



Pharmaceuticals and Chemicals energized  
**IMPROVING QUALITY OF LIFE**

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Cover photo: Darmstadt | Germany \_\_\_\_\_ Jeltje Schulten and Bernd Schneider-Lowitz  
 – two oncology experts at Merck – discuss how to present scientific information about cancer  
 therapies.

# Merck 2004 at a glance

## Stronger and more focused

**Merck Group** The Merck Group is a global pharmaceutical and chemical company that focuses on innovative drugs and chemicals. Sales of the Merck Group decreased by 19% year-on-year to EUR 5,859 million, due to the divestiture of its Laboratory Distribution business sector (VWR International) in the second quarter of 2004. Adjusted for this divestiture, sales increased by 6.7% to EUR 5,339 million. R&D expenditure, which has been high for years now, was kept almost constant at EUR 599 million. The operating result was 776 EUR million; return on sales was 13.2%, or 14.1% excluding VWR.

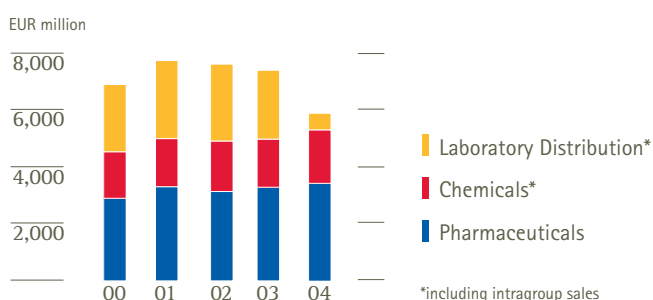
**Pharmaceuticals** The Pharmaceuticals business sector comprises prescription and patented drugs – e.g. for the treatment of cancer, metabolic disorders and cardiovascular diseases – as well as generics and over-the-counter products. Sales in the Pharmaceuticals business sector increased by 4.5% to EUR 3,452 million. Research and development expenditure decreased slightly to EUR 491 million: In the Ethicals division, we invested EUR 381 million or 25% of the division's sales in R&D, focusing on the substances in our oncology pipeline.

**Chemicals** The Chemicals business sector comprises four divisions offering chemicals for high-tech applications: liquid crystals for displays; effect pigments for industry and cosmetics; analytical reagents and test kits, as well as products and services along the entire process chain of the pharmaceutical and biotech industry; electronic chemicals for chip manufacture. Sales increased by 11% to EUR 1,888 million; the operating result rose by 39%.

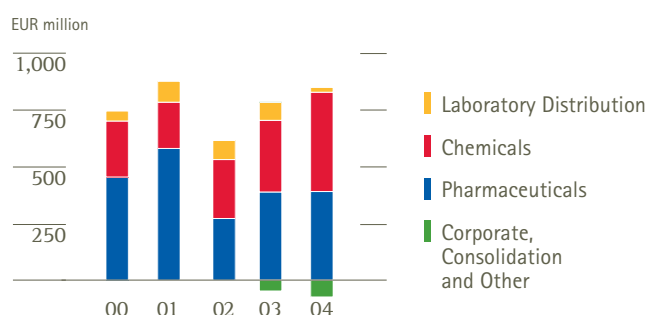
### Key figures in 2004

	Merck Group	Merck Group excluding VWR	Pharmaceuticals	Chemicals
Sales	5,859	5,339	3,452	1,888
Operating result	776	755	391	438
Research and development (R&D)	599	599	491	108
Free cash flow	1,882	575	398	427
Return on sales (ROS) in %	13.2	14.1	11.3	23.2
Return on capital employed (ROCE) in %	14.7	16.0	14.3	22.3

### Sales by business sector



### Operating result by business sector



## Merck is changing

In April 2004, Merck successfully concluded the divestment of VWR International, a global leader in the laboratory distribution business, at a price of USD 1.68 billion. In this transaction – the biggest in Merck’s history – the private equity firm Clayton, Dubilier & Rice, Inc. acquired all interests in VWR. In 2003, the Laboratory Distribution business generated 33% of Merck Group sales and 11% of the operating result. Although the divestment makes Merck smaller, it further improves the company’s financial strength. The transaction enables us to systematically expand and strengthen our core businesses in Pharmaceuticals and Chemicals.

As part of the divestment agreement, VWR will continue to be Merck’s distribution partner for laboratory products. As a consequence of divesting the Laboratory Distribution business and in order to further streamline the corporate structure, Merck has combined two of the formerly five Chemicals divisions – Analytics & Reagents and Life Science Products – into one. This new, larger division named Life Science & Analytics gives a stronger competitive edge and a better use of synergies in customer support.

The sale of VWR creates scope for the establishment of promising future businesses in Pharmaceuticals and Chemicals. This includes our commitment to cancer research as well as investments in the development and production of new liquid crystals, which – with the success of large-format LC displays – have become a fast expanding business for us. At the same time, Merck is also looking for new business fields, for which a strategic innovation process has been especially created.

**FOCUS ON LIQUID CRYSTALS  
AND ONCOLOGY**



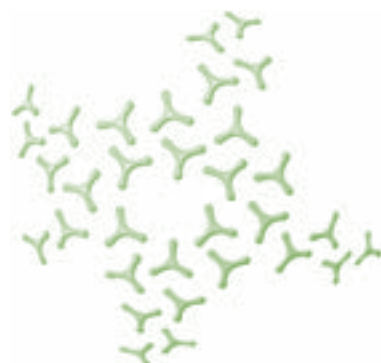
## Cancer therapy

The incidence of cancer in industrialized countries is increasing every year as a result of an aging population and changes in lifestyle. Cancer is the second most common cause of death in these countries after cardiovascular diseases. Ten million new cases of cancer were diagnosed worldwide in 2000; six million people died of cancer. If this trend persists, these figures could rise by 50 percent by the year 2020. However, today more than ever, the diagnosis "cancer" does not necessarily mean a death sentence for the patient. The past decades have seen significant advances in medicine, which have made numerous kinds of cancer treatable.

The significance of cancer research is continuing to grow in line with the increasing medical needs of the attending physicians. At Merck, the oldest pharmaceutical and chemical company in the world, we are working intensively to develop new cancer therapies. Merck is researching targeted therapy options that block the growth and spread of cancer, stimulate the immune system to recognize and fight cancer cells, or cut off the tumor's blood supply.

