in tax rates	-937	0
Foreign currency adjustments	-234	91
December 31	1,526	2,378

CURRENT ASSETS

15 INVENTORIES

EUR thousand	Dec 31, 2017	Dec 31, 2018
Consumables, raw materials, supplies	71	123
Semi-finished goods	148	84
Finished goods	74	157
Total inventories	293	364

The cost of inventories recognized as R&D costs through profit or loss in 2018 amounted to EUR 96 thousand (2017: EUR 63 thousand) and was attributable to write-offs of finished goods due to the determination of an unlikelihood that these goods could have been sold before the end of their shelf lives or because their shelf

lives had already expired.

16 TRADE RECEIVABLES

Trade receivables primarily include receivables from development partners, customers and licensees. These receivables do not bear interest and are therefore not exposed to any interest rate risk. The carrying amounts of the receivables correspond to their fair values. The maximum default risk corresponded to the carrying amount as of the balance sheet date.

EUR thousand	Dec 31, 2017	Dec 31, 2018
Trade receivables	937	164
thereof not yet due	862	122
thereof past due (up to 90 days)	41	9
thereof not yet invoiced (current assets from contractual relationships)	34	33

No allowances for doubtful accounts had been recognized as of the balance sheet date.

17 MARKETABLE SECURITIES

The marketable securities in the amount of EUR 653 thousand as of December 31, 2018 (December 31, 2017: EUR 905 thousand) are so-called “Trust-preferred Securities” issued by a wholly owned subsidiary of Deutsche Bank AG. They are redeemable at any time in one payment at the issuer’s discretion. In previous years they have been recognized as “available-for-sale” financial instruments in accordance with IAS 39.9 *Financial Instruments: Recognition and Measurement*. Since the reporting year, they have been classified in accordance with IFRS 9. They are now measured at fair value with changes in value in other comprehensive income as the Company has no intention of trading with them.

The reported securities are denominated in euros and are subject to the usual market and interest risks. The interest rate risks are price risks and interest rate cash flow risks. The fair value of the marketable securities is identified by their stock exchange quotations at each relevant balance sheet date. The securities were traded on active markets in the reporting year.

18 CASH AND CASH EQUIVALENTS

Cash and cash equivalents increased to EUR 16,487 thousand as of the balance sheet date (December 31, 2017: EUR 12,826 thousand). 99% of those funds was denominated in euros at the balance sheet date, with the remainder denominated in U.S. dollars. The total amount was deposited in current accounts at three different banks.

At the balance sheet date, an amount of EUR 24 thousand of bank deposits was restricted cash.

19 OTHER CURRENT ASSETS

EUR thousand	Dec 31, 2017	Dec 31, 2018
Prepaid expenses	709	338
Receivables from tax authorities	307	197
Interest receivables	9	9
Claims from grant projects	808	1

Other	65	61
Total other current assets	1,898	606

EQUITY

20 SHARE CATEGORIES AND CAPITAL STRUCTURE

As of December 31, 2018, the share capital of Epigenomics AG consisted exclusively of non-par value ordinary registered shares with equal rights.

Equity structure of the Company as of the balance sheet date:

EUR	Dec 31, 2017	Dec 31, 2018
Subscribed capital	24,014,360	36,021,540
Authorized Capital	10,088,530	0
Authorized Capital 2017/I	*994,426*	*0*
Authorized Capital 2017/II	*9,094,104*	*0*
Conditional Capital	11,367,630	12,007,180
Conditional Capital VII	*21,065*	*21,065*
Conditional Capital IX	*521,095*	*521,095*
Conditional Capital X	*8,825,470*	*9,465,020*
Conditional Capital XI	*1,000,000*	*1,000,000*
Conditional Capital XII	*1,000,000*	*1,000,000*

Subscribed capital increased by 12,007,180 shares or EUR 12,007,180 in October 2018 by way of a capital increase through issuing new shares.

Authorized Capital 2017/I and Authorized Capital 2017/II were fully revoked by means of the resolution of the General Shareholders' Meeting dated May 30, 2018, and replaced by Authorized Capital 2018/I and Authorized Capital 2018/II. As part of the capital increase carried out in October 2018, both tranches of authorized capital were fully utilized.

Conditional Capital VII can no longer be used to grant stock options as the respective deadlines have passed. The Stock Option Program 09–13, for which this conditional capital was earmarked, has now expired. There are no longer any exercisable rights outstanding. As a result, additional shares can no longer be created from Conditional Capital VII.

The share capital is conditionally increased by up to EUR 521,095.00 by means of issuing up to 521,095 new non-par value registered shares (Conditional Capital IX). The conditional capital increase serves to grant shares to the holders or creditors of bonds or participation rights issued by the Company or a subsidiary until May 29, 2022 on the basis of the authorization resolution of the General Shareholders' Meeting dated May 30, 2017 if option or conversion rights are exercised, if option or conversion ob-ligations are performed or if the Company exercises its optional right to deliver shares of the Company instead of payment of the cash amount due (or parts thereof). The new shares are issued at the respect-ive option or conversion price to be determined in accordance with the aforementioned authorization resolution.

The conditional capital increase is only to be implemented if bonds or participation rights are issued in accordance with the authorization resolution of the General Shareholders' Meeting dated May 30, 2017, and only to the extent that

- option or conversion rights are exercised or
- holders or creditors of bonds or participation rights who are under an obligation to exercise an option or under a conversion obligation perform their

obligation to exercise the option or their conversion obligation or

– the Company exercises its optional right to deliver shares of the Company instead of paying the cash amount due (or parts thereof)

and to the extent that no cash settlement is granted and no shares from an authorized capital, treasury shares or shares of another listed company are delivered. The new shares issued carry dividend rights from the beginning of the fiscal year in which they are issued. The Executive Board is authorized, as far as legally permissible and with the consent of the Supervisory Board, to determine that, if no resolution on the appropriation of net profit for the fiscal year immediately preceding the year of issue of the new shares has been adopted when the new shares are issued, the new shares shall carry dividend rights from the beginning of the fiscal year immediately preceding the year of issue.

The Executive Board is also authorized, with the consent of the Supervisory Board, to determine the further details concerning the implementation of the conditional capital increase.

The share capital is conditionally increased by up to EUR 9,465,020.00 by means of issuing up to 9,465,020 new non-par value registered shares (Conditional Capital X). The conditional capital increase serves to grant shares to the holders or creditors of bonds or participation rights, such shares being issued by the Company or a subsidiary until May 29, 2022 on the basis of the authorization reso-lution of the General Shareholders' Meeting dated May 30, 2017 or until May 29, 2023 on the basis of the Executive Board's authorization resolution of the General Shareholders' Meeting dated May 30, 2018 if option or conversion rights are exercised, if option or conversion obligations are performed or if the Company exercises its optional right to deliver shares of the Company instead of payment of the cash amount due (or parts thereof). The new shares are issued at the respective option or conversion price to be determined in accordance with the aforementioned authorization resolution.

The conditional capital increase is only to be implemented if bonds or participation rights are issued in accordance with the authorization resolution of the General Shareholders' Meeting dated May 30, 2017 or the resolution of the General Shareholders' Meeting dated May 30, 2018 granting authorization to the Executive Board, and only to the extent that

– option or conversion rights are exercised or

– holders or creditors of bonds or participation rights who are under an obligation to exercise an option or under a conversion obligation perform their obligation to exercise the option or their conversion obligation or

– the Company exercises its optional right to deliver shares of the Company instead of paying the cash amount due (or parts thereof)

and to the extent that no cash settlement is granted and no shares from an authorized capital, treasury shares or shares of another listed company are delivered. The new shares issued carry dividend rights from the beginning of the fiscal year in which they are issued. The Executive Board is authorized, as far as legally permissible and with the consent of the Supervisory Board, to determine that, if no resolution on the appropriation of net profit for the fiscal year immediately preceding the year of issue of the new shares has been adopted when the new shares are issued, the new shares shall carry dividend rights from the beginning of the fiscal year immediately preceding the year of issue.

The Executive Board is also authorized, with the consent of the Supervisory Board, to determine the further details concerning the implementation of the conditional capital increase.

In the reporting year, no shares have been issued from Conditional Capital X.

The share capital is conditionally increased by up to EUR 1,000,000.00 by means of issuing up to 1,000,000 new non-par value registered shares (Conditional Capital XI). The conditional capital increase serves to grant or issue shares to members of the Executive Board of the Company, to members of the management of domestic and foreign dependent companies of the Company as defined in sections 15 and 17 AktG and to employees of the Company and of domestic and foreign dependent companies of the Company as defined in sections 15 and 17 AktG who exercise the subscription rights they were granted prior to the end of April 30, 2018 pursuant to the authorization resolution of the General Shareholders' Meeting dated May 25, 2016 (Stock Option Program 16–18). The new shares are issued against payment by the beneficiary to the Company of the respective exercise price to be determined in accordance with the aforementioned authorization resolution.

The conditional capital increase is to be implemented only if subscription rights are issued in accordance with the authorization resolution on the Company's Stock Option Program 16–18 by the General Shareholders' Meeting dated May 25, 2016 and only to the extent that the holders of these subscription rights exercise them and the Company does not grant any treasury shares or cash compensation to fulfill these subscription rights.

The new shares issued carry dividend rights from the beginning of the fiscal year in which they are created. The Executive Board may determine, as far as legally permissible and with the consent of the Supervisory Board, that, if no resolution on the appropriation of net profit for the fiscal year immediately preceding the year of issue of the new shares has been adopted when the new shares are issued, the new shares shall be entitled to dividends from the beginning of the fiscal year immediately preceding the year of issue; if the new shares are issued to members of the Executive Board, the Supervisory Board is authorized to do so.

The Supervisory Board is also authorized to determine the further details concerning the implement-ation of the conditional capital increase where the granting of subscription rights to members of the Executive Board is concerned. In all other cases, the Executive Board is authorized to determine such details.

Between 2016 and 2018, the maximum permitted number of share options were issued based on Conditional Capital XI. In accordance with the terms and conditions of the stock option program, no new shares can be created upon exercise of these stock options before October 2020.

The share capital is conditionally increased by up to EUR 1,000,000.00 by means of issuing up to 1,000,000 new non-par value registered shares (Conditional Capital XII). The conditional capital increase serves to grant or issue shares to members of the Executive Board of the Company, to members of the management of domestic and foreign dependent companies of the Company as defined in sections 15 and 17 AktG and to employees of the Company and of domestic and foreign dependent companies of the Company as defined in sections 15 and 17 AktG who exercise the subscription rights they were granted prior to the end of April 30, 2019 pursuant to the authorization resolution of the General Shareholders' Meeting dated May 30, 2017 (Stock Option Program 17–19). The new shares are issued against payment by the beneficiary to the Company of the respective exercise price to be determined in accordance with the aforementioned authorization resolution.

The conditional capital increase is to be implemented only if subscription rights are issued in accordance with the authorization resolution on the Company's Stock Option Program 17–19 by the General Shareholders' Meeting dated May 30, 2017 and only to the extent that the holders of these subscription rights exercise them and the Company does not grant any treasury shares or cash compensation to fulfill these subscription rights.

The new shares issued carry dividend rights from the beginning of the fiscal year in which they are created. The Executive Board may determine, as far as legally permissible and with the consent of the Supervisory Board, that, if no resolution on the appropriation of net profit for the fiscal year immediately preceding the year of issue of the new shares has been adopted when the new shares are issued, the new shares shall be entitled to dividends from the beginning of the fiscal year immediately preceding the year of issue; if the new shares are issued to members of the Executive Board, the Supervisory Board is authorized to do so.

The Supervisory Board is also authorized to determine the further details concerning the implement-ation of the conditional capital increase where the granting of subscription rights to members of the Executive Board is concerned. In all other cases, the Executive Board is authorized to determine such details.

Based on Conditional Capital XII, 606,170 share options can still be issued by April 30, 2019. In accordance with the terms and conditions of the stock option program, no new shares can be created upon exercise of these stock options before April 2022.

21 CAPITAL RESERVE

The capital reserve comprises the premiums arising on the issuance of shares and the expenses relating to the issuance of shares, as well as expenses from the issue of stock options to Executive Board and staff members. The capital reserve increased from EUR 59,509 thousand as of December 31, 2017 to EUR 68,802 as of December 31, 2018. A net increase of EUR 8,142 thousand was attributable to the capital increase in the September of the reporting year through issuing new shares from authorized capital. An increase of EUR 1,151 thousand was attributable to the issuance of stock options to Executive Board and staff members (2017: EUR 455 thousand).

22 RETAINED EARNINGS

Retained earnings decreased from EUR -62,880 thousand as of December 31, 2017, to EUR -73,115 thousand as of December 31, 2018 due to the transfer of the Company's net loss for 2017.

23 OTHER COMPREHENSIVE INCOME

The other comprehensive income includes unrealized gains and/or losses on marketable securities and exchange rate differences from the remeasurement of the results and the financial position of the Company's subsidiary whose financial statements were prepared in U.S. dollars. The actual disposal of remeasured financial assets and/or liabilities leads to a recognition of the cumulated revaluation differences through profit or loss.

EUR thousand	2017	2018
January 1	-305	169
Remeasurement of marketable securities	152	-252
Exchange rate differences	322	-321
December 31	169	-404

24 CAPITAL MANAGEMENT

The Group manages its capital to ensure that entities in the Group will be able to continue as a going concern while maximizing the long-term return to stakeholders. An optimization of the debt/equity ratio is always considered.

The current liabilities, cash and cash equivalents, marketable securities and equity attributable to equity holders, comprising subscribed capital, capital reserve (including offset retained earnings) and other comprehensive income are subject to the Group's capital management.

In the reporting year, the Group's equity ratio increased from 53.5% as of December 31, 2017 to 85.3% as of December 31, 2018, due primarily to the capital

increase in 2018 and the redemption of convertible notes in December 2018.

The Company is not subject to any statutory capital requirements. However, the Company is obliged to issue new shares in connection with granted option rights from its existing stock option programs.

LIABILITIES

25 PROVISIONS

Statement of changes in provisions:

EUR thousand	Contract-related provisions	Payroll provisions	Provisions for claims from phantom stock rights	Other provisions	Total
Jan 1, 2017	323	431	1,122	65	1,941
thereof non-current	*0*	*0*	*50*	*39*	*89*
Utilizations	0	-415	-185	-12	-612
Reversals	-273	-12	-290	-6	-581
Additions	0	381	0	17	398
Dec 31, 2017	50	385	647	64	1,146
thereof non-current	*0*	*0*	*0*	*43*	*43*
Utilizations	0	-382	-73	-21	-476
Reversals	0	0	-554	0	-554
Additions	0	876	0	17	893
Dec 31, 2018	50	879	20	60	1,009
thereof non-current	*0*	*0*	*0*	*47*	*47*

Payroll provisions were recognized for obligations from bonus commitments to management and employees of the Company. These provisions may in individual cases also be utilized beyond a twelve-month time frame.

Provisions for claims from phantom stock rights (PSRs) were recognized based on the fair value of all issued and outstanding rights resulting from the Company's phantom stock programs (PSPs).

Other provisions were recognized for various operating obligations which were uncertain as of the reporting date with respect to their exact amounts and/or timing. A utilization of both of these categories of provisions is largely expected within the next twelve months.

26 TRADE PAYABLES

The reported trade payables in the amount of EUR 1,411 thousand as of the balance sheet date (December 31, 2017: EUR 952 thousand) are all non-interest-bearing and are generally due within 30 days. The total amount relates exclusively to non-derivative financial liabilities due in full within two months of the balance sheet date.

27 CONVERTIBLE NOTES ISSUED

In September 2017, the Company issued a convertible note with a principal amount of EUR 7.1 million to Cathay Fortune International Company Limited (CFIC) under exclusion of subscription rights. By issuing the convertible notes – as agreed in the Business Combination Agreement dated April 26, 2017 between Epigenomics and CFIC and published in the offer document for the voluntary public takeover offer of June 8, 2017 – the Company received an immediate liquidity inflow of approximately EUR 6.5 million.

The convertible notes matured on December 31, 2018 and could have been be converted by CFIC into up to 994,397 shares of the Company. CFIC did not exercise this conversion right. In connection with the Company's capital increase in October 2018, CFIC exercised 580,569 subscription rights to which it was entitled as a shareholder of Epigenomics AG. The subscription rights were exercised such that CFIC subscribed for the newly issued shares against an in-kind contribution. The contribution in kind consisted of the partial contribution of its redemption right from the notes to the Company and amounted to EUR 1,079,900.00. The Company's redemption obligation from the convertible notes was thus reduced by the same amount, to EUR 6,020,100.00. This obligation was satisfied in December 2018, i.e., it had completely expired by the balance sheet date.

EUR 550 thousand in interest expenses for convertible notes was recognized through profit or loss in the reporting year.

EUR thousand	
Gross proceeds of the issue of convertible notes 2017	6,461
thereof: Liability element of convertible notes at issue date	*6,423*
thereof: Equity element of convertible notes at issue date	*38*
Total expenses related to the issue of the convertible notes for the liability element	-62
Expenses related to the issue of the convertible notes for the equity element	-0
Total interest expense	674
Conversion of redemption rights into equity	-1,080
Effect of conversion on interest	14
Payment of principal through redemption	-6,020
Liability element of convertible notes at December 31, 2018	0

28 OTHER LIABILITIES

EUR thousand	Dec 31, 2017	Dec 31, 2018
Payables due to staff	345	512
Accrued audit fees	121	127
Payables due to tax authorities	91	100
Deferred income	0	27
Payables to social security institutions	1	0
Other	4	5
Total other liabilities	562	771

The reported other liabilities are all non-interest-bearing. Included are non-derivative financial liabilities in the amount of EUR 262 thousand that were exclusively due within two months of the balance sheet date.

29

FINANCIAL INSTRUMENTS AND FINANCIAL LIABILITIES FROM FINANCING ACTIVITIES

Primary financial instruments			as of Dec 31, 2017		as of Dec 12, 2018	
EUR thousand	Measurement principle	Fair value hierarchy level	Carrying amount	Fair value	Carrying amount	Fair value
Assets						
Marketable securities	FVOCI	1	*905*	*905*	*653*	*653*
Cash and cash equivalents	n/a		12,826	12,826	16,487	16,487
Liabilities						
Convertible notes	AC	2	*7,100*	*6,536*	*0*	*0*

AC = measured at amortized cost
FVOCI = measured at fair value through other comprehensive income

Net liabilities from financing activities				Non-cash changes			
EUR thousand	Note	**Jan 1, 2018**	Cash flows	Offset against equity	Recognized in profit or loss	Other changes	**Dec 31, 2018**
Prepayments for financing projects	19	-346	-2	0	348	0	0
Trade payables	26	68	-68	171	0	0	171
Convertible notes	8, 27	6,536	-6,020	-1,080	550	14	0
Net liabilities from financing activities		6,258	-6,090	-909	898	14	171

NOTES TO THE CONSOLIDATED STATEMENT OF CASH FLOWS

Cash consists of bank deposits and cash in hand. Cash equivalents are defined as instruments convertible to a known amount of cash on a short-term basis and carrying a very low risk of changes in value. As of the balance sheet date, the Company's cash and cash equivalents balance sheet item comprised exclusively cash. For the cash flow consolidation of the U.S. subsidiary, the operating assets and liabil-ities (excluding cash and cash equivalents) were translated at the average monthly exchange rates.

30 OPERATING ACTIVITIES

Cash flow from operating activities is derived indirectly on the basis of the net profit/loss for the year.

31 INVESTING ACTIVITIES

Cash flow from investing activities is calculated based on actual payments.

Proceeds from investment grants received of EUR 813 thousand (2017: EUR 17 thousand) were used for the development of fixed assets.

32 FINANCING ACTIVITIES

Cash flow from financing activities is calculated based on actual payments.

Gross proceeds from the issue of new shares in the amount of EUR 21,253 thousand in the reporting year (2017: EUR 5,475 thousand) related to the Company's capital increase from authorized capital in 2018. The Company generated a gross cash outflow of EUR 6,020 thousand from the redemption of convertible notes in the reporting year (2017: EUR 0). The cash outflow from financing activities amounted to EUR 1,959 thousand in 2018 (2017: EUR 437 thousand) and related to the above-mentioned capital increase.

33 CASH CONSUMPTION

Cash flow from operating activities and cash flow from investing activities less transactions in securities is monitored by the Company as "cash consumption".

EUR thousand	2017	2018
Cash flow from operating activities	-9,576	-10,351
Cash flow from investing activities	-548	724
Net proceeds from transactions in securities	0	0
Cash consumption	-10,124	-9,627

RISKS AND RISK MANAGEMENT

34 GENERAL

For a comprehensive overview of the risks the Company is facing, please refer to the "Report on opportunities and risks" section of the Group management report 2018.

35 LIQUIDITY RISK

The liquidity risk to which Epigenomics is exposed results from the Group's potential inability to meet its financial liabilities, i.e., not being able to pay its suppliers, creditors or lenders. It is therefore the task of cash and liquidity management to ensure the individual Group companies' liquidity at any time. The expected cash inflows and outflows are constantly monitored to ensure short-term liquidity. These activities are supported by internal cash forecasts and a corresponding strategy of managing time deposits with the Company's principal banks.

Furthermore, Epigenomics constantly monitors the capital markets and – if required – makes all necessary efforts to raise fresh capital in order to avoid illiquidity.

Epigenomics has strict cost management in place to avoid unnecessary spending. On the procurement side, the Company always tries to reduce purchase prices by closing favorable contracts and negotiating all relevant conditions and takes advantage of granted terms of payment.

36 FOREIGN CURRENCY EXCHANGE RISK

The Group executes transactions denominated in foreign currencies and is therefore exposed to the risk of exchange rate fluctuations. This risk is due on the one hand

to the fact that the German parent company purchases some goods and services in U.S. dollars. On the other hand, Epigenomics markets its primary product – Epi proColon – in the U.S.A., and revenue is generated by the Group's U.S. subsidiary, Epigenomics, Inc., in U.S. dollars, while the kits are manufactured and billed to the contract manufacturer primarily in euros. This leads to an increased foreign currency exchange (FX) risk for the Group. This risk is reduced by utilizing the proceeds generated in U.S. dollars to finance the operating business activities of Epigenomics, Inc. (e.g., to purchase goods and services). With regard to U.S. dollar amounts in excess of the U.S. subsidiary's mid- to long-term cash requirements, the Group will constantly try to mitigate or to eliminate the remaining risk as far as possible, for example through the use of derivative financial instruments (e.g., forward contracts). As of the balance sheet date, there was only a very limited number and volume of items denominated in foreign currencies other than the U.S. dollar.

The following table shows the carrying amounts of the Group's foreign currency denominated monetary assets and liabilities:

Primary financial instruments	Dec 31, 2017			Dec 31, 2018		
EUR thousand	Total	thereof in USD	in %	Total	thereof in USD	in %
Trade receivables	937	899	95.9	164	130	79.6
Marketable securities	905	0	0.0	653	0	0.0
Cash and cash equivalents	12,826	200	1.6	16,487	163	1.0
Other current assets	883	19	2.1	71	39	54.9
Trade payables	-952	-284	29.8	-1,411	-820	58.1
Convertible notes issued	-7,100	0	0.0	0	0	n/a
Other current liabilities	-231	-29	12.7	-267	-28	10.5
Total net position	7,267	804	11.1	15,695	-515	-3.3
thereof in third currencies	*-3*			*0*		

The sensitivity of the Group's net result and of shareholders' equity to foreign currency exchange rate fluctuations is shown in the table below:

EUR thousand Scenario	Impact on	2017	2018
10% increase in the EUR/USD rate	Total comprehensive income	-57	41
	Equity	445	749
10% decrease in the EUR/USD rate	Total comprehensive income	69	-50
	Equity	-544	-916

The table shows a stronger impact of exchange rate fluctuations on equity in the reporting year than in fiscal year 2017. This is mainly attributable to a significant increase in current liabilities denominated in U.S. dollars in the Group parent company's balance sheet.

37 CREDIT RISK

Credit risk (or default risk) is the risk that a counterparty fails to meet its obligations under a financial instrument or customer contract, resulting in a financial loss. The Company is regularly exposed to credit risks arising from its business and investment activities. This also affects deposits with banks and financial institutions and other financial instruments.

The Company has allocated its cash and cash equivalents to three different banking institutions, which reduces the risk of default on bank deposits.

Securities have only been acquired under careful adherence to the Company's investment policy, i.e., a strict selection by the credit ratings of the issuers has been

conducted. However, the global financial crisis in recent years has shown that even top-rated issuers can suddenly find themselves in a precarious situation or even facing collapse. Additionally, it has become clear that there is a constant risk of illiquid markets.

Customer credit default risk is monitored both centrally and by the Group unit responsible for managing the relevant customer relationships. Monitoring includes outstanding customer receivables and order volume. The Group currently considers the risk concentration with regard to trade receivables and contract receivables to be low, as these mainly relate to renowned business partners with impecc-able credit ratings on the one hand and small customers (primarily laboratories, clinics and universities) with insignificant order volumes on the other. Whenever possible, payments are collected in advance. The Company maintains long-term, good contractual relationships with its most important partners. In individual cases, it obtains security from its customers.

In order to estimate possible credit losses, trade receivables and open order backlogs are aggregated according to common credit risk characteristics (e.g. existing payment arrears in days).

The expected loss rates are based on the customer payment profiles as measured by sales over a period of at least 12 months before the end of each reporting period and the corresponding historical credit losses incurred during that period. Historical loss rates are adjusted as necessary to reflect current and forward-looking information about macroeconomic factors that affect customers' ability to pay receivables. The Company's existing customer base has a very low credit risk by these standards and the Company believes that the economic situation in the United States, China and Europe will remain sound, particularly with respect to the healthcare sector. Currently, the expected default rate on trade receivables and contract assets is 0%.

38 INTEREST RATE RISK

The Group holds interest-bearing financial instruments only in the form of marketable securities.

Given the historically low interest rates on the international capital markets, the Group is currently not exposed to any interest rate risks from its cash and cash equivalents item.

INFORMATION ON SHARE-BASED PAYMENT PLANS

39 DESCRIPTION OF STOCK OPTION PROGRAMS

As of the balance sheet date, the Company had four stock option programs (SOPs) in place:

Both the SOP 09–13 and SOP 11–15 programs have expired. Stock options can no longer be granted from these programs.

On May 25, 2016, the General Shareholders' Meeting resolved to implement a new stock option program (SOP 16–18) based on the new Conditional Capital XI (see also note 20 "Share Categories and Capital Structure"). Under this program, the Executive Board and the Supervisory Board of the Company were authorized, until the end of April 30, 2018, to issue stock options in accordance with the provisions set forth below to members of the Executive Board and to employees of the Company as well as to members of the management and to employees of domestic and foreign dependent companies of the Company provided that each stock option so issued entitles the beneficiary to subscribe for one non-par value registered share of the Company. Under this authorization, the Executive Board and the Supervisory Board have issued the maximum number of stock options, a total of 1,000,000, which entitle the beneficiaries to subscribe for no more than 1,000,000 non-par value registered shares of the Company.

The beneficiaries were the members of the Executive Board of the Company (group 1), the employees of the Company (group 2), the members of the management of subordinated Group companies (group 3) and the employees of subordinated Group companies (group 4).

The subscription rights may only be exercised outside the blackout periods. Blackout periods means the periods between the end of the fiscal year and the publication of the annual report and the consolidated financial statements for the respective fiscal year, and between the end of the first, second and third quarters of a fiscal year and the publication of a quarterly report or a quarterly announcement of the Company for the respective quarter.

A quarter of the subscription rights in every tranche shall vest for the beneficiaries one year, two years, three years and four years, respectively, after the issue date of the respective tranche. In deviation from the above provision, the Supervisory Board may declare full or partial vesting of subscription rights ssued in one tranche in favor of any one or all group 1 beneficiaries, and the Executive Board may with the consent of the Supervisory Board declare full or partial vesting of subscription rights issued in one tranche in favor of any one or all group 2 to 4 beneficiaries, at any time after the issue date of the respective tranche. In this case, the subscription rights shall be deemed vested upon receipt by the respective beneficiary of the corresponding declaration by the Executive Board or the Supervisory Board.

Subscription rights of each tranche can be exercised for the first time after their vesting and after ex-piration of the waiting period. The waiting period ends four years after the issue date of the tranche. The restriction of the exercise of the subscription rights to certain exercise periods and subject to compliance with all exercise conditions shall remain unaffected by the expiration of the waiting period.

The term of the subscription rights of every tranche starts on the issue date of the subscription rights and ends seven years after such issue date. Subscription rights that have not been exercised by the end of their term shall expire without compensation. This shall also apply where the non-exercise of the subscription rights is

attributable to the fact that they could not be exercised, and shall also apply to vested subscription rights.

The subscription rights can only be exercised against payment of the exercise price to the Company. The exercise price for a subscription right of the respective tranche equals the non-volume weighted average stock exchange closing price of the shares of the Company on the ten stock exchange trading days preceding the issue date of the tranche in the electronic trading system of the Frankfurt Stock Exchange plus 10%.

After vesting has occurred and after the waiting period has expired, subscription rights may be exercised only if the closing stock exchange price of the shares of the Company in the electronic trading system of the Frankfurt Stock Exchange has exceeded the original price by at least 10% on at least one trading day in the period between the issue date of the tranche and the expiration of the waiting period (performance target). If the performance target has not been reached upon expiration of the waiting pe-riod, the subscription rights shall expire without compensation.

Any subscription rights of a beneficiary that have not yet vested shall expire without compensation upon termination of the service or employment contract between the beneficiary and the Company (or a subordinated Group company) if the service or employment contract has been terminated by the bene-ficiary, or by the Company (or the respective subordinated Group company) for cause. This shall not apply to any termination by group 1 or group 3 beneficiaries on account of a vote of no confidence by the General Shareholders' Meeting. Subscription rights of a beneficiary that have vested but have not yet been exercised or could not yet be exercised by the respective beneficiary shall expire without compensation upon termination of the service or employment contract between the beneficiary and the Company (or a subordinated Group company) if the service or employment contract has been terminated by the Company (or the respective subordinated Group company) for cause. This shall not apply to any termination by group 1 or group 3 beneficiaries on account of a vote of no confidence by the General Shareholders' Meeting.

The Executive Board or, in the case of group 1 beneficiaries, the Supervisory Board, may reserve the right to fulfill subscription rights that have been validly exercised by paying to the beneficiary compensation in cash instead of delivering any newly issued or previously acquired treasury shares of the Company. Such cash compensation shall equal the difference between the exercise price and the closing price of the shares of the Company last determined in the electronic trading system of the Frankfurt Stock Exchange before the exercise of the subscription right. However, the Company has no obligation to offer cash compensation for exercised subscription rights and does not currently intend to offer such cash compensation for exercised subscription rights.

For further details on SOP 16–18, please see the invitation to the General Shareholders' Meeting on May 25, 2016. The document is available on the Company's website (*www.epigenomics.com*).

On May 30, 2017, the General Shareholders' Meeting resolved to implement a new stock option program (SOP 17–19) based on the new Conditional Capital XII (see also the section "Share Categories and Capital Structure"). Under this program, the Executive Board and the Supervisory Board of the Company were authorized, until the end of May 31, 2019, to issue stock options in accordance with the provisions set forth below to members of the Executive Board and to employees of the Company as well as to members of the management and to employees of domestic and foreign dependent companies of the Company provided that each stock option so issued entitles the beneficiary to subscribe for one non-par value registered share of the Company. Under this authorization, the Executive Board and the Supervisory Board may issue a total of up to 1,000,000 stock options which entitle the beneficiaries to subscribe for no more than 1,000,000 non-par value registered shares of the Company. Only the Supervisory Board of the Company is authorized to issue stock options to beneficiaries who are members of the Executive Board of the Company. In all other respects, the Executive Board is authorized to grant stock options, with the Executive Board being required to obtain the Supervisory Board's consent before granting stock options to holders of a general power of attorney (*Prokura*) of the Company and to members of the management of subordinated Group companies. The shareholders have no subscription rights.

The beneficiaries are the members of the Executive Board of the Company and members of the management of subordinated Group companies (group 1) and the employees of the Company and of subordinated Group companies (group 2). From the total volume of SOP 17–19, the distribution shall be as follows:

- Group 1 all beneficiaries: max. 68% or 680,000 stock options
- Group 2 all beneficiaries: max. 32% or 320,000 stock options

Stock options from the SOP 17–19 may only be issued once more before the end of the program, i.e., with effect from April 1, 2019. The subscription rights may only be exercised outside the blackout periods.

A quarter of the subscription rights in every tranche shall vest for the beneficiaries one year, two years, three years and four years, respectively, after the issue date of the respective tranche. In deviation from the above provision, the Supervisory Board may declare full or partial vesting of subscription rights issued in one tranche in favor of any one or all group 1 beneficiaries, and the Executive Board may with the consent of the Supervisory Board declare full or partial vesting of subscription rights issued in one tranche in favor of any one or all group 2 beneficiaries, at any time after the issue date of the respective tranche. In this case, the subscription rights shall be deemed vested upon receipt by the respective beneficiary of the corresponding declaration by the Executive Board or the Supervisory Board.

Otherwise, the same terms of SOP 16–18 apply to the term, exercise and expiration of the subscription rights under the SOP 17–19.

For further details on SOP 17–19, please see the invitation to the General Shareholders' Meeting on May 30, 2017. The document is available on the Company's website (www.epigenomics.com).

40 STOCK OPTION PROGRAMS – OUTSTANDING RIGHTS

No rights under SOP 09–13 were issued, exercised or forfeited in the reporting year. As of December 31, 2017, 2,000 rights with an average exercise price of EUR 11.05 were still outstanding, which expired during the reporting year; therefore, no rights were still outstanding as of December 31, 2018. None of these rights were held by members of the Company's Executive Board.

No rights under SOP 16–18 and 17–19 expired or were exercised with in the reporting year or in the previous year.

SOP 16–18	Options outstanding	Issued	forfeited	reclassified	Options outstanding	Options exercisable
	as of Jan 1, 2018 (2017)	Options in 2018 (2017)			as of Dec 31, 2018 (2017)	
Option holder						
Greg Hamilton (CEO)	160,000	67,500	0	0	227,500	0
	(91,580)	(68,420)	(0)	(0)	(160,000)	(0)
Albert Weber (EVP Finance)	0	0	0	30,000	30,000	0
	(n/a)	(n/a)	(n/a)	(n/a)	(n/a)	(n/a)
Dr. Uwe Staub (COO)	22,500	0	0	-22,500	0	0
until March 31, 2018	(90,000)	(0)	(67,500)	(0)	(22,500)	(0)
Other option holders	455,250	298,750	56,250	-7,500	690,250	0
	(133,000)	(361,500)	(39,250)	(0)	(455,250)	(0)
All option holders	637,750	366,250	56,250	0	947,750	0
	(314,580)	(429,920)	(106,750)	(0)	(637,750)	(0)
Average exercise price	5.22	4.12	4.80	n/a	4.86	n/a
(in EUR)	(5.43)	(5.10)	(5.35)	(n/a)	(5.22)	(n/a)

SOP 17–19	Options outstanding	Issued	forfeited	reclassified	Options outstanding	Options exercisable
	as of Jan 1, 2018 (2017)	Options in 2018 (2017)			as of Dec 31, 2018 (2017)	
Option holder						
Greg Hamilton (CEO)	31,580	32,500	0	0	64,080	0
	(0)	(31,580)	(0)	(0)	(31,580)	(0)
Jorge Garces (COO)	0	85,000	0	0	85,000	0
	(0)	(0)	(0)	(0)	(0)	(0)
Albert Weber (EVP Finance)	0	70,000	0	0	70,000	0
	(0)	(0)	(0)	(0)	(0)	(0)
Dr. Uwe Staub (COO)	0	0	0	0	0	0

until March 31, 2018	(0)	(70,000)	(70,000)	(0)	(0)	(n/a)
Other option holders	51,000	131,250	7,500	0	174,750	0
	(0)	(51,000)	(0)	(0)	(51,000)	(0)
All option holders	82,580	318,750	7,500	0	393,830	0
	(0)	(152,580)	(70,000)	(0)	(82,580)	(0)
Average exercise price	5.10	4.12	4.12	n/a	4.33	n/a
(in EUR)	(n/a)	(5.10)	(5.10)	(n/a)	(5.10)	(n/a)

Contractual commitments to a total of 340,000 further rights were made to members of the Executive Board for award to them in 2019 and 2020, provided they are then available from the active SOP.

Terms of outstanding stock options of all programs:

	Weighted average exercise price (in EUR)	Stock options issued and outstanding	Weighted average exercise price (in EUR)	Stock options issued and outstanding
Term	**Dec 31, 2017**		**Dec 31, 2018**	
2018	11.05	2,000	n/a	0
2023	5.43	232,830	5.43	232,830
2024	5.10	487,500	5.10	487,500
2025	4.12	0	4.12	621,250
Total	5.22	722,330	4.70	1,341,580

41 STOCK OPTION PROGRAMS – VALUATION PARAMETERS

The fair value of SOP 16–18 and SOP 17–19 was determined using the Monte Carlo simulation. It was assumed that the rights will be exercised in the fifth year after the grant date if the market price of the shares exceeds the exercise price of the stock option rights by more than 20% or in the sixth year after the grant date if the market price of the shares exceeds the exercise price of the stock option rights by more than 10%. An earlier exercise of the rights is not permitted under the program terms and conditions.

The following table gives detailed information on both programs active over the balance sheet date and the applied valuation parameters.

SOP 16–18	**Dec 31, 2017**	**Dec 31, 2018**
Total number of outstanding options	637,750	947,750
thereof vested until end of term	*78,645*	*226,270*
thereof exercisable	*0*	*0*
Exercise prices (in EUR)	5.10–5.43	4.12–5.43
Weighted average term of outstanding rights in years	6.39	5.67
Weighted average fair value per option (EUR)	2.85	1.92
Applied share price volatility in %	84.40	84.32
Risk-free interest rate in %	-0.14	-0.04

Assumed staff turnover in %	4.00	5.88
Expiry dates	Oct 1, 2023– Oct 1, 2024	Oct 1, 2023– Apr 1, 2025

SOP 17–19	**Dec 31, 2017**	**Dec 31, 2018**
Total number of outstanding options	82,580	393,830
thereof vested until end of term	*0*	*20,645*
thereof exercisable	*0*	*0*
Exercise prices (in EUR)	5.10	4.12–5.10
Weighted average term of outstanding rights in years	6.76	6.15
Weighted average fair value per option (EUR)	2.65	2.09
Applied share price volatility in %	84.58	84.25
Risk-free interest rate in %	0.04	0.13
Assumed staff turnover in %	3.70	7.32
Expiry dates	Oct 1, 2024	Oct 1, 2024– Apr 1, 2025

The risk-free interest rates are derived from the yield curve of German government bonds at the valuation date. The volatility of the share price can be derived from the historical volatility of the shares (in accordance with Bloomberg data) over the most recent past period equaling the remaining term of the rights. For adjustment purposes, a constant staff turnover was assumed based on the historical turnover of the Company's staff over the past four years. No dividend payments were assumed during the term of the rights (i.e., the assumed dividend yield was 0%).

42 PHANTOM STOCK PROGRAMS – DESCRIPTION

As of the balance sheet date, the Company had four phantom stock programs (PSPs)/virtual share plans in place as an incentive scheme for management and staff by granting so-called phantom stock rights (PSRs) from such programs to the beneficiaries. The programs define a PSR as a conditional claim of its holder against the Company for a future payment in cash of a premium to the benefit of the holder. As PSRs will be settled in cash upon their exercise, the Company had to record a provision based on the fair values of the outstanding rights.

Phantom stock program 03–15 (PSP 03–15)

PSP 03–15 was established in 2013 to serve as a transformation tool for outstanding stock options at that time. Executive Board and Supervisory Board of the Company therefore had decided to offer PSRs from the PSP 03–15 to all stock option holders who were employees or members of the Executive Board at that time and to a dedicated number of former employees of the Company who still held stock options. For each stock option right returned to the Company in connection with an exchange offer, one PSR from PSP 03–15 was granted to its holder. Each PSR from PSP 03–15 became the legal successor of the returned stock option right then and was on equal terms with its economic value. Hence, the term of each PSR from PSP 03–15 equals the remaining term of the returned stock option right. These PSRs will expire without compensation at that point in time when the stock option right that has been returned in exchange would have expired. After the exchange of previously unvested stock option rights against PSRs, the vesting rules of the underlying SOPs applied equally with respect to the vesting of the PSRs. PSRs which were issued in exchange for vested stock options also vested immediately. Vested PSRs obtained in exchange for stock options from the SOP 06–10 can be exercised immediately. Vested PSRs obtained in exchange for stock options from SOP 09–13 and SOP 11–15 can only be exercised when the holding or waiting period of the stock options returned in exchange is or would have expired for its holder.

The exercise price of a PSR from PSP 03–15 equals the exercise price of the stock option right returned in exchange. The exercise of such a PSR simulates the

exercise of the former stock option right in a so-called "ExerSale" transaction. Unlike the exercise of stock option rights, the holder of a PSR is not en-titled to subscribe to a share of the Company by exercising a PSR. Upon the exercise of a PSR from PSP 03–15, the holder of the right obtains a claim against the Company for the payment of the PSR pre-mium. The PSR premium is defined as the absolute difference between the then-current market price for Epigenomics shares and the exercise price of the PSR. Holders of PSRs are entitled to exercise their right during the exercise period when the strike price at the exercise date is higher than the base value. The strike price equals the arithmetic average of the Xetra closing rates for Epigenomics shares on the Frankfurt Stock Exchange on the five consecutive trading days prior to the exercise date. By exercising the PSR, the holder earns an entitlement to obtain the "PSR premium" from the Company. The PSR premium equals the absolute difference between strike price and base value of the right without any limitation. In contrast to the exercise of stock option rights, the exercise of PSRs is not compulsory subject to pre-defined exercise periods ("trading windows") and can be done at any time during the year. Nevertheless, the Executive Board and the Supervisory Board may stipulate compulsory exercise periods for holders of PSRs who are current employees of the Company. This applies in particular to holders of PSRs who are identified as "insiders" within the meaning of the German Securities Trading Act (Wertpapier-handelsgesetz – WpHG). It is left to the sole discretion of the Company's Executive Board to define and announce such exercise periods to the employees of the Company holding PSRs. Such exercise periods as determined by the Executive Board will then always apply simultaneously to the Executive Board members.