In 2004, Merck successfully introduced a monoclonal antibody to treat metastatic colorectal cancer. Such targeted therapies with a high potential efficacy and tolerability may improve the life expectancy and quality of life of cancer patients. An important goal for Merck is the establishment of oncology partnerships through close cooperation with science and hospital experts dedicated to providing optimum care for cancer patients.

## CHALLENGE FOR RESEARCHERS AND PHYSICIANS





Professor Elke Jäger, M.D. \_\_\_\_\_ Head of the Medical Oncology Unit II at Northwest Hospital, Frankfurt | Germany

“DEVELOPMENTS IN TARGETED CANCER THERAPIES ARE GIVING NEW HOPE TO MANY OF MY PATIENTS.”





"For me, as a doctor,

cancer remains a real challenge. Traditional treatment methods, such as surgery, radiation therapy and chemotherapy, can be effective in managing early-stage cancers, but show very limited results in advanced cancers. In addition, they all have side effects that significantly impact quality of life."

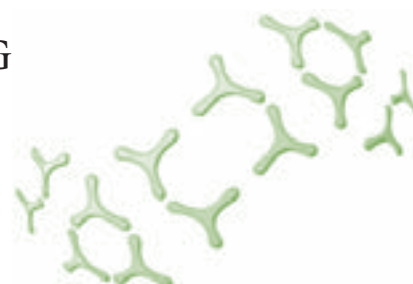
Taking time out \_\_\_\_\_ reading helps Elke Jäger take her mind off the daily stresses of her responsibilities at the hospital.





Professor José Baselga, M.D. \_\_\_\_\_ Director of Medical Oncology, Hematology and Radio-Oncology at Vall d'Hebron University Hospital, Barcelona | Spain

“THESE ARE EXCITING TIMES. WE ARE SEEING  
NEW CANCER TREATMENTS THAT ARE  
PROVIDING A SIGNIFICANT BENEFIT”.





## "For decades

researchers have tried to find new ways to target cancer cells, with little success. However, science has progressed in the meantime and now we have new anti-cancer drugs: These can specifically target receptors on the cells, blocking cell division and the spread of tumors. Some of my patients may now have a chance of increased survival and a better quality of life."

At a meeting alfresco \_\_\_\_\_ Colleagues Josep Tabernero and José Baselga discuss the progress of current studies.





Professor Hansjochen Wilke, M.D. \_\_\_\_\_ Department of Internal Medicine I and Oncology/Hematology,  
Essen-Mitte Hospital, Essen | Germany

“THE UNMET MEDICAL NEED  
IN CANCER THERAPY IS STILL HIGH.”





## "My treatment options

are unfortunately very limited when the cancer has advanced and spread to other organs. Targeted therapies, such as monoclonal antibodies, are a real breakthrough for patients and physicians. They give doctors the chance not only to prolong the time to disease progression, but even to reverse resistance to chemotherapy."

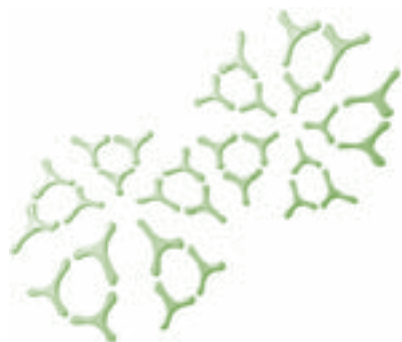
Hansjochen Wilke often thinks about \_\_\_\_\_ how to motivate people to deal with cancer more openly and encourage them to make more use of cancer-screening services.





Professor Paulo Hoff, M.D. \_\_\_\_\_ University of Texas M. D. Anderson Cancer Center, Houston, Texas | United States

“IT IS IMPORTANT FOR ME  
TO PROLONG MY PATIENTS’ ACTIVE LIFE.”





## "The new therapies

are changing the way we treat patients with advanced-stage disease. With their high rate of effectiveness and few additional side effects, new therapies can improve the quality of life of patients who previously had very limited treatment options. Ongoing studies will show whether they hold promise if used earlier on in the treatment pathway."

In dialogue with his patients \_\_\_\_\_ Paulo Hoff explains the new treatment options that may prolong their life.





Professor Eric Van Cutsem, M.D., Ph.D. ————— Professor of Internal Medicine, University Hospital Gasthuisberg,  
University of Leuven | Belgium

“KNOWING THAT THEIR TUMOR HAS STOPPED  
GROWING CAN HAVE A SIGNIFICANT  
PSYCHOLOGICAL IMPACT ON THE PATIENT.”



## "Many patients

are only diagnosed at a late stage of colorectal cancer, when the cancer has already spread from the primary site. The new, targeted therapies are showing very encouraging results: The treatment has given back so much vitality to some of my patients that they can now actively organize their everyday lives with their friends and families again."

**Back home** \_\_\_\_\_ Eric Van Cutsem tells his wife Anne about his latest scientific congress abroad.





## Letter from Bernhard Scheuble

Dear Shareholders and Friends,

Merck is doing well. Measured by profit after tax, Merck has just concluded the most successful year in its history. It was also a year of taking some important steps for future success. Our focus on innovative businesses, including the establishment of a strategic innovation process, is starting to pay off. The divestiture of our laboratory distribution business VWR for USD 1.68 billion and of our interest in BioMer for USD 300 million as well as the sale of our electronic chemicals business for EUR 270 million, which was announced a few days ago, impressively underscore our strategy of "focused diversification". Over the past years, we have consistently pursued a strategy of concentrating on meanwhile three divisions each in pharmaceuticals and chemicals, which enables us to sustainably promote and expand our core businesses in those sectors. The divestiture of VWR has enhanced the relative importance of the remaining divisions. This has led us to change our segment reporting. Starting with the year 2004, we are presenting a number of key figures, including the operating result, for all divisions. This further increase in transparency demonstrates our commitment to excellent corporate governance and reporting practices. It is also fitting given the increased interest in the Merck share, which reached a new all-time high on February 4, 2005, of EUR 53.00 per share.

The year 2004 was distinguished not only by a new record profit after tax, but also by particularly good key financial indicators. For both return on sales (ROS) and return on capital employed (ROCE) we set ourselves medium-term targets of 15% in 2000. With our current business, that is, without VWR, we came close to the target with an ROS of 14.1%, and with an ROCE of 16.0% we exceeded the target for the first time.



Prof. Dr. Bernhard Scheuble \_\_\_\_\_ Chairman of the Executive Board of Merck KGaA



Free cash flow amounted to EUR 575 million excluding VWR, or EUR 1,882 million including VWR, setting new standards for the Merck Group. The gearing – defined as the ratio of net debt to net equity – of 0.27 also represents a new record figure, even more so since it includes pension provisions. The very good figure underscores the fact that the Merck Group is today free of net financial debt. This was reflected in an upgrading of our financial rating.

Of special note during 2004 were liquid crystals and our new innovative cancer treatment Erbitux®. Liquid crystal displays (LCDs) apparently will dominate flat-screen technology for some years to come. Merck has further strengthened its global market leadership, particularly in high-grade, high-potential applications for television screens. It is appropriate for a market leader, however, to follow up and explore the possibilities of alternative technologies. This explains our two acquisitions in the area of organic light-emitting diodes (OLEDs). These acquisitions expand the competencies we already have in the areas of organic chemistry and polymers. Besides Liquid Crystals, our other Chemicals divisions also developed positively.

The three Pharmaceuticals divisions showed a satisfying business development. The integration of Dey, Inc. into the Generics division in 2004 now makes this Merck's largest division in terms of sales. This reallocation underlines the Generics division's strategy of focusing on specialty businesses and value-added generics such as products to treat respiratory diseases in addition to its standard business. A highlight of our Pharmaceuticals business was the market launch of our innovative medicine Erbitux® for treating patients with colorectal cancer. In its first year on the market, Erbitux® generated sales of EUR 77 million and may be one of the most successful market launches of a cancer therapy in Europe. We are proud to be able to offer doctors and patients a new therapeutic option with this innovative product. The clinical development of Erbitux®, the outlicensing of the antidepressant Vilazodone to Genaissance and of a novel drug for insomnia to Eli Lilly, as well as the U.S. market launch, at the beginning of 2005, of our alcohol dependence treatment Campral® through our partner Forest – all underscore the capabilities of our pharmaceutical research. It justifies our substantial investments in research, which are significantly above the industry average. The success of the year is demonstrated, not least, by the impressive earnings power of over EUR 1.3 billion. We define earnings power as the sum of investments in research and the operating result. Major restructuring projects, particularly in France and the United States, will contribute toward securing our long-term profitability.

In our outlook for 2005 we anticipate continuing good business development. This should apply to all divisions. We are especially optimistic about the development of liquid crystals and Erbitux®.

My special thanks and appreciation once again go to all our employees and our management team worldwide, who have worked together to further develop the Merck Group. I am pleased that – in the process of appointing new heads for the three Pharmaceuticals divisions and for the Liquid Crystals division – our management team has become far more international and resembles the global character of our business.

Of course, my thanks also go to our customers who have remained loyal to us. The continuing support of the Merck family and of the shareholders has been of decisive importance for our success. I would like to express my special thanks for your support and for your trust.

Sincerely,

A handwritten signature in blue ink, appearing to read 'B. Scheuble', written in a cursive style.

## The Executive Board of Merck KGaA

### **Bernhard Scheuble** | Chairman

Born in 1953, Ph.D. in Physics from the University of Freiburg;  
with Merck for 23 years |

Pharmaceuticals | Law, Patents, Trademarks,  
Corporate Auditing, Corporate Development and  
Corporate Communications

### **Michael Römer** | Vice Chairman

Born in 1946, Ph.D. in Chemistry from the  
Technical University of Darmstadt; with Merck for 27 years |  
Operations, Purchasing and Logistics, Health,  
Safety and Environmental Protection, Central Process  
Development Chemicals | Production in Germany



### **Michael Becker**

Born in 1948, Ph.D. in Law from the  
University of Augsburg; with Merck  
for 6 years | Accounting and Controlling,  
Finance, Tax, Insurance | Europe,  
Middle East, Africa

### **Thomas Schreckenbach**

Born in 1946, Ph.D. in Biochemistry  
from the Ludwig Maximilian  
University, Munich; with Merck  
for 18 years | Chemicals | China,  
Japan, Korea, Singapore, Malaysia,  
Taiwan

### **Jan Sombroek**

Born in 1947, Ph.D. in Chemistry  
from the University of Cologne;  
with Merck for 29 years | Human  
Resources, Information Services |  
Latin America, Australasia and some  
Asian countries

# Business sectors and divisions

## Focus on Pharmaceuticals und Chemicals

### Pharmaceuticals business sector

#### Ethicals

Oncology | Targeted cancer therapy \_\_\_\_\_ Erbitux® (colorectal cancer)  
 CardioMetabolic Care | Cardiovascular \_\_\_\_\_ Concor® product family  
 Type 2 diabetes \_\_\_\_\_ Glucophage® product family  
 Dyslipidemia \_\_\_\_\_ Niaspan®  
 Thyroid preparations \_\_\_\_\_ Euthyrox® ...

Other indication areas:

Alcoholism \_\_\_\_\_ Campral®  
 Hormone replacement therapy \_\_\_\_\_ Lutanyl®, Fem7® ...

#### Generics

Off-patent, low-price drugs  
 for several indications  
 Respiratory diseases and allergies \_\_\_\_\_ EpiPen®, DuoNeb® ...

#### Consumer Health Care

Vitamins, minerals, supplements \_\_\_\_\_ Multibionta®, Cebion®, Bion®3 ...  
 Cold remedies \_\_\_\_\_ Nasivin®, Sedalmerck® ...  
 Natural remedies \_\_\_\_\_ Seven Seas®, Kytta®, Médiflor® ...

### Chemicals business sector

#### Liquid Crystals

Components (LCs, ITO glass ...) for liquid crystal displays (LCDs) in televisions,  
 PC monitors, notebooks, mobile phones ...

#### Pigments

Effect pigments (Iridin®, Colorstream®, Xirallic® ...), raw materials and active  
 substances for cosmetics (Eusolex®, Ectoin®...), vapor-deposition chemicals  
 (Patinal® ...)