A takeover or a mandatory offer for the shares of the Company in accordance with the German Securities Acquisition and Takeover Act (Wertpapiererwerbs- und Übernahmegesetz – WpÜG) entitles the holders of vested PSRs to exercise these rights in full. This also applies if the waiting period for these rights has not yet expired. The exercise right for the PSR holder shall apply only if the offered consideration consists solely of a cash settlement and if the bidder has gained control over the Company. In the event of a takeover, the PSR premium equals the difference between the cash amount which was finally offered to the shareholders as part of a takeover or a mandatory offer and the base value of the PSR.

Phantom stock program 2013 (PSP 2013), phantom stock program 2014 (PSP 2014), and phantom stock program 2015 (PSP 2015)

PSP 2013 was approved by the Executive Board and the Supervisory Board of the Company in May 2013. PSP 2014 was approved by the Executive Board and the Supervisory Board of the Company in May 2014. PSP 2015 was approved by the Executive Board and the Supervisory Board of the Company in September 2015.

No further rights can be issued from PSP 2013, PSP 2014, and PSP 2015. The eligible beneficiaries of these programs were the members of the Executive Board and Group employees with an unterminated service or employment agreement with a Group company. The Executive Board decided on issuing PSRs from these programs to employees of the Company and to executives and employees of the subsid-iaries. The Supervisory Board decided on issuing PSRs to the members of the Executive Board.

A certain number of PSRs granted to a beneficiary at a certain point in time is defined as a tranche. The PSRs of each tranche issued to beneficiaries who were not members of the Company's Executive Board at the issuance date started to vest from the beginning of the first full calendar quarter over the three years following their issuance in five equal parts, beginning with the first day of the fifth full calendar quarter after the issuance of the tranche. Thereafter, the further four of the five parts each vest after the end of the following four half-years. Thus, the last of the five parts vests after the last day of the twelfth full calendar quarter following issuance of the tranche and therefore at the end of a three-year waiting period. PSRs of each tranche can only be exercised after their vesting, but not before the end of the waiting period. The term of the PSRs begins with their issuance and ends five years after the beginning of their vesting period. Rights not exercised upon the end of their term expire without compensation. PSRs can generally be exercised at any time in the two years between the end of their waiting period and the end of their term ("exercise period"). Nevertheless, the Executive Board and Supervisory Board can stipulate adherence to timing restrictions in the exercise periods. This applies in particular to holders of rights who are identified by the Executive Board as an "insider" within the meaning of section 15b WpHG. The Executive Board of the Company reserves the right to establish such timing restrictions in the exercise periods and to announce such restrictions in the exercise periods to rights holders who are employees of the Company at that date. Timing restrictions in exercise periods as announced by the Executive Board will always apply simultaneously to PSRs held by the Executive Board members themselves.

At the issuance of a PSR tranche, a so-called "base value" of the rights was determined. This base value equaled the average of the Xetra closing rates for Epigenomics shares on the Frankfurt stock exchange on the last five trading days before issuance. Holders of PSRs are entitled to exercise their right during the exercise period when the strike price at the exercise date is higher than the base value. The strike price equals the arithmetic average of the Xetra closing rates for Epigenomics shares on the Frankfurt Stock Exchange on the five consecutive trading days prior to the exercise date. By exercising the PSR, the holder earns an entitlement to obtain the "PSR premium" from the Company. The PSR premium equals the absolute difference between the strike price and the base value of the right up to a maximum of EUR 8.00 (PSP 2013), EUR 12.00 (PSP 2014), or EUR 15.00 (PSP 2015).

Any PSRs held by a beneficiary that have not yet vested expire without compensation upon termination of the service or employment agreement by the beneficiary or if the service or employment agreement has been terminated by the Company for cause. Any PSRs held by a beneficiary that have not yet vested shall remain valid if the Company terminates the service or employment agreement due to oper-ational reasons. If the service or employment agreement is terminated by mutual consent, it is left to the sole discretion of the Executive Board or the Supervisory Board to decide whether those PSRs held by the beneficiary that have not yet vested at that point in time remain valid. If holders of vested PSRs leave the Company before the expiry date of those rights, they remain entitled to such vested rights until the expiry date. In such case, the strike price of their rights from PSP 2014 and PSP 2015 will be limited to the arithmetic average of the Xetra closing rates on the Frankfurt stock exchange on the five consecutive trading days prior to the final termination date of their employment agreement with the Company.

A takeover or a mandatory offer for the shares of the Company in accordance with the WpÜG entitles the holders of vested PSRs to exercise these rights in full. This also applies if the waiting period for these rights has not yet expired. The exercise right for the PSR holder will only apply if the offered consideration consists solely of a cash settlement and if the bidder has gained control over the Company. In the event of a takeover, the PSR premium equals the difference between the cash amount which was finally offered to the shareholders as part of a takeover or a mandatory offer and the base value of the PSR. However, the limitation of the PSR premium to EUR 8.00 (PSP 2013), EUR 12.00 (PSP 2014), and EUR 15.00 (PSP 2015) will still apply in such case.

43 PHANTOM STOCK PROGRAMS – OUTSTANDING RIGHTS

No rights under the Company's PSPs were issued in the reporting year or in the previous year.

Phantom stock program 03–15 (PSP 03–15)

No previously issued rights under PSP 03–15 were forfeited either in the reporting year or in the previous year.

PSP 03–15 Beneficiaries	Reporting year	Rights held as of Jan 1	Rights			Rights held as of Dec 31
			expired	exercised	reclassified	
Dr. Uwe Staub (COO)	2018	22,400	22,400	0	0	0
until March 31, 2018	2017	28,800	6,400	0	0	22,400
Other beneficiaries	2018	75,800	55,800	0	0	20,000
	2017	119,413	27,263	16,350	0	75,800
Total	2018	98,200	78,200	0	0	20,000
	2017	148,213	33,663	16,350	0	98,200
Average base value	2018	5.98	6.87	n/a	n/a	2.51
(EUR/right)	2017	8.53	18.89	2.51	n/a	5.98

Phantom stock program 2013 (PSP 2013)

No previously issued rights under PSP 2013 were forfeited either in the reporting year or in the previous year.

PSP 2013 Beneficiaries	Reporting year	Rights held as of Jan 1	Rights			Rights held as of Dec 31
			expired	exercised	reclassified	
Dr. Uwe Staub (COO)	2018	20,000	0	0	-20,000	0
until March 31, 2018	2017	20,000	0	0	0	20,000
Other beneficiaries	2018	78,000	10,000	65,000	20,000	23,000
	2017	136,000	0	58,000	0	78,000
Total	2018	98,000	10,000	65,000	0	23,000
	2017	156,000	0	58,000	0	98,000
Average base value	2018	2.70	1.64	1.62	6.15	6.19
(EUR/right)	2017	2.55	n/a	2.29	n/a	2.70

Phantom stock program 2014 (PSP 2014)

No previously issued rights under PSP 2014 were forfeited either in the reporting year or in the previous year.

PSP 2014 Beneficiaries	Reporting year	Rights held as of Jan 1	Rights			Rights held as of Dec 31
			expired	exercised	reclassified	
Albert Weber (EVP Finance)	2018	0	0	0	30,000	30,000
since January 1, 2018	2017	n/a	n/a	n/a	n/a	n/a
Dr. Uwe Staub (COO)	2018	60,000	0	0	-60,000	0
until March 31, 2018	2017	60,000	0	0	0	60,000
Other beneficiaries	2018	263,833	0	69,000	30,000	224,833
	2017	271,633	0	7,800	n/a	263,833
Total	2018	323,833	0	69,000	0	254,833
	2017	331,633	0	7,800	n/a	323,833
Average base value	2018	3.23	n/a	3.23	3.23	3.23
(EUR/right)	2017	3.23	n/a	3.23	n/a	3.23

Phantom stock program 2015 (PSP 2015)

No previously issued rights under PSP 2015 were forfeited either in the reporting year or in the previous year.

PSP 2015 Beneficiaries	Reporting year	Rights held as of Jan 1	Rights			Rights held as of Dec 31
			expired	exercised	reclassified	
Albert Weber (EVP Finance)	2018	0	0	0	10,000	10,000
since January 1, 2018	2017	n/a	n/a	n/a	n/a	n/a
Dr. Uwe Staub (COO)	2018	14,400	0	0	-14,400	0
until March 31, 2018	2017	24,000	9,600	0	0	14,400
Other beneficiaries	2018	84,000	0	0	4,400	88,400
	2017	84,000	0	0	0	84,000
Total	2018	98,400	0	0	0	98,400
	2017	108,000	9,600	0	0	98,400
Average base value	2018	5.05	n/a	n/a	5.05	5.05
(EUR/right)	2017	5.05	5.05	n/a	n/a	5.05

44 PHANTOM STOCK PROGRAMS – VALUATION PARAMETERS

The fair value of all PSR was calculated by using the binomial approach based on the Cox-Ross-Rubinstein model. For PSP 03–15 it was assumed that the rights will be exercised after their waiting period if the market price of the shares exceeds the base value of the PSR by more than 10%. For PSP 2013, PSP 2014, and PSP 2015 it was assumed that the rights will be exercised in the fourth year after the grant date if the market price of the shares exceeds the base value of the PSR by more than 20% or in the fifth year after the grant date if the market price of the shares exceeds the base value of the PSR by more than 10%. An earlier exercise of the rights is not permitted under the program terms and conditions.

The following table gives detailed information on all programs and the applied valuation parameters.

PSP 03–15	**Dec 31, 2017**	**Dec 31, 2018**
Total number of outstanding PSRs	98,200	20,000
thereof vested until end of term	*98,200*	*20,000*
thereof exercisable	*98,200*	*20,000*
Base value of PSR (in EUR)	2.51–11.05	2.51
Aggregate adjusted fair value of PSRs (in EUR thousand)	76	0
Aggregate maximum payments if PSRs are exercised (in EUR thousand)[1]	n/a	n/a
Weighted average term of outstanding rights (in years)	0.62	0
Weighted average fair value (EUR/PSR)	0.77	0
Applied share price volatility in %	44.58	27.12
Risk-free interest rate in %	-0.72	-0.65
Assumed staff turnover in %	0.0	0.0
Expiry dates	Jan 1, 2018– Jan 1, 2019	Jan 1, 2019

[1] *The aggregate maximum payment to be made by the Company upon exercise of all outstanding rights under PSP 03–15 cannot be calculated as the program does not provide for a cap on the PSR premium.*

PSP 2013	**Dec 31, 2017**	**Dec 31, 2018**
Total number of outstanding PSRs	98,000	23,000
thereof vested until end of term	*98,000*	*23,000*
thereof exercisable	*98,000*	*23,000*
Base value of PSR (in EUR)	1.62–6.45	6.15–6.45
Aggregate adjusted fair value of PSRs (in EUR thousand)	202	0
Aggregate maximum payments if PSRs are exercised (in EUR thousand)	784	184
Weighted average term of outstanding rights (in years)	0.71	0.22
Weighted average fair value (EUR/PSR)	2.06	0
Applied share price volatility in %	56.85	31.11
Risk-free interest rate in %	-0.72	-0.80
Assumed staff turnover in %	0.0	0.0
Expiry dates	Jul 1, 2018– Apr 1, 2019	Jan 1, 2019– Apr 1, 2019

PSP 2014	**Dec 31, 2017**	**Dec 31, 2018**
Total number of outstanding PSRs	323,833	254,833
thereof vested until end of term	*323,833*	*254,833*
thereof exercisable	*323,833*	*254,833*
Base value of PSR (in EUR)	3.23–3.70	3.23–3.70
Aggregate adjusted fair value of PSRs (in EUR thousand)	329	18
Aggregate maximum payments if PSRs are exercised (in EUR thousand)	3,113	2,153
Weighted average term of outstanding rights (in years)	1.78	0.76
Weighted average fair value (EUR/PSR)	1.02	0.07
Applied share price volatility in %	58.66	78.04
Risk-free interest rate in %	-0.68	-0.74
Assumed staff turnover in %	0.0	0.0
Expiry dates	Oct 1, 2019	Oct 1, 2019

PSP 2015	Dec 31, 2017	Dec 31, 2018
Total number of outstanding PSRs	98,400	98,400
thereof vested until end of term	*88,400*	*98,400*
thereof exercisable	*0*	*98,400*
Base value of PSR (in EUR)	5.05	5.05
Aggregate adjusted fair value of PSRs (in EUR thousand)	39	1
Aggregate maximum payments if PSRs are exercised (in EUR thousand)	591	383
Weighted average term of outstanding rights (in years)	2.79	1.75
Weighted average fair value (EUR/PSR)	0.42	0,02
Applied share price volatility in %	74.95	66.61
Risk-free interest rate in %	-0.52	-0.63
Assumed staff turnover in %	0.47	0.00
Expiry dates	Oct 1, 2020	Oct 1, 2020

The risk-free interest rates are derived from the yield curve of German government bonds at the valu-ation date. The volatility of the share price can be derived from the historical volatility of the shares (in accordance with Bloomberg data) over the most recent past period equaling the remaining term of the rights. For adjustment purposes, a constant staff turnover was assumed based on the historical turnover of the Company's staff over the past three years. No dividend payments were assumed during the term of the rights (i.e., the assumed dividend yield was 0%).

The aggregate adjusted fair value of the rights granted under all programs amounted to EUR 20 thousand as of December 31, 2018 (December 31, 2017: EUR 647 thousand). This was recognized as a non-current provision of EUR 0 thousand and a current provision of EUR 20 thousand as of the balance sheet date.

45

INFORMATION ON THE EXECUTIVE BOARD AND THE SUPERVISORY BOARD OF THE COMPANY AND THEIR REMUNERATION

In the reporting year, the Company's Executive Board consisted of Greg Hamilton as Chief Executive Officer, Jorge Garces, Ph.D., as Chief Scientific Officer, and Albert Weber as Executive Vice President Finance. Dr. Uwe Staub was a member of the Company's Executive Board and served as Chief Operating Officer until March 31, 2018.

The remuneration of the members of the Company's Executive Board comprises a fixed and a variable component. The variable amount is determined on the basis of a variety of criteria, including the achievement of individual performance targets and Company performance targets, which are set by the Supervisory Board on a yearly basis. Apart from the fixed and the variable component, a third remuneration component consists of a long-term performance-based compensation in the form of phantom stock rights (PSRs) and stock options. In addition, the Executive Board members are beneficiaries of a D&O insurance policy with excess set at the statutory minimum amount. They also receive full reimbursement of their business travel expenses and other incidental benefits detailed in the remuneration report section of the Group management report 2018.

In 2018, total remuneration of the members of the Executive Board based on the benefits granted amounted to EUR 2,376 thousand (2017: EUR 1,451 thousand)[1] and comprised:

EUR thousand	2017	2018
Fixed remuneration	786	1,265
One-year variable remuneration	269	664
Multi-year variable remuneration	396	447
Total remuneration (granted benefits)	1,451	2,376

[1] *Note: The Executive Board's total remuneration for 2017 reported in the 2017 Annual Report amounted to EUR 1,224 thousand. The EUR 1,451 thousand difference between this year's figure and the amount reported in the previous year is due to the fact that in 2017 the stock options reported as multi-year variable remuneration had been recognized as an expense in the income statement. However, in accordance with the German Corporate Governance Code, the fair value of the stock options upon their issue date should be reported here. The previous year's misstatement is hereby corrected.*

The multi-year variable compensation of the Executive Board members in 2018 comprised 255,000 stock options (2017: 170,000).

Based on the allocations (cash payments), the total remuneration of the members of the Executive Board amounted to EUR 1,732 thousand (2017: EUR 980 thousand) and comprised:

EUR thousand	2017	2018
Fixed remuneration	786	1,265
One-year variable remuneration	194	467
Multi-year variable remuneration	0	0
Total remuneration (allocations)	980	1,732

In the event of a change of control, all Executive Board members have a special right to terminate their service agreements and would in such case be entitled to receive payment of their fixed remuneration for the remaining term of their service agreements. In no case will such payment exceed 150% of the severance payment cap in accordance with section 4.2.3 of the German Corporate Governance Code.

The Supervisory Board of the Company remained unchanged in the reporting year and comprised the following members: Heino von Prondzynski, Einsiedeln (Switzerland) as Chairman, Dr. Ann Clare Kessler, Rancho Santa Fe, CA (U.S.A.), and Prof. Günther Reiter, Pfullingen (Germany) as Deputy Chairman, and Dr. Helge

Lubenow, Langenfeld/Rheinland (Germany).

The remuneration structure for the Supervisory Board is based on an annual cash retainer ("fixed remuneration") and meeting-related payments ("variable remuneration"). The remuneration does not include any performance-related elements or long-term incentive components. In 2018, total remuneration of the members of the Supervisory Board amounted to EUR 253 thousand (2017: EUR 248 thousand) and comprised:

EUR thousand	2017	2018
Fixed remuneration	200	205
Variable remuneration	48	48
Total remuneration	248	253

Further details to the composition of the Executive Board and the Supervisory Board and details of the remuneration of their members in the reporting year can be found in the "Remuneration Report" section of the Group management report 2018.

46 OTHER FINANCIAL OBLIGATIONS

EUR thousand	Term < 1 year	Term 1–5 years
Financial obligations from commercial lease agreements	317	31
Financial obligations from licensing agreements	47	0
Financial obligations from operating rental, lease, maintenance and service agreements	22	0
Financial obligations from manufacturing orders	467	0
Financial obligations from the purchase of goods and services	940	1
Total financial obligations	1,793	32

For the Epigenomics Group, obligations from commercial lease agreements arise from a lease at the Berlin location and a sublease at the San Diego, CA, location. For the office and lab space at Geneststrasse 5, there is a fixed-term lease with a term expiring on April 30, 2020. The Company has the option to extend the lease by six more years. In the reporting year, the total expenses for lease payments and incidental costs under this agreement amounted to EUR 123 thousand (2017: EUR 120 thousand). For the office and lab space in San Diego, there is a fixed-term lease with a term expiring October 31, 2019. In the reporting year, the total expenses for lease payments and incidental costs under this agreement amounted to EUR 77 thousand (2017: EUR 0).

The U.S. subsidiary has rented office space at its Germantown, MD, location. This lease may be termin-ated at short notice.

In the previous years, Epigenomics acquired numerous exclusive licenses to third-party intellectual property. This means that there are some obligations to pay minimum license fees in years to come. Add-itionally, Epigenomics has the obligation to reimburse most of those third parties for costs incurred in connection with the maintenance and the prosecution of the licensed rights. Those costs are mainly fees for patent attorneys or patent office actions and their amounts and timing are difficult to forecast.

47 INFORMATION ON THE COMPANY'S AUDITOR APPOINTED BY THE GENERAL SHAREHOLDERS' MEETING

At the Company's Annual General Shareholders' Meeting in May 2018, Baker Tilly GmbH & Co. KG Wirtschaftsprüfungsgesellschaft was engaged to audit the Company's annual financial statements and consolidated financial statements for fiscal year 2018. During the reporting year, a total amount of EUR 213 thousand (2017: EUR 141 thousand) was expensed for miscellaneous services of this auditing firm for Epigenomics AG. Details are shown in the following table:

EUR thousand	2017	2018
Costs for audit services	141	126
Costs for other assurance services	0	87
Total	141	213

The costs disclosed for audit services relate to the audits of the separate financial statements of Epigenomics AG in accordance with German GAAP as well as the consolidated financial statements for the Epigenomics Group in accordance with IFRSs, and on reviews of the interim statements. The costs for other assurance services were incurred in connection with the Company's capital increase in October 2018.

48 DECLARATION OF THE EXECUTIVE BOARD AND THE SUPERVISORY BOARD OF EPIGENOMICS AG PURSUANT TO SECTION 161 AKTG ON THE GERMAN CORPORATE GOVERNANCE CODE

In October 2018, the Executive Board and the Supervisory Board of the Company issued an updated declaration of compliance pursuant to section 161 of the German Stock Corporation Act (Aktiengesetz – AktG). The declaration was published on the Company's website (*www.epigenomics.com/news-investors/-corporate-governance/*).

49 INFORMATION ON OTHER TRANSACTIONS WITH RELATED PARTIES

As of the reporting date, the Company's liabilities due to members of its Executive Board amounted to EUR 120 thousand (December 31, 2017: EUR 84 thousand) and liabilities due to members of its Supervisory Board amounted to EUR 0 thousand (December 31, 2017: EUR 32 thousand). There were no other transactions with related parties during the reporting year.

50 REPORT ON POST-BALANCE SHEET DATE EVENTS

After the balance sheet date, the Company published a notice to the capital market on March 6, 2019, regarding its decision to terminate the collaboration with its Chinese partner BioChain regarding the licensing of the Septin9 marker and the exclusive distribution rights in China for Epi proColon with immediate effect. Epigenomics exercised its contractual right to terminate the agreement if BioChain did not pay Epigenomics more than the contractually agreed minimum license fees over a period of three years. The Company will review all options for the distribution of Septin9 in China to maximize the full potential of the test in this key market. No other events occurred after the balance sheet date which could materially affect the Company's net assets, financial position and results of operations or its risk assessment

51 APPROVAL FOR PUBLICATION

The Executive Board of Epigenomics AG approved the consolidated financial statements on March 20, 2019, for submission to the Supervisory Board. The Supervisory Board is responsible for reviewing the consolidated financial statements and declaring whether it approves them. The consolidated financial statements and the individual financial statements of Epigenomics AG as well as the annual report will be published on March 27, 2019, after approval at the Supervisory Board meeting on March 26, 2019.

Berlin, March 20, 2019

The Executive Board

RESPONSIBILITY STATEMENT

To the best of our knowledge, and in accordance with the applicable reporting principles, the consolidated financial statements 2018 give a true and fair view of the assets, liabilities, financial position and profit or loss of the Group, and the Group management report includes a fair review of the development and performance of the business and the position of the Group, together with a description of the principal opportunities and risks associated with the expected development of the Group.

Berlin, March 20, 2019

The Executive Board

LIST OF ABBREVIATIONS

ADMIT	Adherence to Minimally Invasive Testing
ADR	American Depositary Receipts
AktG	German Stock Corporation Act (Aktiengesetz)
ARUP	ARUP Laboratories
CFDA	China Food and Drug Administration
CMS	Centers for Medicare & Medicaid Services
CPT	Current Procedural Terminology
CUSIP	Committee on Uniform Security Identification Procedures
EBIT	Earnings before interest and taxes
EBITDA	EBIT before depreciation and amortization
ECB	European Central Bank
ERP	Enterprise Resource Planning
EU	European Union
FDA	Food and Drug Administration
Fed	Federal Reserve System
FIT	Fecal immunochemical test
GDP	Gross domestic product
GMP	Good manufacturing practice
GSTP1	DNA methylation biomarkers, intellectual property by Epigenomics
HGB	German Commercial Code (Handelsgesetzbuch)
HPV	Human Papilloma Virus
IAS	International Accounting Standards
IASB	International Accounting Standards Board
ICR	Internal control and risk management system

IDW	Institute of Public Auditors in Germany (Institut der Wirtschaftsprüfer)
IFRS	International Financial Reporting Standards
IMF	International Monetary Fund
IPO	Initial public offering
ISIN	International Securities Identification Number
ISO	International Organization for Standardization
IVD	In vitro diagnostic
KonTraG	German Corporation Sector Supervision and Transparency Act (Gesetz zur Kontrolle und Transparenz im Unternehmensbereich)
LDT	Laboratory-developed test
M&A	Mergers & Acquisitions
NCD	National Coverage Determination
NGS	Next Generation Sequencing
OECD	Organisation for Economic Co-operation and Development
OTCQX	Over-the-counter stock exchange
PAL	Principal American Liaison
PCR	Polymerase Chain Reaction
PMA	Premarket approval
PSP	Phantom stock program
PSR	Phantom stock rights
R&D	Research and Development
Septin9	DNA methylation biomarkers, intellectual property by Epigenomics
SHOX2	DNA methylation biomarkers, intellectual property by Epigenomics
SO	Stock options
SOP(s)	Stock option program(s)
USPSTF	United States Preventive Services Task Force
WpÜG	German Securities Acquisition and Takeover Act (Wertpapiererwerbs- und Übernahmegesetz)

INDEPENDENT AUDITOR'S REPORT

To Epigenomics AG, Berlin

REPORT ON THE AUDIT OF THE CONSOLIDATED FINANCIAL STATEMENTS AND THE GROUP MANAGEMENT REPORT

Audit opinion

We have audited Epigenomics AG and its subsidiary's (the Group) consolidated financial statements which comprise the consolidated balance sheet as of December 31, 2018, the consolidated statement of comprehensive income, the consolidated statement of changes in equity and the consolidated cash flow statement for the fiscal year from January 1, 2018 through December 31, 2018 as well as the notes to the Consolidated Financial Statements, including a summary of significant accounting methods. In addition, we have audited Epigenomics AG's management report for the fiscal year from January 1, 2018 through December 31, 2018.In accordance with German legal requirements, we have not audited the statement on corporate governance and the compliance statement contained in the management report's section "Corporate Governance".

In our opinion, based on the knowledge obtained in the audit

the accompanying consolidated financial statements comply, in all material respects, with IFRS as applicable in the EU and the supplementary provisions pursuant to German commercial law (Art. 315e Sec. 1 HGB (German Commercial Code)) and give, in compliance with such provisions, a true and fair view of the net assets and financial performance of the Group as at December 31, 2018 and of its profit situation for the financial year from January 1, 2018 to December 31, 2018 in compliance with German Legally Accounting Principles; and

the accompanying group management report as a whole provides an appropriate view of the Company's position. In all material respects, this group management report is consistent with the consolidated financial statements, complies with German legal requirements and appropriately presents the opportunities and risks of future developments. Our audit opinion on the group management report does not cover the content of the aforementioned statement on corporate governance and the compliance statement.

Pursuant to Art. 322 Sec. 3 sentence 1 HGB, we declare that our audit has not led to any reservations relating to the legal compliance of the consolidated financial statements' and the group management report.

Basis for our opinion

We have conducted our audit of the consolidated financial statements and of the group management report in accordance with Art. 317 HGB and the EU Audit Regulation (No. 537/2014, referred to subsequently as "EU Audit Regulation") and in compliance with German Generally Accepted Standards for the Financial Statements Audit promulgated by the Institut der Wirtschaftsprüfer [Institute of Public Auditors in Germany]

(IDW). Our responsibilities under these requirements and principles are further described in the “Auditor’s Responsibilities for the Audit of the Consolidated Financial Statements and of the group management report” section of our auditor’s report. We are independent of the Group companies in accordance with the requirements of European and German commercial and professional law, and we have fulfilled our other German professional responsibilities in accordance with these requirements. In addition, in accordance with Article 10 (2) (f) of the EU Audit Regulation, we declare that we have not provided any non-audit services prohibited under Article 5 (1) of the EU Audit Regulation. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion on the consolidated financial statements and on the group management report.

Key audit matters in the audit of the consolidated financial statements

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements for the fiscal year from January 1, 2018 through December 31, 2018. These matters have been taken into account in connection with our audit of the consolidated financial statements as a whole, and in forming our audit opinion related herewith; we do not express a separate audit opinion on these matters.

From our perspective, the following matters were of most significance during our audit:

Revenue recognition
Stock options

We have structured our presentation of these key audit matters as follows:

1. Facts and problems
2. Audit approach and findings
3. Reference to further information

In the following, we will present these key audit matters:

Revenue recognition:

1. During the financial year, the Company recognized sales revenues in the amount of ca. EUR 1.5 million. Sales revenues are one of the most significant financial performance indicators in the capital market communication. These sales revenues include sales of the only main product in the amount of EUR 0.8 million and license revenues in the amount of EUR 0.6 million. Product sales are mainly realized by means of sales to few major customers. In general, there are framework agreements with these customers which may be supplemented by further agreements. These agreements may be decisive as to whether a sale has been realized. An incomplete presentation of these additional agreements within the scope of revenue recognition poses a risk, which is why we believe this matter is of particular importance.

2. We have convinced ourselves from the correct recognition of sales by means of the framework agreements, external confirmations as to possibly existing additional arrangements, proofs of delivery as well as the outgoing invoices and the related incoming payments. We could convince ourselves that any conditions additionally agreed upon with the major customers have been appropriately processed during the revenue recognition's assessment.

3. The Company's statements on the revenue recognition are contained in the consolidated financial statements' notes' section "Notes to the consolidated statement of comprehensive income (consolidated income statement and other results – 1 Sales Revenues".

Stock options:

1. As of the balance sheet date, stock option programs (AOP - "Equity settled share based payments") have been recognized in the Company's consolidated financial statements. During the reporting year, further commitments for AOPs have been granted to employees. The AOPs are presented in the consolidated financial statements under the relevant expense positions (cost of sales, research and development costs as well as distribution and administration costs) as well as equity. An amount of EUR 1.2 million of AOPs has been recognized as costs through profit and loss. The Company uses an external expert for the valuation of AOPs. From our perspective, share-based remuneration programs were of particular importance as they depend to a major extent from the legal representatives' assessments and estimates and are thus afflicted by uncertainties.
2. Based upon the knowledge that estimated values provide for an increased risk of misstatements in the financial reporting and that the legal representatives' assessment decisions have a direct and clear impact on the consolidated financial statements, we have convinced ourselves from the valuation parameters' (such as risk-free interest and the shares' volatility) appropriateness by means of contract and company data and by involving a specialist's expertise and have assessed the new commitments' valuations' appropriateness. Based on that, we audited the accounting effect in the consolidated statement of comprehensive income (consolidated income statement and other results) and in the consolidated balance sheet. The management board's underlying estimates and assessments made are within a reasonable range.

3. The Company's information on the stock option program's valuation is contained in the Notes to the Consolidated Financial Statements in section "Expenses for share-based remuneration" and "Description of stock-option programs".

Other information

The legal representatives are responsible for other information. Other information comprises:

- Responsibility statement by the legal representatives in the 2018 annual management report's section "Responsibility Statement"

- Compliance statement in the section “Corporate Governance” of the 2018 Group Management Report
- Declaration on corporate governance in the section “Corporate Governance” of the 2018 Group Management Report
- The section “Foreword by the Executive Board” in the 2018 annual report, and
- The Section “Our share” in the 2018 annual report

The supervisory board is responsible for the following other information:

- The section “Report of the Supervisory Board” in the 2018 annual report.

Our audit opinions on the consolidated financial statements and on the group management report do not cover other information, and consequently we do not express an audit opinion or any other form of audit conclusion thereon.

In connection with our audit, our responsibility is to read the other information and, in doing so, to assess whether the other information

- is materially inconsistent with the consolidated financial statements, with the group management report or our knowledge obtained during the audit; or
- otherwise seems to have been materially misstated.

Responsibilities of the Legal Representatives and the Supervisory Board for the Consolidated Financial Statements and the Group Management Report

The legal representatives are responsible for the preparation of the consolidated financial statements that comply, in all material respects, with IFRS as adopted by the EU and the additional requirements of German commercial law pursuant to Art. 315e Sec. 1 HGB and that the consolidated financial statements, in compliance with these requirements, give a true and fair view of the net assets, liabilities, financial position, and financial performance of the company. In addition, the executive directors are responsible for such internal controls they have determined necessary in order to enable the preparation of consolidated financial statements that are free from material misstatements, whether due to fraud or error.

In preparing the consolidated financial statements, the legal representatives are responsible for assessing the Company’s ability to continue as a going concern. They also have the responsibility for disclosing, as applicable, matters related to going concern. In addition, they are responsible for financial reporting on a going concern basis unless they intend to liquidate the Group or to discontinue business operations or in case there is no realistic alternative but to do so.

Furthermore, the legal representatives are responsible for the preparation of the group management report that, as a whole, provides a true and fair view of the Company’s position and is, in all material respects, consistent with the consolidated financial statements, complies with German legal requirements, and appropriately presents the opportunities and risks of future development. In addition, the legal representatives are responsible for such arrangements and measures (systems) they have considered necessary to enable the preparation of a group management report in accordance with the applicable German legal requirements and to be able to provide sufficient appropriate evidence for the statements

made in the group management report.

The Supervisory Board is responsible for overseeing the Group's financial reporting process for the preparation of the consolidated financial statements and the group management report.

Auditor's Responsibilities for the Audit of the Consolidated Financial Statements and the Group Management Report

Our objective is to obtain reasonable assurance as to whether the consolidated financial statements as a whole are free from material misstatements, whether due to fraud or error, and whether the group management report as a whole presents a true and fair view of the Group's position and is, in all material respects, consistent with the consolidated financial statements and the knowledge obtained during our audit, complies with German legal requirements and appropriately presents the opportunities and risks of the Group's future development, as well as to issue an audit report that includes our audit opinions on the consolidated financial statements and on the group management report.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit con-ducted in accordance with Art. 317 HGB and the EU Audit Regulation and in compliance with German Generally Accepted Standards for the Audit of Financial Statements promulgated by the Institut der Wirtschaftsprüfer (IDW) will always detect any material misstatement. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements and the group management report.

We exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- identify and assess the risks of material misstatements in the consolidated financial statements and the group management report, whether due to fraud or error, plan and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our audit opinions. The risk of not detecting any material misstatements resulting from fraud is higher than for those resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal controls;
- obtain an understanding of the internal control system relevant for the audit of the consolidated financial statements and of arrangements and measures relevant for the audit of the group management report, in order to plan audit procedures that are appropriate under the circumstances, but not for the purpose of expressing an audit opinion on the effectiveness of these systems;
- evaluate the appropriateness of accounting policies applied by the legal representatives and the reasonableness of accounting estimates and applicable disclosures made;
- conclude on the appropriateness of the legal representatives' use of the going concern basis and, based on the audit evidence obtained, whether a material uncertainty exists in related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude a material uncertainty exists, we are required to draw attention to the related disclosures in the annual financial statements in the auditor's report and in the management report

or, if such disclosures are inadequate, to modify our respective audit opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to be able to continue as a going concern;

- evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements present the underlying transactions and events in a manner that the consolidated financial statements give a true and fair view of the Group's net assets, financial performance and profit situation in compliance with IFRS as adopted by the EU and the additional requirements of German commercial law pursuant to Art. 315e Sec. 1 HGB;
- obtain sufficiently appropriate audit evidence regarding the financial information of the entities or business activities within the Group in order to express audit opinions on the consolidated financial statements and on the Group Management Report. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinions;
- evaluate the group management report's consistency with the consolidated financial statements, its conformity with German law, and its presentation of the Group's position;
- perform audit procedures on the prospective information presented by the legal representatives in the group management report. On the basis of sufficient appropriate audit evidence we evaluate, in particular, the significant assumptions used by the legal representatives as a basis for the prospective information, and evaluate the proper derivation of the prospective information from these assumptions. We do not express a separate audit opinion on the prospective information and on the assumptions used as a basis. There is a substantial unavoidable risk that future events will differ materially from the prospective information.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with the relevant independence requirements, and communicate with them all relationships and other matters that may reasonably be expected to affect our independence and, where applicable, the applied safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current reporting period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulations preclude public disclosure about the matter.

OTHER LEGAL AND REGULATORY REQUIREMENTS

Further Information pursuant to Article 10 of the EU Audit Regulation

We were elected as group auditor by the annual general meeting on May 30, 2018. We were engaged by

the supervisory board on August 23, 2018. We have been the group auditor of Epigenomics AG, Berlin, without interruption since the financial year 2015.

We declare that the audit opinions expressed in this auditor's report are consistent with the additional report to the audit committee pursuant to Article 11 of the EU Audit Regulation (long-form audit report).

RESPONSIBLE AUDITOR

The auditor responsible for the audit is Andreas Weissinger.

Munich, dated March 20, 2019

Baker Tilly GmbH & Co. KG
Wirtschaftsprüfungsgesellschaft
(Düsseldorf)

Siegfried Hund	Andreas Weissinger
German CPA	German CPA

Audited Consolidated Financial Statements of Epigenomics AG Prepared in Accordance with IFRS as of and for the Financial Year Ended December 31, 2017

Consolidated Statement of Profit or Loss and Other Comprehensive Income

for the period from January 1 to December 31

EUR thousand	Note	2016	2017
Revenue	**1**	**4,201**	**1,864**
Cost of sales	3	-1,634	-246
Gross profit		**2,567**	**1,618**
Gross margin (in %)		*61.1*	*86.8*
Other income	2	743	1,054
Research and development costs	3	-5,119	-4,329
Selling, general and administrative costs	3	-10,247	-8,035
Other expenses	3.6	-256	-597
Operating result/earnings before interest and taxes (EBIT)	**7**	**-12,312**	**-10,289**
Interest income	8	17	18
Interest expenses	8	0	-175
Other financial result	8	-1	-3
Net loss for the year before taxes on income		**-12,296**	**-10,449**
Taxes on income	9	1,135	214
Net loss for the year		**-11,161**	**-10,235**
Items that may be reclassified subsequently to profit or loss:			
Fair value adjustment of available-for-sale securities	23	-31	152
Exchange rate differences	23	-58	322
Other comprehensive income for the year		**-89**	**474**
Total comprehensive income for the year		**-11,250**	**-9,761**
Earnings per share (basic and diluted, in EUR)	***10***	***-0.55***	***-0.44***

Consolidated Balance Sheet

EUR thousand

ASSETS	Note	Dec. 31, 2016	Dec. 31, 2017
Non-current assets			
Intangible assets	11	755	668
Property, plant and equipment	12	713	720
Deferred taxes	14	1,551	1,526
Total non-current assets		**3,019**	**2,914**
Current assets			
Inventories	15	257	293
Trade receivables	16	2,248	937
Marketable securities	17	753	905
Cash and cash equivalents	18	11,531	12,826
Other current assets	19	414	1,898
Total current assets		**15,203**	**16,859**
Total assets		**18,222**	**19,773**

EQUITY AND LIABILITIES	Note	Dec. 31, 2016	Dec. 31, 2017
Equity			
Subscribed capital	20	22,735	24,014
Capital reserve	21	54,873	59,509
Retained earnings	22	-51,719	-62,880
Net loss for the year		-11,161	-10,235
Other comprehensive income	23	-305	169
Total equity		**14,424**	**10,577**
Non-current liabilities			
Provisions	25	89	43
Total non-current liabilities		**89**	**43**

Current liabilities			
Trade payables	26	1,089	952
Deferred income	27	302	0
Convertible notes issued	28	0	6,536
Other liabilities	29	466	562
Provisions	25	1,852	1,103
Total current liabilities		**3,709**	**9,153**
Total equity and liabilities		**18,222**	**19,773**

Consolidated Statement of Cash Flows

for the period from January 1 to December 31

EUR thousand	Note	2016	2017
Cash and cash equivalents at the beginning of the year		**7,779**	**11,531**
Operating activities			
Net loss for the year		**-11,161**	**-10,235**
Adjustments for:			
Stock option expenses	4	128	455
Amortization of intangible assets	5, 11	234	191
Depreciation of property, plant and equipment	5, 12	122	152
Losses from the disposal of non-current assets	6	3	2
Foreign currency exchange results		34	0
Financial income	8	-18	-18
Financial expenses	8	1	177
Taxes	9	-1,135	-214
Operating result before changes in operating assets and liabilities		**-11,792**	**-9,490**
Changes in operating assets and liabilities:			
Inventories	15	820	-37
Trade receivables	16	-2,005	1,262
Other assets	19	547	-1,491
Non-current and current provisions	25	789	-698
Trade payables and other liabilities	26, 28	-1,350	891
Deferred income		-284	-6
Tax paid		-8	-7
Cash flow from operating activities		**-13,283**	**-9,576**
Investing activities			
Payments to acquire intangible assets		-169	-37
Payments to acquire property, plant and equipment		-207	-183
Payments related to capitalized development costs		-892	-363
Proceeds from investment grants received	12	871	17
Interest received	8	18	18
Cash flow from investing activities		**-379**	**-548**
Financing activities			
Proceeds from the issue of new shares	20, 21	13,982	5,475
Payments for the issue of new shares	21	-729	-374
Proceeds from the conversion of convertible notes	27	4,169	6,461
Payments for the issue of convertible notes	27	0	-63
Cash flow from financing activities		**17,422**	**11,499**
Net cash flow		**3,760**	**1,375**
Currency translation effects		-8	-80
Cash and cash equivalents at the end of the year		**11,531**	**12,826**

As of the balance sheet date, EUR 24 thousand of cash and cash equivalents included restricted cash.

Consolidated Statement of Changes in Equity

EUR thousand	Note	Subscribed capital	Capital reserve	Retained earnings	Net loss for the year	Other comprehensive income	Group equity
Dec. 31, 2015		**18,088**	**40,945**	**-42,734**	**-8,985**	**-216**	**7,098**
Total comprehensive income 2016		**0**	**0**	**0**	**-11,161**	**-89**	**-11,250**
Transfer of net loss for the year 2015 to retained earnings		0	0	-8,985	8,985	0	0
Capital increase with subscription rights		2,946	0	0	0	0	2,946
Premium from the capital increase with subscription rights		0	11,036	0	0	0	11,036
Costs for the creation of new shares		0	-774	0	0	0	-774
Stock option expenses		0	128	0	0	0	128
Conversion of convertible notes		1,701	3,538	0	0	0	5,239
Dec. 31, 2016		**22,735**	**54,873**	**-51,719**	**-11,161**	**-305**	**14,424**
Total comprehensive income 2017	**23**	**0**	**0**	**0**	**-10,235**	**474**	**-9,761**
Transfer of net loss for the year 2016 to retained earnings		0	0	-11,161	11,161	0	0
Capital increase without subscription rights	20	1,279	0	0	0	0	1,279
Premium from the capital increase without subscription rights	20, 21	0	4,195	0	0	0	4,195
Costs for the creation of new shares	21	0	-52	0	0	0	-52
Stock option expenses	4, 21	0	455	0	0	0	455
Option premium on convertible notes	27	0	38	0	0	0	38
Dec. 31, 2017		**24,014**	**59,509**	**-62,880**	**-10,235**	**169**	**10,577**

Basic Information, Principles and Methods

Description of Business Activity

Epigenomics ("Epigenomics" or the "Company") was founded as a limited liability company under German law (*Gesellschaft mit beschränkter Haftung* – GmbH) in 1998 and has its registered office in Berlin, Germany. In 2000, the Company was converted into a stock corporation under German law (*Aktiengesellschaft* – AG) and entered into the commercial register (*Handelsregister*) of Charlottenburg under HRB 75861. It has been listed in the Prime Standard segment of the Frankfurt Stock Exchange since July 19, 2004 (ticker symbol: ECX).