#### Life Science & Analytics

Products and services for the entire process chain of drug development and  
 manufacture, e.g. for chromatography (Chromolith® ...), reagents and test kits  
 for industry, the research laboratory and environmental analysis

#### Electronic Chemicals

Process chemicals and functional chemicals for chip manufacture

## The Merck share

### Back to a high level

The German stock market showed an upward trend in 2004 and the Merck share was able to exploit some of its growth potential: On December 30, 2004, it was listed at a price of EUR 50.62 – around 50% higher than on December 30, 2003, when it was listed at EUR 33.03. The share price increased by as much as 15% in the first quarter. From March 2004 on, the Merck share outstripped both the DAX and the MDAX, in which Merck is listed. It reached its highest value of EUR 51.19 – the Merck share's highest ever closing price in XETRA trading on the Frankfurt Stock Exchange – on June 8, 2004. The share was boosted by the European market approval of the cancer drug Erbitux®, and by the increasing demand for liquid crystals. Since the second quarter it has been possible for senior executives to exercise stock options for the first time within the scope of the stock option program. Options in the second tranche were exercised first at EUR 34.35, when the share was listed at a price of EUR 44.66. Options in the first tranche were exercised later at EUR 37.41, when the share price reached EUR 48.63. The resulting selling pressure for the share did not, however, have a negative impact on its price. The share price fell initially in the third quarter, and then stabilized at a slightly lower level. The successful outlicensing of two substances in the third and fourth quarters was good news for our investors. The third quarter also ended optimistically with the news that the U.S. Food and Drug Administration (FDA) had granted fast-track approval status to the liposomal cancer vaccine L-BLP25.

#### Transparency for all target groups

Investors generally want us to assist them with their stock valuations by providing detailed business forecasts spanning one or even several years. We have set ourselves long-term financial goals, but do not want to raise any expectations with forecasts that we are not in a position to fulfill. In communication, we will take account of the ever more restrictive legislation.

► This year, we again published information about our company for the press, analysts and investors: In conferences, we reported regularly on our complex business activities and the special character of our company. We are continuing to develop our financial reporting methods on an ongoing basis in order to achieve greater transparency. Our Web site provides comprehensive and up-to-date information via online publications, such as the Annual Report, or live transmissions of the press conferences.

#### Dividends reflect successful fiscal year

Earnings per share after tax and minority interest were EUR 3.47 for fiscal year 2004, compared to EUR 1.15 in 2003. As in the previous year, we will propose to pay a dividend of EUR 0.80 per share at our Annual General Meeting on March 31, 2005. We will also propose to pay a one-time bonus of EUR 0.20 per share for the sale of VWR International. This will keep the dividend yield on an attractive level.

### The Merck share compared to DAX/MDAX in 2004





### Percentage of foreign investors is increasing

Merck KGaA shares have been listed on the Frankfurt Stock Exchange since October 1995. The free float is 50,582,879 shares – slightly more than in 2003. The increase by 1,082,880 shares in 2004 is attributable to the stock option program, in which stock options were exercised for the first time. The holding of the general partners remained unchanged at 139,699,997 theoretical shares; the equity share of E. Merck OHG is not represented by shares (further information on the total capital of Merck KGaA can be found on page 58). The average daily turnover during the year was 215,402 shares.

Around one third of our shares are held in the United Kingdom, just over a quarter are held in the United States, while only 22% are held in Germany. The percentage of foreign investors thus increased from 74% in the previous year to 78% in 2004. The percentage of institutional investors also increased further. Only in Germany are 55% of our shares still in the hands of private investors – although this trend is on the decline. Almost all shares abroad are held by institutional investors.

### Share data<sup>1</sup>

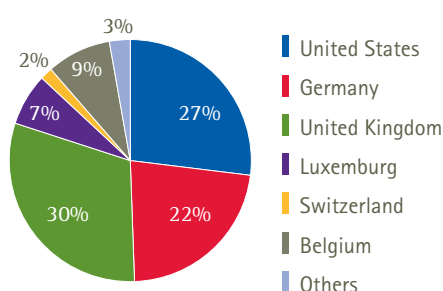
	2004	2003
Earnings per share after tax and minority interest in EUR	3.47	1.15
Dividend in EUR	0.80	0.80
One-time bonus in EUR	0.20	–
High share price for the year in EUR	51.19	34.06
Low share price for the year in EUR	32.00	20.01
Year-end share price in EUR	50.62	33.03
Price-earnings ratio (Dec. 30)	14.59	28.72
Theoretical number <sup>2</sup> of shares in millions (Dec. 30)	190.3	189.2
Actual number of shares in millions (Dec. 30)	50.6	49.5
Market capitalization <sup>3</sup> in millions of EUR (Dec. 30)	9,632	6,249

<sup>1</sup> All figures relate to the respective closing price in XETRA trading on the Frankfurt Stock Exchange.

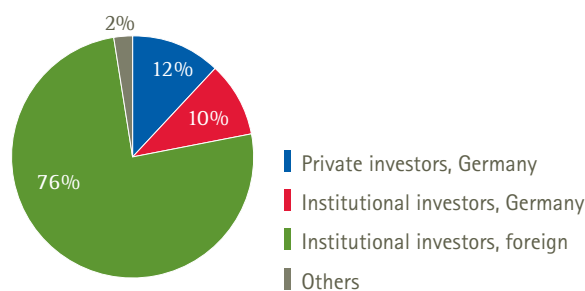
<sup>2</sup> The calculation of the theoretical number of shares is based on the fact that the general partner's equity capital is not represented by shares. As the share capital of EUR 131.5 million is divided into 50.6 million shares, the corresponding calculation for the general partner's capital of EUR 363.2 million gives 139.7 million theoretical shares. The number of shares increased due to the exercise of stock options in 2004 (see page 79).

<sup>3</sup> Based on the theoretical number of shares

### Shareholder structure by country\*



### Shareholder structure by investors\*



\*Status as of July 2004

## Business development of the Merck Group

### Committed to sustained growth

#### Boom in the global economy

The boom in the global economy lost some of its momentum during the course of 2004. Reasons for this include the increase in crude oil prices, a tightening of fiscal and monetary policy in the United States, and the restrictive economic policy in China. Although the global economy suffered from the strong demand from the Chinese industry for raw materials, it benefited from the substantial exports to China. According to calculations by the German Institute for Economic Research (DIW), global economic growth was 3.9% in 2004; the Euroframe group calculated as much as 4.6%. According to Euroframe, growth in the United States was 4.0%, putting it ahead of the euro zone, which grew by 1.8%.

The recovery in Europe was borne by exports. Both companies and consumers remained cautious as the continually rising euro exchange rate hampered this export-driven growth somewhat. Sectors such as the pharmaceutical and automotive industries suffered particularly badly. In addition, prospects were clouded by the high current account deficit in the United States, and by the risk of further depreciation of the dollar.

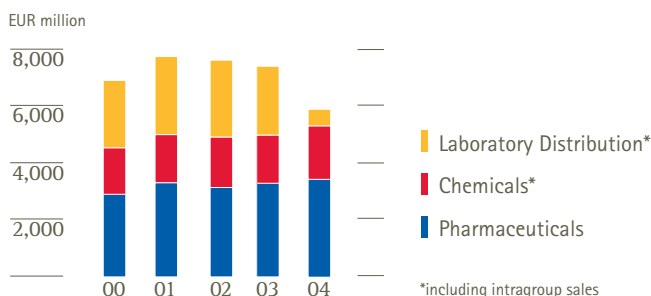
After a brief upturn, the German economy slowed down again in the second half of 2004: The growth rate for the year as a whole was 1.7%, according to calculations by the Federal Statistics Office; adjusted for the different number of working days, it was as low as 1.1%. Although the slump in consumption continued, the high-flying euro and the oil price hike continued to have a curbing effect, and the situation on the labor market showed little improvement, Germany defended its position as world export leader in 2004. Exports increased by 10%.

#### Encouraging growth for the Merck Group

Considering general economic conditions, the Merck Group's continuing operations showed encouraging development, generating a 6.7% rise in sales to EUR 5,339 million. Total sales amounted to EUR 5,859 million, corresponding to a year-on-year decrease of EUR 1,343 million due to the sale of our Laboratory Distribution business, VWR, at the beginning of April. The Laboratory Distribution business sector accounted for EUR 582 million of overall sales in the first quarter; the intragroup sales between the Chemicals and the Laboratory Distribution business sector totaled EUR 63 million.

Acquisitions and other divestitures had only a minor effect on the business development of the altogether seven Pharmaceuticals and Chemicals divisions. The unfavorable exchange rate development, particularly the strength of the euro against the U.S. and Japanese currencies, had a total negative effect of 2.7%. Adjusted for both effects, sales of the Merck Group excluding VWR increased by 9.3% – we describe this growth as organic growth.

### Sales by business sector



## Components of growth

Sales compared to previous year's quarters in %	Quarter 1	Quarter 2	Quarter 3	Quarter 4	2004	2003
Organic growth	10.3	10.6	9.8	6.6	9.3	7.3
Pharmaceuticals	4.3	3.3	8.4	8.6	6.2	11.1
Chemicals	21.2	25.6	12.5	2.9	15.3	8.7
Currency effects	-3.8	-1.7	-2.8	-2.7	-2.7	-9.7
Acquisitions/Divestitures	-0.1	0.1	0.2	0.4	0.1	-0.3
Total (excluding VWR)	6.4	9.0	7.2	4.4	6.7	-
Total (including VWR)	2.5	-24.2	-26.1	-26.1	-18.6	-2.7

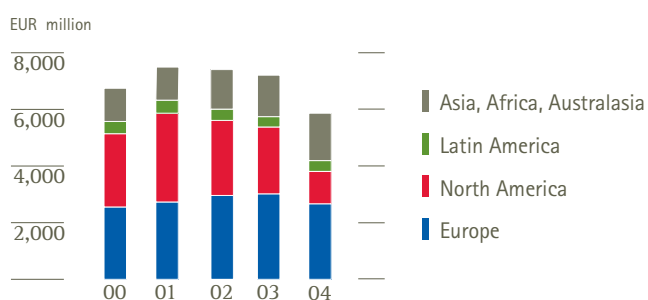
The 4.5% increase in sales to EUR 3,452 million in the **Pharmaceuticals** business sector is primarily attributable to the Generics division, which continued its growth trend at a slightly slower pace, increasing by 5.4%. Sales in the Ethicals division increased slightly by 2.5% – in spite of generic competition for our best-selling drug, the antidiabetic agent Glucophage®. The Consumer Health Care division increased its sales by an encouraging 9.6%. Sales in the **Chemicals** business sector rose by 11% to EUR 1,888 million. This increase was again characterized by the success of liquid crystals for displays: The Liquid Crystals division grew by 33%. The Electronic Chemicals and Pigments divisions also increased their sales, however, by 11% and 5.0%, respectively. The Life Science & Analytics division, which was formed at the beginning of 2004 from the Analytics & Reagents and Life Science Products divisions, achieved sales growth of 1.0%.

### Regional sales development influenced by strong euro

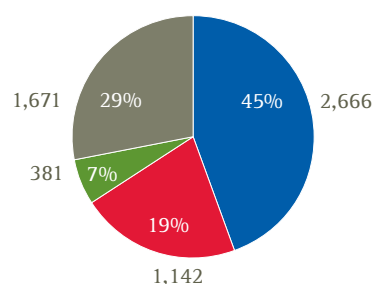
With sales of EUR 2,666 million and a 45% share of Group sales, **Europe** is the most important market for Merck. Adjusted for the VWR divestiture, sales in the EU member states increased by 5.6%; growth in the Eastern European states was as much as 33%. After adjustment, sales in France increased by 11%; in Spain, they increased by 15%, while in Germany, we made a loss of 1.3%. In **North America**, the weak dollar led to a decline of 4.9% in adjusted sales, while sales in Canada rose by 16%. Sales of this region, including VWR, correspond to 19% of Group sales, which were substantially lower due to the divestiture of VWR.

In spite of strong currency effects, sales in **Latin America** increased by 4.5% to EUR 381 million, corresponding to a 7% share in Group sales. Contrary to the previous year, sales grew in the largest market, Brazil, by 6.1%; Chile, Colombia and Venezuela achieved double-digit sales increases. Sales in **Asia, Africa and Australasia** amounted to EUR 1,671 million, corresponding to an increase of 14%. We achieved double-digit sales growth in South Korea and in Taiwan. Growth in Africa and Australia was also very encouraging, where sales increased by 12% and 11%, respectively. Sales in this region accounted for 29% of Group sales.

## Sales by region



2004



## Results of Merck Group operations

### Record profit after tax

The operating result of the **Merck Group** increased by 5.5% to EUR 776 million. This includes the operating result of EUR 21 million generated by the discontinued Laboratory Distribution business sector (Discontinuing Operations) for the period until VWR's spin-off from the Group in April 2004; however, this value is reported separately in the income statement in accordance with International Financial Reporting Standards (IFRS). Excluding VWR's contribution to earnings in 2003 and 2004, the operating result increased by 15%. Aside from the sale of Laboratory Distribution, acquisitions and divestitures had little effect on the operating result; currency effects had a negative impact of

2.7%. Return on sales (ROS) increased from 10.2% to 13.2%. Return on capital employed (ROCE) rose from 12.1% to 14.7%. Excluding VWR, this key figure increased to as much as 16.0% and therefore exceeded our medium-term target of 15% for the first time.