In accordance with its Articles of Association, the object of the Company is the development and marketing of procedures and devices for the production in quantity of particular epigenetic parameters such as DNA methylation patterns as well as the information technology bases necessary for their procurement and evaluation. Epigenomics AG is a molecular diagnostics company developing and commercializing a pipeline of proprietary products for screening, early detection and diagnosis of cancer. The Company's products enable doctors to diagnose cancer earlier and more accurately, leading to improved outcomes for patients.

General Principles

The consolidated financial statements of Epigenomics AG have been prepared in accordance with Section 315e of the German Commercial Code (*Handelsgesetzbuch* – HGB) and in application of the International Financial Reporting Standards (IFRSs) of the International Accounting Standards Board (IASB), London, in effect as of the December 31, 2017 balance sheet date, as adopted by the European Union (EU).

The Company has incurred accounting losses of EUR 62,880 thousand since being founded. The Company generated a net loss of EUR 10,235 thousand for 2017 (2016: EUR 11,161 thousand). The "going concern" principle in accordance with IAS 1.25 *Presentation of Financial Statements* was applied. With EUR 13.7 million in liquid assets (cash, cash equivalents and marketable securities) at year-end 2017, at the projected cash consumption the Company's current financial resources are sufficient to support its operations beyond 2018. Against this backdrop, it must be noted that we issued convertible notes with an aggregate principal amount of EUR 7.1 million in the reporting year. These mature as of December 31, 2018. Until that date, the holder has the right at any time before maturity to convert these into a specific number of shares to be issued by the Company. The holder also has the right, upon maturity, to demand the full redemption of the notes (less any portion previously converted into shares). Without successfully completing further corporate actions in 2018 and/or in the absence of an extension of maturity or changes in the terms and conditions of the notes to be agreed with the holders, it cannot be expected that the Company has the necessary liquidity as of December 31, 2018 to guarantee full or even partial redemption of the notes. In this case, we would be exposed to immediate insolvency as of the redemption date. Based on our past experience, and our projections of the future development of our business and the capital markets, we assume that any necessary corporate actions will be successful.

The consolidated statement of profit or loss has been prepared using the cost of sales method.

Reporting Period and Reporting Currency

The reporting period (comparative period) as defined in these consolidated financial statements is the period from January 1 to December 31, 2017 (2016). The reporting currency is the euro (EUR). Many figures are rounded to the nearest thousand euros, which may give rise to rounding differences in the figures presented in these notes.

Scope of Consolidation

The consolidated Group consists of Epigenomics AG as the parent company (registered office: Geneststrasse 5, 10829 Berlin, Germany) and Epigenomics, Inc. (registered office: Suite 400, 1455 NW Leary Way, Seattle, WA 98107, U.S.A.), as its sole subsidiary during the reporting period. Epigenomics, Inc. additionally operates an office in Germantown, MD, U.S.A. Epigenomics AG held 100% of the share capital and the voting rights of Epigenomics, Inc. between January 1, 2016 and December 31, 2017.

For the reporting year and the previous year, the two companies each prepared separate financial statements which were either audited or reviewed, independent of their inclusion in the consolidated financial statements.

Principles of Consolidation

In acquisition accounting, the carrying amount of the investment is offset against the share of equity of the subsidiary attributable to the parent as at the date of acquisition. Any resulting difference is added to the assets and liabilities in the amount in which their market value deviates from their carrying amount at the time of the initial consolidation. Any amount in excess is recognized as goodwill.

All intercompany transactions and interim results, income and expenses, profits and losses, receivables and payables are eliminated in full on consolidation.

Application of New and Revised IFRSs and Interpretations

In the reporting year, the Group for the first time applied the following amended IFRSs and Interpretations issued by the IASB and endorsed by the EU that are effective for accounting periods beginning on or after January 1, 2017. Generally, the amendments mentioned below require prospective application.

Amendments to IAS 7 *Statement of Cash Flows – Disclosure Initiative* *(endorsed by the EU as of November 6, 2017)*

The amendments to IAS 7 call for entities to provide expanded disclosures on changes in those liabilities reported in the balance sheet in the reporting period for which cash flows were, or future cash flows will be, classified in the statement of cash flows as cash flows from financing activities ("liabilities arising from financing activities"). In addition, corresponding expanded disclosures must also be made on changes in the carrying amounts of financial assets (for example, assets that hedge liabilities arising from financing activities) if cash flows from those financial assets are likewise included in cash flows from financial activities.

Amendments to IAS 12 *Income Taxes – Recognition of Deferred Tax Assets for Unrealized Losses* *(endorsed by the EU as of November 6, 2017)*

The amendments to IAS 12 clarify the issue of recognizing a deferred tax asset for temporary differences resulting from unrealized losses. A temporary difference within the meaning of IAS 12 is determined based on the premise that the carrying amount as of the date of recognition will be recovered in the form of economic benefits that will flow to the entity in future periods. The existence of a temporary difference depends solely on a comparison of the IFRS carrying amount as of the respective reporting date with the tax base as of that date, and is not affected by possible future changes in the carrying amount.

It was also clarified that the IFRS carrying amount is only relevant to determining temporary differences, and not to estimating future taxable profits. When calculating taxable profit, it is also conceivable for a value exceeding the current IFRS carrying amount to be recovered, if this is probable. In this context it was also clarified that, if tax law restricts the utilization of deductible temporary differences to a specific type of income, the assessment of whether and in what amount a deferred tax asset is to be recognized must only be based on the source of income specific to these temporary differences.

Finally, it was clarified that future taxable profit must be calculated before the reversal of any deductible temporary differences in order to prove the recoverability of the deductible temporary differences.

Amendments to IFRS 12 *Disclosure of Interests in Other Entities* as part of the Annual Improvements to IFRS Standards (2014–2016 Cycle) *(EU endorsement pending as of December 31, 2017)*

Endorsement by the EU was also scheduled for 2017 for the amendments to IFRS 12 as part of the annual improvements (2014–2016 Cycle). The amendments clarify that the requirements specified under this IFRS apply to an entity's interests that are classified as held for sale or discontinued operations (or included in a disposal group that is classified as held for sale or discontinued operations) in accordance with IFRS 5 *Non-current Assets Held for Sale and Discontinued Operations*. Contrary to the timetable published by the European Financial Reporting Advisory Group (EFRAG) at the end of 2017, this endorsement did not take place in 2017. The amendments are thus not reflected in these consolidated financial statements.

New and Revised IFRSs and Interpretations that do Not Yet Require Mandatory Application (but Allow Early Application) for the Reporting Year

Except where indicated, the Group has not applied the following new and revised IFRSs and Interpretations which have been issued but are not yet effective and some of which have not yet been endorsed by the EU:

Mandatory application for fiscal years beginning on or after January 1, 2018:

(i) IFRS 9 *Financial Instruments* (as revised in 2014)

(ii) IFRS 15 *Revenue from Contracts with Customers* including the *Modifications to IFRS 15 – Effective Date of IFRS 15* and the *Clarifications to IFRS 15 – Revenue from Contracts with Customers*

(iii) Amendments to IFRS 2 *Classification and Measurement of Share-based Payment Transactions*

(iv) Amendments to IFRS 4 applying IFRS 9 *Financial Instruments* with IFRS 4 *Insurance Contracts*

(v) Amendments to IAS 40 *Transfers of Investment Property*

(vi) Annual Improvements to IFRSs (2014–2016 Cycle) – Amendments to IFRS 1, IFRS 12 and IAS 28

(vii) IFRIC 22 *Foreign Currency Transactions and Advance Consideration*

IFRS 9 (as revised in 2014) will supersede IAS 39 *Financial Instruments: Recognition and Measurement* in its entirety upon its effective date. Compared to IFRS 9 (as revised in 2013), the 2014 version includes limited amendments to the classification and measurement requirements by introducing a "fair value through other comprehensive income" measurement category for certain simple debt instruments. It also adds the impairment requirements relating to the accounting for an entity's expected credit losses on its financial assets and commitments to extend credit. IFRS 9 was endorsed by the EU on November 22, 2016.

The new **IFRS 15** establishes a single comprehensive model for entities to use in accounting for revenue arising from contracts with customers. It will supersede the following revenue standards and interpretations upon its effective date: IAS 18 *Revenue*, IAS 11 *Construction Contracts*, IFRIC 13 *Customer Loyalty Programmes*, IFRIC 15 *Agreements for the Construction of Real Estate*, IFRIC 18 *Transfers of Assets from Customers*, and SIC-31 *Revenue – Barter Transactions Involving Advertising Services*. IFRS 15 was endorsed by the EU on September 22, 2016.

The **Amendments to IFRS 2** clarify issues concerning the treatment and/or distinction between cash-settled and equity-settled share-based payments.

The **Amendments to IFRS 4** clarify the scope of the standard and the applicable conditions for a temporary exemption from IFRS 9 for insurers, as well as for a temporary exemption from specific requirements under IAS 28. The amendments to IFRS 4 were endorsed by the EU on November 3, 2017.

The **Amendments to IAS 40** clarify that a change in use of investment property occurs when the property meets, or ceases to meet, the definition of investment property and there is evidence of the change in use. In isolation, a change in management's intentions for the use of a property does not provide evidence of a change in use.

The **Annual Improvements (2014–2016 Cycle)** include amendments to IFRS 1 *First-time Adoption of International Financial Reporting Standards*, and to IAS 28 *Investments in Associates and Joint Ventures*. The amendments to IFRS 1 relate to the removal of short-term exemptions for first-time adopters. The amendments to IAS 28 clarify the measurement of an associate or a joint venture at fair value.

The new **IFRIC 22** addresses the issue of how to determine the date of the transaction for the purpose of determining which exchange rate to use when recognizing revenue in circumstances where an entity has received advance consideration in a foreign currency.

Mandatory application for fiscal years beginning on or after January 1, 2019:

(viii) IFRS 16 *Leases*

(ix) IFRIC 23 *Uncertainty over Income Tax Treatments*

(x) Amendments to IFRS 9 *Prepayment Features with Negative Compensation*

(xi) Amendments to IAS 28 *Long-term Interests in Associates and Joint Ventures*

The new **IFRS 16** provides a comprehensive model for the identification of lease arrangements and their treatment in the financial statements of both lessees and lessors. Upon its effective date it will supersede IAS 17 *Leases*, IFRIC 4 *Determining Whether an Arrangement Contains a Lease*, SIC-15 *Operating Leases – Incentives* and SIC-27 *Evaluating the Substance of Transactions in the Legal Form of a Lease*. IFRS 16 introduces significant changes to lessee accounting. It removes the distinction between operating and finance leases under IAS 17 and instead requires a lessee to recognize a right-of-use asset and a lease liability at lease commencement for all leases, except for short-term leases and leases of low value assets. A lessee can apply IFRS 16 either by means of a full retrospective approach or a modified retrospective approach. If the latter approach is selected, an entity is not required to restate the comparative information and the cumulative effect of initially applying IFRS 16 must be presented as an adjustment to opening retained earnings (or other component of equity as appropriate). IFRS 16 was endorsed by the EU on October 31, 2017.

The new **IFRIC 23** clarifies the accounting for uncertainties in income taxes. The interpretation is to be applied to the determination of taxable profit (tax loss), tax bases, unused tax losses, unused tax credits and tax rates, when there is uncertainty over income tax treatments under IAS 12.

The **Amendments to IFRS 9** contain on the one hand changes regarding symmetric prepayment options. These amend the existing requirements in IFRS 9 regarding termination rights in order to allow measurement at amortized cost (or, depending on the business model, at fair value through other comprehensive income) even in the case of negative compensation payments. On the other hand, the amendments clarify that the carrying amount of a financial

liability is immediately recognized in profit or loss following modification or exchange. A retrospective change of the accounting treatment may therefore become necessary if in the past the effective interest rate was adjusted and not the amortized cost amount.

The **Amendments to IAS 28** clarify that an entity applies IFRS 9, including its impairment requirements, to long-term interests in an associate or joint venture that form part of the net investment in the associate or joint venture but to which the equity method is not applied. In addition, paragraph 41 was deleted.

Mandatory application for fiscal years beginning on or after January 1, 2021:

(xii) IFRS 17 *Insurance Contracts*

The new **IFRS 17** establishes the principles for the recognition, measurement, presentation and disclosure of insurance contracts within the scope of the standard. The objective of IFRS 17 is to ensure that a reporting entity provides relevant information and faithfully represents those contracts.

Application of the new standards and expected effects on the Company's future accounting

The Company intends to adopt these new and/or revised standards, amendments and interpretations as soon as their adoption is mandatory and they are endorsed by the EU.

The Company does not engage in hedge accounting. In addition, an analysis of past developments in receivables has shown that the Company was not exposed to any notable defaults. Adoption of the new IFRS 9 is therefore not expected to give rise to any material effects on the Company's financial statements for fiscal year 2018. This is particularly true of the "impairment approach" prescribed in the standard, which we do not expect to have any effect with regard to our current customer base. In addition, the new requirements for classifying financial assets depending on our business model and on classifying financial liabilities are not expected to give rise to any changes in measurement and recognition.

The application of the new IFRS 15 will not have any material impact on the Company's financial statements for fiscal year 2018, as its business model is based on standardized product sales and royalty income which are not significantly affected by the new requirements.

The application of IFRS 16 will impact the Company's financial statements from fiscal year 2019 onwards. As a result of this new standard on leases, the Company's rental agreement for office space at its Berlin headquarters must then be recognized as a liability in the balance sheet instead of being treated as an off-balance sheet liability. Based on the current contractual situation and parameters, the rental agreement will correspondingly be recognized as a non-current asset in a range of approximately EUR 600 thousand to EUR 700 thousand as of January 1, 2019. From fiscal year 2019, this will increase total assets and cause a decrease in the equity ratio. Amortization and impairment, as well as the interest expense on the affected leases will in future be recognized in other comprehensive income as opposed to the current method of recognizing the lease expense, which will result in a slight improvement in EBIT, EBITDA, and EBITDA before share-based payment expenses. Currently, the Company has no other lease agreements in place that would be affected by IFRS 16.

The Company is currently examining the effects of applying IFRIC 23 on the consolidated financial statements from fiscal year 2019 onwards.

From the current perspective, the Company does not expect that application of the other amendments, improvements, and new interpretations will have any material impact on its financial statements for fiscal years from 2018 onwards (*e.g.*, because these standards and interpretations or their mere clarifications regarding presentation are not applicable).

Management's Judgment, Assumptions and Expectations

The management of the Company has made several judgments in the process of applying the entity's accounting policies that have a significant effect on the amounts recognized in the financial statements. Those judgments concern the capitalization of development costs and the recognition of deferred taxes. The judgments are described for each relevant position in the enumeration of accounting and valuation principles.

Management's expectations on the future are usually based on the current economic outlook according to the consensus prognoses by leading economic and financial research institutions and independent analysts. The global economic situation is not expected to change significantly in 2018, but rather to rest on shaky ground due to the increasing political challenges around the world.

The plans of the Group's management do not expect Epigenomics to be highly dependent on the overall economic situation in the short term. The Group's operating activities are furthermore not highly dependent on the availability of or the price development for commodities or industrial supplies but rather on the individual situation of the Company and its opportunities to continue its operations by further financing transactions. Therefore, the Company is still dependent on the condition and the development of the capital markets (mainly in the U.S.A. and in Germany), particularly with regard to the life sciences industry. Additionally, the Company is strongly dependent on inclusion in expert organization guidelines and the reimbursement decisions by the payors in the healthcare system of the U.S.A. with regard to its lead product – Epi proColon, and subsequently on the commercial success of this product. The Company's strategy going forward assumes positive reimbursement decisions in 2018 and the years to come.

At the end of 2017, the U.S. Congress passed comprehensive tax reform legislation that resulted in a significant tax cut for businesses with effect as of January 1, 2018. This improves the long-term competitiveness of the U.S.A. as a business location, and is expected to have noticeable effects on the location decisions and investment activities of businesses from a range of sectors. For our Company, too, this necessitates taking the new conditions into account in our strategic decision-making processes and making any necessary modifications to our plans for the future. By contrast, it remains to be seen how developments will pan out in Germany given the fact that, following the parliamentary elections in the fall of 2017, a new government had still not been formed by the end of the year. Although tax relief (such as rescinding the "solidarity surcharge") has to date been a discussion point in exploratory talks between the potential coalition partners, it cannot currently be foreseen whether a specific proposal will make it onto the new coalition's agenda. For this reason, our initial assumption is that the conditions in Germany will remain unchanged in 2018.

The Trump administration in the U.S.A. also plans to partially or even fully repeal Obamacare, the semi-state health care system introduced by the previous administration. It remains to be seen how successful this will be. However, the assumption must be that attempts will continue to be made to stem the cost explosion in the health care sector, and that this will also be to the detriment of the life sciences industry.

All future scenarios furthermore assume essentially unrestricted access to the relevant clinical and biological samples, corresponding clinical data and sufficient resources for the execution of the Company's commercial projects.

In the short to medium term, the expectation is that the euro will continue to strengthen against the U.S. dollar, as it has since spring 2017, on the back of the Trump administration's economic policy. Management plans are based on an average exchange rate of EUR/USD 1.18 throughout 2018. It also took note of the predictions of financial experts and banks at the time of the budget preparation.

The preparation of the consolidated financial statements in accordance with IFRSs requires, in the case of several items, that assumptions or estimates be made that affect the carrying amounts in the consolidated balance sheet and/or the amounts recognized in the consolidated statement of profit or loss and other comprehensive income. This also applies to the presentation of contingent assets and liabilities. The actual amounts may vary from these assumptions and estimates.

Determining the useful life of capitalized development costs of the Company's products requires a long-term estimation of the market approval timelines for the products, their market acceptance and/or the speed of their market penetration, regulatory developments in key markets, the timing and the extent of reimbursement decisions, and competition just to name some of the most important parameters. Particularly for novel products like blood-based cancer tests there are no empirical values and less experience available, which makes any estimations difficult. The Group's management closely observes developments on the key markets and regularly reviews its own projections. Reaching or not reaching a milestone – like a market approval decision – will therefore lead to remeasurements which may possibly be decisive for a change of the previously assumed useful lives.

In particular, further assumptions and estimates are required for:

- determining the useful lives of other property, plant and equipment and non-current intangible assets,
- determining whether the criteria for the capitalization of development costs and the recoverability of internally generated intangible assets are met,
- testing assets for impairment (particularly regarding intangible assets),
- determining the terms of in-licensed intellectual property rights,
- determining if deferred taxes are realizable,
- determining whether securities classify as "available for sale" or "at fair value through profit or loss",
- determining the fair value of financial instruments,
- setting the parameters regarding the measurement of share-based payment instruments, and
- accounting for provisions (particularly the determination of the likelihood of occurrence).

Accounting and Valuation Principles

Fair value measurement

These consolidated financial statements have been prepared on the historical cost basis except for certain financial instruments that are measured at revalued amounts or their fair values at the end of each reporting period.

For determining and disclosing the fair value of financial instruments, the Company uses the following hierarchy in accordance with IFRS 13 *Fair Value Measurement*:

Level 1: Quoted (unadjusted) prices in active markets for identical assets or liabilities

Level 2: Inputs other than quoted prices included within level 1 that are observable for assets or liabilities, either directly (as prices) or indirectly (derived from prices)

Level 3: Inputs for assets or liabilities that are not based on observable market data (unobservable inputs)

The carrying amounts of financial assets and liabilities such as cash and cash equivalents, marketable securities, trade receivables, trade payables, convertible notes and other current liabilities approximate their fair values due to their short-term maturities. The fair value of marketable securities is based on quoted market prices (level 1). There were no transfers between level 1 and level 2 fair value measurements, and no transfers into or out of level 3 fair value measurements during the reporting period.

Revenue recognition

Revenue from the sale of goods and property rights (*e.g.*, patents), and the rendering of other services is recognized when:

- the goods or property rights have been delivered to the buyer,
- the risks and rewards connected with the goods or property rights have been transferred,
- the amount of revenue and the costs involved in the transaction can be measured reliably and
- it is probable that the economic benefits associated with the transaction will flow to the entity.

Revenue from research and development collaboration agreements is recorded and recognized pursuant to the percentage of completion method when costs are incurred in connection with the contractual obligations in accordance with the applicable performance requirements and terms of the respective contracts.

Milestone payments are recorded and recognized when acknowledgment of having achieved applicable performance requirements is received from the partner.

Non-refundable upfront payments are deferred and recognized on a straight-line basis over the contractual collaboration term. Optional prolongation terms are considered individually in accordance with the underlying exercise conditions and anticipated likelihood of their exercise.

Royalty revenue is recognized on an accrual basis in accordance with the substance of the relevant contract. Royalties determined on a time basis are recognized on a straight-line basis over the contracted period. Royalty arrangements that are based on sales and other measures are recognized by reference to the underlying contract.

Cost of sales

Cost of sales includes expenses for material used in products sold, changes in inventories, services received in connection with product sales or other types of revenue, royalties to be paid to third parties and triggered by product sales or other types of revenue. In addition, cost of sales includes directly allocable portions of personnel expenses, costs of intellectual property, depreciation, amortization and impairment, as well as *pro rata* overheads.

Other income

Other income includes third-party research grants, currency exchange rate gains, earnings from the reversal of provisions, income from the sale of assets outside of the Company’s ordinary business activities, reimbursements from suppliers and insurance companies, and other non-operating earnings.

Government grants

In individual cases, cost contributions from public authorities are granted for research projects. These grants are partially paid in advance and then reported as deferred income (see below). To some extent, grants will only be paid after the work has been performed and proven. A current asset is recorded in such cases.

Subsidies received for product development activities are deducted from capitalized development costs, and investment grants and subsidies are offset directly against the acquisition costs of the subsidized assets, *i.e.* in both

cases the carrying amount of the asset is reduced. The grant is thus recognized as a reduced depreciation expense over the remaining useful life.

Government grants usually come with certain requirements, which have been met so far by the Company and are expected to be met going forward. Should the requirements cease to be met in the future, repayment obligations could arise which have not been recognized yet.

Research and development costs

Research and development costs (R&D costs) include the personnel expenses for the R&D staff, costs of R&D material, depreciation, amortization and impairment, service fees, licensing fees and other direct expenses in connection with the Company's research and/or development activities (including clinical studies) which cannot be classified as revenue-generating activities. In addition, R&D costs include pro rata overhead costs charged to the R&D departments.

Selling, general and administrative costs

Selling, general and administrative costs (SG&A costs) include:

- all direct personnel and material expenses of the corresponding departments,
- depreciation and amortization expenses of the corresponding departments,
- other direct expenses of the corresponding departments, and
- pro rata overheads of the corresponding departments as well as the Company's statutory costs.

Other expenses

Other expenses consist of all operating expenses which do not classify as cost of sales, R&D costs or SG&A costs as defined above. This includes in particular but not exclusively

- foreign exchange rate losses,
- losses from the disposal of assets outside of the ordinary business activities, and
- expenses due to extraordinary effects or measures such as restructuring expenses or write-downs of non-current assets (*e.g.*, goodwill impairment).

Share-based payment expenses

The fair value of granted stock options is determined in accordance with IFRS 2 *Share-based Payment* by simulation of the future movement in the Company's share capital on the basis of market parameters (*e.g.*, volatility and risk free rate) and normal distributed random numbers ("Monte Carlo simulation"). The fair value of the stock options is expensed over the expected option term of up to four years against the capital reserve. The measurement is based on the fair value as of the grant date.

The fair value of phantom stock rights granted in previous years is calculated using the binomial model based on the Cox-Ross-Rubinstein model in accordance with IFRS 2 *Share-based Payment*, and recognized *pro rata temporis* as expenses and as a provision due to the obligation of the Company for a cash settlement in the future. If phantom stock rights are held by current employees of the Group, the related expenses are recorded as personnel costs and included in the payroll provisions. If phantom stock rights are held by former employees of the Group, the related expenses are recorded as other costs and included in other provisions.

Intangible assets

Intangible assets other than goodwill and capitalized development costs are measured at cost less straight-line amortization. Depending on the investment, the useful life of between three years (software) and twenty years (patents) will be defined. For patents, the useful life in individual cases depends on the term of the patent protection.

Amortization of intangible assets is allocated in the consolidated statement of profit or loss and other comprehensive income to the functional area in which they are used. IAS 38 *Intangible Assets* is applied. In accordance with this standard, an intangible asset is reported if it is likely that a future economic benefit is associated with the use of such asset and that its cost can be reliably determined. An impairment test is carried out annually for assets or groups of assets for which an impairment is assumed. If the carrying amount of an intangible asset exceeds the recoverable amount of this asset as of the balance sheet date, this will be taken into account by means of a write-down, the amount of which is determined by the result of the impairment test. If there is no longer any indication of impairment, the impairment loss is reversed up to a maximum of the asset's amortized cost.

Capitalized development costs

Expenditure on research activities is recognized as an expense in the period in which it is incurred. An internally generated intangible asset arising from internal development is recognized if, and only if, all of the following requirements in accordance with IAS 38.57 *Intangible Assets* have been fulfilled:

- proof of the technical feasibility of completing the intangible asset so that it will be available for use or sale;
- proof of the intention to complete the intangible asset to use or sell it;
- proof of the ability to use or sell the intangible asset;
- proof of how the intangible asset will generate probable future economic benefits;
- proof of the availability of adequate technical, financial and other resources to complete the development and to use or sell the intangible asset;
- demonstration of the ability to measure reliably the expenditure attributable to the intangible asset during its development.

The amount initially recognized for the capitalization of development costs is the sum of expenditure incurred from the date when the intangible assets first met the aforementioned recognition criteria. Where no internally generated intangible asset can be recognized, development expenditure is charged to profit or loss in the period in which it is incurred. Subsequent to initial recognition, capitalized development costs are reported at cost less accumulated amortization and impairment losses, on the same basis as intangible assets acquired separately. The useful life of such capitalized development costs is assumed under consideration of the business plan and amounts to up to ten years for the currently capitalized assets. Amortization is recorded on a straight-line basis.

Property, plant and equipment

Property, plant and equipment is measured at cost less depreciation. Apart from directly attributable costs, *pro rata* overhead costs and depreciation are also included in the cost of internally produced items of property, plant and equipment. The cost is reduced by public and governmental investment grants. Repair costs are immediately recorded as an expense. Leasehold improvements are depreciated on a straight-line basis over the remaining term of the underlying leases (including optional extension periods). Movable items of property, plant and equipment are depreciated on a straight-line basis. The useful life is three to ten years for technical and electronic equipment and five to ten years for operating and office equipment.

In the "Assets schedule", fully depreciated items of property, plant and equipment are shown under cost and accumulated depreciation until the assets in question are decommissioned. Once disposed of, the asset and its accumulated depreciation are reported as a disposal. Income or expenses resulting from the disposal of assets (proceeds less residual carrying amount) is reported in the consolidated statement of profit or loss and other comprehensive income under other income/other expenses.

If the carrying amount of the property, plant and equipment calculated in accordance with the above principles exceeds the recoverable amount of these assets as of the balance sheet date, it will be taken into account by means

of impairment. The amount of the impairment is determined by the net sale proceeds or – if higher – the net present value of future cash flows estimated from the value in use of the asset. An impairment test will be carried out annually for assets or groups of assets for which an impairment is assumed. If there is no longer any indication of impairment, the impairment loss is reversed up to a maximum of the asset's amortized cost.

Deferred taxes

Deferred taxes are calculated in accordance with IAS 12 *Income Taxes*. They are recognized on the basis of temporary differences between the carrying amount of assets and liabilities in the financial statements in accordance with IFRS of the companies involved and in their tax accounts. Furthermore, deferred tax assets are recognized for unutilized tax loss carryforwards and unutilized tax credits to the extent that deferred tax liabilities exist, or that taxable income is likely to be available against which to utilize the benefits of the temporary differences and that these are expected to reverse in the foreseeable future. At each balance sheet date, it is determined whether or not these requirements are still met. If such a realization in the foreseeable future is not likely, a valuation allowance is recognized against the tax loss carryforwards.

Deferred tax assets and tax liabilities from temporary differences associated with investments in subsidiaries are not recognized when the timing of the reversal of the temporary difference can be controlled, and it is probable that the temporary difference will not reverse in the foreseeable future.

Deferred tax assets and liabilities are measured using the local tax rates applicable on the balance sheet date or the local tax rates which are expected to apply at the future point in time when the asset is realized or the liability settled. Tax rates are used that have been enacted or substantively enacted by the end of the reporting period. Deferred tax assets and liabilities are only offset if they relate to taxes levied by the same tax authority and if the Group intends to settle its current tax assets and liabilities on a net basis.

Inventories

Inventories consist of finished and unfinished products, raw materials, low-value consumables as well as other production supplies. They are measured at the lower of cost and net realizable value. The manufacturing costs of the finished and semi-finished products include directly attributable unit costs, depreciation, amortization of capitalized development costs and overheads attributable to the production process. For finished and semi-finished products the principle of item-by-item measurement applies.

Financial instruments

Financial assets and liabilities are initially measured at fair value. Purchases and sales of financial assets are recognized using trading date accounting.

Primary financial instruments

The reported primary financial instruments include cash and cash equivalents, marketable securities, trade receivables, trade payables and other liabilities. Those instruments are initially recognized at cost or at fair value and then at amortized cost or fair value.

Marketable securities

In accordance with the definitions of IAS 39.9 *Financial Instruments: Recognition and Measurement*, the Company's marketable securities are classified either as "financial assets at fair value through profit or loss" (FVTPL) or as "available-for-sale financial assets" (AFS). The Group does not hold financial assets for trading purposes. Irrespective of this classification, financial assets are recognized at fair value. Changes in fair value are recognized through profit or loss or – if the securities classify for AFS – in other comprehensive income until the securities are disposed of or

are determined to be permanently impaired. Impairment losses recognized in profit or loss are subsequently reversed if an increase in the fair value of the instrument can be objectively determined.

Trade receivables

Trade receivables are measured at fair value, net of allowances for doubtful accounts.

Derivative financial instruments

Derivative financial instruments are initially recognized at fair value at the date the derivative contracts are entered into and are subsequently remeasured to their fair values at the end of each reporting period. The result is recognized as financial result through profit or loss.

The fair values of derivative financial instruments generally correspond to their market values. For unlisted derivatives the fair values are determined by individual settlement quotes from the Group's contractual partner to the underlying agreement.

Impairment of financial assets

At the balance sheet date, financial assets other than those measured at fair value are tested for impairment whenever there is an indication that the asset might be impaired. A financial asset is impaired when there is objective evidence that, as a result of one or more events that occurred after the initial recognition of the financial asset, the estimated future cash flows from the asset have been impacted. Objective evidence that financial assets are impaired can include the default or the insolvency of a debtor or economic conditions that correlate with default in payment obligations.

For available-for-sale securities, a significant or prolonged decline in the fair value of the security below its cost is considered to be objective evidence of impairment, as is the disappearance of an active market for such securities.

The carrying amount of a financial asset is directly reduced by the impairment amount for all financial assets, with the exception of trade receivables, where the carrying amount is reduced through the use of an allowance account. When a trade receivable is considered to be no longer collectible, it is written off against the allowance account. Subsequent recoveries of amounts previously written off are credited against the allowance account. Changes in the carrying amount of the allowance account are recognized in profit or loss.

Additionally, global allowances against trade receivables are recognized on a portfolio basis determined by reference to past default experience.

Cash equivalents

A cash equivalent is defined as a financial instrument which is readily convertible on a short-term basis to a known amount of cash and which is subject to an insignificant risk of changes in value (IAS 7.6 *Statement of Cash Flows*). Financial instruments generally qualify as cash equivalents when they are more closely related to the money markets than to the bond markets and are issued by a debtor rated "investment grade". All such cash equivalents must be readily convertible into primary cash.

Prepaid expenses

Payments before the balance sheet date in respect of expenses for a specific period after that date are deferred and reported as prepaid expenses in other current assets.

Financial liabilities

On initial recognition, financial liabilities are carried at fair value less transaction costs. The price is determined on a price-efficient and liquid market. In subsequent periods, the financial liabilities are measured at amortized cost. Any differences between the amount received and the amount repayable are recognized through profit or loss over the term of the loan using the effective interest method.

Compound financial instruments constituting a financial liability to the Company and granting an optional conversion right into an equity instrument are recognized separately by an equity and a liability element in the balance sheet. The liability element is measured at fair value.

Non-current and current liabilities

Liabilities are classified as current when certain criteria in accordance with IAS 1.60 *et seq*. *Presentation of Financial Statements* are met. The Company's normal operating cycle in accordance with this definition is generally 12 months. In the licensing business, the operating cycle exceeds 12 months.

Trade payables

Trade payables are initially recognized at the fair value of the received goods and services. After initial recognition they are measured at amortized cost. Foreign currency liabilities are translated at market exchange rates as of the reporting date. Trade payables are derecognized if the obligation on which this liability is based is fulfilled, canceled or expired.

Convertible notes issued

Convertible notes are compound financial instruments which must be split in a repayment obligation (liability element) and a conversion right (equity element). The carrying amount of the equity element to be recognized in the capital reserves is determined by using the subtraction method (subtraction of the financial liability from the total value of the compound instrument). The equity element is presented in equity as "option premium on convertible notes".

Deferred income

Deferred income is recognized for grants and for research and development payments ("R&D payments") received in advance. Grants received in advance for research expenses which were provided by governmental or comparable national, regional or local authorities are recognized through profit or loss as other income over the subsidized terms of each grant project according to its stage of completion. Subsidies received in advance for product development activities are deducted from capitalized development costs. Payments received in advance from customers for R&D services to be rendered by the Company in the future or for licenses are deferred and recognized through profit or loss under the terms and conditions of the contract according to the stage of project completion (percentage of completion method).

Provisions

In accordance with IAS 37 *Provisions, Contingent Liabilities and Contingent Assets*, a provision is recognized if a present obligation exists as a result of a past event, if it is probable that an outflow of resources embodying economic benefits will be required to settle this obligation and if a reliable estimate can be made of the amount of the obligation. The amount recognized as a provision is the best estimate of the expenditure required to settle the present obligation at the balance sheet date, taking into account the risks and uncertainties surrounding the obligation. When a provision is measured using the cash flows expected to be required to settle the present obligation, its carrying amount is the present value of these cash flows. Obligations arising from share-based payment programs that provide for awards payable in cash (*i.e.*, the Company's phantom stock programs) are measured at fair value and recognized as current or non-current provisions based on the remaining term of the underlying rights until these can be exercised.

Currency translation

In the separate financial statements, receivables and liabilities in foreign currencies are measured using the corresponding euro reference rate published by the European Central Bank and applicable as of the balance sheet date. Items that are hedged by forward transactions are valued at their forward prices.

Since the beginning of 2016, the functional and reporting currency of our U.S. subsidiary has been the U.S. dollar.

For consolidation purposes, the expenses and income of the subsidiary are translated into euros at the average monthly exchange rates. The monetary assets and liabilities of the subsidiary are translated at the end of each reporting period using the closing rate. Equity components and other non-monetary items that are measured in terms of historical cost in U.S. dollars are translated using the exchange rate at the date of the transaction. Non-monetary items that are measured at fair value in U.S. dollars are translated using the exchange rates at the date when the fair value was measured. The resulting translation differences are accounted for separately within equity.

Foreign currency exchange rates applied in the reporting period:

	Closing rates		Average rates	
	Dec. 31, 2016	Dec. 31, 2017	2016	2017
EUR/USD	1.0541	1.1993	1.1032	1.1370

Notes to the Consolidated Statement of Profit or Loss and Other Comprehensive Income

1 Revenue

Revenue by type:

	2016		2017	
	EUR thousand	in %	EUR thousand	in %
Product sales (own and third-party)	2,213	52.7	548	29.4
Sale of non-capitalized property rights	1,350	32.1	0	0.0
Licensing income	564	13.4	1,271	68.2
R&D income and reimbursements	74	1.8	45	2.4
Total revenue	**4,201**	**100.0**	**1,864**	**100.0**

Licensing income is generated by out-licensing of own intellectual property (*e.g.* technologies, biomarkers) to third parties. Revenue from product sales is generated by the sale of the Group's products through own sales channels, through distribution partners or by the rendering of services by third parties based on the Company's products. R&D income and reimbursements are generated by rendering services in connection with contract research and by charging pass-through costs to third parties.

Revenue by geographical market:

	2016		2017	
	EUR thousand	in %	EUR thousand	in %
Europe	1,907	45.4	280	15.0
North America	1,536	36.6	943	50.6
Asia	752	17.9	638	34.2
Rest of the world	6	0.1	3	0.2
Total revenue	**4,201**	**100.0**	**1,864**	**100.0**

In the reporting year, 81% of total revenue (2016: 90%) was generated by the Company's three largest customers.

2 Other income

EUR thousand	2016	2017
Income from the reversal of provisions	65	581
Reversal of write-downs on receivables	0	209
Income from the disposal of other assets	0	161
Recoveries and refunds	85	59

Correction of deferred liabilities	122	42
Foreign exchange rate gains	156	2
Third-party research grants from public authorities	312	0
Other	3	0

Total other income	**743**	**1,054**

3 Cost allocation by function

2016

EUR thousand	Cost of sales	R&D costs	SG&A costs	Other expenses	**Total**
Materials and consumables	1,306	678	210	0	**2,194**
Depreciation, amortization and impairment	3	290	63	0	**356**
Personnel costs	6	2,815	4,483	0	**7,304**
Other costs	319	1,336	5,491	256	**7,402**
Total	**1,634**	**5,119**	**10,247**	**256**	**17,256**

2017

EUR thousand	Cost of sales	R&D costs	SG&A costs	Other expenses	**Total**
Materials and consumables	197	591	17	0	**805**
Depreciation, amortization and impairment	9	253	81	0	**343**
Personnel costs	4	2,247	3,285	0	**5,536**
Other costs	36	1,238	4,652	597	**6,523**
Total	**246**	**4,329**	**8,035**	**597**	**13,207**

4 Personnel costs

EUR thousand

	2016	**2017**
Wages and salaries	4,415	4,304
Share-based payment expenses	2,286	577
– thereof: expenses for issuing phantom stock rights (PSR) to members of the Executive Board		
• *PSR expenses for Dr. T. Taapken (CEO/CFO until June 30, 2016)*	*373*	*0*
• *PSR expenses for Dr. U. Staub (COO)*	*378*	*0*
– thereof: expenses for issuing stock options (SO) to members of the Executive Board		
• *SO expenses for G. Hamilton (CEO)*	*42*	*99*
• *SO expenses for Jorge Garces (CEO since December 1, 2017)*	*0*	*11*
• *SO expenses for Dr. U. Staub (COO)*	*35*	*52*
Social security expenses	602	655
– thereof: employer's contribution to a national pension fund (Germany)	*155*	*160*
– thereof: employer's contribution to a 401(k) savings plan (U.S.A.)	*37*	*51*
Total personnel costs	**7,303**	**5,536**

The Group employed an average of 44 employees in 2017 (2016: 42). The 46 employees as of the end of 2017 included 24 employees across the areas of research, product development, IP, regulatory affairs, quality assurance and manufacturing. Their activities are reported as R&D costs in the financial statements. The remaining 22 employees reported as selling, general and administrative functions work in business and commercial development,

customer and technical service, accounting, finance, legal, human resources, IT, investor relations and general management.

The share-based payment expenses for PSR in the amount of EUR 122 thousand (2016: EUR 2,158 thousand) resulted from cash payments for exercises of PSR and revaluations of issued PSR which had not been exercised yet , and included a fluctuation of the fair value of the rights in the amount of EUR 109 thousand (2016: EUR 1,936 thousand). Measurement of the stock options granted gave rise to share-based payment expenses amounting to EUR 455 thousand (2016: EUR 128 thousand).

5 Depreciation and amortization

EUR thousand

	2016	2017
Amortization of intangible assets	234	191
– thereof: amortization of capitalized development costs	*185*	*111*
Depreciation of property, plant and equipment	122	152
Total depreciation and amortization	**356**	**343**

6 Other expenses

EUR thousand

	2016	2017
Foreign exchange rate losses	27	595
Losses from the disposal of assets	3	1
Allowance for doubtful accounts	226	0
Other	0	1
Total other expenses	**256**	**597**

7 Operating result (EBIT) and EBITDA

EUR thousand	2016	2017
Operating result/earnings before interest and taxes (EBIT)	-12,312	-10,289
Total depreciation and amortization	356	343
EBIT before depreciation and amortization (EBITDA)	-11,956	-9,946
Share-based payment expenses	2,286	577
EBITDA before share-based payment expenses	**-9,670**	**-9,369**

8 Financial result

Net gains and losses on all financial instruments:

EUR thousand	2016	2017
Interest from cash and cash equivalents	0	0
Interest from available-for-sale financial assets	17	18
Interest and related income	**17**	**18**
Other financial income	**0**	**0**
Total financial income	**17**	**18**

Other interest expenses	0	-175
Interest and related expenses	**0**	**-175**
Other finance costs	-1	-3
Total financial expenses	**-1**	**-178**

Total financial result	**16**	**-160**

9 Taxes on income

The reported taxes on income in the amount of EUR -214 thousand (2016: EUR -1,135 thousand) consist solely of taxes relating to the Company's U.S. subsidiary.

EUR thousand	**2016**	**2017**
Current tax expenses	8	8
Deferred tax income due to loss carryforwards	-1,143	-222

Total taxes on income	-1,135	-214

For the calculation of deferred taxes of the U.S. subsidiary, a local tax rate of 21% was applied from January 1, 2018 onwards (previous year: 34%).