The **Pharmaceuticals** business sector's operating result of EUR 391 million was slightly higher than in the previous year. This is attributable on the one hand to the absence of the previous year's income from the sales partnership with Bristol-Myers Squibb for diabetes products of the Glucophage® franchise, and from the license payments for omeprazole from Schwarz Pharma. The costs of launching Erbitux® and Niaspan® also had a significant impact. Fortunately, Erbitux® sales and earnings contributions exceeded our expectations. Return on sales in Pharmaceuticals declined to 11.3%; return on capital employed, on the other hand, showed a slight increase to 14.3%. The Ethicals division increased its operating result by 15% to EUR 137 million, thus generating the greatest growth of all the individual Pharmaceuticals divisions. Generics suffered a 7.5% decline in its operating result to EUR 214 million, primarily due to the loss of omeprazole license payments. The Consumer Health Care division, on the other hand, increased its operating result by 5.3% to EUR 40 million.

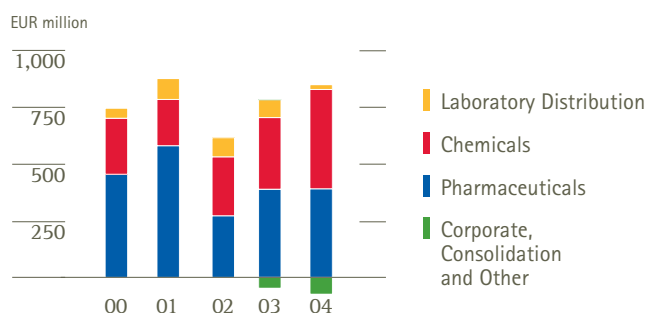
### Key figures of the Merck Group

	Operating result EUR million	Exceptional items EUR million	EBIT EUR million	EBITDA EUR million	ROS %	ROCE %
Pharmaceuticals	391	22	412	615	11.3	14.3
Chemicals	438	-	438	593	23.2	22.3
Laboratory Distribution	21	-	21	37	3.7	3.8
CCO segment (incl. VWR)	-74	246	172	174	-	-
<b>Merck Group (incl. VWR)</b>	<b>776</b>	<b>267</b>	<b>1,044</b>	<b>1,419</b>	<b>13.2</b>	<b>14.7</b>
Merck Group (excl. VWR)	755	-20	735	1,094	14.1	16.0

EBIT = Earnings before interest and tax  
ROS = Return on sales  
CCO = Corporate, Consolidation and Other

EBITDA = EBIT before depreciation and amortization  
ROCE = Return on capital employed

### Operating result by business sector





The operating result of the **Chemicals** business sector rose by an impressive 39% to EUR 438 million: All Chemicals divisions contributed to this extraordinarily high growth. As in the previous year, the front-runner was our Liquid Crystals division, which increased its operating result by 37% year-on-year to EUR 299 million. The Life Science & Analytics division increased its operating result by as much as 50% to EUR 72 million. Pigments achieved growth of 16% to EUR 48 million. The operating result of our Electronic Chemicals division increased to EUR 18 million and was thus up 136% on the previous year. Return on sales in the Chemicals business sector increased further to 23.2%; return on capital employed also improved again, reaching 22.3%. Both these values were significantly higher than our respective medium-term targets of 15%.

The sale of VWR ended **Laboratory Distribution's** business operations and reporting on them. In accordance with IAS 35, the figures until VWR's deconsolidation are carried separately in the consolidated financial statements as Discontinuing Operations. We set up the segment **Corporate, Consolidation and Other (CCO)** on January 1, 2004, to report, among other things, group administration expenses that cannot be allocated on a cost-causative basis to the individual divisions. The segment also includes all income taxes and certain exceptional items.

#### High income from exceptional items

Profit before tax from the sale of VWR amounts to EUR 287 million and is disclosed on a separate line in the income statement. The remaining exceptional items totaling EUR -20 million are a balance of earnings totaling EUR 47 million – composed, among other things, of the proceeds from the sale of our interest in the joint venture BioMer C.V. – and expenses, such as follow-up costs relating to previous exceptional items, or additions to our provisions for litigation proceedings and the write-down of goodwill.

#### Outstanding financial result

The sale of VWR enabled us to decrease our financial obligations (see chapter on financial position) and improve our financial result: At EUR 83 million, expenses were 28% lower than in the previous year. The largest items included in the financial result were, at EUR 55 million, the expenses for interest payments on our pension provisions; the remainder mainly related to interest expenses incurred back in the first quarter.

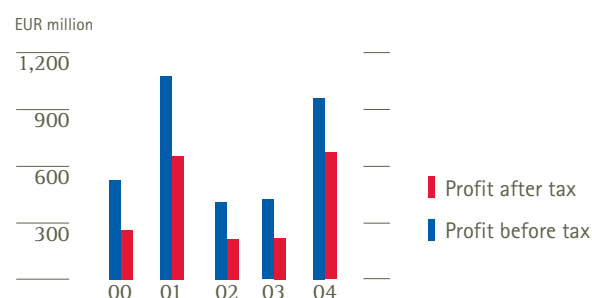
#### Profit after tax more than tripled

Profit before tax was EUR 961 million; profit after tax was EUR 672 million. The tax rate thus fell to 30.1% from 48.5% the previous year. Exceptional items played a significant role in this development, however: Excluding these items, the tax rate was 32.4%, compared to 39.9% the previous year.

#### Proposal for dividend and one-time bonus

We intend proposing to the Annual General Meeting on March 31, 2005, the payment of a dividend of EUR 0.80, plus a one-time bonus of EUR 0.20 per share. The regular dividend will therefore remain at the previous year's level.

### Profit before and after tax



## Financial position of the Merck Group

### Strong balance sheet

#### Record cash flow

Free cash flow reached a record EUR 1,882 million – primarily due to the proceeds from the divestiture of VWR. Positive effects were also gained – independent of this effect – from the favorable business situation and investments, attributable to the level of depreciations and write-downs. Adjusted for the sale of VWR, free cash flow almost doubled to EUR 575 million from EUR 316 million in 2003.

#### Excellent balance sheet structure

The balance sheet has changed significantly due to the divestiture of VWR. Total assets decreased from EUR 6,982 million to EUR 5,722 million. Financial obligations were down to just EUR 212 million; however, these were far exceeded by cash and cash equivalents, which amounted to EUR 370 million. In net terms, Merck was free of financial obligations as of December 31, 2004. Its net equity ratio thus increased substantially, corresponding to 51% of total assets.

Taking pension provisions into account, gearing (ratio of net debt and pension provisions to net equity) improved to 0.27, compared with 1.01 at the end of 2003. In addition to other factors, the favorable development of this key figure was reflected in positive reviews from leading international rating agencies (e.g. a high “BBB+” rating from Standard & Poor’s and a “Baa1” rating from Moody’s), which rate companies’ creditworthiness and risk situation.

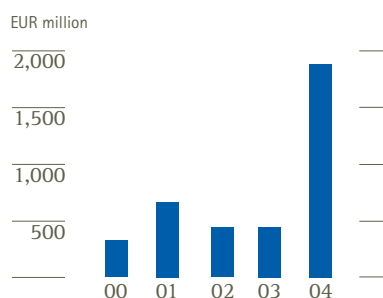
► Further details on the financial position and the balance sheet are contained in the consolidated financial statements and the related explanatory notes starting on page 61.

#### Investments in previous years now paying off

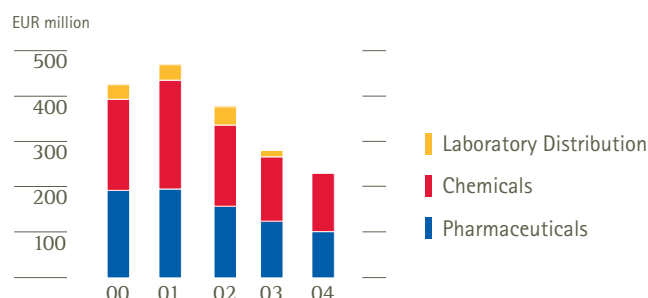
We again reduced our investments in property, plant, and equipment in 2004 to EUR 234 million, due to the completion of several large-scale projects of previous years. This gives the Merck Group – excluding VWR – an investment ratio of 4.3%, based on adjusted sales. Around one half was attributable to large-scale projects with costs in excess of EUR 0.5 million; the other half related to a large number of smaller investments around the world, since Merck is represented in 27 countries via 61 production sites.

More than half of these measures to secure the future were again taken in Europe, where the focus was on the modernization and expansion of the two largest production sites, Darmstadt and Gernsheim. We invested considerably more in Asia than in previous years, in order to supply our customers – for example, in the electronics and automotive paints industries – with liquid crystal mixtures and pigments quickly and flexibly on site. In order to ensure future growth opportunities, we have established new production capacities, mainly in South Korea, Japan and Taiwan.

#### Free cash flow



#### Investments in property, plant, and equipment





Darmstadt | Germany \_\_\_\_\_ Together with Joseph L. Rice, Chairman of the Board at Clayton, Dubilier & Rice, Bernhard Scheuble and Michael Becker sign the divestment agreement concerning the sale of Merck's Laboratory Distribution business VWR International.

The **Pharmaceuticals** business sector invested EUR 102 million worldwide, more than half of which was allocated to the Ethicals division, which invested mainly in the modernization of its production sites in Darmstadt and Semoy in France. The growing Generics division invested EUR 39 million in its subsidiaries Alphapharm in Australia, Genpharm in Canada, Gerard Laboratories in Ireland and Merck Génériques in France.

The **Chemicals** business sector accounted for EUR 129 million of global investments in property, plant, and equipment. As in previous years, the focus was on modernizing the production of organic chemicals in Darmstadt, which will enable us in particular to meet the growing demand for liquid crystals in the coming years. The Liquid Crystals division invested a total of EUR 56 million, with most being allocated to Darmstadt, but it also reinvested in Korea and Taiwan to set up facilities for manufacturing customer-specific mixtures for various types of flat-screen displays. In Taoyuan in Taiwan, we also completed the second plant for the production of special color filters for displays. This is part of Merck's strategy of expanding its share in the rapidly growing display market beyond liquid crystals and ITO glass to include other components. In Taiwan, we completed a regional distribution center for the Electronic Chemicals division. More than EUR 30 million was invested in the new Life Science & Analytics division, particularly in Germany and the United States: In future, this division will also benefit from investments in logistics at the Darmstadt site. The Pigments division invested EUR 28 million in production facilities for effect pigments, especially in Gernsheim (Germany) and Onahama (Japan).

## Cross-divisional functions

### Securing the future of core businesses

▶ [www.innovation.merck.de](http://www.innovation.merck.de)

#### Research and development above industry average

Our research and development (R&D) expenditure, which has been substantial for a number of years now, was kept stable at EUR 599 million. Around one half of research funding was invested in our research and development site in Darmstadt. Darmstadt is home to our main facilities, such as our chemical analysis plant, the complete infrastructure for preclinical and clinical development, as well as many other departments necessary for researching a drug, including the Regulatory Affairs and Patents departments. Other major pharmaceutical competence centers are located in Chilly-Mazarin (France), Mollet del Vallès, near Barcelona (Spain), and Billerica, near Boston, Massachusetts (United States). The most important chemical research locations, besides Darmstadt, are headquartered in Atsugi and Onahama (both in Japan), Madison, Wisconsin (United States), and Southampton (United Kingdom).

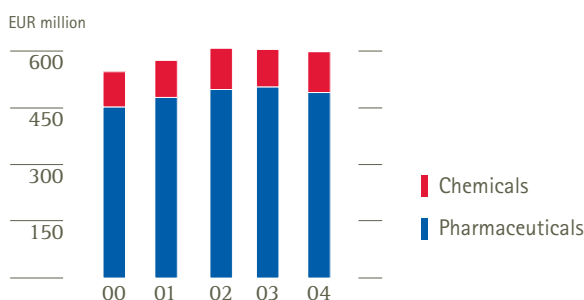
The Pharmaceuticals business sector invested a total of EUR 491 million in R&D, decreasing its share in the Group's total research expenditure slightly to around 82%; the research-spending ratio was 14% based on Pharmaceuticals' sales. In the particularly research-driven Ethicals division, this ratio was as high as 25% – with expenditure down slightly to EUR 381 million. In the Chemicals business sector, we increased our expenditure by 9.0% to EUR 108 million. Further information on research and development can be found in the sections on the individual divisions starting on page 32 and in our brochure “Chemistry with a Future – A Glimpse of Research at Merck”.