Calculation of the applicable tax rate in Germany for the purpose of deferred taxes:

in %	**2016**	**2017**
Corporate income tax	15.0	15.0
Solidarity surcharge	5.5	5.5
Trade tax	14.35	14.35
underlying trade tax rate of assessment	*410*	*410*

Total applicable tax rate in Germany for the purpose of deferred taxes	**30.2**	**30.2**

Tax reconciliation:

EUR thousand	**2016**	**2017**
Net loss for the year before taxes on income	**-12,296**	**-10,449**
Expected tax income	**3,713**	**3,156**
applicable tax rate for the Group	*30.2%*	*30.2%*
– permanent differences	*-37*	*-41*
– other foreign taxes	*-9*	*-7*
– effect of foreign taxes	*129*	*-313*
– unrecognized tax loss carryforwards	*-2,662*	*-2,580*
Effective tax income	**1,135**	**214**

Effective tax rate	**9.2%**	**2.1%**

The expected tax expense for the reporting year has been calculated by applying the individual tax rates for the Group companies to the net results before taxes on income. Permanent differences result from non-deductible expenses in accordance with German tax law.

10 Earnings per share

Earnings per share (basic) are calculated by dividing the net loss for the year by the weighted average number of shares issued. The outstanding stock options and convertible notes granted by the Company are antidilutive in accordance with IAS 33.41 and 33.43 *Earnings per Share*. Therefore, the earnings per share (diluted) equal the earnings per share (basic). The number of shares issued as of the balance sheet date amounted to 24,014,360 (December 31, 2016: 22,735,260).

	2016	**2017**
Net loss for the year (in EUR thousand)	-11,161	-10,235
Weighted average number of shares issued	20,271,817	23,161,627
Earnings per share (basic and diluted, in EUR)	-0.55	-0.44

Non-current assets

11 Intangible assets

EUR thousand		Software	Licenses/ patents	Development costs	Total intangible assets
Jan. 1, 2016	**Cost**	**587**	**1,151**	**3,559**	**5,297**
	Additions	171	0	27	198
	Disposals	0	0	0	0
Dec. 31, 2016	**Cost**	**758**	**1,151**	**3,586**	**5,495**
	Additions	37	0	67	104
	Disposals	-384	-113	0	-497
	Currency translation	-1	0	0	-1
Dec. 31, 2017	**Cost**	**410**	**1,038**	**3,653**	**5,101**
Jan. 1, 2016	**Accumulated amortization and impairment**	**579**	**1,033**	**2,893**	**4,505**
	Additions	15	35	185	235
	Disposals	0	0	0	0
Dec. 31, 2016	**Accumulated amortization and impairment**	**594**	**1,068**	**3,078**	**4,740**
	Additions	40	40	111	191
	Disposals	-384	-113	0	-497
	Currency translation	-1	0	0	-1
Dec. 31, 2017	**Accumulated amortization and impairment**	**249**	**995**	**3,189**	**4,433**
Dec. 31, 2016	**Carrying amounts**	**164**	**83**	**508**	**755**
Dec. 31, 2017	**Carrying amounts**	**161**	**43**	**464**	**668**

The capitalized development costs for Epi proColon are assumed to have a useful life of ten years. The annual amortization for this asset amounted to EUR 111 thousand.

The Company finished developing the blood-based Epi proLung test at the end of the reporting year. The EUR 1,168 thousand total costs incurred (2016: EUR 892 thousand) was reduced by subsidies received as part of the development project from EUR 1,101 thousand (2016: EUR 865 thousand) to a net amount of EUR 67 thousand (2016: EUR 27 thousand). Going forward, it is assumed that this asset will also have a useful life of ten years, commencing at the beginning of the 2018 fiscal year.

12 Property, plant and equipment

EUR thousand		Fixtures/leasehold improvements	Technical equipment	Other property, plant and equipment	Total property, plant and equipment
Jan. 1, 2016	**Cost**	**568**	**1,320**	**78**	**1,966**
	Additions	3	125	26	154
	Disposals	0	-26	-13	-39
Dec. 31, 2016	**Cost**	**571**	**1,419**	**91**	**2,081**

	Additions	0	165	3	168
	Disposals	0	-337	-4	-341
	Currency translation	-5	23	-5	13
Dec. 31, 2017	**Cost**	**566**	**1,270**	**85**	**1,921**
Jan. 1, 2016	**Accumulated depreciation and impairment**	**100**	**1,144**	**38**	**1,282**
	Additions	44	70	8	122
	Disposals	0	-26	-10	-36
Dec. 31, 2016	**Accumulated depreciation and impairment**	**144**	**1,188**	**36**	**1,368**
	Additions	44	99	9	152
	Disposals	0	-336	-4	-340
	Currency translation	-5	28	-2	21
Dec. 31, 2017	**Accumulated depreciation and impairment**	**183**	**979**	**39**	**1,201**
Dec. 31, 2016	**Carrying amounts**	**427**	**231**	**55**	**713**
Dec. 31, 2017	**Carrying amounts**	**383**	**291**	**46**	**720**

Subsidies received in the reporting year reduced the cost of property, plant and equipment by EUR 17 thousand in 2017 (2016: EUR 54 thousand).

These subsidies constitute public financial assistance for businesses under the joint program for the improvement of regional economic structures (*Gemeinschaftsaufgabe "Verbesserung der regionalen Wirtschaftsstruktur"*) granted from German federal and state funds. The funding period ended on April 8, 2017. However, if certain conditions attaching to the funding are not complied with going forward, the funding sponsors may demand partial or full repayment of the subsidies in the following years. These conditions include preserving the current permanent jobs at the Company's Berlin site and the obligation to keep the subsidized assets for a period of at least five years after the end of the project at the subsidized location. The Company assumes that it will be able to fulfill all of the conditions.

13 Assets schedule

EUR thousand		Intangible assets	Property, plant and equipment	Total intangible assets and property, plant and equipment
Jan. 1, 2016	Cost	5,297	1,966	7,263
	Additions	198	154	352
	Disposals	0	-39	-39
Dec. 31, 2016	**Cost**	**5,495**	**2,081**	**7,576**
	Additions	104	168	272
	Disposals	-497	-341	-838
	Currency translation	-1	13	12
Dec. 31, 2017	**Cost**	**5,101**	**1,921**	**7,022**
Jan. 1, 2016	**Accumulated depreciation/amortization and impairment**	**4,505**	**1,282**	**5,787**
	Additions	235	122	357
	Disposals	0	-36	-36
Dec. 31, 2016	**Accumulated depreciation/amortization and impairment**	**4,740**	**1,368**	**6,108**
	Additions	191	152	343
	Disposals	-497	-340	-837

	Currency translation	-1	21	20
Dec. 31, 2017	**Accumulated depreciation/amortization and impairment**	**4,433**	**1,201**	**5,634**
Dec. 31, 2016	**Carrying amounts**	**755**	**713**	**1,468**
Dec. 31, 2017	**Carrying amounts**	**668**	**720**	**1,388**

14 Deferred taxes

For the Group, deferred taxes arise as described in the following table:

EUR thousand	Deferred tax assets from temporary differences		Deferred tax liabilities from temporary differences	
	Dec. 31, 2016	Dec. 31, 2017	Dec. 31, 2016	Dec. 31, 2017
Intangible assets and property, plant and equipment	58	34	154	140
Current assets	0	0	1	1
Non-current liabilities	0	0	1	0
Current liabilities	0	0	33	88
Total	**58**	**34**	**189**	**229**
Total after offsetting	**0**	**0**	**131**	**195**

	Dec. 31, 2016	Dec. 31, 2017
Deferred tax assets due to German tax loss carryforwards	55,270	57,404
Deferred tax assets due to U.S. tax credits	2,774	2,562
Deferred tax assets due to U.S. tax loss carryforwards	1,551	1,781
Total deferred tax assets due to tax loss carryforwards	**59,595**	**61,747**
Deferred tax position (net) from temporary differences	-131	-195
Total deferred tax assets	**59,464**	**61,552**
Allowance on deferred tax assets	-57,913	-60,026
Recognized deferred tax assets	**1,551**	**1,526**

Overview of tax loss carryforwards (2017 estimated):

	2016	2017
Tax loss carryforwards in Germany (corporate income tax)	183,903	190,974
Tax loss carryforwards in Germany (trade tax)	182,354	189,425
Tax loss carryforwards in the U.S.A. (corporate income tax)	4,627	7,072
R&D tax credits in the U.S.A.	2,774	2,562

Since all deferred tax assets and liabilities arising from temporary differences must be settled with the same tax authority that levied the taxes to which those deferred tax assets and liabilities relate, in accordance with IAS 12.71 *et seq*. *Income Taxes*, only those deferred tax assets and liabilities which relate to taxes levied by the same tax authority have been offset.

Since its founding through to December 31, 2016, the Company's tax loss carryforwards in Germany amounted to EUR 184 million for corporate income tax and to EUR 182 million for trade tax. Furthermore, the Company estimates

that the accumulated tax loss carryforwards in both aforementioned tax categories will increase by approximately EUR 7 million when it files its tax returns for 2017. In accordance with German tax law, such tax losses have an unlimited carryforward period. As a consequence of completed tax audits, tax loss carryforwards in the amount of EUR 167 million are undisputed. The resulting deferred tax asset is therefore sufficient to offset the aforementioned deferred tax liability from temporary differences of EUR 195 thousand as of December 31, 2017. However, a future utilization of these carryforwards could become impossible under certain conditions (*e.g.*, a major change of ownership and a change of business) based on the applicable German tax law. Due to the current financial situation of the Company, without sufficient liquidity to achieve the break-even point, valuation allowances have been recognized for the calculated exceeding amount of deferred tax assets at the balance sheet date.

The temporary differences connected with shares in subsidiaries, for which no deferred tax assets had been recognized in the reporting periods presented, amounted to a total of EUR 5,655 thousand (2016: EUR 2,791 thousand).

In the reporting year, deferred tax assets were recognized due to tax loss carryforwards of Epigenomics, Inc. and temporary differences between IFRSs and U.S. tax law. These tax loss carryforwards in the U.S.A. arising before December 31, 2017 can be utilized for up to twenty years. A utilization of the remaining tax loss carryforwards of Epigenomics, Inc. in the amount of EUR 7 million over the next three years is very likely according to the Company's business plan, which is based on favorable reimbursement decisions in the U.S.A. for Epi proColon over the course of 2018.

The deferred tax asset in the U.S.A. was remeasured as of the end of the year in light of the tax reform legislation passed by the U.S. Senate at the end of December 2017. The key point of this reform was to cut the tax rate for businesses from 34% to 21% from January 2018 onwards. Going forward, there will be no time limit on utilizing tax loss carryforwards arising from January 1, 2018 onwards.

The R&D tax credits in the U.S.A. expire on various dates beginning in 2022 through to 2034.

Changes in recognized deferred tax assets in the reporting year:

EUR thousand

	2016	**2017**
January 1	**346**	**1,551**
Deferred tax income	1,143	1,146
Adjustment due to changes in tax rates	0	-937
Foreign currency adjustments	62	-234
December 31	**1,551**	**1,526**

Current assets

15 Inventories

EUR thousand

	Dec. 31, 2016	Dec. 31, 2017
Consumables, raw materials, supplies	142	71
Semi-finished goods	0	148
Finished goods	115	74
Total inventories	**257**	**293**

The cost of inventories recognized as R&D costs through profit or loss in 2017 amounted to EUR 63 thousand (2016: EUR 172 thousand) and was attributable to write-offs of finished goods due to the determination of an unlikelihood that these goods could have been sold before the end of their shelf lives or because their shelf lives had already expired.

16 Trade receivables

Trade receivables primarily include receivables from development partners, customers and licensees. These receivables do not bear interest and are therefore not exposed to any interest rate risk. The carrying amounts of the receivables correspond to their fair values. The maximum default risk corresponded to the carrying amount as of the balance sheet date.

EUR thousand

	Dec. 31, 2016	Dec. 31, 2017
Trade receivables, gross	2,474	937
Allowance for doubtful accounts	-226	0
Trade receivables, net	**2,248**	**937**

As of the balance sheet date, trade receivables in the amount of EUR 862 thousand were not due (December 31, 2015: EUR 454 thousand). Receivables amounting to EUR 34 thousand had not yet been billed as of the balance sheet (December 31, 2016: EUR 0 thousand).

Receivables past due as of the balance sheet date:

EUR thousand

	Dec. 31, 2016	Dec. 31, 2017
Trade receivables up to 90 days past due	1,673	41
Trade receivables more than 90 days past due	347	0
Trade receivables past due	**2,020**	**41**

17 Marketable securities

The marketable securities in the amount of EUR 905 thousand as of December 31, 2017 (December 31, 2016: EUR 753 thousand) are so-called “Trust-preferred Securities” issued by a wholly owned subsidiary of Deutsche Bank AG. They are recognized as "available-for-sale" financial instruments in accordance with IAS 39.9 *Financial Instruments:*

Recognition and Measurement and at the issuer's discretion have been redeemable at any time in one payment since June 2015.

The reported securities are denominated in euros and are subject to the usual market and interest risks. The interest rate risks are price risks and interest rate cash flow risks. The fair value of the marketable securities is identified by their stock exchange quotations at each relevant balance sheet date. The securities were traded on active markets in the reporting year.

18 Cash and cash equivalents

Cash consists of bank deposits and cash in hand. Cash equivalents are defined as instruments which are convertible on a short-term basis to a known amount of cash, *i.e.*, highly liquid financial instruments which are subject to only a very low risk of changes in value.

At the balance sheet date, an amount of EUR 24 thousand of bank deposits was restricted cash.

Cash and cash equivalents increased to EUR 12,826 thousand as of the balance sheet date (December 31, 2016: EUR 11,531 thousand). 98.4% of those funds was denominated in euros at the balance sheet date, with the remainder denominated in U.S. dollars. The total amount was deposited in current accounts at three different banks.

19 Other current assets

EUR thousand

	Dec. 31, 2016	Dec. 31, 2017
Claims from grant projects	0	808
Prepaid expenses	239	709
Receivables from tax authorities	43	307
Deposits	20	19
Creditors with debt accounts	35	12
Interest receivables	9	9
Advance payments	28	0
Other	40	34
– thereof: with a prospective maturity > 1 year	*38*	*0*
Total other current assets	**414**	**1,898**

Claims from grant projects as of December 31, 2017 arose due to a government subsidized R&D project which the Company commenced in 2016 under the European Union's Horizon 2020 framework program. The grant was used to fund clinical research to validate lung cancer biomarkers with the goal of developing a CE-certified product for the detection of lung cancer in blood plasma under the new In Vitro Diagnostic Medical Devices Directive ("**IVD Directive**"). Product development was successfully completed by the end of the reporting year, and the Epi proLung test subsequently received CE certification. The final report to the EU will be prepared and submitted in the first quarter of 2018. The EU is expected to reimburse the claims in the second quarter of 2018. In the reporting year, the Company received subsidies from the EU in the amount of EUR 17 thousand (2016: EUR 816 thousand).

As of the balance sheet date, the reported prepaid expenses (EUR 709 thousand) included EUR 346 thousand in expenses associated with the preparation of potential financing activities. They were deferred as of the balance sheet date since the project had not yet been completed and because they will have to be recognized directly in equity upon successful completion of such activities.

This page has been left blank intentionally.

Equity

20 Share Categories and Capital Structure

As of December 31, 2017, the share capital of Epigenomics AG consisted exclusively of non-par value ordinary registered shares with equal rights.

Equity structure of the Company as of the balance sheet date:

EUR	Dec. 31, 2016	Dec. 31, 2017
Subscribed capital	**22,735,260**	**24,014,360**
Authorized Capital	**7,942,046**	**10,088,530**
* Authorized Capital 2016/I	380,412	0
* Authorized Capital 2016/II	7,561,634	0
* Authorized Capital 2017/I	0	994,426
* Authorized Capital 2017/II	0	9,094,104
Conditional Capital	**8,566,862**	**11,367,630**
* Conditional Capital VII	21,065	21,065
* Conditional Capital IX	521,095	521,095
* Conditional Capital X	7,024,702	8,825,470
* Conditional Capital XI	1,000,000	1,000,000
* Conditional Capital XII	0	1,000,000

Subscribed capital increased by 1,279,100 shares or EUR 1,279,100 in September 2017 by way of a capital increase through issuing new shares under exclusion of subscription rights.

Authorized Capital 2016/I and Authorized Capital 2016/II were fully revoked by means of the resolution of the General Shareholders' Meeting dated May 30, 2017, and replaced by Authorized Capital 2017/I and Authorized Capital 2017/II.

The Executive Board is authorized until May 29, 2022, to increase, with the consent of the Supervisory Board, the share capital of the Company once or several times by up to a total of EUR 2,273,526.00 against cash and/or in kind contributions by issuing new non-par value registered shares (**Authorized Capital 2017/I**). Subscription rights shall be granted to the shareholders. The new shares can also be subscribed by one or more credit institutions or undertakings acting pursuant to section 53 (1) sentence 1 or section 53b (1) sentence 1 or (7) of the German Banking Act (*Kreditwesengesetz* – KWG) under the obligation to offer the shares to the shareholders for subscription (indirect subscription right). The Executive Board is, however, authorized to exclude, with the consent of the Supervisory Board, the shareholders' statutory subscription rights in the following events:

- for fractional amounts;
- if the new shares are issued according to section 186 (3) sentence 4 of the German Stock Corporation Act (*Aktiengesetz* – AktG) against contribution in cash at an issue price which is not significantly below the stock exchange price of the shares already listed and the *pro rata* notional portion of the share capital represented by the new shares does not exceed ten per cent (10%) of the share capital at the time this authorization is registered with the commercial register, or, if lower, at the respective time when the authorization is exercised. The 10% limitation shall include other shares which have been newly issued by the Company by way of a capital increase against contribution in cash during the term of this authorization pursuant to or in application *mutatis mutandis* of section 186 (3) sentence 4 AktG, or which have been sold following a repurchase, in each case under exclusion of subscription rights. Furthermore, the 10% limitation shall include shares for which there is an option or conversion right or obligation, or a share delivery right in favor of the Company, based on bonds with warrants or convertible bonds or participation rights that have been issued during the term of this

authorization under exclusion subscription rights pursuant to section 221 (4) sentence 2 in conjunction with section 186 (3) sentence 4 AktG by the Company or its subsidiaries;

- for capital increases against contribution in kind in order to be able to offer the new shares to third parties with regard to mergers or upon the purchase (including an indirect purchase) of enterprises, parts of enterprises, shares in enterprises, or the purchase (including an indirect purchase) of other assets (including receivables, also to the extent owed by the Company or subsidiaries);
- to the extent necessary to grant subscription rights for new shares to holders or creditors of option rights or creditors of convertible bonds or participation rights issued by the Company or its subsidiaries in the amount in which they would be entitled thereto upon the exercise of the option or conversion rights or the exercise of share delivery rights, or performance of conversion or option obligations.

The Executive Board is further authorized to determine, with the consent of the Supervisory Board, the dividend rights of the new shares in deviation from section 60 (2) AktG as well as the further details of the implementation of capital increases from Authorized Capital 2017/I. The Supervisory Board is authorized to amend the wording of the Articles of Association, as appropriate, after implementation of a capital increase from the Authorized Capital 2017/I in accordance with the respective share capital increase or after expiry of the term of the authorization.

In the reporting year, 1,279,100 new shares were created from Authorized Capital 2017/I as part of the capital increase referred to above.

The Executive Board is authorized until May 29, 2022, to increase, with the consent of the Supervisory Board, the share capital of the Company once or several times by up to a total of EUR 9,094,104.00 against cash and/or in kind contributions by issuing new non-par value registered shares (**Authorized Capital 2017/II**). Subscription rights shall be granted to the shareholders. The new shares can also be subscribed by one or more credit institutions or undertakings acting pursuant to section 53 (1) sentence 1 or section 53b (1) sentence 1 or (7) of the German Banking Act (*Kreditwesengesetz* – KWG) under the obligation to offer the shares to the shareholders for subscription (indirect subscription right). The Executive Board is, however, authorized to exclude, with the consent of the Supervisory Board, the shareholders' statutory subscription rights in the following events:

- for fractional amounts;
- for capital increases against contribution in kind in order to be able to offer the new shares to third parties with regard to mergers or upon the purchase (including an indirect purchase) of enterprises, parts of enterprises, shares in enterprises, or the purchase (including an indirect purchase) of other assets (including receivables, also to the extent owed by the Company or subsidiaries);
- for capital increases in cash, to the extent the capital increases are implemented for the purpose of the placement of the shares in the context of a listing or the subsequent placement on a foreign stock exchange. The Executive Board is further authorized to determine, with the consent of the Supervisory Board, the dividend rights of the new shares in deviation from section 60 (2) AktG as well as the further details of the implementation of capital increases from Authorized Capital 2017/II. The Supervisory Board is authorized to amend the wording of the Articles of Association, as appropriate, after implementation of a share capital increase from Authorized Capital 2017/II in accordance with the respective share capital increase or after expiry of the term of the authorization.

No shares were issued from Authorized Capital 2017/II in the reporting year.

Conditional Capital VII can no longer be used to grant stock options as the respective deadlines have passed. 2,000 new shares can still be created from Conditional Capital VII upon exercise of granted options from one of the underlying stock option programs (09–13).

The share capital is conditionally increased by up to EUR 521,095.00 by means of issuing up to 521,095 new non-par value registered shares (**Conditional Capital IX**). The conditional capital increase serves to grant shares to the holders or creditors of bonds or participation rights issued by the Company or a subsidiary until May 29, 2022 on the basis of the authorization resolution of the General Shareholders' Meeting dated May 30, 2017 if option or conversion rights are exercised, if option or conversion obligations are performed or if the Company exercises its optional right to deliver shares of the Company instead of payment of the cash amount due (or parts thereof). The new shares are issued at the respective option or conversion price to be determined in accordance with the aforementioned authorization resolution.

The conditional capital increase is only to be implemented if bonds or participation rights are issued in accordance with the authorization resolution of the General Shareholders' Meeting dated May 30, 2017, and only to the extent that

- option or conversion rights are exercised or
- holders or creditors of bonds or participation rights who are under an obligation to exercise an option or under a conversion obligation perform their obligation to exercise the option or their conversion obligation or
- the Company exercises its optional right to deliver shares of the Company instead of paying the cash amount due (or parts thereof)

and to the extent that no cash settlement is granted and no shares from an authorized capital, treasury shares or shares of another listed company are delivered. The new shares issued carry dividend rights from the beginning of the fiscal year in which they are issued. The Executive Board is authorized, as far as legally permissible and with the consent of the Supervisory Board, to determine that, if no resolution on the appropriation of net profit for the fiscal year immediately preceding the year of issue of the new shares has been adopted when the new shares are issued, the new shares shall carry dividend rights from the beginning of the fiscal year immediately preceding the year of issue.

The Executive Board is also authorized, with the consent of the Supervisory Board, to determine the further details concerning the implementation of the conditional capital increase.

The share capital is conditionally increased by up to EUR 8,825,470.00 by means of issuing up to 8,825,470 new non-par value registered shares (**Conditional Capital X**). The conditional capital increase serves to grant shares to the holders or creditors of bonds or participation rights issued by the Company or a subsidiary until May 29, 2022 on the basis of the authorization resolution of the General Shareholders' Meeting dated May 30, 2017 if option or conversion rights are exercised, if option or conversion obligations are performed or if the Company exercises its optional right to deliver shares of the Company instead of payment of the cash amount due (or parts thereof). The new shares are issued at the respective option or conversion price to be determined in accordance with the aforementioned authorization resolution.

The conditional capital increase is only to be implemented if bonds or participation rights are issued in accordance with the authorization resolution of the General Shareholders' Meeting dated May 30, 2017, and only to the extent that

- option or conversion rights are exercised or
- holders or creditors of bonds or participation rights who are under an obligation to exercise an option or under a conversion obligation perform their obligation to exercise the option or their conversion obligation or
- the Company exercises its optional right to deliver shares of the Company instead of paying the cash amount due (or parts thereof)

and to the extent that no cash settlement is granted and no shares from an authorized capital, treasury shares or shares of another listed company are delivered. The new shares issued carry dividend rights from the beginning of the fiscal year in which they are issued. The Executive Board is authorized, as far as legally permissible and with the consent of the Supervisory Board, to determine that, if no resolution on the appropriation of net profit for the fiscal year immediately preceding the year of issue of the new shares has been adopted when the new shares are issued, the new shares shall carry dividend rights from the beginning of the fiscal year immediately preceding the year of issue.

The Executive Board is also authorized, with the consent of the Supervisory Board, to determine the further details concerning the implementation of the conditional capital increase.

In the reporting year, no shares have been issued from Conditional Capital X.

Based on Conditional Capital IX and Conditional Capital X, convertible notes were issued in the reporting year that, if converted, will lead to the creation of up to 994,397 new shares in 2018.

The share capital is conditionally increased by up to EUR 1,000,000.00 through issuance of up to 1,000,000 new non-par value registered shares (**Conditional Capital XI**). The conditional capital increase serves to grant or issue shares to members of the Executive Board of the Company, to members of the management of domestic and foreign dependent companies of the Company as defined in sections 15 and 17 AktG and to employees of the Company and of domestic and foreign dependent companies of the Company as defined in sections 15 and 17 AktG who exercise the subscription rights they were granted prior to the end of April 30, 2018 pursuant to the authorization resolution of the General Shareholders' Meeting dated May 25, 2016 (Stock Option Program 16–18). The new shares are issued against payment by the beneficiary to the Company of the respective exercise price to be determined in accordance with the aforementioned authorization resolution.

The conditional capital increase is to be implemented only if subscription rights are issued in accordance with the authorization resolution on the Company's Stock Option Program 16–18 by the General Shareholders' Meeting dated May 25, 2016 and only to the extent that the holders of these subscription rights exercise them and the Company does not grant any treasury shares or cash compensation to fulfill these subscription rights.

The new shares issued carry dividend rights from the beginning of the fiscal year in which they are created. The Executive Board may determine, as far as legally permissible and with the consent of the Supervisory Board, that, if no resolution on the appropriation of net profit for the fiscal year immediately preceding the year of issue of the new shares has been adopted when the new shares are issued, the new shares shall be entitled to dividends from the beginning of the fiscal year immediately preceding the year of issue; if the new shares are issued to members of the Executive Board, the Supervisory Board shall be authorized to do so.

The Supervisory Board is also authorized to determine the further details concerning the implementation of the conditional capital increase where the granting of subscription rights to members of the Executive Board is concerned. In all other cases, the Executive Board is authorized to determine such details.

In the reporting year, 429,920 stock options were issued based on Conditional Capital XI (2016: 314,580). However, in accordance with the terms and conditions of the stock option program, no new shares can be created upon exercise of these stock options before October 2020.

The share capital is conditionally increased by up to EUR 1,000,000.00 through issuance of up to 1,000,000 new non-par value registered shares (**Conditional Capital XII**). The conditional capital increase serves to grant or issue shares to members of the Executive Board of the Company, to members of the management of domestic and foreign dependent companies of the Company as defined in sections 15 and 17 AktG and to employees of the Company and of domestic and foreign dependent companies of the Company as defined in sections 15 and 17 AktG who exercise the subscription rights they were granted prior to the end of April 30, 2019 pursuant to the authorization resolution of the General Shareholders' Meeting dated May 30, 2017 (Stock Option Program 17-19). The new shares are issued against payment by the beneficiary to the Company of the respective exercise price to be determined in accordance with the aforementioned authorization resolution.

The conditional capital increase is to be implemented only if subscription rights are issued in accordance with the authorization resolution on the Company's Stock Option Program 17-19 by the General Shareholders' Meeting dated May 30, 2017 and only to the extent that the holders of these subscription rights exercise them and the Company does not grant any treasury shares or cash compensation to fulfill these subscription rights.

The new shares issued carry dividend rights from the beginning of the fiscal year in which they are created. The Executive Board may determine, as far as legally permissible and with the consent of the Supervisory Board, that, if no resolution on the appropriation of net profit for the fiscal year immediately preceding the year of issue of the new shares has been adopted when the new shares are issued, the new shares shall be entitled to dividends from the

beginning of the fiscal year immediately preceding the year of issue; if the new shares are issued to members of the Executive Board, the Supervisory Board shall be authorized to do so.

The Supervisory Board is also authorized to determine the further details concerning the implementation of the conditional capital increase where the granting of subscription rights to members of the Executive Board is concerned. In all other cases, the Executive Board is authorized to determine such details.

In the reporting year, 152,580 stock options were issued based on Conditional Capital XII (2016: 0). However, in accordance with the terms and conditions of the stock option program, no new shares can be created upon exercise of these stock options before October 2021.

21 Capital reserve

The capital reserve comprises the premiums arising on the issuance of shares and the expenses relating to the issuance of shares, as well as expenses from the issue of stock options to Executive Board and staff members. The capital reserve increased from EUR 54,873 thousand as of December 31, 2016 to EUR 59,509 as of December 31, 2017. A net increase of EUR 4,142 thousand was attributable to the capital increase in the September of the reporting year through issuing new shares from authorized capital. An increase of EUR 455 thousand was attributable to the issuance of stock options to Executive Board and staff members (2016: EUR 128 thousand). In addition, the capital reserve increased by EUR 38 thousand in 2017 due to the option premium on issued convertible notes.

22 Retained earnings

Retained earnings decreased from EUR -51,719 thousand as of December 31, 2016, to EUR -62,880 thousand as of December 31, 2017 due to the transfer of the Company's net loss for 2016.

23 Other comprehensive income

The other comprehensive income includes unrealized gains and/or losses on available-for-sale securities and exchange rate differences from the remeasurement of the results and the financial position of the Company's subsidiary whose financial statements were prepared in U.S. dollars. The actual disposal of remeasured financial assets and/or liabilities leads to a recognition of the cumulated revaluation differences through profit or loss.

EUR thousand

	Dec. 31, 2016	Dec. 31, 2017
January 1	**216**	**305**
– Remeasurement of marketable securities	31	-152
– Exchange rate differences	58	-322
December 31	**305**	**-169**

24 Capital Management

The Group manages its capital to ensure that entities in the Group will be able to continue as a going concern while maximizing the long-term return to stakeholders. An optimization of the debt/equity ratio is always considered.

The current liabilities, cash and cash equivalents, the securities available for sale and equity attributable to equity holders, comprising subscribed capital, capital reserve (including offset retained earnings) and other comprehensive income are subject to the Group's capital management.

In the reporting year, the Group's equity ratio decreased from 79.2% as of December 31, 2016 to 53.5 % as of December 31, 2017, primarily due to the net loss for the year and the issue of a convertible note in September 2017.

The Company is not subject to any statutory capital requirements. However, the Company is obliged to issue new shares in connection with granted option rights from its existing stock option programs.

Liabilities

25 Provisions

Statement of changes in provisions:

EUR thousand	Contract-related provisions	Payroll provisions	Provisions for claims from phantom stock rights	Other provisions	**Total**
Jan. 1, 2016	**51**	**192**	**782**	**86**	**1,111**
thereof non-current	*0*	*0*	*181*	*36*	*217*
Utilizations	0	-185	-480	-40	-705
Reversals	-51	-7	-6	0	-64
Additions	323	431	826	19	1,599
Dec. 31, 2016	**323**	**431**	**1,122**	**65**	**1,941**
thereof non-current	*0*	*0*	*50*	*39*	*89*
Utilizations	0	-415	-185	-12	-612
Reversals	-273	-12	-290	-6	-581
Additions	0	381	0	17	398
Dec. 31, 2017	**50**	**385**	**647**	**64**	**1,146**
thereof non-current	0	0	0	43	43

Payroll provisions were recognized for obligations from bonus commitments to management and employees of the Company. These provisions may in individual cases also be utilized beyond a twelve-month time frame.

Provisions for claims from phantom stock rights (PSRs) were recognized based on the fair value of all issued and outstanding rights resulting from the Company's phantom stock programs (PSPs). The non-current portion of these provisions amounted to EUR 0 thousand as of the balance sheet date (December 31, 2016: EUR 50 thousand).

Statutory provisions were recognized for expenses associated with the General Shareholders' Meeting. Other provisions were recognized for various operating obligations which were uncertain as of the reporting date with respect to their exact amounts and/or timing. A utilization of both of these categories of provisions is largely expected within the next twelve months.

26 Trade payables

The reported trade payables in the amount of EUR 952 thousand as of the balance sheet date (December 31, 2016: EUR 1,089 thousand) are all non-interest-bearing and are generally due within 30 days.

27 Convertible notes issued

In September 2017, the Company issued a convertible note with a principal amount of EUR 7.1 million to Cathay Fortune International Company Limited (CFICL) under exclusion of subscription rights. By issuing the convertible notes – as agreed in the Business Combination Agreement dated April 26, 2017 between Epigenomics and CFIC and

published in the offer document for the voluntary public takeover offer of June 8, 2017 – the Company received an immediate liquidity inflow of approximately EUR 6.5 million.

The note comprises 71,000 registered bonds ranked *pari passu*, each with a principal amount of EUR 100.00, in favor of CFIC. The notes were issued at 91% of their principal amount, are not interest-bearing and are not admitted to stock market trading. They mature on December 31, 2018 and may be converted by the holder into up to 994,397 shares of the Company. The conversion price per share amounts to EUR 7.144 or, if lower, 95.00% of the market price of the bondholder's shares, however no less than EUR 1.099.

Convertible notes are compound financial instruments which must be split in a repayment obligation (liability element) and a conversion right (equity element). The fair value of the overall compound financial instrument is determined by discounting future payments of principle and interest payments using a 7.75% risk-weighted discount rate. The effective interest rate of the liability element cannot be conclusively determined due to the uncertainty as to the repayment amount and date. The carrying amount of the equity element to be recognized in the capital reserves was determined by using the subtraction method (subtraction of the financial liability from the total value of the compound instrument). The equity element is presented in equity as "option premium on convertible notes". The EUR 62 thousand in transaction costs relating to the issue of the convertible note were deducted from equity if attributable to the equity element or recognized as an interest expense over the term of the note if attributable to the liability component. EUR 175 thousand in interest expenses for convertible notes was recognized through profit or loss in the reporting year. The difference between the carrying amount of the financial liability recognized under current liabilities and the amount that the Company is contractually obliged to pay at maturity to noteholders who have not exercised their conversion option amounted to EUR 564 thousand.

EUR thousand

Gross proceeds of the issue of convertible notes 2017	**6,461**
• *thereof: Liability element of convertible notes at issue date*	*6,423*
• *thereof: Equity element of convertible notes at issue date*	*38*
Total expenses related to the issue of the convertible notes for the liability element	-62
Expenses related to the issue of the convertible notes for the equity element	-0
Total interest expense	175

Liability element of convertible notes at December 31, 2017	**6,536**

28 Other liabilities

EUR thousand	Dec. 31, 2016	Dec. 31, 2017
Payables due to staff	202	345
Accrued audit fees	146	121
Payables due to tax authorities	114	91
Payables to social security institutions	0	1
Other	4	4

Total other liabilities	**466**	**562**

The reported other liabilities are all non-interest-bearing and are generally due at short notice.

29 Financial instruments and financial liabilities from financing activities

Primary financial instruments	Measurement	Fair value	Carrying amount	Fair value	Carrying amount	Fair value
EUR thousand	principle	hierarchy level	as of Dec. 31, 2016		as of Dec. 31, 2017	
Assets						
Loans and receivables	AC		2,353	2,353	1,814	1,814
Trade receivables			*2,248*	*2,248*	*937*	*937*
Other current assets			*105*	*105*	*883*	*883*
Financial assets available for sale	FV Rec. Eq.		**753**	**753**	**905**	**905**
Marketable securities		1	*753*	*753*	*905*	*905*
Cash and cash equivalents	n/a		11,531	11,531	12,826	12,826
Liabilities						
Financial liabilities measured at amortized cost	AC		1,259	1,259	8,283	7,719
Trade payables			*1,089*	*1,089*	*952*	*952*
Convertible notes		2	*0*	*0*	*7,100*	*6,536*
Other current liabilities			*170*	*170*	*231*	*231*

AC = Amortized cost

FV Rec. Eq. = Fair Value Recognized in Equity

FV Rec. PL = Fair Value Recognized in Profit or Loss

EUR thousand	Note	**Jan 1, 2017**	Cash flows	Non-cash changes: Equity component of convertible notes	Non-cash changes: Liabilities from equity transaction	Other changes	**Dec 31, 2017**
Other current assets (prepaid expenses)	19	0	-278	0	-68	0	-346
Trade payables	26	0	0	0	68	0	68
Convertible notes	8; 27	0	6,399	-38	0	175	6,536
Net liabilities from financing activities		**0**	**6,121**	**-38**	**0**	**175**	**6,258**

Cash consists of bank deposits and cash in hand. Cash equivalents are defined as instruments convertible to a known amount of cash on a short-term basis and carrying a very low risk of changes in value. As of the balance sheet date, the Company's cash and cash equivalents balance sheet item comprised exclusively cash. For the cash flow consolidation of the U.S. subsidiary, the operating assets and liabilities (excluding cash and cash equivalents) were translated at the average monthly exchange rates.

30 Operating activities

Cash flow from operating activities is derived indirectly on the basis of the net profit/loss for the year.

31 Investing activities

Cash flow from investing activities is calculated based on actual payments.

Proceeds from investment grants received of EUR 17 thousand (2016: EUR 871 thousand) were used for the purchase of property, plant and equipment.

32 Financing activities

Cash flow from financing activities is calculated based on actual payments.

Gross proceeds from the issue of new shares in the amount of EUR 5,475 thousand in the reporting year (2016: EUR 13,982 thousand) related to the Company's capital increase from authorized capital in 2017. The Company generated a gross cash inflow of EUR 6,461 thousand from the issue of convertible notes in the reporting year (2016: EUR 0). The cash outflow from financing activities amounted to EUR 437 thousand in 2017 (2016: EUR 729 thousand) and related to the above-mentioned capital increases and the issue of convertible notes.

33 Cash consumption

Cash flow from operating activities and cash flow from investing activities less transactions in securities is monitored by the Company as "cash consumption".

EUR thousand

	2016	2017
Cash flow from operating activities	-13,283	-9,576
Cash flow from investing activities	-379	-548
Net proceeds from transactions in securities	0	0
Cash consumption	**-13,662**	**-10,124**

Risks and Risk Management

34 General

For a comprehensive overview of the risks the Company is facing, please refer to the "Report on opportunities and risks" section of the Group management report 2017.

35 Liquidity risk

The liquidity risk to which Epigenomics is exposed results from the Group's potential inability to meet its financial liabilities, *i.e.*, not being able to pay its suppliers, creditors or lenders. It is therefore the task of cash and liquidity management to ensure the individual Group companies' liquidity at any time. The expected cash inflows and outflows are constantly monitored to ensure short-term liquidity. These activities are supported by internal cash forecasts and a corresponding strategy of managing time deposits with the Company's principal banks.

Furthermore, Epigenomics constantly monitors the capital markets and – if required – makes all necessary efforts to raise fresh capital in order to avoid illiquidity.

Epigenomics has strict cost management in place to avoid unnecessary spending. On the procurement side, the Company always tries to reduce purchase prices by closing favorable contracts and negotiating all relevant conditions and takes advantage of granted terms of payment.

36 Foreign currency exchange risk

The Group executes transactions denominated in foreign currencies and is therefore exposed to the risk of exchange rate fluctuations. In past years, this risk mainly stemmed from the need to purchase some goods and services in U.S. dollars. In the reporting year, Epigenomics received FDA approval for Epi proColon in the U.S.A. and began to commercialize the product there. Revenue is now generated by the Group's U.S. entity Epigenomics, Inc. in U.S. dollars, while the kits are manufactured and invoiced primarily in euros. This leads to an increased foreign currency exchange (FX) risk for the Group. This risk is reduced by utilizing the proceeds generated in U.S. dollars to finance the operating business activities of Epigenomics, Inc. (*e.g.*, to purchase goods and services). With regard to U.S. dollar amounts in excess of the U.S. subsidiary's mid- to long-term cash requirements, the Group will constantly try to mitigate or to eliminate the remaining risk as far as possible, for example through the use of derivative financial instruments (*e.g.*, forward contracts) to minimize this risk. As of the balance sheet date, there was only a very limited number and volume of items denominated in foreign currencies other than the U.S. dollar.

The following table shows the carrying amounts of the Group's foreign currency denominated monetary assets and liabilities:

EUR thousand	**Dec. 31, 2016**			**Dec. 31, 2017**		
Primary financial instruments	Total	thereof in USD	in %	Total	thereof in USD	in %
Trade receivables	2,248	379	16.9	937	899	95.9
Marketable securities	753	0	0.0	905	0	0.0
Cash and cash equivalents	11,531	123	1.1	12,826	200	1.6
Other current assets	105	20	18.9	883	19	2.1
Trade payables	-1,089	-124	11.4	-952	-284	29.8
Convertible notes issued	0	0	0.0	-7,100	0	0
Other current liabilities	-170	-32	18.9	-231	-29	12.7
Total net position	**13,378**	**366**	**2.7**	**7,267**	**804**	**11.1**
thereof in third currencies	*-2*			*-3*		

The sensitivity of the Group's net result and of shareholders' equity to foreign currency exchange rate fluctuations is shown in the table below:

EUR thousand

Scenario	Impact on	2016	2017
10% increase in the EUR/USD rate	Total comprehensiveincome	-32	-57
	Equity	185	445
10% decrease in the EUR/USD rate	Total comprehensive income	39	69
	Equity	-227	-544

The table shows a stronger impact of exchange rate fluctuations on equity in the reporting year than in fiscal year 2016. This is mainly attributable to a significant increase in current liabilities denominated in U.S. dollars in the Group parent company's balance sheet.

37 Credit risk

Credit risks arise from the Group's operating and investing business activities. Trade receivables essentially relate on the one hand to renowned commercial partners with acceptable ratings and on the other to small customers (predominantly laboratories, clinics and researchers) with non-material ordering volumes. Whenever possible, payments are collected upfront. The Group maintains a long-standing, good contractual relationship with its major partners (*e.g.*, BioChain and Polymedco). Receivables from Polymedco are secured up to a maximum of EUR 500 thousand by an irrevocable standby letter of credit issued by a leading North American bank.

Securities have only been acquired under careful adherence to the Company's investment policy, *i.e.*, a strict selection by the credit ratings of the issuers has been conducted. However, the global financial crisis in recent years has shown that even top-rated issuers can suddenly find themselves in a precarious situation or even facing collapse. Additionally, it has become clear that there is a constant risk of illiquid markets. Cash and cash equivalents are deposited at three different banks.

In all cases, the maximum amount at risk can be derived from the carrying amounts of the recognized receivables.

38 Interest rate risk

The Group holds interest-bearing financial instruments only in the form of marketable securities.

Given the historically low interest rates on the international capital markets, the Group is not exposed to any interest rate risks from its cash and cash equivalents item.

Information on Share-based Payment Plans

39 Description of stock option programs

As of the balance sheet date, the Company had four stock option programs (SOPs) in place:

Both the SOP 09–13 and SOP 11–15 programs have expired. Stock options can no longer be granted from these programs.

On May 25, 2016, the General Shareholders' Meeting resolved to implement a new stock option program (SOP 16–18) based on the new Conditional Capital XI (see also note 20 "Share Categories and Capital Structure"). Under this program, the Executive Board and the Supervisory Board of the Company were authorized, until the end of April 30, 2018, to issue stock options in accordance with the provisions set forth below to members of the Executive Board and to employees of the Company as well as to members of the management and to employees of domestic and foreign

dependent companies of the Company provided that each stock option so issued entitles the beneficiary to subscribe for one non-par value registered share of the Company. Under this authorization, the Executive Board and the Supervisory Board may issue a total of up to 1,000,000 stock options which entitle the beneficiaries to subscribe for no more than 1,000,000 non-par value registered shares of the Company. Only the Supervisory Board of the Company is authorized to issue stock options to beneficiaries who are members of the Executive Board of the Company. In all other respects, the Executive Board is authorized to grant stock options, with the Executive Board being required to obtain the Supervisory Board's consent before granting stock options to holders of a general power of attorney (*Prokura*) of the Company and to members of the management of subordinated Group companies. The shareholders have no subscription rights.

The beneficiaries are the members of the Executive Board of the Company (group 1), the employees of the Company (group 2), the members of the management of subordinated Group companies (group 3) and the employees of subordinated Group companies (group 4). From the total volume of SOP 16–18, the distribution shall be as follows:

- Group 1 all beneficiaries: max. 25% or 250,000 stock options
- Group 2 all beneficiaries: max. 35% or 350,000 stock options
- Group 3 all beneficiaries: max. 7% or 70,000 stock options
- Group 4 all beneficiaries: max. 33% or 330,000 stock options

Stock options may be issued with effect as of up to four dates, *i.e.*, in each case with effect as of the beginning of October 1, 2016, April 1, 2017, October 1, 2017 and April 1, 2018 (each an "issue date"). The subscription rights may only be exercised outside the blackout periods. Blackout periods means the periods between the end of the fiscal year and the publication of the annual report and the consolidated financial statements for the respective fiscal year, and between the end of the first, second and third quarters of a fiscal year and the publication of a quarterly report or a quarterly announcement of the Company for the respective quarter.

A quarter of the subscription rights in every tranche shall vest for the beneficiaries one year, two years, three years and four years, respectively, after the issue date of the respective tranche. In deviation from the above provision, the Supervisory Board may declare full or partial vesting of subscription rights issued in one tranche in favor of any one or all group 1 beneficiaries, and the Executive Board may with the consent of the Supervisory Board declare full or partial vesting of subscription rights issued in one tranche in favor of any one or all group 2 to 4 beneficiaries, at any time after the issue date of the respective tranche. In this case, the subscription rights shall be deemed vested upon receipt by the respective beneficiary of the corresponding declaration by the Executive Board or the Supervisory Board.

Subscription rights of each tranche can be exercised for the first time after their vesting and after expiration of the waiting period. The waiting period ends four years after the issue date of the tranche. The restriction of the exercise of the subscription rights to certain exercise periods and subject to compliance with all exercise conditions shall remain unaffected by the expiration of the waiting period.

The term of the subscription rights of every tranche starts on the issue date of the subscription rights and ends seven years after such issue date. Subscription rights that have not been exercised by the end of their term shall expire without compensation. This shall also apply where the non-exercise of the subscription rights is attributable to the fact that they could not be exercised, and shall also apply to vested subscription rights.

The subscription rights can only be exercised against payment of the exercise price to the Company. The exercise price for a subscription right of the respective tranche equals the non-volume weighted average stock exchange closing price of the shares of the Company on the ten stock exchange trading days preceding the issue date of the tranche in the electronic trading system of the Frankfurt Stock Exchange plus 10%.

After vesting has occurred and after the waiting period has expired, subscription rights may be exercised only if the closing stock exchange price of the shares of the Company in the electronic trading system of the Frankfurt Stock Exchange has exceeded the original price by at least 10% on at least one trading day in the period between the issue date of the tranche and the expiration of the waiting period (performance target). If the performance target has not been reached upon expiration of the waiting period, the subscription rights shall expire without compensation.

Any subscription rights of a beneficiary that have not yet vested shall expire without compensation upon termination of the service or employment contract between the beneficiary and the Company (or a subordinated Group company) if the service or employment contract has been terminated by the beneficiary, or by the Company (or the respective subordinated Group company) for cause. This shall not apply to any termination by group 1 or group 3 beneficiaries on account of a vote of no confidence by the General Shareholders' Meeting. Subscription rights of a beneficiary that have vested but have not yet been exercised or could not yet be exercised by the respective beneficiary shall expire without compensation upon termination of the service or employment contract between the beneficiary and the Company (or a subordinated Group company) if the service or employment contract has been terminated by the Company (or the respective subordinated Group company) for cause. This shall not apply to any termination by group 1 or group 3 beneficiaries on account of a vote of no confidence by the General Shareholders' Meeting.

The Executive Board or, in the case of group 1 beneficiaries, the Supervisory Board, may reserve the right to fulfill subscription rights that have been validly exercised by paying to the beneficiary compensation in cash instead of delivering any newly issued or previously acquired treasury shares of the Company. Such cash compensation shall equal the difference between the exercise price and the closing price of the shares of the Company last determined in the electronic trading system of the Frankfurt Stock Exchange before the exercise of the subscription right. However, the Company has no obligation to offer cash compensation for exercised subscription rights and does not currently intend to offer such cash compensation for exercised subscription rights.

For further details on SOP 16–18, please see the invitation to the General Shareholders' Meeting on May 25, 2016. The document is available on the Company's website (www.epigenomics.com).

On May 30, 2017, the General Shareholders' Meeting resolved to implement a new stock option program (SOP 17-19) based on the new Conditional Capital XII (see also the section "Share Categories and Capital Structure"). Under this program, the Executive Board and the Supervisory Board of the Company were authorized, until the end of May 31, 2019, to issue stock options in accordance with the provisions set forth below to members of the Executive Board and to employees of the Company as well as to members of the management and to employees of domestic and foreign dependent companies of the Company provided that each stock option so issued entitles the beneficiary to subscribe for one non-par value registered share of the Company. Under this authorization, the Executive Board and the Supervisory Board may issue a total of up to 1,000,000 stock options which entitle the beneficiaries to subscribe for no more than 1,000,000 non-par value registered shares of the Company. Only the Supervisory Board of the Company is authorized to issue stock options to beneficiaries who are members of the Executive Board of the Company. In all other respects, the Executive Board is authorized to grant stock options, with the Executive Board being required to obtain the Supervisory Board's consent before granting stock options to holders of a general power of attorney (*Prokura*) of the Company and to members of the management of subordinated Group companies. The shareholders have no subscription rights.

The beneficiaries are the members of the Executive Board of the Company and members of the management of subordinated Group companies (group 1) and the employees of the Company and of subordinated Group companies (group 2). From the total volume of SOP 17–19, the distribution shall be as follows:

- Group 1 all beneficiaries: max. 68% or 680,000 stock options
- Group 2 all beneficiaries: max. 32% or 320,000 stock options

Stock options may be issued with effect as of up to four dates, *i.e.*, in each case with effect as of the beginning of October 1, 2017, April 1, 2018, October 1, 2018 and April 1, 2019 (each an "issue date"). The subscription rights may only be exercised outside the blackout periods. Blackout periods means the periods between the end of the fiscal year and the publication of the annual report and the consolidated financial statements for the respective fiscal year, and between the end of the first, second and third quarters of a fiscal year and the publication of a quarterly report or a quarterly announcement of the Company for the respective quarter.

A quarter of the subscription rights in every tranche shall vest for the beneficiaries one year, two years, three years and four years, respectively, after the issue date of the respective tranche. In deviation from the above provision, the Supervisory Board may declare full or partial vesting of subscription rights issued in one tranche in favor of any one or all group 1 beneficiaries, and the Executive Board may with the consent of the Supervisory Board declare full or partial

vesting of subscription rights issued in one tranche in favor of any one or all group 2 beneficiaries, at any time after the issue date of the respective tranche. In this case, the subscription rights shall be deemed vested upon receipt by the respective beneficiary of the corresponding declaration by the Executive Board or the Supervisory Board.

Subscription rights of each tranche can be exercised for the first time after their vesting and after expiration of the waiting period. The waiting period ends four years after the issue date of the tranche. The restriction of the exercise of the subscription rights to certain exercise periods and subject to compliance with all exercise conditions shall remain unaffected by the expiration of the waiting period.

The term of the subscription rights of every tranche starts on the issue date of the subscription rights and ends seven years after such issue date. Subscription rights that have not been exercised by the end of their term shall expire without compensation. This shall also apply where the non-exercise of the subscription rights is attributable to the fact that they could not be exercised, and shall also apply to vested subscription rights.

The subscription rights can only be exercised against payment of the exercise price to the Company. The exercise price for a subscription right of the respective tranche equals the non-volume weighted average stock exchange closing price of the shares of the Company on the ten stock exchange trading days preceding the issue date of the tranche in the electronic trading system of the Frankfurt Stock Exchange plus 10%.

After vesting has occurred and after the waiting period has expired, subscription rights may be exercised only if the closing stock exchange price of the shares of the Company in the electronic trading system of the Frankfurt Stock Exchange has exceeded the original price by at least 10% on at least one trading day in the period between the issue date of the tranche and the expiration of the waiting period (performance target). If the performance target has not been reached upon expiration of the waiting period, the subscription rights shall expire without compensation.

Any subscription rights of a beneficiary that have not yet vested shall expire without compensation upon termination of the service or employment contract between the beneficiary and the Company (or a subordinated Group company) if the service or employment contract has been terminated by the beneficiary, or by the Company (or the respective subordinated Group company) for cause. This shall not apply to any termination on account of a vote of no confidence by the General Shareholders' Meeting by group 1 beneficiaries who are simultaneously members of the Executive Board. Subscription rights of a beneficiary that have vested but have not yet been exercised or could not yet be exercised by the respective beneficiary shall expire without compensation upon termination of the service or employment contract between the beneficiary and the Company (or a subordinated Group company) if the service or employment contract has been terminated by the Company (or the respective subordinated Group company) for cause. This shall not apply to any termination on account of a vote of no confidence by the General Shareholders' Meeting by group 1 beneficiaries who are simultaneously members of the Executive Board.

The Executive Board or, in the case of group 1 beneficiaries, the Supervisory Board, may reserve the right to fulfill subscription rights that have been validly exercised by paying to the beneficiary compensation in cash instead of delivering any newly issued or previously acquired treasury shares of the Company. Such cash compensation shall equal the difference between the exercise price and the closing price of the shares of the Company last determined in the electronic trading system of the Frankfurt Stock Exchange before the exercise of the subscription right. However, the Company has no obligation to offer cash compensation for exercised subscription rights and does not currently intend to offer such cash compensation for exercised subscription rights.

For further details on SOP 17-19, please see the invitation to the General Shareholders' Meeting on May 30, 2017. The document is available on the Company's website (www.epigenomics.com).

40 Stock Option Programs – Outstanding Rights

No rights under SOP 09–13 were issued, exercised or forfeited in the reporting year, nor did any rights expire. While 21,065 rights with an average exercise price of EUR 15.65 were in circulation as of December 31, 2016, 19,065 expired in the reporting year, meaning that 2,000 rights with an exercise price of EUR 11.05 were outstanding as of December 31, 2017, which subsequently also expired on the following day. None of these rights were held by members of the Company's Executive Board.

SOP 16–18

Option holder	Options outstanding	Issued	Expired	Forfeited	Exercised	Options outstanding	Options exercisable
	as of Jan. 1, 2017 (2016)	**Options in 2017 (2016)**				**as of Dec. 31, 2017 (2016)**	
Greg Hamilton (CEO)	**91,580** (0)	**68,420** (91,580)	**0** (0)	**0** (0)	**0** (0)	**160,000** (91,580)	**0** (0)
Dr. Uwe Staub (COO)	**90,000** (0)	**0** (90,000)	**0** (0)	**67,500** (0)	**0** (0)	**22,500** (90,000)	**0** (0)
Other option holders	**133,000** (0)	**361,500** (133,000)	**0** (0)	**39,250** (0)	**0** (0)	**455,250** (133,000)	**0** (0)
All option holders	**314,580** (0)	**429,920** (314,580)	**0** (0)	**106,750** (0)	**0** (0)	**637,750** (314,580)	**0** (0)
Average exercise price (in EUR)	**5.43** (n/a)	**5.10** (5.43)	**n/a** (n/a)	**5.35** (n/a)	**n/a** (n/a)	**5.22** (5.43)	**n/a** (n/a)

SOP 17–19

Option holder	Options outstanding	Issued	Expired	Forfeited	Exercised	Options outstanding	Options exercisable
	as of Jan. 1, 2017 (2016)	**Options in 2017 (2016)**				**as of Dec. 31, 2017 (2016)**	
Greg Hamilton (CEO)	**0** (0)	**31,580** (0)	**0** (0)	**0** (0)	**0** (0)	**31,580** (0)	**0** (0)
Dr. Uwe Staub (COO)	**0** (0)	**70,000** (0)	**70,000** (0)	**0** (0)	**0** (0)	**0** (0)	**0** (0)
Other option holders	**0** (0)	**51,000** (0)	**0** (0)	**0** (0)	**0** (0)	**51,000** (0)	**0** (0)
All option holders	**0** (0)	**152,580** (0)	**70,000** (0)	**0** (0)	**0** (0)	**82,580** (0)	**0** (0)
Average exercise price (in EUR)	**n/a** (n/a)	**5.10** (n/a)	**5.10** (n/a)	**n/a** (n/a)	**n/a** (n/a)	**5.10** (n/a)	**n/a** (n/a)

Contractual commitments to a total of 295,000 further rights under the SOP 16-18 and SOP 17-19 programs were made to members of the Executive Board in the reporting year for award to them between 2018 and 2020.

Terms of outstanding stock options of all programs:

Term	Weighted average exercise price (in EUR)	Stock options issued and outstanding	Weighted average exercise price (in EUR)	Stock options issued and outstanding
	Dec. 31, 2016		Dec. 31, 2017	
2017	16.13	19,065	n/a	0
2018	11.05	2,000	11.05	2,000
2023	5.43	314,580	5.43	232,830

2024	5.10	0	5.10	487,500
Total	**6.07**	**335,645**	**5.22**	**722,330**

41 Stock option programs – valuation parameters

The fair value of SOP 16–18 and SOP 17–19 was determined using the Monte Carlo simulation. It was assumed that the rights will be exercised in the fifth year after the grant date if the market price of the shares exceeds the exercise price of the stock option rights by more than 20% or in the sixth year after the grant date if the market price of the shares exceeds the exercise price of the stock option rights by more than 10%. An earlier exercise of the rights is not permitted under the program terms and conditions.

The following table gives detailed information on both programs active over the balance sheet date and the applied valuation parameters.

	SOP 16–18		SOP 17–19	
	Dec. 31, 2016	Dec. 31, 2017	Dec. 31, 2016	Dec. 31, 2017
Total number of outstanding options	314,580	637,750	n/a	82,580
thereof vested	*0*	*78,645*	*n/a*	*0*
thereof exercisable	0	0	n/a	0
Exercise price (in EUR)	5.43	5.10–5.43	n/a	5.10
Weighted average term of outstanding rights in years	6.75	6.39	n/a	6.76
Weighted average fair value per option (EUR)	2.97	2.85	n/a	2.65
Applied share price volatility in %	84.10	84.40	n/a	84.58
Risk-free interest rate in %	-0.44	-0.14	n/a	0.04
Assumed staff turnover in %	4.6	4.0	n/a	3.7
Expiry dates	Oct. 1, 2023	Oct. 1, 2023 – Oct. 1, 2024	n/a	Oct. 1, 2024

The risk-free interest rates are derived from the yield curve of German government bonds at the valuation date. The volatility of the share price can be derived from the historical volatility of the shares (in accordance with Bloomberg data) over the most recent past period equaling the remaining term of the rights. For adjustment purposes, a constant staff turnover was assumed based on the historical turnover of the Company's staff over the past four years. No dividend payments were assumed during the term of the rights (*i.e.*, the assumed dividend yield was 0%).

42 Phantom Stock Programs – Description

As of the balance sheet date, the Company had four phantom stock programs (PSPs)/virtual share plans in place as an incentive scheme for management and staff by granting so-called phantom stock rights (PSRs) from such programs to the beneficiaries. The programs define a PSR as a conditional claim of its holder against the Company for a future payment in cash of a premium to the benefit of the holder. As PSRs will be settled in cash upon their exercise, the Company had to record a provision based on the fair values of the outstanding rights.

Phantom stock program 03–15 (PSP 03–15)

PSP 03–15 was established in 2013 to serve as a transformation tool for outstanding stock options at that time. Executive Board and Supervisory Board of the Company therefore had decided to offer PSRs from the PSP 03–15 to all stock option holders who were employees or members of the Executive Board at that time and to a dedicated number of former employees of the Company who still held stock options. For each stock option right returned to the Company in connection with an exchange offer, one PSR from PSP 03–15 was granted to its holder. Each PSR from PSP 03–15 became the legal successor of the returned stock option right then and was on equal terms with its economic value. Hence, the term of each PSR from PSP 03–15 equals the remaining term of the returned stock option right. These PSRs will expire without compensation at that point in time when the stock option right that has been returned in exchange would have expired. After the exchange of previously unvested stock option rights against PSRs, the vesting rules of the underlying SOPs applied equally with respect to the vesting of the PSRs. PSRs which were issued in exchange for vested stock options also vested immediately. Vested PSRs obtained in exchange for stock options from the SOP 06–10 can be exercised immediately. Vested PSRs obtained in exchange for stock options from SOP 09–13 and SOP 11–15 can only be exercised when the holding or waiting period of the stock options returned in exchange is or would have expired for its holder.

The exercise price of a PSR from PSP 03–15 equals the exercise price of the stock option right returned in exchange. The exercise of such a PSR simulates the exercise of the former stock option right in a so-called "ExerSale" transaction. Unlike the exercise of stock option rights, the holder of a PSR is not entitled to subscribe to a share of the Company by exercising a PSR. Upon the exercise of a PSR from PSP 03–15, the holder of the right obtains a claim against the Company for the payment of the PSR premium. The PSR premium is defined as the absolute difference between the then-current market price for Epigenomics shares and the exercise price of the PSR. Holders of PSRs are entitled to exercise their right during the exercise period when the strike price at the exercise date is higher than the base value. The strike price equals the arithmetic average of the Xetra closing rates for Epigenomics shares on the Frankfurt Stock Exchange on the five consecutive trading days prior to the exercise date. By exercising the PSR, the holder earns an entitlement to obtain the “PSR premium” from the Company. The PSR premium equals the absolute difference between strike price and base value of the right without any limitation. In contrast to the exercise of stock option rights, the exercise of PSRs is not compulsory subject to pre-defined exercise periods ("trading windows") and can be done at any time during the year. Nevertheless, the Executive Board and the Supervisory Board may stipulate compulsory exercise periods for holders of PSRs who are current employees of the Company. This applies in particular to holders of PSRs who are identified as "insiders" within the meaning of the German Securities Trading Act (*Wertpapierhandelsgesetz* – WpHG). It is left to the sole discretion of the Company’s Executive Board to define and announce such exercise periods to the employees of the Company holding PSRs. Such exercise periods as determined by the Executive Board will then always apply simultaneously to the Executive Board members.

A takeover or a mandatory offer for the shares of the Company in accordance with the German Securities Acquisition and Takeover Act (*Wertpapiererwerbs- und Übernahmegesetz* – WpÜG) entitles the holders of vested PSRs to exercise these rights in full. This also applies if the waiting period for these rights has not yet expired. The exercise right for the PSR holder shall apply only if the offered consideration consists solely of a cash settlement and if the bidder has gained control over the Company. In the event of a takeover, the PSR premium equals the difference between the cash amount which was finally offered to the shareholders as part of a takeover or a mandatory offer and the base value of the PSR.

Phantom stock program 2013 (PSP 2013), phantom stock program 2014 (PSP 2014), and phantom stock program 2015 (PSP 2015)

PSP 2013 was approved by the Executive Board and the Supervisory Board of the Company in May 2013. PSP 2014 was approved by the Executive Board and the Supervisory Board of the Company in May 2014. PSP 2015 was approved by the Executive Board and the Supervisory Board of the Company in September 2015 .

No further rights can be issued from PSP 2013, PSP 2014, and PSP 2015. The eligible beneficiaries of these programs were the members of the Executive Board and Group employees with an unterminated service or employment agreement with a Group company. The Executive Board decided on issuing PSRs from these programs to employees of the Company and to executives and employees of the subsidiaries. The Supervisory Board decided on issuing PSRs to the members of the Executive Board.

A certain number of PSRs granted to a beneficiary at a certain point in time is defined as a tranche. The PSRs of each tranche issued to beneficiaries who were not members of the Company's Executive Board at the issuance date started to vest from the beginning of the first full calendar quarter over the three years following their issuance in five equal parts, beginning with the first day of the fifth full calendar quarter after the issuance of the tranche. Thereafter, the further four of the five parts each vest after the end of the following four half-years. Thus, the last of the five parts vests after the last day of the twelfth full calendar quarter following issuance of the tranche and therefore at the end of a three-year waiting period. PSRs of each tranche can only be exercised after their vesting, but not before the end of the waiting period. The term of the PSRs begins with their issuance and ends five years after the beginning of their vesting period. Rights not exercised upon the end of their term expire without compensation. PSRs can generally be exercised at any time in the two years between the end of their waiting period and the end of their term ("exercise period"). Nevertheless, the Executive Board and Supervisory Board can stipulate adherence to timing restrictions in the exercise periods. This applies in particular to holders of rights who are identified by the Executive Board as an "insider" within the meaning of Section 15b WpHG. The Executive Board of the Company reserves the right to establish such timing restrictions in the exercise periods and to announce such restrictions in the exercise periods to rights holders who are employees of the Company at that date. Timing restrictions in exercise periods as announced by the Executive Board will always apply simultaneously to PSRs held by the Executive Board members themselves.

At the issuance of a PSR tranche, a so-called "base value" of the rights was determined. This base value equaled the average of the Xetra closing rates for Epigenomics shares on the Frankfurt stock exchange on the last five trading days before issuance. Holders of PSRs are entitled to exercise their right during the exercise period when the strike price at the exercise date is higher than the base value. The strike price equals the arithmetic average of the Xetra closing rates for Epigenomics shares on the Frankfurt Stock Exchange on the five consecutive trading days prior to the exercise date. By exercising the PSR, the holder earns an entitlement to obtain the "PSR premium" from the Company. The PSR premium equals the absolute difference between the strike price and the base value of the right up to a maximum of EUR 8.00 (PSP 2013), EUR 12.00 (PSP 2014), or EUR 15.00 (PSP 2015).

Any PSRs held by a beneficiary that have not yet vested expire without compensation upon termination of the service or employment agreement by the beneficiary or if the service or employment agreement has been terminated by the Company for cause. Any PSRs held by a beneficiary that have not yet vested shall remain valid if the Company terminates the service or employment agreement due to operational reasons. If the service or employment agreement is terminated by mutual consent, it is left to the sole discretion of the Executive Board or the Supervisory Board to decide whether those PSRs held by the beneficiary that have not yet vested at that point in time remain valid. If holders of vested PSRs leave the Company before the expiry date of those rights, they remain entitled to such vested rights until the expiry date. In such case, the strike price of their rights from PSP 2014 and PSP 2015 will be limited to the arithmetic average of the Xetra closing rates on the Frankfurt stock exchange on the five consecutive trading days prior to the final termination date of their employment agreement with the Company.

A takeover or a mandatory offer for the shares of the Company in accordance with the WpÜG entitles the holders of vested PSRs to exercise these rights in full. This also applies if the waiting period for these rights has not yet expired. The exercise right for the PSR holder will only apply if the offered consideration consists solely of a cash settlement and if the bidder has gained control over the Company. In the event of a takeover, the PSR premium equals the difference between the cash amount which was finally offered to the shareholders as part of a takeover or a mandatory offer and the base value of the PSR. However, the limitation of the PSR premium to EUR 8.00 (PSP 2013), EUR 12.00 (PSP 2014), and EUR 15.00 (PSP 2015) will still apply in such case.

43 Phantom Stock Programs – Outstanding Rights

Phantom stock program 03–15 (PSP 03–15)

PSP 03-15 Beneficiaries	Year	Rights held as of Jan. 1	Rights				Reclassification of beneficiary	Rights held as of Dec. 31
			granted	expired	forfeited	exercised		
Dr. Thomas Taapken (CEO/CFO) *until June 30, 2016*	**2017**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	2016	40,000	0	0	0	0	-40,000	0
Dr. Uwe Staub (COO)	**2017**	**28,800**	**0**	**6,400**	**0**	**0**	**0**	**22,400**
	2016	38,800	0	10,000	0	0	0	28,800
Other beneficiaries	**2017**	**119,413**	**0**	**27,263**	**0**	**16,350**	**0**	**75,800**
	2016	116,079	0	16,666	0	20,000	40,000	119,413
Total	**2017**	**148,213**	**0**	**33,663**	**0**	**16,350**	**0**	**98,200**
	2016	194,879	0	26,666	0	20,000	0	148,213
Average base value (EUR/right)	**2017**	**8.53**	**n/a**	**18.89**	**n/a**	**2.51**	**n/a**	**5.98**
	2016	8.66	n/a	13.63	n/a	3.03	n/a	8.53

Phantom stock program 2013 (PSP 2013)

PSP 2013 Beneficiaries	Year	Rights held as of Jan. 1	Rights				Reclassification of beneficiary	Rights held as of Dec. 31
			granted	expired	forfeited	exercised		
Dr. Thomas Taapken (CEO/CFO) *until June 30, 2016*	**2017**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	2016	110,000	0	0	0	0	-110,000	0
Dr. Uwe Staub (COO)	**2017**	**20,000**	**0**	**0**	**0**	**0**	**0**	**20,000**
	2016	115,000	0	0	0	95,000	0	20,000
Other beneficiaries	**2017**	**136,000**	**0**	**0**	**0**	**58,000**	**0**	**78,000**
	2016	497,000	0	0	8,000	463,000	110,000	136,000
Total	**2017**	**156,000**	**0**	**0**	**0**	**58,000**	**0**	**98,000**
	2016	722,000	0	0	8,000	558,000	0	156,000
Average base value (EUR/right)	**2017**	**2.55**	**n/a**	**n/a**	**n/a**	**2.29**	**n/a**	**2.70**
	2016	1.89	n/a	n/a	4.05	1.69	n/a	2.55

Phantom stock program 2014 (PSP 2014)

PSP 2014 Beneficiaries	Year	Rights held as of Jan. 1	Rights				Reclassification of beneficiary	Rights held as of Dec. 31
			granted	expired	forfeited	exercised		
Dr. Thomas Taapken	**2017**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

(CEO/CFO) *until June 30, 2016*	2016	73,333	0	0	0	0	-73,333	0
Dr. Uwe Staub (COO)	**2017**	**60,000**	**0**	**0**	**0**	**0**	**0**	**60,000**
	2016	60,000	0	0	0	0	0	60,000
Other beneficiaries	**2017**	**271,633**	**0**	**0**	**0**	**7,800**	**0**	**263,833**
	2016	202,500	0	0	4,200	0	73,333	271,633
Total	**2017**	**331,633**	**0**	**0**	**0**	**7,800**	**0**	**323,833**
	2016	335,833	0	0	4,200	0	0	331,633
Average base value (EUR/right)	**2017**	**3.23**	**n/a**	**n/a**	**n/a**	**3.23**	**n/a**	**3.23**
	2016	3.23	n/a	n/a	3.23	n/a	n/a	3.23

Phantom stock program 2015 (PSP 2015)

PSP 2015			Rights					
Beneficiaries	Year	Rights held as of Jan. 1	granted	expired	forfeited	exercised	Reclassification of beneficiary	Rights held as of Dec. 31
Dr. Thomas Taapken (CEO/CFO) *until June 30, 2016*	**2017**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	2016	59,000	0	0	0	0	-59,000	0
Dr. Uwe Staub (COO)	**2017**	**24,000**	**0**	**0**	**9,600**	**0**	**0**	**14,400**
	2016	24,000	0	0	0	0	0	24,000
Other beneficiaries	**2017**	**84,000**	**0**	**0**	**0**	**0**	**0**	**84,000**
	2016	25,000	0	0	0	0	59,000	84,000
Total	**2017**	**108,000**	**0**	**0**	**9,600**	**0**	**0**	**98,400**
	2016	108,000	0	0	0	0	0	108,000
Average base value (EUR/right)	**2017**	**5.05**	**n/a**	**n/a**	**5.05**	**n/a**	**n/a**	**5.05**
	2016	5.05	n/a	n/a	n/a	n/a	n/a	5.05

44 Phantom Stock Programs – Valuation Parameters

The fair value of all PSR was calculated by using the binomial approach based on the Cox-Ross-Rubinstein model. For PSP 03–15 it was assumed that the rights will be exercised after their waiting period if the market price of the shares exceeds the base value of the PSR by more than 10%. For PSP 2013, PSP 2014, and PSP 2015 it was assumed that the rights will be exercised in the fourth year after the grant date if the market price of the shares exceeds the base value of the PSR by more than 20% or in the fifth year after the grant date if the market price of the shares exceeds the base value of the PSR by more than 10%. An earlier exercise of the rights is not permitted under the program terms and conditions.

The following table gives detailed information on all programs and the applied valuation parameters.

	PSP 03–15		**PSP 2013**		**PSP 2014**		**PSP 2015**	
	Dec. 31, 2016	Dec. 31, 2017	Dec. 31, 2016	Dec. 31, 2017	Dec. 31, 2016	Dec. 31, 2017	Dec. 31, 2016	Dec. 31, 2017

Total number of outstanding PSRs	148,213	98,200	156,000	98,000	331,633	323,833	108,000	98,400
thereof vested	*148,213*	*98,200*	*150,000*	*98,000*	*228,733*	*323,833*	*68,800*	*88,400*
thereof exercisable	*148,213*	*98,200*	*120,000*	*98,000*	*0*	*323,833*	*0*	*0*
Base value of PSR (in EUR)	2.51–19.35	2.51–11.05	1.62–6.45	1.62–6.45	3.23–3.70	3.23–3.70	5.05	5.05
Aggregate adjusted fair value of PSRs (in EUR thousand)	130	76	375	202	566	329	50	39
Aggregate maximum payments if PSRs are exercised (in EUR thousand)	n/a[1]	n/a[1]	1,248	784	3,204	3,113	735	591
Weighted average term of outstanding rights (in years)	1.26	0.62	1.78	0.71	2.80	1.78	3.80	2.79
Weighted average fair value (EUR/PSR)	0.88	0.77	2.41	2.06	1.82	1.02	0.70	0.42
Applied share price volatility in %	60.14	44.58	84.65	56.85	82.51	58.66	84.56	74.95
Risk-free interest rate in %	-0.83	-0.72	-0.82	-0.72	-0.74	-0.68	-0.64	-0.52
Assumed staff turnover in %	0.0	0.0	0.2	0.0	1.4	0.0	1.7	0.47
Expiry dates	Jan. 1, 2017 – Mar. 1, 2019	Jan. 1, 2018 – Jan. 1, 2019	Jul. 1, 2018 – Apr. 1, 2019	Jul. 1, 2018 – Apr. 1, 2019	Oct. 1, 2019	Oct. 1, 2019	Oct. 1, 2020	Oct. 1, 2020

[1] The aggregate maximum payment to be made by the Company upon exercise of all outstanding rights under PSP 03–15 cannot be calculated as the program does not provide for a cap on the PSR premium.

The risk-free interest rates are derived from the yield curve of German government bonds at the valuation date. The volatility of the share price can be derived from the historical volatility of the shares (in accordance with Bloomberg data) over the most recent past period equaling the remaining term of the rights. For adjustment purposes, a constant staff turnover was assumed based on the historical turnover of the Company's staff over the past three years. No dividend payments were assumed during the term of the rights (*i.e.*, the assumed dividend yield was 0%).

The aggregate adjusted fair value of the rights granted under all programs amounted to EUR 647 thousand as of December 31, 2017 (December 31, 2016: EUR 1,122 thousand). This was recognized as a non-current provision of EUR 0 thousand and a current provision of EUR 647 thousand as of the balance sheet date.

45 Information on the Executive Board and the Supervisory Board of the Company and their Remuneration

In the reporting year, the Company's Executive Board consisted of Greg Hamilton as CEO and Dr. Uwe Staub as COO. Effective December 1, 2017, the Executive Board was expanded to include Dr. Jorge Garces, Ph.D., as CSO. Effective January 1, 2018, Albert Weber has been appointed as Executive Vice President Finance and member of the Executive Board of the Company (in charge of the Company's financial, accounting, and controlling departments).

The remuneration of the members of the Company's Executive Board comprises a fixed and a variable component. The variable amount is determined on the basis of a variety of criteria, including the achievement of individual performance targets and Company performance targets, which are set by the Supervisory Board on a yearly basis. Apart from the fixed and the variable component, a third remuneration component consists of a long-term performance-based remuneration in the form of phantom stock rights (PSRs) and stock options. In addition, the Executive Board members are beneficiaries of a D&O insurance policy with excess set at the statutory minimum amount. They also receive full reimbursement of their business travel expenses and other incidental benefits detailed in the remuneration report section of the Group management report 2017.

In 2017, total remuneration of the members of the Executive Board based on the benefits granted amounted to EUR 1,224 thousand (2016: EUR 1,616 thousand) and comprised:

EUR thousand	**2016**	**2017**
Fixed remuneration	734	786
One-year variable remuneration	400	269
Multi-year variable remuneration	482	169
Total remuneration (granted benefits)	**1,616**	**1,224**
thereof severance payments	688	0

The multi-year variable remuneration of the Executive Board members in 2017 comprised 170,000 stock options (2016: 181,580 PSRs).

Based on the allocations (cash payments), the total remuneration of the members of the Executive Board amounted to EUR 980 thousand (2016: EUR 2,125 thousand) and comprised:

EUR thousand	**2016**	**2017**
Fixed remuneration	732	786
One-year variable remuneration	279	194
Multi-year variable remuneration	1,113	0
Total remuneration (allocations)	**2,125**	**980**
thereof severance payments	688	0

In the event of a change of control, all Executive Board members have a special right to terminate their service agreements and would in such case be entitled to receive payment of their fixed remuneration for the remaining term of their service agreements. In no case will such payment exceed 150% of the severance payment cap in accordance with section 4.2.3 of the German Corporate Governance Code.

The Supervisory Board of the Company remained unchanged in the reporting year and comprised the following members: Heino von Prondzynski, Einsiedeln (Switzerland) as Chairman, Ann Clare Kessler, Ph.D., Rancho Santa

Fe, CA (U.S.A.), and Prof. Dr. Günther Reiter, Pfullingen (Germany) as Deputy Chairman, and Dr. Helge Lubenow, Langenfeld/Rheinland (Germany).

The remuneration structure for the Supervisory Board is based on an annual cash retainer ("fixed remuneration") and meeting-related payments ("variable remuneration"). The remuneration does not include any performance-related elements or long-term incentive components. In 2017, total remuneration of the members of the Supervisory Board amounted to EUR 248 thousand (2016: EUR 235 thousand) and comprised:

EUR thousand	2016	2017
Fixed remuneration	193	200
Variable remuneration	42	48
Total remuneration	**235**	**248**

Further details to the composition of the Executive Board and the Supervisory Board and details of the remuneration of their members in the reporting year can be found in the "Remuneration Report" section of the Group management report 2017.

46 Other Financial Obligations

EUR thousand	Term < 1 year	Term 1–5 years
Financial obligations from commercial lease agreements	120	151
Financial obligations from licensing agreements	155	41
Financial obligations from operating rental, lease, maintenance and service agreements	30	2
Financial obligations from manufacturing orders	99	0
Financial obligations from the purchase of goods and services	242	0
Total financial obligations	**646**	**194**

For the Epigenomics Group, obligations from commercial lease agreements arise from a lease at the Berlin location. For the office space at Geneststrasse 5, there is a fixed-term lease with a term expiring on April 30, 2020. The Company has the option to extend the lease by six more years. In the reporting year the total expenses for lease payments and incidental costs under this agreement amounted to EUR 120 thousand (2016: EUR 119 thousand).

The U.S. subsidiary is located in Seattle, WA, with further offices in Germantown, MD. In both locations the Company has rented office space which can be terminated on a short-term basis.

In the previous years, Epigenomics acquired numerous exclusive licenses to third-party intellectual property. This means that there are some obligations to pay minimum license fees in years to come. Additionally, Epigenomics has the obligation to reimburse most of those third parties for costs incurred in connection with the maintenance and the prosecution of the licensed rights. Those costs are mainly fees for patent attorneys or patent office actions and their amounts and timing are difficult to forecast.

47 Information on the Company’s Auditor Appointed by the General Shareholders’ Meeting

At the Company’s Annual General Shareholders’ Meeting in May 2017, Baker Tilly AG Wirtschaftsprüfungsgesellschaft (now Baker Tilly GmbH & Co. KG Wirtschaftsprüfungsgesellschaft) was engaged to audit the Company’s annual financial statements and consolidated financial statements for fiscal year 2017. During the reporting year, a total amount of EUR 141 thousand (2016: EUR 180 thousand) was expensed for miscellaneous services of this auditing firm for Epigenomics AG. Details are shown in the following table:

EUR thousand	2016	2017
Costs for audit services	145	141
Costs for other assurance services	15	0
Costs for other services	20	0
Total	**180**	**141**

The costs disclosed for audit services relate to the audits of the separate financial statements of Epigenomics AG in accordance with German GAAP as well as the consolidated financial statements for the Epigenomics Group in accordance with IFRSs, and on reviews of the interim statements.

48 Declaration of the Executive Board and the Supervisory Board of Epigenomics AG pursuant to section 161 AktG on the German Corporate Governance Code

In October 2017, the Executive Board and the Supervisory Board of the Company issued an updated declaration of compliance pursuant to section 161 of the German Stock Corporation Act (*Aktiengesetz* – AktG). The declaration was published on the Company's website *(www.epigenomics.com/news-investors/corporate-governance/)*.

49 Information on Other Transactions with Related Parties

As of the reporting date, the Company's liabilities due to members of its Executive Board amounted to EUR 84 thousand (December 31, 2016: EUR 4 thousand) and liabilities due to members of its Supervisory Board amounted to EUR 32 thousand (December 31, 2016: EUR 144 thousand). There were no other transactions with related parties during the reporting year.

50 Report on Post-Balance Sheet Date Events

No events occurred after the balance sheet date which could materially affect the Company's net assets, financial position and results of operations or its risk assessment.

51 Approval for Publication

These consolidated financial statements were approved and cleared for publication by the Executive Board of the Company on March 16, 2018.

Berlin, March 16, 2018

The Executive Board

Independent Auditor's Report

To Epigenomics AG, Berlin

REPORT ON THE AUDIT OF THE CONSOLIDATED FINANCIAL STATEMENTS AND THE CONSOLIDATED MANAGEMENT REPORT

Audit opinions

We have audited the consolidated financial statements of Epigenomics AG and its subsidiary (the Group) – comprising the consolidated balance sheet as of December 31, 2017, the consolidated statement of comprehensive income, the consolidated statement of changes in equity and the consolidated cash flow statement for the fiscal year from January 1, 2017 through December 31, 2017 as well as the Notes to the Consolidated Financial Statements, including a summary of significant accounting methods. In addition, we have audited Epigenomics AG's Consolidated Management Report for the fiscal year from January 1, 2017 through December 31, 2017.

In our opinion, on the basis of the knowledge obtained during the audit,

- the attached consolidated financial statements comply, in all material respects, with the IFRS as adopted by the EU, and the additional requirements of German commercial law pursuant to Art. 315e Sec. 1 HGB (German Commercial Code) and provides, in compliance with these requirements, a true and fair view of the Group's assets, liabilities, and financial position as of December 31, 2017, and of its profit situation for the fiscal year from January 1, 2017 through December 31, 2017; and
- the attached Consolidated Management Report as a whole provides a true and fair view of the Group's position. In all material respects, this Consolidated Management Report is consistent with the consolidated financial statements, complies with German legal requirements and appropriately presents the opportunities and risks of the Group's future development.

Pursuant to Art. 322 Sec. 3 sentence 1 HGB, we declare that our audit has not led to any reservations relating to the consolidated financial statements' and the Consolidated Management Report's legal compliance.

Basis for the audit opinion

We conducted our audit of the consolidated financial statements and of the Consolidated Management Report in accordance with Art. 317 HGB and the EU Audit Regulation (No. 537/2014, hereinafter referred to as "EU Audit Regulation") and in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the *Institut der Wirtschaftsprüfer* (Institute of Public Auditors in Germany; "IDW"). Our responsibilities under those requirements and principles are further described in the section "Auditor's Responsibilities for the Audit of the Consolidated Financial Statements and of the Consolidated Management Report" in our auditor's report. We are independent from the Group companies in accordance with the requirements of European law as well as German commercial and professional law, and we have fulfilled our other German professional responsibilities in accordance with these requirements. Furthermore, we declare in accordance with Article 10 Sec. 2 lit. f) of the EU Audit Regulation that we have not provided any non-audit services prohibited under Article 5 Sec. 1 of the EU Audit Regulation. We believe the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions on the consolidated financial statements and on the Consolidated Management Report.

Material uncertainties in connection with the continuation as a going concern

We refer to the section "General Principles" in the Notes to the Consolidated Financial Statements as well as the information in the section "Financial opportunities and risks" of the Consolidated Management Report, where the legal representatives explain that the Company, without a successful implementation of capital measures in 2018 and/or an extension of the term or amendment of the Company's bond conditions, as of December 31, 2018 is expected to no longer have the required liquidity in order to ensure a full or even partial repayment of the bond. Irrespective of a possible repayment of the convertible bond further capital market measures must be implemented until the beginning of 2019 in order to ensure the continue as a going concern beyond the beginning of 2019. As explained in the section

"General Principles" in the Notes to the Consolidated Financial Statements as well as in the section "Financial opportunities and risks" in the Consolidated Management Report, this reveals the existence of a material uncertainty which may raise doubts as to the Group's ability to continue as a going concern and poses a risk to the Group's continued existence as a going concern pursuant to Art. 322 Sec. 2 sentence 3 HGB. We have not modified our audit opinion with regard to these facts.

Key audit matters in the audit of the consolidated financial statements

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements for the fiscal year from January 1, 2017 through December 31, 2017. These matters have been taken into account in connection with our audit of the consolidated financial statements as a whole, and in forming our audit opinion related herewith; we do not provide a separate audit opinion on these matters.

From our perspective, the following matters were of most significance during our audit:

- Revenue recognition
- Share-based compensation.

We have structured our presentation of these key audit matters as follows:

1.) Facts and problems

2.) Audit approach and findings

3.) Reference to further information

In the following, we will present these key audit matters:

Revenue recognition:

1. During the fiscal year, the Company recognized sales revenues in the amount of EUR 1.9 million. Sales revenues are one of the most significant financial performance indicators in the capital market communication. From these sales revenues, sales of the only main product account for EUR 0.5 million and license revenues account for EUR 1.3 million. Product sales are mainly realized by means of sales to few major customers. In general, there are framework agreements with these customers which may be supplemented by further agreements. These agreements may be decisive as to whether a sale has been realized. An incomplete presentation of these additional agreements within the scope of revenue recognition poses a risk, which is why we believe this matter is of particular importance.

2. We have convinced ourselves from the correct sales recognition by means of the framework agreements, external confirmations as to possibly existing additional arrangements, proofs of delivery as well as the outgoing invoices and the related incoming payments. We could convince ourselves that any conditions additionally agreed upon with the major customers have been appropriately processed during the revenue recognition's assessment.

3. The Company's statements on the revenue recognition are contained in the Consolidated Management Report in section "Financials – Result of Operations" and in the Notes to the Consolidated Financial Statements in the section "Notes to the Consolidated Statement of Profit or Loss and Other Comprehensive Income – 1 Revenue".

Share-based compensation:

1. As of the balance sheet date, both the stock option programs (AOP - "Equity settled share based payments") and the phantom stock programs (PSP – "Cash settled options") have been recognized in the Company's consolidated financial statements.

   During the reporting year, further commitments for AOPs have been granted to employees.

   The AOPs are presented in the consolidated financial statements under the positions "personnel expenses" and "equity" and PSPs are presented under the relevant expense positions (cost of sales, research and

development costs as well as distribution and administration costs) as well as the position “other provisions”. An amount of EUR 0.1 million of AOPs and EUR 0.5 million of PSPs has been recognized through profit and loss.

The Company uses an external expert for the valuation of AOPs and PSPs. From our perspective, share-based remuneration programs were of particular importance as they depend to a major extent from the legal representatives’ assessments and estimates and are thus afflicted by uncertainties.

2. Based on the knowledge that estimated values provide for an increased risk of misstatements in the financial reporting and that the legal representatives’ assessment decisions have a direct and clear impact on the consolidated financial statements, we have convinced ourselves from the valuation parameters’ (such as risk-free interest and the shares’ volatility) appropriateness by means of contract and company data and by involving a specialist’s expertise and have assessed the new commitments’ valuations’ appropriateness. Based on that, we audited the accounting effect in the consolidated statement of comprehensive income (consolidated income statement and other results) and in the consolidated balance sheet. The management board’s underlying estimates and assessments made are within a reasonable range.
3. The Company’s information on the stock option program’s valuation is contained in the Notes to the Consolidated Financial Statements in section “39 Description of Stock Option Programs et. seq.” and in the Consolidated Management Report in the sections “Remuneration Report” and “Conditional Capital”.

Other information

The legal representatives are responsible for other information. Other information comprises:

- Responsibility statement by the legal representatives in the 2017 annual report’s section “Responsibility Statement”
- Compliance statement in Section 10 of the 2017 Consolidated Management Report
- Declaration on the continuation as a going concern in Section 10 of the 2017 Consolidated Management Report
- The section “Foreword by the Executive Board” in the 2017 annual report
- The Section “Our share” in the 2017 annual report

The supervisory board is responsible for the following other information:

- The section “Report of the Supervisory Board” in the 2017 annual report.

Our audit opinions on the consolidated financial statements and on the Consolidated Management Report do not cover the other information, and consequently we do not express an audit opinion or any other form of assurance conclusion thereon.

In connection with our audit, our responsibility is to read the other information and, in so doing, to assess whether the other information

- is materially inconsistent with the consolidated financial statements, with the Consolidated Management Report or our knowledge obtained during the audit; or
- otherwise seem to have been materially misstated.

Responsibilities of the Legal Representatives and the Supervisory Board for the Consolidated Financial Statements and the Consolidated Management Report

The legal representatives are responsible for the preparation of the consolidated financial statements that comply, in all material respects, with IFRS as adopted by the EU and the additional requirements of German commercial law pursuant to Art. 315e Sec. 1 HGB and that the consolidated financial statements, in compliance with these requirements, provide a true and fair view of the Group’s assets, liabilities, financial position, and profit situation.

Furthermore, the legal representatives are responsible for such internal controls they have determined as being necessary in order to provide for the preparation of consolidated financial statements that are free from material misstatements, whether due to fraud or error.

In preparing the consolidated financial statements, the legal representatives are responsible to assess the Group's ability to continue as a going concern. They also have the responsibility to disclose, as applicable, matters related to the continuation as a going concern. Furthermore, they are responsible for financial reporting based on the going concern principle unless there is an intention to liquidate the Group or to cease operations, or there is no realistic alternative but to do so.

Furthermore, the legal representatives are responsible for the preparation of the Consolidated Management Report that, as a whole, provides a true and fair view of the Group's position and is, in all material respects, consistent with the consolidated financial statements, complies with German legal requirements, and appropriately presents the opportunities and risks of future development. Furthermore, the legal representatives are responsible for such arrangements and measures (systems) they have deemed necessary in order to provide for the preparation of a Consolidated Management Report that is in accordance with applicable German legal requirements, and in order to provide sufficiently appropriate evidence for the assertions in the Consolidated Management Report.

The supervisory board is responsible to monitor the Group's financial reporting process for the preparation of the consolidated financial statements and of the Consolidated Management Report.

Auditor's Responsibilities for the Audit of the Consolidated Financial Statements and of the Consolidated Management Report

Our objective is to obtain reasonable assurance as to whether the consolidated financial statements as a whole are free from any material misstatements, whether due to fraud or error, and whether the Consolidated Management Report as a whole presents a true and fair view of the Group's position and is, in all material respects, consistent with the consolidated financial statements and the knowledge obtained during the audit, complies with German legal requirements and appropriately presents the opportunities and risks of future development, as well as to issue an auditor's report that includes our audit opinions on the consolidated financial statements and on the Consolidated Management Report.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Art. 317 HGB and the EU Audit Regulation and in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the IDW will always detect any material misstatement. Misstatements can arise from fraud or error and are considered material if they, individually or in the aggregate, could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements and the Consolidated Management Report.

Throughout the entire audit, we exercise professional judgment and maintain professional skepticism. We also:

- identify and assess the risks of material misstatements in the consolidated financial statements and the Consolidated Management Report, whether due to fraud or error, plan and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our audit opinions. The risk of not detecting any material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal controls;
- obtain an understanding of the internal control system relevant for the audit of the consolidated financial statements and of arrangements and measures relevant for the audit of the Consolidated Management Report in order to plan audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an audit opinion on the effectiveness of these systems;
- evaluate the appropriateness of accounting policies used by the legal representatives and the reasonableness of estimates made by the legal representatives as well as the related disclosures;

- draw conclusions on the appropriateness of the legal representatives' application of the going concern principle and, based on the audit evidence obtained, whether a material uncertainty exists in connection with events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in the auditor's report to the related disclosures in the consolidated financial statements and in the Consolidated Management Report or, if such disclosures are inadequate, to modify our respective audit opinions. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern;
- evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements present the underlying transactions and events in a manner that the consolidated financial statements provide a true and fair view of the Group's assets, liabilities, financial position and profit situation in compliance with IFRS as adopted by the EU and the additional requirements of German commercial law pursuant to Art. 315e Sec. 1 HGB;
- obtain sufficiently appropriate audit evidence regarding the financial information of the entities or business activities within the Group in order to express audit opinions on the consolidated financial statements and on the Consolidated Management Report. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinions;
- evaluate the consistency of the Consolidated Management Report with the consolidated financial statements, its conformity with German law, and its presentation of the Group's position;
- perform audit procedures on the prospective information presented by the legal representatives in the Consolidated Management Report. On the basis of sufficiently appropriate audit evidence we evaluate, in particular, the significant assumptions used by the legal representatives as a basis for the prospective information, and evaluate the proper derivation of the prospective information from these assumptions. We do not express a separate audit opinion on the prospective information and on the underlying assumptions. There is a substantial unavoidable risk that future events will differ significantly from the prospective information.

We discuss with those charged with governance, *inter alia*, the planned scope and timing of the audit as well as significant audit findings, including any deficiencies in the internal control system we identify during our audit.

We also provide those charged with governance with a declaration that we have complied with the relevant independence requirements, and discuss with them all relationships and other circumstances that may reasonably be expected to affect our independence, as well as the related protective measures taken in this regard.

From the circumstances discussed with those charged with governance, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current reporting period and therefore constitute key audit matters. We describe these circumstances in our auditor's report unless any law or other regulation precludes the circumstance's public disclosure.

OTHER LEGAL AND REGULATORY REQUIREMENTS

Further Information pursuant to Article 10 of the EU Audit Regulation

We were elected as auditor by the annual general meeting on May 30, 2017. We were engaged by the supervisory board on December 8, 2017. We have been the auditor of Epigenomics AG, Berlin, without interruption since the fiscal year 2015.

We declare that the audit opinions expressed in this auditor's report are consistent with the additional report to the audit committee pursuant to Article 11 of the EU Audit Regulation (long-form audit report).

RESPONSIBLE AUDITOR

The German Public Accountant responsible for the audit is Klaus Biersack.

Munich, March 16, 2018

Baker Tilly GmbH & Co. KG

Wirtschaftsprüfungsgesellschaft
(Düsseldorf)
(formerly Baker Tilly AG Wirtschaftsprüfungsgesellschaft)

Weissinger	Biersack
Wirtschaftsprüfer	Wirtschaftsprüfer
(German Public Auditor)	(German Public Auditor)

Disclaimer

This Document is an English translation of the official signed leading German version.

Audited Financial Statements of Epigenomics AG Prepared in Accordance with HGB as of and for the Financial Year Ended December 31, 2018

Balance Sheet of Epigenomics AG (HGB) as of December 31, 2018

The balance sheet of Epigenomics AG is structured in accordance with section 266 of the German Commercial Code (*Handelsgesetzbuch* – HGB).

ASSETS		Dec. 31, 2018 EUR	Dec. 31, 2017 (EUR thousand)
A.	**FIXED ASSETS**	**1.592.197,83**	**1.682**
	I. Intangible fixed assets	143.700,67	203
	1. Purchased concessions, industrial and similar rights and assets, licenses in such rights and assets	143.700,67	203
	II. Tangible fixed assets	661.497,16	692
	1. Leasehold improvements	342.375,00	383
	2. Technical equipment and machinery	292.052,30	276
	3. Other equipment, operating and office equipment	27.069,86	33
	III. Long-term financial assets	787.000,00	787
	1. Shares in affiliated companies	787.000,00	787
B.	**CURRENT ASSETS**	**27.693.933,10**	**21.855**
	I. Inventories	250.316,12	293
	1. Raw materials, consumables and supplies	123.240,39	71
	2. Work in progress	83.920,00	148
	3. Finished goods	43.155,73	74
	II. Receivables and other assets	10.464.026,33	8.019
	1. Trade receivables	66.117,80	866
	2. Receivables from affiliated companies	10.169.407,31	5.982
	2. Other assets	228.501,22	1.171
	III. Securities	652.500,00	905
	1. Other securities	652.500,00	905
	IV. Cash-in-hand and bank balances	16.327.090,65	12.638
C.	**PREPAID EXPENSES**	**240.376,32**	**806**
	TOTAL ASSETS	**29.526.507,25**	**24.343**

		Dec. 31, 2018	Dec. 31, 2017
EQUITY AND LIABILITIES		**EUR**	**(EUR thousand)**
A.	**EQUITY**	**26.913.020,04**	**15.077**
	I. Subscribed capital	36.021.540,00	24.014
	Conditional capital	*12.007.180,00*	*11.368*
	II. Capital reserve	52.778.160,21	42.467
	III. Accumulated losses brought forward	-51.404.283,23	-44.376
	IV. Net loss for the year	-10.482.396,94	-7.028
B.	**PROVISIONS**	**1.524.994,95**	**1.380**
	1. Provisions for personnel expenses	970.414,13	867
	2. Other provisions	554.580,82	513
	- of which non-current	*32.947,57*	*32*
C.	**LIABILITIES**	**1.065.971,89**	**7.886**
	1. Bonds	0,00	7.100
	- of which convertible	*0,00*	*7.100*
	2. Payments received on account of orders	26.516,50	0
	3. Trade payables	819.599,57	603
	4. Other liabilities	219.855,82	183
D.	**DEFERRED INCOME**	**22.520,37**	**0**
	TOTAL EQUITY AND LIABILITIES	**29.526.507,25**	**24.343**

Income Statement of Epigenomics AG (HGB) 2018

The income statement of Epigenomics AG is structured in accordance with section 275 (2) of the German Commercial Code (*Handelsgesetzbuch* – HGB)

	2018	2017
	EUR	EUR thousand
Gross revenue	**3.301.736,74**	**4.117**
1. Sales	**1.882.059,02**	**1.986**
2. Decrease (previous year: increase) in stock of finished goods and work in progress	**-95.706,59**	**108**
3. Other operating income	**1.515.384,31**	**2.023**
of which currency translation gains	*704.068,42*	*0*
4. Cost of materials	**-628.368,82**	**-791**
a) Cost of raw materials, consumables and supplies	-616.712,86	-755
b) Cost of purchased services	-11.655,96	-36
5. Personnel expenses	**-4.140.536,14**	**-3.556**
a) Wages and salaries	-3.765.970,57	-3.149
b) Social security	-374.565,57	-407
6. Depreciation, amortization and write-downs	**-181.615,46**	**-225**
of intangible and tangible fixed assets		-225
7. Other operating expenses	**-8.100.011,10**	**-6.427**
of which currency translation losses	*-305.163,93*	-593
8. Other interest and similar income	**17.567,75**	**17**
9. Write-downs of long-term financial assets and securities classified as current assets	**-252.250,00**	**0**
10. Interest and similar expenses	**-498.919,91**	**-163**
11. Net loss for the year	**-10.482.396,94**	**-7.028**

Notes to the annual financial statements as of December 31, 2018

1 General information on the annual financial statements

Epigenomics AG, Geneststr. 5, 10829 Berlin, Germany, has its registered office in Berlin and is entered into the commercial register (*Handelsregister*) of the Local Court (*Amtsgericht*) of Berlin under HRB 75861.

The Company's fiscal year corresponds to the calendar year and covered the period from January 1 to December 31, 2018. The prior-year disclosures relate to the period from January 1 to December 31, 2017.

These annual financial statements have been prepared on the basis of the accounting and measurement requirements of the German Commercial Code (*Handelsgesetzbuch* – HGB), as amended by the German Accounting Directive Implementation Act (*Bilanzrichtlinie-Umsetzungsgesetz* – BilRUG), the supplementary requirements of the German Stock Corporation Act (*Aktiengesetz* – AktG), and the Articles of Association.

The "going concern" principle pursuant to section 252 (1) no. 2 HGB was applied.

The Company is a large corporation within the meaning of section 267 (3) sentence 2 HGB since its shares have been listed in the Prime Standard segment of the Frankfurt Stock Exchange since July 19, 2004 (ticker symbol: ECX). The shares are traded under German securities identification number (WKN) A11QW5 and international securities identification number (ISIN) DE000A11QW50.

2 Accounting policies

The accounting policies applied in preparing these annual financial statements were unchanged as against the previous year. The balance sheet classification complies with section 266 (2) and (3) HGB.

Please note the following regarding the measurement of individual items of assets and liabilities:

Within **fixed assets**, in the interests of clear and understandable presentation "leasehold improvements" are reported under tangible fixed assets in accordance with section 265 (6) HGB.

Intangible assets comprise purchased software licenses (e.g., for databases) and purchased licenses to third-party patents. They are carried at cost and amortized over their useful lives (3–20 years) using the straight-line method. Write-downs are recognized where required. The useful lives of licenses and third-party patents are determined by the duration of the underlying intellectual property rights or the term of the license agreement, up to a maximum of 20 years. The useful life commences at the priority or filing date. The option to capitalize development costs was not exercised.

Tangible fixed assets are carried at cost less depreciation. Borrowing costs are not included. Tangible fixed assets are depreciated using the straight-line method, applying

a useful life of between 5 and 10 years depending on the asset class. Leasehold improvements are depreciated over a maximum of 12 years based on the remaining term of the underlying lease and any extension options.

Tangible fixed assets are broken down into leasehold improvements, technical equipment and machinery, and other equipment, operating and office equipment. Technical equipment comprises laboratory fittings, measuring, test and analysis instruments, production equipment, and all IT.

In accordance with tax law, low-value assets are written off in full in the year in which they are acquired and are treated as disposals in the statement of changes in fixed assets.

Investment grants and subsidies received in prior periods were offset directly against the subsidized asset as a retrospective reduction in acquisition costs. The grants and subsidies are amortized through profit or loss as a reduction in the corresponding depreciation expense.

Long-term financial assets are carried at the lower of cost or fair value as of the reporting date. The equity investment in a subsidiary is reported under long-term financial assets.

Write-downs are recognized on intangible assets, tangible fixed assets and long-term financial assets if the impairment is expected to be permanent. Write-downs are reversed up to a maximum of amortized cost if the reasons for impairment no longer apply.

Raw materials, consumables and supplies are carried at cost. Write-downs are recognized as necessary pursuant to the strict principle of lower of cost or market value.

Work in progress and finished goods are carried at cost, taking into account the strict principle of lower of cost or market value. Cost includes direct materials and production costs, overheads for materials and production, and depreciation attributable to production. It does not include borrowing costs.

Receivables and other assets are carried at cost, taking into account the strict principle of lower of cost or market value. Adequate specific valuation allowances are recognized to take account of risk exposures.

Other securities classified as current assets are carried at the lower of cost or market or fair value. Write-downs are reversed up to a maximum of amortized cost if the reasons for impairment no longer apply.

Cash and cash equivalents are carried at their principal amount.

Prepaid expenses are recognized for payments made in advance that represent an expense for future periods.

Deferred tax assets and liabilities are offset. Excess deferred tax assets are not recognized, in line with the option under section 274 (1) sentence 2 HGB.

Provisions for personnel expenses and **other provisions** cover all obligations and identifiable risks in the required settlement amount dictated by prudent business judgment. Other provisions with a remaining maturity of more than one year are discounted at the average market interest rate for the past seven fiscal years corresponding to their remaining maturity.

On initial recognition, provisions are carried at the required settlement amount of the obligation dictated by prudent business judgment (i.e., after discounting), without recognizing interest income (net method). In subsequent periods, discounting of provisions is recognized in the financial result.

Liabilities are carried at their settlement amount. If the settlement amount exceeds the issue amount, the difference is recognized as an asset and amortized over the term of the liability.

Deferred income comprises payments received prior to the reporting date that represent income for a specific period after that date.

Assets and liabilities denominated in foreign currency with a remaining term of less than one year are measured at the middle spot rate prevailing on the balance sheet date, irrespective of the principles of realization or imparity or historical cost. Currency translation gains or losses are recognized in the income statement.

The official euro foreign exchange reference rates published daily by the European Central Bank are used as closing rates for all currency translation. These can be found online at www.ecb.eu.

The **income statement** was prepared using the total cost (nature of expense) method pursuant to section 275 (2) HGB.

If products are sold with a right of return, the **sales** are only recognized in their full amount after the right of return has expired. Until that date, the sales are recognized at cost less any return costs. No products were sold with a right of return in the reporting period.

3 Balance sheet disclosures

3.1 Fixed assets

Changes in the individual items of fixed assets and the depreciation, amortization and write-downs during the fiscal year are presented in the statement of changes in fixed assets (see Appendix 3/1).

3.2 Shareholdings

Shares in affiliated companies were as follows as of the end of the reporting period:

Company	Registered office	Equity interest	Net loss not covered by	Net profit/loss for

		in %	equity as of Dec. 31, 2018 in EUR thousand	2018 in EUR thousand
Epigenomics, Inc.	Seattle, WA (USA)	100.0%	8,244	-3,054

3.3 Trade receivables

All trade receivables are due within one year. Of the reported trade receivables, specific valuation allowances of EUR 309 thousand were recognized with respect to a single customer.

3.4. Receivables from affiliated companies

As of December 31, 2018, the Company reported EUR 10,169 thousand in receivables from affiliated company Epigenomics, Inc. These were exclusively trade receivables. All receivables are due within one year.

3.5 Prepaid expenses

The EUR 513 thousand discount recognized in the previous year on the issued convertible note was fully reversed in the reporting period.

3.6 Other assets

All other assets mature within one year.

3.7 Cash and cash equivalents

3.7.1 Restrictions on disposal

As of the balance sheet date, bank deposits amounting to EUR 24 thousand were subject to restrictions on disposal due to a lease guarantee.

3.7.2 Other securities

As of the balance sheet date, a marketable bond without fixed maturity was reported under other securities. Under the Company's investment policy, certain criteria are observed when investing in securities. These include restricting investments to euro-denominated assets and ensuring that the issuer or securities have a capital market rating equivalent to investment grade. At present, the Company only holds trust-preferred securities issued by a subsidiary of Deutsche Bank AG. During the reporting period, the securities were written down in the amount of EUR 252 thousand to reflect their listed price as of the reporting date.

3.8 *Equity*

3.8.1 Disclosures on share classes (section 160 (1) no. 3 AktG)

As of the balance sheet date, the total number of outstanding shares of the Company was 36,021,540. The Company's equity structure was as follows as of December 31:

1.	EUR as of Dec. 31, 2018	EUR as of Dec. 31, 2017
2. Share capital	**36,021,540**	**24,014,360**
Conditional capital	**12,007,180**	**11,367,630**
** Conditional Capital VII*	*21,065*	*21,065*
** Conditional Capital IX*	*521,095*	*521,095*
** Conditional Capital X*	*9,465,020*	*8,825,470*
** Conditional Capital XI*	*1,000,000*	*1,000,000*
** Conditional Capital XII*	*1,000,000*	*1,000,000*
Authorized Capital	**0**	**10,088,530**
** Authorized Capital 2017/I*	*0*	*994,426*
** Authorized Capital 2017/II*	*0*	*9,094,104*

3.8.2 Disclosures on conditional capital

3.8.2.1 Conditional Capital VII

The Stock Option Program 09–13, for which Conditional Capital VII was earmarked, has now expired. There are no longer any exercisable rights outstanding. As a result, additional shares can no longer be created from Conditional Capital VII.

3.8.2.2 Conditional Capital IX

The General Shareholders' Meeting on May 2, 2012 resolved Conditional Capital IX with the corresponding addition of Article 5 (5) of the Company's Articles of Association.

Pursuant to the resolution of the General Shareholders' Meeting on May 30, 2018, the authorization resolved by the General Shareholders' Meeting on May 6, 2013 and amended by the General Shareholders' Meeting on June 3, 2014 was revoked and a new authorization was issued with the corresponding amendment of Article 5 (5) of the Articles of Association. The share capital was thus conditionally increased by up to EUR 521,095 by means of issuing up to 521,095 new non-par value registered shares. The conditional capital increase serves to grant shares to the holders or creditors of bonds or participation rights, such shares being issued by the Company until May 29, 2023 on the basis of the authorization resolution of the General Shareholders' Meeting dated May 30, 2017 or issued by the Company or a subsidiary until May 29, 2023 on the basis of the authorization resolution of the General Shareholders' Meeting dated May 30, 2018, if option or conversion rights are exercised, if option or conversion obligations are

discharged or if the Company exercises its optional right to deliver shares of the Company instead of payment of the cash amount due (or parts thereof). The new shares are issued at the respective option or conversion price to be determined in accordance with the aforementioned authorization resolution.

The conditional capital increase is only to be implemented if bonds or participation rights are issued in accordance with the authorization resolution of the General Shareholders' Meeting dated May 30, 2017 or the resolution of the General Shareholders' Meeting dated May 30, 2018 granting authorization to the Executive Board, and only to the extent that

- option or conversion rights are exercised or
- holders or creditors of bonds or participation rights who are under an obligation to exercise an option or under a conversion obligation perform their obligation to exercise the option or their conversion obligation or
- the Company exercises its optional right to deliver shares of the Company instead of paying the cash amount due (or parts thereof)

and to the extent that no cash settlement is granted and no shares from an authorized capital, treasury shares or shares of another listed company are delivered. The new shares issued carry dividend rights from the beginning of the fiscal year in which they are issued. The Executive Board is authorized, as far as legally permissible and with the consent of the Supervisory Board, to determine that, if no resolution on the appropriation of net profit for the fiscal year immediately preceding the year of issue of the new shares has been adopted when the new shares are issued, the new shares shall carry dividend rights from the beginning of the fiscal year immediately preceding the year of issue. The Executive Board is authorized, with the consent of the Supervisory Board, to determine the further details concerning the implementation of the conditional capital increase.

The amendment to Conditional Capital IX and the associated amendment of the Articles of Association were entered into the commercial register on July 17, 2018.

No shares were issued from Conditional Capital IX in the reporting period.

3.8.2.3 Conditional Capital X

The General Shareholders' Meeting on June 3, 2014 resolved Conditional Capital X with the corresponding addition of Article 5 (6) of the Company's Articles of Association. Pursuant to the resolution of the General Shareholders' Meeting on May 30, 2018, the authorization amended by the General Shareholders' Meeting on May 25, 2016 was revoked and a new authorization was issued with the corresponding amendment of Article 5 (6) of the Articles of Association. The share capital was thus conditionally increased by up to EUR 9,465,020 by means of issuing up to 9,465,020 new non-par value registered shares. The conditional capital increase serves to grant shares to the holders or creditors of bonds or participation rights, such shares being issued by the Company until May 29, 2023 on the basis of the authorization resolution of the General

Shareholders' Meeting dated May 30, 2017 or issued by the Company or a subsidiary until May 29, 2023 on the basis of the resolution of the General Shareholders' Meeting dated May 30, 2018 granting authorization to the Executive Board, if option or conversion rights are exercised, if option or conversion obligations are discharged or if the Company exercises its optional right to deliver shares of the Company instead of payment of the cash amount due (or parts thereof). The new shares are issued at the respective option or conversion price to be determined in accordance with the aforementioned authorization resolution.

The conditional capital increase is only to be implemented if bonds or participation rights are issued in accordance with the authorization resolution of the General Shareholders' Meeting dated May 30, 2017 or the authorization resolution of the General Shareholders' Meeting dated May 30, 2018, and only to the extent that

- option or conversion rights are exercised or

- holders or creditors of bonds or participation rights who are under an obligation to exercise an option or under a conversion obligation perform their obligation to exercise the option or their conversion obligation or

- the Company exercises its optional right to deliver shares of the Company instead of paying the cash amount due (or parts thereof)

and to the extent that no cash settlement is granted and no treasury shares or shares of another listed company are delivered. The new shares issued carry dividend rights from the beginning of the fiscal year in which they are issued. The Executive Board is authorized, as far as legally permissible and with the consent of the Supervisory Board, to determine that, if no resolution on the appropriation of net profit for the fiscal year immediately preceding the year of issue of the new shares has been adopted when the new shares are issued, the new shares shall carry dividend rights from the beginning of the fiscal year immediately preceding the year of issue. The Executive Board is also authorized, with the consent of the Supervisory Board, to determine the further details concerning the implementation of the conditional capital increase.

The amendment to Conditional Capital X and the associated amendment of the Articles of Association were entered into the commercial register on July 17, 2018.

No shares were issued from Conditional Capital X in the reporting period.

3.8.2.4 Conditional Capital XI

The General Shareholders' Meeting on May 25, 2016 resolved Conditional Capital XI with the corresponding addition of Article 5 (9) of the Articles of Association. The share capital was thus conditionally increased by up to EUR 1,000,000 by means of issuing up to 1,000,000 new non-par value registered shares. The conditional capital increase serves to grant or issue shares to members of the Executive Board of the Company, to members of the management of domestic and foreign dependent companies of the Company as defined in sections 15 and 17 AktG and to employees of the Company and of domestic and foreign dependent companies of the Company as defined in sections 15 and 17 AktG who exercise the subscription rights they were granted prior to the end of

April 30, 2018 pursuant to the authorization resolution of the General Shareholders' Meeting dated May 25, 2016 (Stock Option Program 16–18). The new shares are issued against payment by the beneficiary to the Company of the respective exercise price to be determined in accordance with the aforementioned authorization resolution.

The conditional capital increase is to be implemented only if subscription rights are issued in accordance with the authorization resolution on the Company's Stock Option Program 16–18 by the General Shareholders' Meeting dated May 25, 2016 and only to the extent that the holders of these subscription rights exercise them and the Company does not grant any treasury shares or cash compensation to fulfill these subscription rights.

The new shares issued carry dividend rights from the beginning of the fiscal year in which they are created. The Executive Board may determine, as far as legally permissible and with the consent of the Supervisory Board, that, if no resolution on the appropriation of net profit for the fiscal year immediately preceding the year of issue of the new shares has been adopted when the new shares are issued, the new shares shall be entitled to dividends from the beginning of the fiscal year immediately preceding the year of issue; if the new shares are issued to members of the Executive Board, the Supervisory Board shall be authorized to do so. The Supervisory Board is also authorized to determine the further details concerning the implementation of the conditional capital increase where the granting of subscription rights to members of the Executive Board is concerned. In all other cases, the Executive Board is authorized to determine such details.

3.8.2.5 Conditional Capital XII

The General Shareholders' Meeting on May 30, 2017 resolved Conditional Capital XII with the corresponding addition of Article 5 (10) of the Articles of Association. The share capital was thus conditionally increased by up to EUR 1,000,000 by means of issuing up to 1,000,000 new non-par value registered shares. The conditional capital increase serves to grant or issue shares to members of the Executive Board of the Company, to members of the management of domestic and foreign dependent companies of the Company as defined in sections 15 and 17 AktG and to employees of the Company and of domestic and foreign dependent companies of the Company as defined in sections 15 and 17 AktG who exercise the subscription rights they were granted prior to the end of May 31, 2019 pursuant to the authorization resolution of the General Shareholders' Meeting dated May 30, 2017 (Stock Option Program 17–19). The new shares are issued against payment by the beneficiary to the Company of the respective exercise price to be determined in accordance with the aforementioned authorization resolution.

The conditional capital increase is to be implemented only if subscription rights are issued in accordance with the authorization resolution on the Company's Stock Option Program 17–19 by the General Shareholders' Meeting dated May 30, 2017 and only to the extent that the holders of these subscription rights exercise them and the Company does not grant any treasury shares or cash compensation to fulfill these subscription rights.

The new shares issued carry dividend rights from the beginning of the fiscal year in which they are created. The Executive Board may determine, as far as legally permissible and with the consent of the Supervisory Board, that, if no resolution on the appropriation of net profit for the fiscal year immediately preceding the year of issue of the new shares has been adopted when the new shares are issued, the new shares shall be entitled to dividends from the beginning of the fiscal year immediately preceding the year of issue; if the new shares are issued to members of the Executive Board, the Supervisory Board shall be authorized to do so. The Supervisory Board is also authorized to determine the further details concerning the implementation of the conditional capital increase where the granting of subscription rights to members of the Executive Board is concerned. In all other cases, the Executive Board is authorized to determine such details.

3.8.3 Disclosures on authorized capital (section 160 (1) no. 4 AktG)

3.8.3.1 Authorized Capital 2018/I (Authorized Capital 2017/I)

The General Shareholders' Meeting on May 30, 2018 rescinded Authorized Capital 2017/I and replaced it with the new Authorized Capital 2018/I. Authorized Capital 2018/I was utilized in full in the course of the capital increase carried out by the Company in October 2018.

3.8.3.2 Authorized Capital 2018/II (Authorized Capital 2017/II)

The General Shareholders' Meeting on May 30, 2018 rescinded Authorized Capital 2017/II and replaced it with the new Authorized Capital 2018/II. Authorized Capital 2018/II was utilized in full in the course of the capital increase carried out by the Company in October 2018.

3.8.4 Capital increases

As of December 31, 2018, the Company's share capital was composed of 36,021,540 non-par value registered shares, constituting an increase of 12,007,180 shares issued compared with the total of 24,014,360 as of December 31, 2017.

As part of the capital increase referred to in sections 3.8.3.1 and 3.8.3.2, 12,007,180 new non-par value registered shares were successfully placed against cash and partly in-kind contributions by means of a rights issue in October 2018. The new shares were placed at an issue price of EUR 1.86. The capital increase was entered into the commercial register of Charlottenburg on October 24, 2018.

3.8.5 Capital reserves

(21) The capital reserves changed as follows in the reporting period:

(22)		2017	2018
(23)	Balance as of January 1	**(24)** 38,233,434.75	**(25)** 42,466,492.75
(26)	Creation of new shares against cash contributions	**(27)** 4,195,448.00	**(28)** 9,826,885.46
(29)	Creation of new shares from in-kind capital increase	**(30)** 0.00	**(31)** 484,782.00
(32)	Premium on newly issued convertible notes	**(33)** 37,610.00	**(34)** 0.00
(35)		**(36)**	**(37)**
(38)	Balance as of December 31	**(39)** 42,466,492.75	**(40)** 52,778,160.21

3.8.6 Disclosures on subscription rights (section 160 (1) no. 5 AktG)

3.8.6.1 Current stock option programs

The Company had five stock option programs in place as of the balance sheet date. Options can no longer be issued from the 06–10 and 11–15 programs, and new shares may no longer be created from exercising options under these programs.

The 09–13 program has also expired. As of December 31, 2017, 2,000 rights with an average exercise price of EUR 11.05 were still outstanding, which expired during the reporting year; therefore, no rights were still outstanding as of December 31, 2018. None of these rights are held by members of the Company's Executive Board.

With the consent of the General Shareholders' Meeting on May 25, 2016, the Company launched Stock Option Program 16–18 in 2016. The Company's Executive Board and Supervisory Board are authorized, until the end of May 31, 2019, to issue up to 1,000,000 subscription rights to beneficiaries.

The beneficiaries of the new rights are the members of the Company's Executive Board (25%), Company employees (35%), members of the management of subordinated Group companies (7%), and employees of subordinated Group companies (33%). The shareholders have no subscription rights.
The exercise price equals the non-volume weighted average stock exchange closing price of the shares of the Company on the ten stock exchange trading days preceding the issue date of the tranche in the electronic trading system of the Frankfurt Stock Exchange, plus 10%.

Subscription rights under each tranche have a term of seven years and can only be exercised after they have vested and after a waiting period of four years following issue of the subscription rights.

After the waiting period has expired, the vested subscription rights under a tranche may only be exercised if the closing stock exchange price of the shares of the Company in the

electronic trading system of the Frankfurt Stock Exchange has exceeded the original price by at least 10% on at least one trading day in the period between the issue date of the subscription rights under this tranche and the expiration of the waiting period (performance target). If the performance target has not been reached upon expiration of the waiting period, the subscription rights shall expire without compensation.

Any subscription rights of a beneficiary that have not yet vested shall expire without compensation upon termination of the service or employment contract between the beneficiary and the Company (or a subordinated Group company) if the service or employment contract has been terminated by the beneficiary, or by the Company (or the respective subordinated Group company) for cause. This shall not apply to any termination of a member of the Executive Board or a member of the management of subordinated Group companies on account of a vote of no confidence by the General Shareholders' Meeting.

Subscription rights of a beneficiary that have vested but have not yet been exercised or could not yet be exercised by the respective beneficiary shall expire without compensation upon termination of the service or employment contract between the beneficiary and the Company (or a subordinated Group company) if the service or employment contract has been terminated by the Company (or the respective subordinated Group company) for cause. This shall not apply to any termination of a member of the Executive Board or a member of the management of subordinated Group companies on account of a vote of no confidence by the General Shareholders' Meeting.

The subscription rights granted to beneficiaries under this Stock Option Program 16–18 are inheritable but are non-transferable and may not be sold or pledged. Subscription rights that are not or cannot be exercised by the end of the term expire without compensation.

366,250 stock options were issued from Stock Option Program 16–18 in the reporting period (2017: 429,920). Under the terms of the program, no new shares may be created under exercise of these option rights before October 2020.

With the consent of the General Shareholders' Meeting on May 30, 2017, the Company launched a further program, Stock Option Program 17–19, in 2017. The Company's Executive Board and Supervisory Board are authorized, until the end of May 31, 2019, to issue up to 1,000,000 subscription rights to beneficiaries.

The beneficiaries are the members of the Executive Board of the Company and members of the management of subordinated Group companies (68%) and the employees of the Company and of subordinated Group companies (32%). The shareholders have no subscription rights.

The exercise price equals the non-volume weighted average stock exchange closing price of the shares of the Company on the ten stock exchange trading days preceding the issue date of the tranche in the electronic trading system of the Frankfurt Stock Exchange, plus 10%.

Subscription rights under each tranche have a term of seven years and can only be exercised after they have vested and after a waiting period of four years following issue of the subscription rights.

After the waiting period has expired, the vested subscription rights under a tranche may only be exercised if the closing stock exchange price of the shares of the Company in the electronic trading system of the Frankfurt Stock Exchange has exceeded the original price by at least 10% on at least one trading day in the period between the issue date of the subscription rights under this tranche and the expiration of the waiting period (performance target). If the performance target has not been reached upon expiration of the waiting period, the subscription rights shall expire without compensation.

Any subscription rights of a beneficiary that have not yet vested shall expire without compensation upon termination of the service or employment contract between the beneficiary and the Company (or a subordinated Group company) if the service or employment contract has been terminated by the beneficiary, or by the Company (or the respective subordinated Group company) for cause. This shall not apply to any termination of a member of the Executive Board on account of a vote of no confidence by the General Shareholders' Meeting.

Subscription rights of a beneficiary that have vested but have not yet been exercised or could not yet be exercised by the respective beneficiary shall expire without compensation upon termination of the service or employment contract between the beneficiary and the Company (or a subordinated Group company) if the service or employment contract has been terminated by the Company (or the respective subordinated Group company) for cause. This shall not apply to any termination of a member of the Executive Board on account of a vote of no confidence by the General Shareholders' Meeting.

The subscription rights granted to beneficiaries under this Stock Option Program 17–19 are inheritable but are non-transferable and may not be sold or pledged. Subscription rights that are not or cannot be exercised by the end of the term expire without compensation.

318,750 stock options were issued from Stock Option Program 17–19 in the reporting period (2017: 152,580). Under the terms of the program, no new shares may be created under exercise of the option rights before October 2021.

The award of stock options to employees is not recognized in the accounts, since for accounting purposes no payment is received for these options and thus there is no need to make additions to the capital reserve or recognize an expense.

3.8.6.2 Issued stock options

The following table details changes in the outstanding stock options during the reporting period:

Stock Option Program 16–18	options outstanding as of Dec. 31, 2017	options issued in 2018	options forfeited in 2018	options expired in 2018	options exercised in 2018	options reclassified in 2018	options outstanding as of Dec. 31, 2018
			(41)				
Option holder							
Greg Hamilton (CEO)	160,000	67,500	0	0	0	0	227,500
Jorge Garces (COO)	0	0	0	0	0	0	0
Albert Weber (member of the Executive Board since Jan. 1, 2018)	0	0	0	0	0	30,000	30,000
Dr. Uwe Staub (member of the Executive Board until Mar. 31, 2018)	22.5000	0	0	0	0	-22,500	0
Other holders	455,250	298,750	56,250	0	0	-7,500	690,250
- of which employees of the subsidiary	*201,500*	*182,500*	*4,375*	*0*	*0*	*0*	*379,625*
Total options	**637,750**	**366,250**	**56,250**	**0**	**0**	**0**	**947,750**
Average exercise price in EUR	**5.22**	**4.12**	**4.80**	**n/a**	**n/a**	**n/a**	**4.86**

Stock Option Program 17–19	options outstanding as of Dec. 31, 2017	options issued in 2018	options forfeited in 2018	options expired in 2018	options exercised in 2018	options reclassified in 2018	options outstanding as of Dec. 31, 2018
			(42)				
Option holder							
Greg Hamilton (CEO)	31,580	32,500	0	0	0	0	64,080
Jorge Garces (COO)	0	85,000	0	0	0	0	85,000
Albert Weber (member of the Executive Board since Jan. 1, 2018)	0	70,000	0	0	0	0	70,000
Dr. Uwe Staub (member of the Executive Board until Mar. 31, 2018)	0	0	0	0	0	0	0
Other holders	51,000	131,250	7,500	0	0	0	174,750
- of which employees of the subsidiary	*51,000*	*60,000*	*0*	*0*	*0*	*0*	*111,000*
Total options	**82,580**	**318,750**	**7,500**	**0**	**0**	**0**	**393,830**
Average exercise price in EUR	**5.10**	**4.12**	**4.12**	**n/a**	**n/a**	**n/a**	**4.33**

Contractual commitments to a total of 340,000 further rights were made to members of the Executive Board for award to them in 2019 and 2020, provided they are then available from the active stock option program.

3.9 Other share-based payment plans

(43) In prior years, the Company established four phantom stock programs (PSPs) as incentive schemes for management and staff. The intention was to grant "phantom stock rights" (PSRs) to beneficiaries under these programs: PSP 03–15, PSP 2013, PSP 2014 and PSP 2015. The programs define a PSR as a conditional claim of its holder against the Company for the future payment of a premium to the holder. More detailed information on the structure of these plans can be found in the management report for 2018.

(44)

(45) 3.9.1 Details of the existing PSPs

Phantom stock program 03–15 (PSP 03–15)	PSRs outstanding as of Dec. 31, 2017	PSRs issued in 2018	PSRs forfeited in 2018	PSRs expired in 2018	PSRs exercised in 2018	PSRs reclassified in 2018	PSRs outstanding as of Dec. 31, 2018
			(46)				
Option holder							
Albert Weber (member of the Executive Board since Jan. 1, 2018)	0	0	0	0	0	0	0
Dr. Uwe Staub (member of the Executive Board until Mar. 31, 2018)	22,400	0	0	22,400	0	0	0
Other holders	75,800	0	0	55,800	0	0	20,000
- of which employees of the subsidiary	*43,800*	*0*	*0*	*23,800*	*0*	*0*	*20,000*
Total options	**98,200**	**0**	**0**	**78,200**	**0**	**0**	**20,000**
Average exercise price in EUR	**5.98**	**n/a**	**n/a**	**6.87**	**n/a**	**n/a**	**2.51**

Phantom stock program 2013 (PSP 2013)	PSRs outstanding as of Dec. 31, 2017	PSRs issued in 2018	PSRs forfeited in 2018	PSRs expired in 2018	PSRs exercised in 2018	PSRs reclassified in 2018	PSRs outstanding as of Dec. 31, 2018
			(47)				
Option holder							
Albert Weber (member of the Executive Board since Jan. 1, 2018)	0	0	0	0	0	0	0
Dr. Uwe Staub (member of the Executive Board until Mar. 31, 2018)	20,000	0	0	0	0	-20,000	0
Other holders	78,000	0	0	10,000	65,000	20,000	23,000
- of which employees of the subsidiary	*75,000*	*0*	*0*	*10,000*	*65,000*	*0*	*0*
Total options	**98,000**	**0**	**0**	**10,000**	**65,000**	**0**	**23,000**
Average exercise price in EUR	**2.70**	**n/a**	**n/a**	**1.64**	**1.62**	**6.15**	**6.19**

Phantom stock program 2014 (PSP 2014)	PSRs outstanding as of Dec. 31, 2017	PSRs issued in 2018	PSRs forfeited in 2018	PSRs expired in 2018	PSRs exercised in 2018	PSRs reclassified in 2018	PSRs outstanding as of Dec. 31, 2018
			(48)				
Option holder							
Albert Weber (member of the Executive Board since Jan. 1, 2018)	0	0	0	0	0	30,000	30,000
Dr. Uwe Staub (member of the Executive Board until Mar. 31, 2018)	60,000	0	0	0	0	-60,000	0
Other holders	263,833	0	0	0	69,000	30,000	224,833
- of which employees of the subsidiary	*65,250*	*0*	*0*	*0*	*0*	*0*	*65,250*
Total options	**323,833**	**0**	**0**	**0**	**69,000**	**0**	**254,833**
Average exercise price in EUR	**3.23**	**n/a**	**n/a**	**n/a**	**3.23**	**3.23**	**3.23**

Phantom stock program 2015 (PSP 2015)	PSRs outstanding as of Dec. 31, 2017	PSRs issued in 2018	PSRs forfeited in 2018	PSRs expired in 2018	PSRs exercised in 2018	PSRs reclassified in 2018	PSRs outstanding as of Dec. 31, 2018
			(49)				
Option holder							
Albert Weber (member of the Executive Board since Jan. 1, 2018)	0	0	0	0	0	10,000	10,000
Dr. Uwe Staub (member of the Executive Board until Mar. 31, 2018)	14,400	0	0	0	0	-14,400	0
Other holders	84,000	0	0	0	0	4,400	88,400
- of which employees of the subsidiary	*15,000*	*0*	*0*	*0*	*0*	*0*	*15,000*
Total options	**98,400**	**0**	**0**	**0**	**0**	**0**	**98,400**
Average exercise price in EUR	**5.05**	**n/a**	**n/a**	**n/a**	**n/a**	**5.05**	**5.05**

(50) 3.9.2 Measurement and accounting treatment of the PSRs in the reporting period

(51) The PSPs are cash-settled remuneration plans. When the rights are exercised, the Company is required to pay the option premiums to rights holders in cash. Issuing PSRs necessitates the recognition of personnel expenses amounting to the fair value of the rights, for which provisions must be recognized. An external service provider appointed by the Company calculates the fair value of the outstanding rights using the binomial approach based on the Cox-Ross-Rubinstein model.

(52) The associated waiting period for 20,000 of the rights issued under PSP 03–15 has already expired in accordance with the terms of the program.

(53)

(54) Since the rights issued under PSP 03–15 are based on the original stock option structure, there is no cap on the option premium for each holder. It is thus impossible to disclose the maximum possible payment obligation arising for the Company from the outstanding rights.

(55)

(56) The rights issued under PSP 2013 have all been exercisable since April 2017 at the latest. The program provides for a maximum premium of EUR 8.00 per holder per individual right. As a consequence, exercise of the rights still outstanding would give rise to a maximum payment obligation of EUR 184 thousand for the Company and EUR 0 thousand for the subsidiary.

(57) The rights issued under PSP 2014 have been exercisable since October 2017. The program provides for a maximum premium of EUR 12.00 per holder per individual right. As a consequence, exercise of all rights outstanding would give rise to a maximum payment obligation of EUR 1,370 thousand for the Company and EUR 783 thousand for the subsidiary.

(58) The rights issued under PSP 2015 have been exercisable since October 2018. The program provides for a maximum premium of EUR 15.00 per holder per individual right. As a consequence, exercise of all rights outstanding would give rise to a maximum payment obligation of EUR 158 thousand for the Company and EUR 225 thousand for the subsidiary.

3.10 Provisions

Provisions for personnel expenses in the total amount of EUR 970 thousand were recognized for executive and employee bonuses, outstanding PSRs, unused vacation, compensation for a non-compete covenant, and overtime worked.

The remaining EUR 555 thousand in provisions was mainly attributable to provisions for outstanding invoices (EUR 169 thousand), audit and the annual financial statements (EUR 117 thousand), PSR premiums to former employees (EUR 172 thousand), consultants (EUR 50 thousand), and for storage of business documents (EUR 33 thousand), which is the only item classified as long-term provisions.

3.11 Liabilities

3.11.1 Convertible notes

On September 7, 2017, the Company issued a convertible note with a principal amount of EUR 7.1 million, comprising 71,000 registered bonds ranked *pari passu*, each with a principal amount of EUR 100.00. The convertible notes matured on December 31, 2018 and could have been be converted by the holder into up to 994,397 shares of the Company.

The holder did not exercise this conversion right. In connection with the Company's capital increase in October 2018, the holder exercised 580,569 subscription rights to which it was entitled as a shareholder of Epigenomics AG. The subscription rights were exercised such that the holder subscribed for the newly issued shares against an in-kind contribution. The contribution in kind consisted of the partial contribution of its

redemption right from the notes to the Company and amounted to EUR 1,079,900.00. The Company's redemption obligation from the convertible notes was thus reduced by the same amount, to EUR 6,020,100.00. This obligation was fully discharged prior to the reporting date, in December 2018.

3.11.2 Remaining terms of reported liabilities

All reported liabilities are due within less than one year.

3.11.3 Other liabilities

The EUR 220 thousand in other liabilities includes EUR 98 thousand to the tax authority (2017: EUR 89 thousand) and EUR 0 thousand for social security (2017: EUR 1 thousand).

3.12 Deferred taxes

In order to calculate deferred taxes arising from temporary or other timing differences between the tax base and the carrying amounts of assets, liabilities and items of prepaid expenses and deferred income recognized in the financial statements, or from tax loss carryforwards, the amounts of the resulting tax burden and tax relief are measured at the tax rate applicable to the individual company at the date on which the differences are reversed. They are not discounted. Deferred tax assets and liabilities are offset.

As of the reporting date, EUR 20 thousand in deferred tax assets (December 31, 2017: EUR 34 thousand) was identified due to differences between the carrying amounts in the financial statements and the tax accounts, based on the tax rate of 30.18% applicable in Berlin. The deferred tax assets result from different useful lives applied to items of tangible fixed assets.

From its founding through to December 31, 2017, the Company also accumulated tax loss carryforwards in Germany amounting to approximately EUR 191 million for corporate income tax and approximately EUR 189 million for trade tax. Furthermore, the Company estimates that the accumulated tax loss carryforwards in both aforementioned tax categories will increase further by approximately EUR 10 million when it files its tax returns for 2018. In accordance with German tax law, such tax losses have an unlimited carryforward period. As a consequence of completed tax audits, tax loss carryforwards in the amount of EUR 167 million are undisputed. However, a future utilization of these carryforwards could become impossible under certain conditions (e.g., a major change of ownership and a change of business) based on the applicable German tax law. Due to the current financial situation of the Company, without sufficient liquidity to achieve the break-even point, valuation allowances have been recognized for the full amount of deferred tax assets at the balance sheet date.

4 Income statement disclosures

4.1 Sales

The Company generated a total of EUR 1,882 thousand in sales in the reporting period (2017: EUR 1,986 thousand).

Sales comprise licensing income (EUR 945 thousand; 2017: EUR 1,271 thousand), product sales (EUR 765 thousand; 2017: EUR 466 thousand), of which product sales to affiliated companies (EUR 481 thousand; 2017: EUR 157 thousand), other income from sales to affiliated companies (EUR 126 thousand; 2017: EUR 204 thousand), and income from R&D services (EUR 46 thousand; 2017: EUR 45 thousand). European customers accounted for 16% of sales (2017: 14%), with 84% attributable to customers from North America and Asia (2017: 86%).

4.2 Depreciation, amortization and write-downs

The EUR 182 thousand in depreciation, amortization and write-downs of intangible and tangible fixed assets in 2018 (2017: EUR 225 thousand) did not include any write-downs of tangible fixed assets (2017: write-downs of EUR 38 thousand).

4.3 Other operating expenses

The other operating expenses of EUR 8,100 thousand (2017: EUR 6,427 thousand) include the costs of the capital increase (EUR 2,000 thousand; 2017: EUR 227 thousand).

4.4 Disclosures on appropriation of profits pursuant to section 158 AktG

The table below presents the reconciliation of net loss for the year to net accumulated losses:

EUR	2017	2018
Net loss for the year	7,028,281.74	10,482,396.94
Accumulated losses brought forward	44,376,001.49	51,404,283.23
Net accumulated losses	51,404,283.23	61,886,680.17

5 Other information

5.1 Human resources

The Company had an average of 27 employees and 3 members of the Executive Board during the reporting period, in accordance with section 267 HGB (2017: 33/2). The 27 employees included 19 employees across the areas of research, product development, IP, regulatory affairs, quality assurance and manufacturing. The remaining 8 employees in selling, general and administrative functions work in business and commercial development, technical (customer) service, accounting, finance, legal, human resources, IT, investor relations and general management.

5.2 Executive bodies

5.2.1 Supervisory Board and Supervisory Board remuneration

The Supervisory Board comprised the following members as of December 31, 2018[1]:

- Heino von Prondzynski – Einsiedeln (CH) – Chairman (since May 2, 2012)

  Independent consultant and former member of the group management of F. Hoffman-La Roche Ltd. (Basel, CH)

  Supervisory Board member from May 2007 until March 2010 and since May 2012

  Mr. Heino von Prondzynski is not a member of other mandatory supervisory boards. He is a member of comparable boards with supervisory function of the following foreign undertakings:

  * HTL-Strefa S.A., Warsaw (POL) (until July 2018)
  * Koninklijke Philips Electronics N.V. (Royal Philips Electronics), Eindhoven (NL)
  * Quotient Ltd., Jersey (UK) – Independent Lead Director

- Ann Clare Kessler, Ph.D. – Rancho Santa Fe, CA (USA) – Vice-Chairwoman (since May 2, 2012)

  Independent consultant and former Head of Global Project Management at F. Hoffmann-La Roche Ltd. (Basel, CH) and former Head of the Division of Exploratory Research at F. Hoffmann-La Roche Inc. (USA)

  Supervisory Board member since June 2005

  Ms. Kessler, Ph.D., is not a member of other mandatory supervisory boards. She was a member of comparable boards with supervisory function of the following foreign undertakings:

  * AltheaDx Inc., San Diego, CA (USA)
  * MedGenesis Therapeutix, Inc., Victoria, BC (CAN)
  * Scripps Translational Science Institute, CA (USA)
  * Gen-Probe, Inc., CA (USA)
  * Spectrum Pharmaceuticals, CA (USA)

- Prof. Dr. Günther Reiter – Pfullingen (GER) – Vice-Chairman

[1] The supervisory board positions indicated are memberships of other supervisory boards or of comparable boards with supervisory function in Germany and abroad, pursuant to section 125 (1) sentence 5 AktG.

(since November 5, 2014)

Professor at the ESB Business School in Reutlingen (GER)
Supervisory Board member since June 2005; Chairman of the Audit Committee

Prof. Dr. Reiter is not a member of other mandatory supervisory boards. He was a member of comparable boards with supervisory function of the following German undertakings:

* Internationales Bankhaus Bodensee AG
* Actium AG
* Deltoton GmbH
* CSA Verwaltungs GmbH

- Dr. Helge Lubenow – Langenfeld (Rhineland) (GER)

Independent Management Consultant and former Head of the Molecular Diagnostic Business Area at Qiagen

Supervisory Board member since May 2016; Member of the Audit Committee

Dr. Lubenow is not a member of other mandatory supervisory boards. She is a member of comparable boards with supervisory function of the following foreign undertakings:

* ProteoMediX AG (CH)
* Indical Biosciences GmbH

The remuneration structure for the Supervisory Board is based on an annual cash retainer ("fixed remuneration") and meeting-related payments ("variable remuneration"). The remuneration does not include any performance-related elements or long-term incentive components. The total remuneration of the members of the Supervisory Board amounted to EUR 253 thousand in 2018 and was broken down as follows:

EUR thousand	2017	2018
Fixed remuneration	200	205
Variable remuneration	48	48
Total remuneration	248	253

Further disclosures on the Supervisory Board and details of its members' remuneration can be found in the section entitled "Remuneration Report" in the 2018 management report.

5.2.2 Executive Board and Executive Board remuneration

The members of the Company's Executive Board in the fiscal year were:

- Greg Hamilton, Chief Executive Officer
- Dr. Jorge Garces, PhD, Chief Scientific Officer

- Dr. Uwe Staub, Chief Operating Officer (until March 31, 2018)
- Albert Weber, Executive Vice President Finance (since January 1, 2018)

The remuneration of the members of the Company's Executive Board comprises a fixed and a variable component. The variable amount is determined on the basis of a variety of criteria, including the achievement of individual performance targets and Company performance targets, which are set by the Supervisory Board on a yearly basis. Mr. Hamilton and Dr. Garces are also entitled to reimbursement of certain costs incurred by them.

In addition to the fixed and variable remuneration, a third component comprises long-term performance-based compensation through the award of stock appreciation rights under the share-based payment plans (see 3.9) and stock options in the Company (see 3.8.6). The Company also provides a D&O insurance policy for the members of the Executive Board with an excess in the statutory minimum amount, and reimburses business travel expenses in full.

Based on the benefits allocated, the remuneration of the members of the Executive Board in 2018 amounted to EUR 2,376 thousand (2017: EUR 1,451 thousand)[2] and comprised:

EUR thousand	2017	2018
Fixed remuneration and fringe benefits	786	1,265
One-year variable remuneration	269	664
Multi-year variable remuneration	396	447
Total remuneration (benefits allocated)	1,451	2,376

The multi-year variable remuneration of the members of the Executive Board in 2018 comprised the award of 255,000 stock options (2017: 170,000).

Based on the benefits granted, the remuneration of the members of the Executive Board amounted to EUR 1,732 thousand in the reporting period (2017: EUR 980 thousand) and comprised:

EUR thousand	2017	2018

[2] Note: The Executive Board's total remuneration for 2017 reported in the annual financial statements for 2017 amounted to EUR 1,224 thousand. The EUR 1,451 thousand difference between this year's figure and the amount reported in the previous year is due to the fact that in 2017 the stock options reported as multi-year variable remuneration had been recognized as an expense in the income statement. However, in accordance with the German Corporate Governance Code, the fair value of the stock options upon their issue date should be reported here. The previous year's misstatement is hereby corrected.

Fixed remuneration and fringe benefits	786	1,265
One-year variable remuneration	194	467
Multi-year variable remuneration	0	0
Total remuneration	980	1,732

Dr. Staub, whose appointment to the Executive Board ended on March 31, 2018, received EUR 172,500 in compensation following the end of his term in 2018 for a post-contractual non-compete covenant still in effect in the current fiscal year.

The service agreement with Mr. Gregory Hamilton has a term until December 31, 2021, and the agreement with Mr. Jorge Garces has a term until December 31, 2020. Effective January 1, 2018, Mr. Albert Weber was appointed to the Executive Board of Epigenomics AG with responsibility for finance, accounting and controlling. The service agreement with Mr. Weber has a term until December 31, 2020. All service agreements contain post-contractual non-compete clauses for a period of one year after termination. During this period, all Executive Board members are entitled to 100% of their final basic salary as a non-compete payment. The service agreements also provide for a special right of termination in the event of a change of control within the meaning of the German Securities Acquisition and Takeover Act (*Wertpapiererwerbs- und Übernahmegesetz*). If a service agreement is terminated pursuant to such a special right of termination, the members of the Executive Board are entitled to receive their basic salary for the remaining term of their service agreements, however up to a maximum of 150% of the severance payment cap stipulated in section 4.2.3 of the German Corporate Governance Code.

Further disclosures on the composition of the Executive Board in the reporting period and details of its members' remuneration can be found in the section entitled "Remuneration Report" in the 2018 management report.

5.3 Other financial obligations

A purchase commitment amounting to approximately EUR 1,460 thousand to acquire goods and services from various suppliers was reported as of the balance sheet date.

In the past, the Company acquired certain exclusive licenses to third-party intellectual property, some of which give rise to obligations to pay minimum royalties in future periods. Additionally, Epigenomics has the obligation to reimburse the licensors for costs arising in connection with maintaining and prosecuting the licensed rights. These costs are mainly recharged fees for patent attorneys and patent office actions and their amount and timing can only be forecast with extreme difficulty. The expected payments to various licensors total approximately EUR 135 thousand (not discounted). Epigenomics can nevertheless terminate the majority of such agreements at short notice.

Were Epigenomics to use this licensed intellectual property to generate product revenues from third parties going forward, royalties would in some cases have to be paid to the rights holders as a percentage of those revenues. Material portions of the variable royalties depend on the

type and nature of the future revenues, making it difficult to quantify the potential amount of the obligations.

The lease for the business premises at Geneststrasse in Berlin expires in April 2020 and gives rise to other financial obligations for ongoing lease payments amounting to approximately EUR 164 thousand (not discounted) until the end of the lease term. The Company has the option to extend the lease by six more years.

Other financial obligations to affiliated company Epigenomics, Inc. are also likely to arise in fiscal year 2018. Since the market approval of Epi proColon by the U.S. Food and Drug Administration (FDA) in 2016, Epigenomics, Inc. has been responsible for distributing and marketing the product in the United States in cooperation with U.S. distributor Polymedco, and since that time has generated its own sales with third parties. For this purpose, the parent company granted Epigenomics, Inc. an exclusive license to market and distribute the product in North America, pursuant to which it now pays royalties to Epigenomics AG as a percentage of product sales. Obligations also arise from a transfer pricing arrangement between the two companies, pursuant to which the U.S. subsidiary provides various services for the parent company (e.g., carrying out clinical studies, market preparation, participation in regulatory processes) in return for fees calculated at arm's length using the cost plus method. By the same token, Epigenomics AG charges a service fee for various administrative services provided to its U.S. subsidiary (e.g., accounting, HR, IT).

The Company's corporate planning envisages that the U.S. subsidiary will reach the break-even point relatively quickly following reimbursement decisions for Epi proColon from payors in the U.S. healthcare system, which are now expected in 2019. Until such time as reimbursements are introduced for patients to undergo blood tests, however, Epigenomics, Inc. will not be able to generate sufficient sales on its own, and market development costs will initially exceed the sales generated by Epi proColon. In the meantime, the Company expects that Epigenomics, Inc. will have to be funded by means of short-term corporate lending not yet disbursed. As plans currently stand, Epigenomics, Inc. could reach the break-even point in 2020. Until then, it requires approximately EUR 8–10 million in financing, assuming that the EUR/USD exchange rate in the relevant periods remains at the level of the reporting date.

5.4 Related party disclosures

As of the December 31, 2018 reporting date, Epigenomics AG held a 100% equity interest in the following company:

Epigenomics, Inc.
c/o BTA Legal
31811 Pacific Highway South B101
Federal Way, WA 98003
USA

This company's net loss not covered by equity amounted to EUR 8,244 thousand as of December 31, 2018 (2017: EUR 4,868 thousand). It reported a net loss for the fiscal year ended December 31, 2018 in the amount of EUR 3,054 thousand (2017: EUR 3,186 thousand).

5.5 Information on the Company's auditors

The General Shareholders' Meeting in May 2018 elected Baker Tilly GmbH & Co. KG Wirtschaftsprüfungsgesellschaft as auditors for fiscal year 2018.

EUR thousand	2017	2018
Costs for audit services	131	116
Costs for other assurance services	0	87
Total	**131**	**203**

The audit costs cover the audit of the Company's annual and consolidated financial statements. The costs for other assurance services were incurred in connection with the Company's capital increase in October 2018.

5.6 Report on post-balance sheet date events

After the end of the reporting period, the Company published a notice to the capital market on March 6, 2019 announcing its decision, effective immediately, to terminate the collaboration with its Chinese partner BioChain regarding the licensing of the Septin9 marker and the exclusive distribution rights in China for Epi proColon. Epigenomics exercised its contractual right to terminate the agreement in the event of BioChain failing to pay Epigenomics more than the contractually agreed minimum license fees over a period of three years. The Company will review all options for the distribution of Septin9 in China to maximize the full potential of the test in this key market. No other events occurred after the balance sheet date which could materially affect the Company's net assets, financial position and results of operations or its risk assessment.

5.7 Corporate governance disclosures

In the October of the reporting period, the Executive Board and the Supervisory Board of Epigenomics AG issued the declaration of compliance pursuant to section 161 of the German Stock Corporation Act (*Aktiengesetz* – AktG). The declaration is published on the Company's website (www.epigenomics.com/news-investors/corporate-governance). For further information, please see the section entitled "Corporate Governance" in the management report.

5.8 Disclosures in accordance with the German Securities Trading Act (WpHG)

The following companies have notified Epigenomics AG of changes in their direct voting rights pursuant to the German Securities Trading Act (*Wertpapierhandelsgesetz* – WpHG) since the reporting date of the annual financial statements for 2017.

(59) January 22, 2018/4:13 p.m. – Global Bio and Information Technologies Partners GP Ltd.

Voting Rights Notification

1. Issuer

Epigenomics AG Geneststraße 5 10829 Berlin Germany

2. Reason for notification

X	Acquisition/disposal of shares carrying voting rights
	Acquisition/disposal of instruments
	Change in total number of voting rights
	Other:

3. Person/entity subject to notification requirement

Name:	Registered office and country:
Global Bio and Information Technologies Partners GP Ltd.	George Town, Grand Cayman Cayman Islands

4. Name of shareholders

holding equal to or more than 3% of voting rights, if not named under 3.

Globetrotter (BVI) Holdings, Ltd.

5. Date threshold reached:

December 29, 2017

6. Total percentage of voting rights

	Percentage of voting rights (sum of 7.a.)	Percentage of instruments (sum of 7.b.1. + 7.b.2.)	Total percentage (sum of 7.a. + 7.b.)	Issuer's total voting rights
New	4.67%	%	4.67%	24014360
Most recent notification	9.19%	%	9.19%	/

7. Details of voting rights holdings

a. Voting rights (sections 33, 34 WpHG)

ISIN	absolute		in %	
	direct (section 33 WpHG)	attributed (section 34 WpHG)	direct (section 33 WpHG)	attributed (section 34 WpHG)
DE000A11QW50		1120685	%	4.67%
Total	1120685		4.67%	

b.1. Instruments within the meaning of section 38 (1) no. 1 WpHG

Type of instrument	Maturity/expiration	Exercise period/term	Voting rights (absolute)	Voting rights (%)
				%
		Total		%

b.2. Instruments within the meaning of section 38 (1) no. 2 WpHG

Type of instrument	Maturity/expiration	Exercise period/term	Cash or physical settlement	Voting rights (absolute)	Voting rights (%)
					%
			Total		%

8. Information on the person/entity subject to the notification requirement

	The person or entity subject to the notification requirement (3.) is neither controlled by nor controls other entities holding voting rights in the issuer (1.) that are subject to notification.
X	Complete chain of subsidiaries beginning with the person or entity exercising ultimate control:

Companies	Voting rights in % if 3% or higher	Instruments in % if 5% or higher	Total in % if 5% or higher
Global Bio Information Technologies Partners GP Ltd.	%	%	%
Global Bio and Information Technologies Partners L.P.	%	%	%
Team Curis Group	%	%	%
BioChain (BVI) Holdings, Ltd.	%	%	%
BioChain Institute, Inc.	%	%	%
Globetrotter (BVI) Holdings, Ltd.	4.67%	%	%

9. For proxies pursuant to section 34 (3) WpHG
(applies solely to attribution pursuant to section 34 (1) sentence 1 no. 6 WpHG)

Date of annual general meeting:	
Total percentage of voting rights after the annual general meeting:	% (corresponds to voting rights)

10. Other information:

Shares previous held by Globetrotter (BVI) Holdings, Ltd. and Bio-Epi (BVI) Holdings, Ltd. were sold in the course of liquidating the Team Curis Group.

---

(60) January 23, 2018/2:13 p.m. – BioChain Institute, Inc.

Voting Rights Notification

1. Issuer

Epigenomics AG
Geneststraße 5
10829 Berlin
Germany

2. Reason for notification

	Acquisition/disposal of shares carrying voting rights
	Acquisition/disposal of instruments
	Change in total number of voting rights
X	Other: Voluntary notification/restructuring of group shares in Epigenomics

3. Person/entity subject to notification requirement

Name:	Registered office and country:
BioChain Institute, Inc.	Newark, CA 94560 United States of America

4. Name of shareholders
holding equal to or more than 3% of voting rights, if not named under 3.

5. Date threshold reached:

January 5, 2018

6. Total percentage of voting rights

	Percentage of voting rights (sum of 7.a.)	Percentage of instruments (sum of 7.b.1. + 7.b.2.)	Total percentage (sum of 7.a. + 7.b.)	Issuer's total voting rights
New	4.67%	%	4.67%	24014360
Most recent notification	4.67%	%	4.67%	/

7. Details of voting rights holdings
a. Voting rights (sections 33, 34 WpHG)

ISIN	absolute		in %	
	direct (section 33 WpHG)	attributed (section 34 WpHG)	direct (section 33 WpHG)	attributed (section 34 WpHG)
DE000A11QW50	1120685		4.67%	%
Total	1120685		4.67%	

b.1. Instruments within the meaning of section 38 (1) no. 1 WpHG

Type of instrument	Maturity/expiration	Exercise period/term	Voting rights (absolute)	Voting rights (%)
				%
		Total		%

b.2. Instruments within the meaning of section 38 (1) no. 2 WpHG

Type of instrument	Maturity/expiration	Exercise period/term	Cash or physical settlement	Voting rights (absolute)	Voting rights (%)
					%
			Total		%

8. Information on the person/entity subject to the notification requirement

X	The person or entity subject to the notification requirement (3.) is neither controlled by nor controls other entities holding voting rights in the issuer (1.) that are subject to notification.
	Complete chain of subsidiaries beginning with the person or entity exercising ultimate control:

Companies	Voting rights in % if 3% or higher	Instruments in % if 5% or higher	Total in % if 5% or higher

9. For proxies pursuant to section 34 (3) WpHG
(applies solely to attribution pursuant to section 34 (1) sentence 1 no. 6 WpHG)

Date of annual general meeting:	
Total percentage of voting rights after the annual general meeting:	% (corresponds to voting rights)

10. Other information:

Globetrotter(BVI) Holdings, Ltd. and the group companies controlled by BioChain Institute, Inc., were liquidated effective January 5, 2018. 1,120,685 Epigenomics shares were acquired by BioChain Institute, Inc., in the course of liquidating Globetrotter(BVI) Holdings, Ltd.

Voting Rights Notification

1. Issuer

Epigenomics AG Geneststraße 5 10829 Berlin Germany

2. Reason for notification

	Acquisition/disposal of shares carrying voting rights
	Acquisition/disposal of instruments
	Change in total number of voting rights
X	Other: Exercise of an instrument (obligation to waive transfer)

3. Person/entity subject to notification requirement

Name:	Registered office and country:
Mr. Yong Yu, date of birth: February 27, 1961	

4. Name of shareholders

holding equal to or more than 3% of voting rights, if not named under 3.

Cathay Fortune International Company Limited

5. Date threshold reached:

May 18, 2018

6. Total percentage of voting rights

	Percentage of voting rights (sum of 7.a.)	Percentage of instruments (sum of 7.b.1. + 7.b.2.)	Total percentage (sum of 7.a. + 7.b.)	Issuer's total voting rights
New	4.84%	4.14%	8.98%	24014360
Most recent notification	4.84%	8.98%	8.98%	/

7. Details of voting rights holdings

a. Voting rights (sections 33, 34 WpHG)

ISIN	absolute		in %	
	direct (section 33 WpHG)	attributed (section 34 WpHG)	direct (section 33 WpHG)	attributed (section 34 WpHG)
DE000A11QW50	0	1161139	0%	4.84%
Total	1161139		4.84%	

b.1. Instruments within the meaning of section 38 (1) no. 1 WpHG

Type of instrument	Maturity/expiration	Exercise period/term	Voting rights (absolute)	Voting rights (%)
				%
		Total		%

b.2. Instruments within the meaning of section 38 (1) no. 2 WpHG

Type of instrument	Maturity/expiration	Exercise period/term	Cash or physical settlement	Voting rights (absolute)	Voting rights (%)
Convertible note	December 31, 2018	September 7, 2017 to December 31, 2018	Physical	994397	4.14%
			Total	994397	4.14%

8. Information on the person/entity subject to the notification requirement

	The person or entity subject to the notification requirement (3.) is neither controlled by nor controls other entities holding voting rights in the issuer (1.) that are subject to notification.
X	Complete chain of subsidiaries beginning with the person or entity exercising ultimate control:

Companies	Voting rights in % if 3% or higher	Instruments in % if 5% or higher	Total in % if 5% or higher
Yong Yu	%	%	%
Cathay Fortune Corp.	%	%	%
Cathay Fortune International Company Limited	4.84%	%	8.98%

9. For proxies pursuant to section 34 (3) WpHG

(applies solely to attribution pursuant to section 34 (1) sentence 1 no. 6 WpHG)

Date of annual general meeting:	
Total percentage of voting rights after the annual general meeting:	% (corresponds to voting rights)

10. Other information:

---

(62) October 31, 2018/10:24 a.m. – Heidelberger Beteiligungsholding AG/ABC Beteiligungen AG

Voting Rights Notification

1. Issuer

Name:	Epigenomics AG
Street, no.:	Geneststraße 5
Postal code:	10829
City:	Berlin Germany
Legal Entity Identifier (LEI):	549300X1C4U862NDLN97

2. Reason for notification

X	Acquisition/disposal of shares carrying voting rights
	Acquisition/disposal of instruments
X	Change in total number of voting rights
	Other:

3. Person/entity subject to notification requirement

Natural person (name, surname): Wilhelm K. T. Zours
Date of birth: July 28, 1961

4. Name of shareholders

holding equal to or more than 3% of voting rights, if not named under 3.

Heidelberger Beteiligungsholding AG, ABC Beteiligungen AG

5. Date threshold reached:

October 24, 2018

6. Total percentage of voting rights

	Percentage of voting rights (sum of 7.a.)	Percentage of instruments (sum of 7.b.1. + 7.b.2.)	Total percentage (sum of 7.a. + 7.b.)	Total voting rights pursuant to section 41 WpHG

New	13.57%	0%	13.57%	36021540
Most recent notification	8.35%	0%	8.35%	/

7. Details of voting rights holdings

a. Voting rights (sections 33, 34 WpHG)

ISIN	absolute		in %	
	direct (section 33 WpHG)	attributed (section 34 WpHG)	direct (section 33 WpHG)	attributed (section 34 WpHG)
DE000A11QW50	0	4887347	0%	13.57%
Total	4887347		13.57%	

b.1. Instruments within the meaning of section 38 (1) no. 1 WpHG

Type of instrument	Maturity/expiration	Exercise period/term	Voting rights (absolute)	Voting rights (%)
				%
		Total		%

b.2. Instruments within the meaning of section 38 (1) no. 2 WpHG

Type of instrument	Maturity/expiration	Exercise period/term	Cash or physical settlement	Voting rights (absolute)	Voting rights (%)
					%
			Total		%

8. Information on the person/entity subject to the notification requirement

	The person or entity subject to the notification requirement (3.) is neither controlled by nor controls other entities that hold voting rights in the issuer (1.) or to which voting rights in the issuer are attributed.
X	Complete chain of subsidiaries beginning with the person or entity exercising ultimate control:

Companies	Voting rights in % if 3% or higher	Instruments in % if 5% or higher	Total in % if 5% or higher
Wilhelm K.T. Zours	%	%	%
DELPHI Unternehmensberatung Aktiengesellschaft	%	%	%
VV Beteiligungen Aktiengesellschaft	%	%	%
Deutsche Balaton Aktiengesellschaft	%	%	%
ABC Beteiligungen AG	5.86%	%	5.86%
Heidelberger Beteiligungsholding AG	4.37%	%	%
Wilhelm K.T. Zours	%	%	%
DELPHI Unternehmensberatung Aktiengesellschaft	%	%	%
VV Beteiligungen Aktiengesellschaft	%	%	%
Deutsche Balaton Aktiengesellschaft	%	%	%
AEE Ahaus-Enscheder AG	%	%	%
Wilhelm K.T. Zours	%	%	%
DELPHI Unternehmensberatung Aktiengesellschaft	%	%	%
VV Beteiligungen Aktiengesellschaft	%	%	%
Deutsche Balaton Aktiengesellschaft	%	%	%
Investunity AG	%	%	%
Wilhelm K.T. Zours	%	%	%
DELPHI Unternehmensberatung	%	%	%

Aktiengesellschaft			
VV Beteiligungen Aktiengesellschaft	%	%	%
Deutsche Balaton Aktiengesellschaft	%	%	%
Ming Le Sports AG	%	%	%

9. For proxies pursuant to section 34 (3) WpHG
(applies solely to attribution pursuant to section 34 (1) sentence 1 no. 6 WpHG)

Date of annual general meeting:
Total percentage of voting rights (6.) after the annual general meeting:

Percentage of voting rights	Percentage of instruments	Total percentage
%	%	%

10. Other information:

---

(5) October 31, 2018/10:43 a.m. – Goldman Sachs & Co. LLC

Voting Rights Notification

1. Issuer

Name:	Epigenomics AG
Street, no.:	Geneststraße 5
Postal code:	10829
City:	Berlin Germany
Legal Entity Identifier (LEI):	549300X1C4U862NDLN97

2. Reason for notification

X	Acquisition/disposal of shares carrying voting rights
	Acquisition/disposal of instruments
	Change in total number of voting rights
	Other:

3. Person/entity subject to notification requirement

Natural person (name, surname): Ari Zweiman
Date of birth: April 15, 1972

4. Name of shareholders
holding equal to or more than 3% of voting rights, if not named under 3.

Goldman Sachs & Co. LLC

5. Date threshold reached:

October 24, 2018

6. Total percentage of voting rights

	Percentage of voting rights (sum of 7.a.)	Percentage of instruments (sum of 7.b.1. + 7.b.2.)	Total percentage (sum of 7.a. + 7.b.)	Total voting rights pursuant to section 41 WpHG
New	3.75%	0%	3.75%	36021540
Most recent notification	n/a %	n/a %	n/a %	/

7. Details of voting rights holdings
a. Voting rights (sections 33, 34 WpHG)

ISIN	absolute		in %	
	direct (section 33 WpHG)	attributed (section 34 WpHG)	direct (section 33 WpHG)	attributed (section 34 WpHG)
DE000A11QW50	0	1350000	0%	3.75%
Total	1350000		3.75%	

b.1. Instruments within the meaning of section 38 (1) no. 1 WpHG

Type of instrument	Maturity/expiration	Exercise period/term	Voting rights (absolute)	Voting rights (%)
				%
		Total		%

b.2. Instruments within the meaning of section 38 (1) no. 2 WpHG

Type of instrument	Maturity/expiration	Exercise period/term	Cash or physical settlement	Voting rights (absolute)	Voting rights (%)
					%
			Total		%

8. Information on the person/entity subject to the notification requirement

	The person or entity subject to the notification requirement (3.) is neither controlled by nor controls other entities that hold voting rights in the issuer (1.) or to which voting rights in the issuer are attributed.
X	Complete chain of subsidiaries beginning with the person or entity exercising ultimate control:

Companies	Voting rights in % if 3% or higher	Instruments in % if 5% or higher	Total in % if 5% or higher
Ari Zweiman	%	%	%
683 Capital GP, LLC	%	%	%
683 Capital Partners, LP	3.75%	%	%
Ari Zweiman	%	%	%
683 Capital Management, LLC	3.75%	%	%

9. For proxies pursuant to section 34 (3) WpHG
(applies solely to attribution pursuant to section 34 (1) sentence 1 no. 6 WpHG)

Date of annual general meeting:
Total percentage of voting rights (6.) after the annual general meeting:

Percentage of voting rights	Percentage of instruments	Total percentage
%	%	%

10. Other information:

Please note: This voting rights notification dated October 31, 2018 was corrected after the end of the reporting period by means of a further notification made by the entity subject to the notification requirement dated February 26, 2019. This concerned exclusively the information given in point 4 of the notification. The shareholder name was changed to 683 Capital Partners, LP.

(6) November 5, 2018/1:36 p.m. – Morgan Stanley & Co. LLC

Voting Rights Notification

1. Issuer

Name:	Epigenomics AG
Street, no.:	Geneststraße 5
Postal code:	10829
City:	Berlin Germany
Legal Entity Identifier (LEI):	549300X1C4U862NDLN97

2. Reason for notification

X	Acquisition/disposal of shares carrying voting rights
	Acquisition/disposal of instruments
	Change in total number of voting rights
	Other:

3. Person/entity subject to notification requirement

Legal entity: Morgan Stanley
Registered office, country: Wilmington, Delaware, United States of America

4. Name of shareholders

holding equal to or more than 3% of voting rights, if not named under 3.

Morgan Stanley & Co. LLC

5. Date threshold reached:

October 29, 2018

6. Total percentage of voting rights

	Percentage of voting rights (sum of 7.a.)	Percentage of instruments (sum of 7.b.1. + 7.b.2.)	Total percentage (sum of 7.a. + 7.b.)	Total voting rights pursuant to section 41 WpHG
New	3.75%	0.13%	3.88%	36021540
Most recent notification	0.01%	n/a %	0.01%	/

7. Details of voting rights holdings

a. Voting rights (sections 33, 34 WpHG)

ISIN	absolute		in %	
	direct (section 33 WpHG)	attributed (section 34 WpHG)	direct (section 33 WpHG)	attributed (section 34 WpHG)
DE000A11QW50	0	1350000	0%	3.75%
Total	1350000		3.75%	

b.1. Instruments within the meaning of section 38 (1) no. 1 WpHG

Type of instrument	Maturity/expiration	Exercise period/term	Voting rights (absolute)	Voting rights (%)
Right to terminate securities lending agreements	any time	any time	45,919	0.13%
		Total	45,919	0.13%

b.2. Instruments within the meaning of section 38 (1) no. 2 WpHG

Type of instrument	Maturity/expiration	Exercise period/term	Cash or physical settlement	Voting rights (absolute)	Voting rights (%)
					%
			Total		%

8. Information on the person/entity subject to the notification requirement

	The person or entity subject to the notification requirement (3.) is neither controlled by nor controls other entities that hold voting rights in the issuer (1.) or to which voting rights in the issuer are attributed.
X	Complete chain of subsidiaries beginning with the person or entity exercising ultimate control:

Companies	Voting rights in % if 3% or higher	Instruments in % if 5% or higher	Total in % if 5% or higher
Morgan Stanley	%	%	%
Morgan Stanley Capital Management , LLC	%	%	%
Morgan Stanley Domestic Holdings, Inc.	%	%	%
Morgan Stanley & Co. LLC	3.75%	%	%

9. For proxies pursuant to section 34 (3) WpHG
(applies solely to attribution pursuant to section 34 (1) sentence 1 no. 6 WpHG)

Date of annual general meeting:
Total percentage of voting rights (6.) after the annual general meeting:

Percentage of voting rights	Percentage of instruments	Total percentage
%	%	%

10. Other information:

---

(7) November 5, 2018/5:55 p.m. – Cigogne Management S.A.

Voting Rights Notification

1. Issuer

Name:	Epigenomics AG
Street, no.:	Geneststraße 5
Postal code:	10829
City:	Berlin Germany
Legal Entity Identifier (LEI):	549300X1C4U862NDLN97

2. Reason for notification

	Acquisition/disposal of shares carrying voting rights
	Acquisition/disposal of instruments
X	Change in total number of voting rights
	Other:

3. Person/entity subject to notification requirement

Legal entity: CIGOGNE MANAGEMENT S.A. Registered office, country: Luxembourg, Luxembourg

4. Name of shareholders
holding equal to or more than 3% of voting rights, if not named under 3.

5. Date threshold reached:

October 24, 2018

6. Total percentage of voting rights

	Percentage of voting rights (sum of 7.a.)	Percentage of instruments (sum of 7.b.1. + 7.b.2.)	Total percentage (sum of 7.a. + 7.b.)	Total voting rights pursuant to section 41 WpHG
New	1.91%	0.00%	1.91%	36021540
Most recent notification	3.30%	0.00%	3.30%	/

7. Details of voting rights holdings
a. Voting rights (sections 33, 34 WpHG)

ISIN	absolute		in %	
	direct (section 33 WpHG)	attributed (section 34 WpHG)	direct (section 33 WpHG)	attributed (section 34 WpHG)
DE000A11QW50	0	688549	0.00%	1.91%
Total	688549		1.91%	

b.1. Instruments within the meaning of section 38 (1) no. 1 WpHG

Type of instrument	Maturity/expiration	Exercise period/term	Voting rights (absolute)	Voting rights (%)
			0	0.00%
		Total	0	0.00%

b.2. Instruments within the meaning of section 38 (1) no. 2 WpHG

Type of instrument	Maturity/expiration	Exercise period/term	Cash or physical settlement	Voting rights (absolute)	Voting rights (%)
				0	0.00%
			Total	0	0.00%

8. Information on the person/entity subject to the notification requirement

X	The person or entity subject to the notification requirement (3.) is neither controlled by nor controls other entities that hold voting rights in the issuer (1.) or to which voting rights in the issuer are attributed.
	Complete chain of subsidiaries beginning with the person or entity exercising ultimate control:

Companies	Voting rights in % if 3% or higher	Instruments in % if 5% or higher	Total in % if 5% or higher

9. For proxies pursuant to section 34 (3) WpHG
(applies solely to attribution pursuant to section 34 (1) sentence 1 no. 6 WpHG)

Date of annual general meeting:
Total percentage of voting rights (6.) after the annual general meeting:

Percentage of voting rights	Percentage of instruments	Total percentage
%	%	%

10. Other information:

---

(8) November 5, 2018/6:06 p.m. – Cigogne UCITS

Voting Rights Notification

1. Issuer

Name:	Epigenomics AG
Street, no.:	Geneststraße 5
Postal code:	10829
City:	Berlin Germany
Legal Entity Identifier (LEI):	549300X1C4U862NDLN97

2. Reason for notification

	Acquisition/disposal of shares carrying voting rights
	Acquisition/disposal of instruments
X	Change in total number of voting rights
	Other:

3. Person/entity subject to notification requirement

Legal entity: CIGOGNE UCITS
Registered office, country: Luxembourg, Luxembourg

4. Name of shareholders

holding equal to or more than 3% of voting rights, if not named under 3.

5. Date threshold reached:

October 24, 2018

6. Total percentage of voting rights

	Percentage of voting rights (sum of 7.a.)	Percentage of instruments (sum of 7.b.1. + 7.b.2.)	Total percentage (sum of 7.a. + 7.b.)	Total voting rights pursuant to section 41 WpHG
New	1.91%	0.00%	1.91%	36021540
Most recent notification	3.30%	0.00%	3.30%	/

7. Details of voting rights holdings

a. Voting rights (sections 33, 34 WpHG)

ISIN	absolute		in %	
	direct (section 33 WpHG)	attributed (section 34 WpHG)	direct (section 33 WpHG)	attributed (section 34 WpHG)
DE000A11QW50	688549	0	1.91%	0.00%
Total	688549		1.91%	

b.1. Instruments within the meaning of section 38 (1) no. 1 WpHG

Type of instrument	Maturity/expiration	Exercise period/term	Voting rights (absolute)	Voting rights (%)
			0	0.00%
		Total	0	0.00%

b.2. Instruments within the meaning of section 38 (1) no. 2 WpHG

Type of instrument	Maturity/expiration	Exercise period/term	Cash or physical settlement	Voting rights (absolute)	Voting rights (%)
				0	0.00%
			Total	0	0.00%

8. Information on the person/entity subject to the notification requirement

X	The person or entity subject to the notification requirement (3.) is neither controlled by nor controls other entities that hold voting rights in the issuer (1.) or to which voting rights in the issuer are attributed.
	Complete chain of subsidiaries beginning with the person or entity exercising ultimate control:

Companies	Voting rights in % if 3% or higher	Instruments in % if 5% or higher	Total in % if 5% or higher

9. For proxies pursuant to section 34 (3) WpHG
(applies solely to attribution pursuant to section 34 (1) sentence 1 no. 6 WpHG)

Date of annual general meeting:
Total percentage of voting rights (6.) after the annual general meeting:

Percentage of voting rights	Percentage of instruments	Total percentage
%	%	%

10. Other information:

---

(9) November 7, 2018/10:13 a.m. – Bridger Healthcare Ltd.

Voting Rights Notification

1. Issuer

Name:	Epigenomics AG
Street, no.:	Geneststraße 5
Postal code:	10829
City:	Berlin Germany
Legal Entity Identifier (LEI):	549300X1C4U862NDLN97

2. Reason for notification

X	Acquisition/disposal of shares carrying voting rights
	Acquisition/disposal of instruments
	Change in total number of voting rights
	Other:

3. Person/entity subject to notification requirement

Natural person (name, surname): Roberto Mignone
Date of birth: August 22, 1971

4. Name of shareholders
holding equal to or more than 3% of voting rights, if not named under 3.

Bridger Healthcare Ltd.

5. Date threshold reached:

October 29, 2018

6. Total percentage of voting rights

	Percentage of voting rights (sum of 7.a.)	Percentage of instruments (sum of 7.b.1. +	Total percentage (sum of 7.a. +	Total voting rights pursuant to section 41 WpHG

		7.b.2.)	7.b.)	
New	3.75%	0%	3.75%	36021540
Most recent notification	n/a %	n/a %	n/a %	/

7. Details of voting rights holdings
a. Voting rights (sections 33, 34 WpHG)

ISIN	absolute		in %	
	direct (section 33 WpHG)	attributed (section 34 WpHG)	direct (section 33 WpHG)	attributed (section 34 WpHG)
DE000A11QW50	0	1350000	n/a %	3.75%
Total	1350000		3.75%	

b.1. Instruments within the meaning of section 38 (1) no. 1 WpHG

Type of instrument	Maturity/expiration	Exercise period/term	Voting rights (absolute)	Voting rights (%)
				%
		Total		%

b.2. Instruments within the meaning of section 38 (1) no. 2 WpHG

Type of instrument	Maturity/expiration	Exercise period/term	Cash or physical settlement	Voting rights (absolute)	Voting rights (%)
					%
			Total		%

8. Information on the person/entity subject to the notification requirement

	The person or entity subject to the notification requirement (3.) is neither controlled by nor controls other entities that hold voting rights in the issuer (1.) or to which voting rights in the issuer are attributed.
X	Complete chain of subsidiaries beginning with the person or entity exercising ultimate control:

Companies	Voting rights in % if 3% or higher	Instruments in % if 5% or higher	Total in % if 5% or higher
Mr. Roberto Mignone	%	%	%
Bridger Management LLC	3.75%	%	%
Mr. Roberto Mignone	%	%	%
Bridger Capital LLC	%	%	%
Bridger EMP LLC / Shearwater Onshore LLC	%	%	%
Bridger Healthcare Ltd.	3.75%	%	%

9. For proxies pursuant to section 34 (3) WpHG
(applies solely to attribution pursuant to section 34 (1) sentence 1 no. 6 WpHG)

Date of annual general meeting:
Total percentage of voting rights (6.) after the annual general meeting:

Percentage of voting rights	Percentage of instruments	Total percentage
%	%	%

10. Other information:

(10) November 22, 2018/4:03 p.m. – Deutsche Balaton AG

Deutsche Balaton AG (and other notifying parties, see voting rights notification dated October 26, 2018), Heidelberg, Germany, informed us of the following on November 21, 2018 in accordance with section 43 (1) WpHG in connection with exceeding/reaching the 10% or higher threshold on October 24, 2018:

A. Objective pursued in acquiring the voting rights:

1. The investment by Deutsche Balaton AG and the other notifying parties is long-term in nature and its objective is capital growth. With this in mind, we expect that patience will be necessary over the medium term.

2. Neither Deutsche Balaton AG nor the other notifying parties to which the voting rights in Epigenomics AG held within the Deutsche Balaton Group (including by ABC Beteiligungen AG and Heidelberger Beteiligungsholding AG) are attributable currently intend to acquire further voting rights, either directly or indirectly, within the next 12 months. However, by no means do we rule this out in the future. Depending on the price, further voting rights may be purchased or otherwise acquired within the next 12 months.

3. Deutsche Balaton AG and the other notifying parties do not seek to influence the composition of Epigenomics AG's executive, management, or supervisory bodies. They will freely exercise their voting rights at the next election of members to the Supervisory Board.

4. Deutsche Balaton AG is not currently seeking to make any material change to the Company's capital structure (in particular with respect to the debt/equity ratio and dividend policy).

B. With respect to the source of funds used to acquire the voting rights in Epigenomics AG, we hereby declare that Deutsche Balaton AG and its group companies that hold voting rights in Epigenomics AG used their own funds to finance the purchase of voting rights. In some cases these own funds were sourced from general credit agreements.

(11) November 27, 2018/3:04 p.m. – BioChain Institute, Inc.

Voting Rights Notification

1. Issuer

Name:	Epigenomics AG
Street, no.:	Geneststraße 5
Postal code:	10829
City:	Berlin Germany
Legal Entity Identifier (LEI):	549300X1C4U862NDLN97

2. Reason for notification

X	Acquisition/disposal of shares carrying voting rights
	Acquisition/disposal of instruments
	Change in total number of voting rights
	Other:

3. Person/entity subject to notification requirement

Legal entity: BioChain Institute Inc. Registered office, country: Newark, CA, United States of America

4. Name of shareholders

holding equal to or more than 3% of voting rights, if not named under 3.

5. Date threshold reached:

November 2, 2018

6. Total percentage of voting rights

	Percentage of voting rights (sum of 7.a.)	Percentage of instruments (sum of 7.b.1. + 7.b.2.)	Total percentage (sum of 7.a. + 7.b.)	Total voting rights pursuant to section 41 WpHG
New	2.81%	0%	2.81%	36021540
Most recent notification	4.67%	0%	4.67%	/

7. Details of voting rights holdings
a. Voting rights (sections 33, 34 WpHG)

ISIN	absolute		in %	
	direct (section 33 WpHG)	attributed (section 34 WpHG)	direct (section 33 WpHG)	attributed (section 34 WpHG)
DE000A11QW50	1011002		2.81%	%
Total	1011002		2.81%	

b.1. Instruments within the meaning of section 38 (1) no. 1 WpHG

Type of instrument	Maturity/expiration	Exercise period/term	Voting rights (absolute)	Voting rights (%)
				%
		Total		%

b.2. Instruments within the meaning of section 38 (1) no. 2 WpHG

Type of instrument	Maturity/expiration	Exercise period/term	Cash or physical settlement	Voting rights (absolute)	Voting rights (%)
					%
			Total		%

8. Information on the person/entity subject to the notification requirement

X	The person or entity subject to the notification requirement (3.) is neither controlled by nor controls other entities that hold voting rights in the issuer (1.) or to which voting rights in the issuer are attributed.
	Complete chain of subsidiaries beginning with the person or entity exercising ultimate control:

Companies	Voting rights in % if 3% or higher	Instruments in % if 5% or higher	Total in % if 5% or higher

9. For proxies pursuant to section 34 (3) WpHG
(applies solely to attribution pursuant to section 34 (1) sentence 1 no. 6 WpHG)

Date of annual general meeting:
Total percentage of voting rights (6.) after the annual general meeting:

Percentage of voting rights	Percentage of instruments	Total percentage
%	%	%

10. Other information:

(12) December 19, 2018/10:43 a.m. – Digital Time Investment Limited

Voting Rights Notification

1. Issuer

Name:	Epigenomics AG
Street, no.:	Geneststraße 5
Postal code:	10829
City:	Berlin Germany
Legal Entity Identifier (LEI):	549300X1C4U862NDLN97

2. Reason for notification

	Acquisition/disposal of shares carrying voting rights
	Acquisition/disposal of instruments
X	Change in total number of voting rights
	Other:

3. Person/entity subject to notification requirement

Legal entity: Digital Time Investment Limited Registered office: Hong Kong, People's Republic of China

4. Name of shareholders

holding equal to or more than 3% of voting rights, if not named under 3.

5. Date threshold reached:

October 24, 2018

6. Total percentage of voting rights

	Percentage of voting rights (sum of 7.a.)	Percentage of instruments (sum of 7.b.1. + 7.b.2.)	Total percentage (sum of 7.a. + 7.b.)	Total voting rights pursuant to section 41 WpHG
New	2.36%	0.00%	2.36%	36,021,540
Most recent notification	3.97%	0.00%	3.97%	/

7. Details of voting rights holdings

a. Voting rights (sections 33, 34 WpHG)

ISIN	absolute		in %	
	direct (section 33 WpHG)	attributed (section 34 WpHG)	direct (section 33 WpHG)	attributed (section 34 WpHG)
DE000A11QW50	0	849,167	0.00%	2.36%
Total	849,167		2.36%	

b.1. Instruments within the meaning of section 38 (1) no. 1 WpHG

Type of instrument	Maturity/expiration	Exercise period/term	Voting rights (absolute)	Voting rights (%)

			0	0.00%
		Total	0	0.00%

b.2. Instruments within the meaning of section 38 (1) no. 2 WpHG

Type of instrument	Maturity/expiration	Exercise period/term	Cash or physical settlement	Voting rights (absolute)	Voting rights (%)
				0	0.00%
			Total	0	0.00%

8. Information on the person/entity subject to the notification requirement

	The person or entity subject to the notification requirement (3.) is neither controlled by nor controls other entities that hold voting rights in the issuer (1.) or to which voting rights in the issuer are attributed.
X	Complete chain of subsidiaries beginning with the person or entity exercising ultimate control:

Companies	Voting rights in % if 3% or higher	Instruments in % if 5% or higher	Total in % if 5% or higher
Digital Time Investment Limited	%	%	%
Shanghai Summitview IC M&A Investment Limited Partnership	%	%	%
Uchip Technology Limited	%	%	%

9. For proxies pursuant to section 34 (3) WpHG
(applies solely to attribution pursuant to section 34 (1) sentence 1 no. 6 WpHG)

Date of annual general meeting:
Total percentage of voting rights (6.) after the annual general meeting:

Percentage of voting rights	Percentage of instruments	Total percentage
%	%	%

10. Other information:

Date
December 18, 2018

---

(13) December 20, 2018/12:20 p.m. – Cathay Fortune International Company Limited

---

Voting Rights Notification

1. Issuer

Name:	Epigenomics AG
Street, no.:	Geneststraße 5
Postal code:	10829
City:	Berlin Germany
Legal Entity Identifier (LEI):	549300X1C4U862NDLN97

2. Reason for notification

	Acquisition/disposal of shares carrying voting rights
	Acquisition/disposal of instruments

	Change in total number of voting rights
X	Other: Expiration of instruments due to early repayment of convertible notes

3. Person/entity subject to notification requirement

Natural person (name, surname): Yong Yu
Date of birth: February 27, 1961

4. Name of shareholders

holding equal to or more than 3% of voting rights, if not named under 3.

Cathay Fortune International Company Limited

5. Date threshold reached:

December 18, 2018

6. Total percentage of voting rights

	Percentage of voting rights (sum of 7.a.)	Percentage of instruments (sum of 7.b.1. + 7.b.2.)	Total percentage (sum of 7.a. + 7.b.)	Total voting rights pursuant to section 41 WpHG
New	4.84%	0.00%	4.84%	36021540
Most recent notification	4.84%	4.14%	8.98%	/

7. Details of voting rights holdings

a. Voting rights (sections 33, 34 WpHG)

ISIN	absolute		in %	
	direct (section 33 WpHG)	attributed (section 34 WpHG)	direct (section 33 WpHG)	attributed (section 34 WpHG)
DE000A11QW50	0	1741708	0%	4.84%
Total	1741708		4.84%	

b.1. Instruments within the meaning of section 38 (1) no. 1 WpHG

Type of instrument	Maturity/expiration	Exercise period/term	Voting rights (absolute)	Voting rights (%)
				%
		Total		%

b.2. Instruments within the meaning of section 38 (1) no. 2 WpHG

Type of instrument	Maturity/expiration	Exercise period/term	Cash or physical settlement	Voting rights (absolute)	Voting rights (%)
					%
			Total		%

8. Information on the person/entity subject to the notification requirement

	The person or entity subject to the notification requirement (3.) is neither controlled by nor controls other entities that hold voting rights in the issuer (1.) or to which voting rights in the issuer are attributed.
X	Complete chain of subsidiaries beginning with the person or entity exercising ultimate control:

Companies	Voting rights in % if 3% or higher	Instruments in % if 5% or higher	Total in % if 5% or higher
Yong Yu	%	%	%
Cathay Fortune Corp.	%	%	%
Cathay Fortune International Company Limited	4.84%	%	%

9. For proxies pursuant to section 34 (3) WpHG
(applies solely to attribution pursuant to section 34 (1) sentence 1 no. 6 WpHG)

Date of annual general meeting:
Total percentage of voting rights (6.) after the annual general meeting:

Percentage of voting rights	Percentage of instruments	Total percentage
%	%	%

10. Other information:

Berlin, March 20, 2019
The Executive Board

INDEPENDENT AUDITOR'S REPORT

To Epigenomics AG, Berlin

REPORT ON THE AUDIT OF THE ANNUAL FINANCIAL STATEMENTS AND THE MANAGEMENT REPORT

Audit opinion

We have audited Epigenomics AG's annual financial statements, which comprise the balance sheet as of December 31, 2018 and the income statement for the financial year from January 1, 2018 to December 31, 2018 as well as the notes, including a summary of accounting and valuation methods. In addition, we have audited the management report of Epigenomics AG for the financial year from January 1, 2018 through December 31, 2018. In accordance with German legal requirements, we have not audited the contend of the statement on corporate governance and the compliance statement contained in the management report's section "C orporate Governance".

In our opinion, based on the knowledge obtained in the audit

- the accompanying annual financial statements comply, in all material respects, with the requirements of German commercial law applicable to business corporations and give a true and fair view of the net assets and financial position of the Company as at December 31, 2018 and of its financial performance for the financial year from January 1, 2018 to December 31, 2018 in compliance with German Legally Accounting Principles; and

- the accompanying management report as a whole provides an appropriate view of the Company's position. In all material respects, this management report is consistent with the financial statements, complies with German legal requirements and appropriately presents the opportunities and risks of future developments. Our audit opinion on the management report does not cover the content of the aforementioned statement declaration on corporate governance and compliance statement.

Pursuant to Art. 322 Sec. 3 sentence 1 HGB, we declare that our audit has not led to any reservations relating to the legal compliance of the financial statements and the management report.

Basis for our opinion

We have conducted our audit of the annual financial statements and of the management report in accordance with Art. 317 HGB and the EU Audit Regulation (No. 537/2014, referred to subsequently as "EU Audit Regulation") and in compliance with German Generally Accepted Standards for the Financial Statements Audit promulgated by the Institut der Wirtschaftsprüfer [Institute of Public Auditors

in Germany] (IDW). Our responsibilities under those requirements and principles are further described in the "Auditor's Responsibilities for the Audit of the Annual Financial Statements and of the Management Report" section of our auditor's report. We are independent of the Company in accordance with the requirements of European law and German commercial and professional law, and we have fulfilled our other German professional responsibilities in accordance with these requirements. In addition, in accordance with Article 10 (2) (f) of the EU Audit Regulation, we declare that we have not provided non-audit services prohibited under Article 5 (1) of the EU Audit Regulation. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our [audit] opinion on the annual financial statements and on the management report.

Key audit matters in the audit of the annual financial statements

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the annual financial statements for the financial year from January 1, 2018 through December 31, 2018. These matters have been taken into account in connection with our audit of the annual financial statements as a whole, and in forming our audit opinion related herewith; we do not express a separate audit opinion on these matters.

From our perspective, the following matters were of most significance during our audit:

- Revenue recognition

We have structured our presentation of these key audit matters as follows:

1. Facts and problems
2. Audit approach and findings
3. Reference to further information

In the following, we will present these key audit matters:

Revenue recognition:

1. During the financial year, the Company recognized sales revenues in the amount of ca. EUR 1.9 million. Sales revenues are one of the most significant financial performance indicators in the capital market communication. These sales revenues include sales of the only main product in the amount of EUR 0.8 million and license revenues in the amount of EUR 0.9 million. Product sales are mainly realized by means of sales to few major customers. In general, there are framework agreements with these customers which may be supplemented by further agreements. These agreements may be decisive as to whether a sale has been realized. An incomplete presentation of these additional agreements within the scope of revenue recognition poses a risk, which is why we believe this matter is of particular importance.

2. We have convinced ourselves from the correct recognition of sales by means of the framework agreements, external confirmations as to possibly existing additional arrangements, proofs of delivery as well as the outgoing invoices and the related incoming payments. We could convince ourselves that any conditions additionally agreed upon with the major customers have been appropriately processed during the revenue recognition's assessment.

3. The Company's statements on the revenue recognition are contained in the Notes' section "Accounting and Valuation Principles".

Other information

The legal representatives are responsible for other information. Other information comprises:

- Responsibility statement by the legal representatives in the 2018 annual management report's section "Responsibility Statement"
- Compliance statement in the section "Corporate Governance" of the 2018 Management Report
- Declaration on corporate governance in the section "Corporate Governance" of the 2018 Management Report
- The section "Foreword by the Executive Board" in the 2018 annual report, and
- The Section "Our share" in the 2018 annual report

The supervisory board is responsible for the following other information:

- The section "Report of the Supervisory Board" in the 2018 annual report.

Our audit opinions on the annual financial statements and on the management report do not cover other information, and consequently we do not express an audit opinion or any other form of audit conclusion thereon.

In connection with our audit, our responsibility is to read the other information and, in doing so, to assess whether the other information

- is materially inconsistent with the annual financial statements, with the management report or our knowledge obtained during the audit; or
- otherwise seems to have been materially misstated.

Responsibilities of the Legal Representatives and the Supervisory Board for the Annual Financial Statements and the Management Report

The legal representatives are responsible for the preparation of the annual financial statements that comply, in all material respects, with the requirements pursuant German commercial as applicable to business corporations, and that the annual financial statements, give a true an fair view of the net assets, liabilities, financial position, and financial performance of the Company in compliance with German Legally Required Accounting Principles. In addition, the executive directors are responsible for such internal controls as they, in accordance with German Legally Required Accounting Principles, have determined necessary to enable the preparation of annual financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the annual financial statements, the legal representatives are responsible for assessing the Company's ability to continue as a going concern. They also have the responsibility for disclosing, as applicable, matters related to going concern. In addition, they are responsible for financial reporting on a going concern basis, provided no actual or legal circumstances conflict therewith.

Furthermore, the legal representatives are responsible for the preparation of the management report that, as a whole, provides a true and fair view of the Company's position and is, in all material respects, consistent with the annual financial statements, complies with German legal requirements, and appropriately presents the opportunities and risks of future development. In addition, the legal representatives are responsible for such arrangements and measures (systems) they have considered necessary to enable the preparation of a management report in accordance with the applicable German legal requirements and to be able to provide sufficient appropriate evidence for the statements made in the management report.

The Supervisory Board is responsible for overseeing the Company's financial reporting process for the preparation of the annual financial statements and of the management report.

Auditor's Responsibilities for the Audit of the Annual Financial Statements and the Management Report

Our objective is to obtain reasonable assurance as to whether the annual financial statements as a whole are free from material misstatements, whether due to fraud or error, and whether the management report as a whole presents a true and fair view of the Company's position and is, in all material respects, consistent with the annual financial statements and the knowledge obtained during our audit, complies with German legal requirements and appropriately presents the opportunities and risks of the Company's future development, as well as to issue an audit Report that includes our audit opinions on the annual financial statements and on the management report.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit con-ducted in accordance with Art. 317 HGB and the EU Audit Regulation and in compliance with German Generally Accepted Standards for the Audit of Financial Statements promulgated by the Institut der Wirtschaftsprüfer (IDW) will always detect a material misstatement. Misstatements can arise from fraud or error and are considered material if, individually or in aggregate, they could reasonably be

expected to influence the economic decisions of users taken on the basis of these annual financial statements and this management report.

We exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- identify and assess the risks of material misstatements in the annual financial statements and the management report, whether due to fraud or error, plan and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our audit opinions. The risk of not detecting any material misstatements resulting from fraud is higher than for those resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control;

- obtain an understanding of the internal control system relevant for the audit of the annual financial statements and of arrangements and measures relevant for the audit of the management report, in order to plan audit procedures that are appropriate under the circumstances, but not for the purpose of expressing an audit opinion on the effectiveness of these systems;

- evaluate the appropriateness of accounting policies used by the legal representatives and the reasonableness of accounting estimates and applicable disclosures made;

- conclude on the appropriateness of the legal representatives' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Company's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention to the related disclosures in the annual financial statements in the auditor's report and in the management report or, if such disclosures are inadequate, to modify our respective audit opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Company to cease to be able to continue as a going concern.

- evaluate the overall presentation, structure and content of the annual financial statements, including the disclosures, and whether the annual financial statements present the underlying transactions and events in a manner that the annual financial statements give a true and fair view of the

net assets, financial position and financial performance of the Company in compliance with German Legally Required Accounting Principles;

- evaluate the management report's consistency with the annual financial statements, its conformity with German law, and its presentation of the Company's position;

- perform audit procedures on the prospective information presented by the legal representatives in the management report. On the basis of sufficient appropriate audit evidence we evaluate, in particular, the significant assumptions used by the legal representatives as a basis for the prospective information, and evaluate the proper derivation of the prospective information from these assumptions. We do not express a separate [audit] opinion on the prospective information and on the assumptions used as a basis. There is a substantial unavoidable risk that future events will differ materially from the prospective information

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with the relevant independence requirements, and communicate with them all relationships and other matters that may reasonably be expected to affect our independence, and where applicable, the applied safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the annual financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation preclude public disclosure about the matter.

OTHER LEGAL AND REGULATORY REQUIREMENTS

Further Information pursuant to Article 10 of the EU Audit Regulation

We were elected as auditor by the annual general meeting on May 30, 2018. We were engaged by the supervisory board on August 23, 2018. We have been the auditor of Epigenomics AG, Berlin, without interruption since the financial year 2015.

We declare that the audit opinions expressed in this auditor's Report are consistent with the additional report to the audit committee pursuant to Article 11 of the EU Audit Regulation (long-form audit report).

RESPONSIBLE AUDITOR

The auditor responsible for the audit is Andreas Weissinger.

Munich, dated March 20, 2019

Baker Tilly GmbH & Co. KG
Wirtschaftsprüfungsgesellschaft
(Düsseldorf)

Hund	Weissinger
German CPA	German CPA

20. GLOSSARY

ACA	Patient Protection and Affordable Care Act
ACS	American Cancer Society, a nationwide voluntary health organization dedicated to eliminating cancer
ADMIT	Adherence to Minimally Invasive Testing, a study we completed in 2015 to demonstrate the rate of adherence to our Epi proColon product
AFP	Alpha-fetoprotein, a widely used diagnostic serum biomarker for liver cancer in cirrhosis patients
ArbEG	German Act on Employees' Inventions (*Arbeitnehmererfindungsgesetz*)
Ariosa	The Federal Circuit's decision in Ariosa Diagnostics, Inc. v. Sequenom, Inc.
BaFin	German Federal Financial Supervisory Authority (*Bundesanstalt für Finanzdienstleistungen*), a financial market supervisory and control authority within the framework of the financial sector
Baker Tilly	Baker Tilly GmbH & Co. KG Wirtschaftsprüfungsgesellschaft (formerly: Baker Tilly Roelfs AG Wirtschaftsprüfungsgesellschaft and Baker Tilly AG Wirtschaftsprüfungsgesellschaft), Düsseldorf, Germany
BCA	Business combination agreement entered into on April 26, 2017 between the Company, CFICL and SHH (then Blitz F16-83 GmbH) regarding the takeover of the Company by SHH
BfArM	German Federal Institute for Drugs and Medical Devices (*Bundesinstitut für Arzneimittel und Medizinprodukte*), a German independent federal agency concerned with authorisation, improving the safety of medicinal products, risk identification and assessment of medical devices and monitoring the movement of narcotics and precursors
BioChain	BioChain Institute Inc., Newark, California, United States, providing processed bio-sample products and analysis services used in advancing translational medicine, companion diagnostics, and clinical product research and development
BioChain Colon Agreement	The exclusive license agreement with BioChain in particular for China, also granting a license to BioChain to develop their own Septin9 IVD product
BioChain Lung Agreement	The exclusive license agreement with BioChain for our SHOX2, FOXL2 and PTGER4 biomarker assays and related intellectual property rights for our Epi proLung product in particular in China
Budget Control Act	The Budget Control Act of 2011, as amended
CAGR	Compound annual growth rate
Capital Increase	The increase in the Company's share capital from EUR 36,021,540.00 by up to EUR 10,806,462.00 to up to EUR 46,828,002.00 by issuing up to 10,806,462 New Shares against cash contributions at a Subscription Price, as resolved by the Executive Board on October 17, 2019 and approved by the

CE marked	The CE mark (CE meaning *conformité européenne*) indicates that the product complies with all the legal requirements for CE marking in the European Economic Area
cffDNA	Cell free fetal DNA
CFICL	Cathay Fortune International Company Limited, Hong Kong, People's Republic of China
cGMP	Current Good Manufacturing Practices, as laid out in the FDA's Quality System Regulation, 21 Code of Federal Regulations 820
Clearstream	Clearstream Banking Aktiengesellschaft, Mergenthalerallee 61, 65760 Eschborn, Germany, a supplier for post-trading services
CMS	Centers for Medicare & Medicaid Services, a US federal agency within the US Department of Health & Human Services responsible for administration of several key federal health care programs
CNIPA	China National Intellectual Property Administration
Code of Conduct	Code of Business Conduct and Ethics, which we have adopted to apply to all of our employees and executive officers as well as to third parties commissioned by employees of Epigenomics
Company	Epigenomics AG
CpG	A region of DNA where a cytosine nucleotide is followed by a guanine nucleotide
CPT	Current Procedural Terminology, a medical code set maintained by the AMA to communicate uniform information about medical services and procedures
CRC	Colorectal cancer
DIMDI	German Institute for Medical Documentation and Information (*Deutsches Institut für Medizinische Dokumentation und Information*)
DNA	Deoxyribonucleic Acid
EASME	EU's Executive Agency for Small and Medium-sized Enterprises
EEA	European Economic Area
EPC	European Patent Convention, a multilateral treaty instituting the European Patent Organisation and providing an autonomous legal system according to which European patents are granted
Epigenomics AG	Epigenomics AG, Berlin, Germany, the parent company of the Epigenomics Group, which comprises the Group's central business functions (*e.g.* accounting, human resources and intellectual property) as well as the Group's R&D activities

Epigenomics Group	Epigenomics AG, together with its consolidated subsidiary Epigenomics, Inc.
Epigenomics, Inc.	Epigenomics, Inc., Federal Way, Washington, United States, our wholly owned subsidiary, which is mainly active in developing our business and commercial activities in North America and in international markets outside of Europe
Epi proColon	Our key product, an IVD test to detect the presence of methylated Septin9 in blood plasma, which has been approved by the FDA as a screening test for the detection of colorectal cancer
Epi proLung	An IVD test product to detect the presence of lung cancer in blood plasma based on the SHOX2 and PTGER4 DNA methylation biomarkers, for which we are currently seeking regulatory approval
EU Short Selling Regulation	Regulation (EU) No. 236/2012 of the European Parliament and of the Council of March 14, 2012 on short selling and certain aspects of credit default swaps
FDA	U.S. Food and Drug Administration, a federal agency of the United States Department of Health and Human Services responsible for protecting and promoting public health through the regulation and supervision of, *inter alia*, food safety, prescription and over-the-counter pharmaceutical drugs (medications), biopharmaceuticals and medical devices
FDCA	Federal Food, Drug, and Cosmetic Act, passed by U.S. Congress in 1938 giving authority to the FDA to oversee the safety of food, drugs, medical devices, and cosmetics
FIT	Fecal immunochemical tests
FOXL2	Forkhead Box L2, a protein-coding gene
GCP	Good Clinical Practice, a standard for the conduct of clinical studies as set forth in the International Council for Harmonization of Technical Requirements for Pharmaceutical Use in Humans (ICH) harmonized tripartite guideline for good clinical practice E6(R1)
GeschGehG	German Act on the Protection of Trade Secrets of April 26, 2019 (*Geschäftsgeheimnisgesetz*)
Governance Code	German Corporate Governance Code (*Deutscher Corporate Governance Kodex*) which was adopted in February 2002 and last amended on February 7, 2017 by the Government Commission German Corporate Governance Code
HCC	Hepatocellular carcinoma
Health Information Technology for Economic and Clinical Health Act	HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act of 2009
HIPAA	Health Insurance Portability and Accountability Act
HITECH	HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act of 2009

HPV	Human Papilloma Virus
IDE	Investigational device exemption, an exemption allowing the investigational device to be used in a clinical study in order to collect safety and effectiveness data
IFRS	International Financial Reporting Standards, as issued by the International Accounting Standards Board
Institutional Review Boards	A type of committee used in research in the United States that has been formally designated to approve, monitor, and review biomedical and behavioral research involving humans
ISO	International Organization for Standardization, a worldwide federation of national standards bodies
ISO 13485	ISO 13485, a standard issued by the ISO for the design, development, manufacturing and distribution of IVD products
IVD	In vitro diagnostic, *i.e.*, tests for detecting diseases, conditions, or infections
IVD Directive	The European Union's In-vitro Diagnostic Directive 98/79/EC
IVD Regulation	Regulation (EU) 2017/746 on IVD medical devices, with effect from 26 May 2017
LabCorp	Laboratory Corporation of America Holdings, Burlington, North Carolina, United States, an operator of clinical laboratory networks
Laboratory Customers	Clinical and genetic laboratories
LDCT	Low-dose computed tomography
LDTs	Laboratory-developed tests, a type of IVD test that is designed, manufactured and used within a single laboratory
Life Technologies	Life Technologies AS, Oslo, Norway, a wholly owned subsidiary of Thermo Fischer Scientific Inc., Waltham, MA, United States
MACs	Medicare Administrative Contractors, private health care insurers that act as intermediaries between Medicare and health care providers
Market Abuse Regulation	EU Market Abuse Regulation (EU) No. 596/2014 of April 16, 2014 as amended by Regulations (EU) No. 1011/2016 of June 8, 2016 and 1033/2016 of June 23, 2016
MD Regulation	Regulation (EU) 2017/745 of April 5, 2017 on medical devices, amending Directive 2001/83/EC, Regulation (EC) No 178/2002 and Regulation (EC) No 1223/2009 and repealing Council Directives 90/385/EEC and 93/42/EEC
MDRs	Medical Device Reports, postmarket surveillance tools of the FDA used to monitor device performance, detect potential device-related safety issues, and contribute to benefit-risk assessments of these products
Medicaid	Medicaid, a social health care program managed by U.S. states and co-funded

	by the U.S. federal government, providing coverage for persons of all ages with a low income in the United States
Medicare	Medicare, a national social insurance program administered by the U.S. federal government providing health insurance for the elderly (aged 65 and older) and younger people with disabilities
M.M.Warburg	M.M.Warburg & CO (AG & Co.) Kommanditgesellschaft auf Aktien, Ferdinandstraße 75, 20095 Hamburg, Germany, the Underwriter
MPG	German Federal Medical Devices Act (*Medizinproduktegesetz*)
NCD	National coverage determination, a U.S. nationwide determination made by CMS of whether Medicare will pay for an item or service
New Shares	Up to 10,806,462 ordinary registered shares from the Capital Increase with no par value (*Stückaktien*), each such share representing a notional amount of the Company's issued share capital of EUR 1.00 and with full dividend rights as from January 1, 2019
NGS	Next generation sequencing, a technology using bisulfite sequencing methods to analyze one patient sample using multiple biomarkers at the same time
NMPA	National Medical Products Administration, a Chinese public authority responsible for registering and certifying medical devices and instruments, drugs, foods and cosmetic products for the Chinese market, and successor to the China Food and Drug Administration
Parent-Subsidiary Directive	EC Directive 2011/96/EU of November 30, 2011, as amended
PCR	Polymerase chain reaction, a technique used in molecular biology to amplify a single copy or a few copies of a piece of DNA across several orders of magnitude, generating thousands to millions of copies of a particular DNA sequence
PEI	Paul-Ehrlich-Institute (*Paul-Ehrlich-Institut*) at Langen (near Frankfurt/Main)
PMA	Pre-market Approval
Pharmaceuticals and Medical Devices Agency	The government organization in Japan that is in charge of reviewing drugs and medical devices, dealing with post-market safety and providing relief for adverse health effects
Polymedco	Polymedco Cancer Diagnostics Products LLC, Cortlandt Manor, New York, United States, a manufacturer, marketer and distributor in the clinical laboratory marketplace
Prospectus	This prospectus, dated October 18, 2019
PSPs	Phantom stock programs, under which we previously awarded cash-settled PSRs to Executive Board members and employees
PSR	Phantom stock rights, instruments we have previously awarded to Executive Board members and employees under PSPs, entitling their holders (once

	certain vesting and waiting periods have passed) to payment in cash of the PSR Premium
PSR Premium	The absolute difference between the current share price of a Share on the exercise date and the exercise price of the PSR
PTGER4	Prostaglandin E2 receptor 4 gene, a protein-coding gene
Qiagen	QIAGEN GmbH, Hilden, Germany, a provider of sample and assay technologies for molecular diagnostics, applied testing, academic and pharmaceutical research
QIBs	Qualified institutional buyers (as defined in Rule 144A under the Securities Act)
QSR	Quality System Regulation of FDA
Quest	Quest Diagnostics, Inc., Madison, New Jersey, United States
Roche	The Roche group (including Roche Molecular Systems, Inc., Pleasanton, USA and F. Hoffmann-La Roche Ltd., Basel, Switzerland), a Swiss multinational healthcare company
Securities Act	U.S. Securities Act of 1933, as amended
Sentinel	Sentinel CH. SpA., Milan, Italy, an R&D provider and manufacturer of IVD products
Septin9	A gene providing instructions for making a protein called septin-9, the DNA methylation status of which is considered an indicator for the presence of colon cancer
Shares	All shares of the Company including the New Shares, being no par value ordinary registered shares, each such share representing a notional amount of the Company's issued share capital of EUR 1.00
SHH	Summit Hero Holding GmbH, Cologne, Germany, formerly Blitz F16-83 GmbH
SHOX2	Short Stature Homeobox 2, a member of the homeobox family of genes that encode proteins
Takeover Offer	A voluntary public takeover offer of SHH under the terms of the BCA, pursuant to the German Takeover Act (Wertpapiererwerbs- und Übernahmegesetz) to acquire all of the Company's outstanding Shares
Trolox	A scavenger used in bisulfite conversion of DNA
Underwriter	M.M.Warburg & CO (AG & Co.) Kommanditgesellschaft auf Aktien, Ferdinandstraße 75, 20095 Hamburg, Germany
Underwriting Agreement	Underwriting agreement entered into on October 18, 2019 among the Company, the Underwriter and the U.S. Placement Agent
USC	University of Southern California, Los Angeles, California, United States

U.S. Census	Twenty-third and most recent U.S. national census with the reference day of April 1, 2010, taken via mail-in citizen self-reporting and spot-checking of randomly selected neighborhoods and communities
U.S. Placement Agent	Raymond James & Associates, Inc., 880 Carillon Parkway, St. Petersburg, FL 33716, United States, acting as placement agent for the private placements inside the United States to certain QIBs and directors and executive officers of the Company resident in the United States pursuant to the relevant exemptions from the registration requirements under the Securities Act
USPSTF	United States Preventive Services Task Force, an independent panel of primary care physicians and epidemiologists specializing in primary care and prevention, which is staffed and funded by the U.S. Department of Health and Human Services' Agency for Healthcare Research and Quality
USPTO	United States Patent and Trademark Office, an agency in the U.S. Department of Commerce that issues patents to inventors and businesses for their inventions and registered trademarks for product and intellectual property identification
We, our, us	The Epigenomics Group
Weizhen	Jiangsu Weizhen Biomedical Technology, Inc.
World Health Organization	A specialized agency of the United Nations that is concerned with international public health
WpHG	German Securities Trading Act (*Wertpapierhandelsgesetz*)

21. RECENT DEVELOPMENTS AND OUTLOOK

Overall, since June 30, 2019, our business has seen a continuation of the developments observed during the six-month period ended June 30, 2019. In our core market in the United States, product revenue was stable at a modest level while we are continuously striving for positive reimbursement decisions by relevant payor organizations. In the rest of the world, we expect revenue levels to remain marginal after the termination of the BioChain Colon Agreement in March 2019 which resulted in a material decrease of our licensing revenue in the six-month period ended June 30, 2019 compared to the same period in 2018.

Our costs have developed largely in line with the developments observed during the six-month period ended June 30, 2019, in particular relating to R&D costs. Furthermore, we have seen a continuation in the development of our inventories.

Based on certain factors and assumptions and associated uncertainties, we expect that consolidated revenue will remain low in the financial year 2019, ranging between EUR 1.0 million and EUR 1.5 million due to delays in the reimbursement decision.

As far as our operating costs are concerned, on the one hand, we expect higher R&D costs in 2019, compared to 2018, due to the post-approval clinical study for Epi proColon as required by the FDA, which we expect will entail substantial costs, as well as the current cross-sectional liver cancer study, and further planned development activities. On the other hand, the marketing, sales and distribution activities (*e.g.*, preparation of the broader commercialization of Epi proColon in the U.S. market), and increased supporting activities with regard to the awaited reimbursement determination in the United States, will lead to higher costs on the marketing and sales side. Against the backdrop of the aforementioned revenue and costs estimates, we continue to assume an operating loss for 2019. On this basis, we anticipate that EBITDA before share-based payment expenses for the full year 2019 will be in a range between EUR (12.5) million and EUR (14.0) million in 2019. For further details, see *8. "Profit Forecast"*. We also anticipate that our cash consumption for the full year 2019 will be in a range between EUR (13.5) million and EUR (15.0) million, due to payments in the first quarter of 2019 for which the corresponding expenses had already been incurred in 2018.