#### Further improvement in cost situation and efficiency

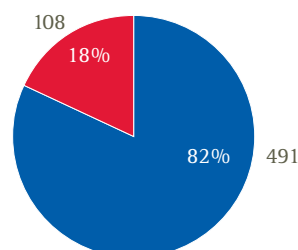
The long-term program to increase efficiency underway at our sites in Darmstadt and Gernsheim is continuing to bear fruit. We have achieved all the goals we set in 2002 – to optimize processes, reduce the number of employees without redundancies, and cut costs – bringing us future annual savings of around EUR 40 million. The cost benefits can be clearly felt in the divisions and help to improve our market position and secure jobs. The savings in logistics and production at the Darmstadt works, for example, reduced costs for the Life Science & Analytics division by EUR 13 million in 2004.

As part of the measures begun in 2003 to optimize pharmaceutical production, we are planning to close down our Lyon-Lacassagne plant by 2006. Due to the setbacks in diabetes research, we have also decided to focus pharmaceutical research in France on one location, namely Chilly-Mazarin. In order to secure our competitiveness and have enough resources for high-potential research projects, we decided in 2004 to discontinue four research projects in our active substance pipeline. We have outlicensed two additional research substances to partners; one of these has been granted marketing authorization in the United States and is now being marketed under license by a partner. The

Research and development by business sector



2004







Darmstadt | Germany \_\_\_\_\_ Head of Cosmetic Research Herwig Buchholz in a discussion with Teresa Mujica-Fernaud and Christophe Carola. This international team registers around one dozen patents for new cosmetic active substances every year.

license payments provide us with the necessary scope to accelerate the progress of our innovations. As we do not currently market any drugs from the Ethicals division independently in the United States, we have downsized our subsidiary EMD Pharmaceuticals there, and focused its activities on preclinical and clinical cancer research.

#### Further advancements in online purchasing

We further improved strategic and operational purchasing in 2004 through innovative e-procurement strategies: An electronic ordering system on the intranet (IntraShop Merck) with integrated online catalogs from external suppliers enables us to ensure efficient processing in the procurement of consumables and services. The system can provide 1,200 active purchasers with direct access to 81 contract suppliers. An average of around 20,000 order items a month are processed via the IntraShop and booked directly to cost centers. The volume of orders in 2004 was valued at EUR 28 million.

In strategic purchasing, our intensive use of Internet auctions (reverse e-auctions) ensures us the best possible bargaining results. Global strategic purchasing programs enabled us to achieve cost savings of around EUR 47 million in a total of 31 projects: These savings mainly benefited the Pharmaceuticals business sector. The Chemicals divisions benefited in particular at the largest production sites, Darmstadt and Gernsheim: Firstly, cost prices were 5.7% lower than the previous year and, secondly, we managed to negotiate investment discounts averaging 18% of the project costs quoted.

We have had our own purchasing office in Shanghai since January 2005. A team of initially three people will exploit the opportunities offered by this dynamically growing market for purchasing chemical and pharmaceutical raw materials.

**International focus creates global IT synergies**

We coordinate our global IT projects centrally and again reduced costs in 2004: Adjusted for the expenses for the companies sold in the first six months of 2004, costs were 1.4% lower than in the previous year at EUR 144 million. We will continue to provide the European subsidiaries of these companies with IT services as defined by long-term service agreements.

In addition to further optimizing our internal processes, exploiting scale effects, and many measures to consolidate infrastructure, we successfully concluded several projects to increase efficiency. Together with the Generics division, we established a document management system for drug approval in 2004. Dossiers can now be created electronically and can be submitted in electronic form in future if required. Extensive marketing authorization applications can thus be processed quickly and cost-effectively. We were able to draw on our experience here with applications and systems that the Ethicals division has been using for years. We provide efficient support for global marketing processes – such as the global market launch of Erbitux® – by way of innovative communication platforms based on databases and intranet solutions.

In order to continually optimize our processes and services, we are harmonizing business processes and synchronizing data worldwide, primarily in the areas of production, logistics, distribution and accounting. We design these best-practice business processes for the entire Merck Group, giving consideration to potential for innovation, and reproduce them in the regional SAP systems. We plan to provide these solutions to all our larger companies in the next five years.

**Communication increases awareness of our areas of activity**

The success story of liquid crystals was the focal point of our communication activities, as liquid crystals celebrated their 100th anniversary at Merck in 2004. The presentation of the German Future Prize by the German Federal President at the end of 2003 had already heightened media interest and prepared the sounding board for the anniversary with numerous events and publications for customers, scientists, the general public and employees: The international conference of the Society for Information Display (SID) in Seattle, United States, as well as additional scientific congresses in Germany and Slovenia, were as much a part of the program as our own press and customer events in Japan, Taiwan and Korea.

In line with the new German Law for the Improvement of Investor Protection (AnSVG), which entered into effect in October 2004, we further harmonized our international communication policy and adopted binding guidelines.

## Responsibility for employees, the environment, and the community

### Motivated employees ensure success

Following the divestiture of its laboratory distribution company VWR, the Merck Group has 171 companies in 52 countries; we are represented in 27 countries via 61 production sites. As of the balance sheet date, December 31, 2004, a total of 28,877 employees worldwide were contributing to our entrepreneurial success and helping to secure our future. This corresponds to an increase – after adjustment for the 5,881 employees of the 19 VWR companies – of 1.9%, although the number of employees did not increase significantly due to acquisitions.

[www.people.merck.de](http://www.people.merck.de)

The following factors were integral in our decision to recruit new employees: our good business development, newly commissioned production plants in Asia, and well utilized production and logistics capacities in Europe. In addition, the Oncology business area has established a highly qualified field sales force, and we have reinforced our Clinical Research and Development department.

#### Many new employees in Asia

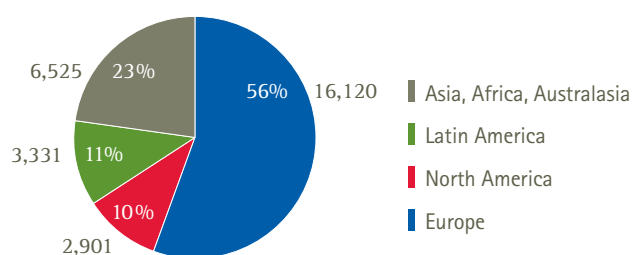
Relatively speaking, our greatest regional growth was generated in Asia at 6.8%, mainly in China and Taiwan. Growth in Indonesia, Canada, Poland and Slovakia was also substantial. Within the scope of optimizing our global research and production network, we made our site in Chilly-Mazarin the focus of pharmaceutical research in France, and are planning to discontinue pharmaceutical production in Lyon-Lacassagne by mid-2006 - this plant is situated in the middle of a residential area. We have already agreed individual solutions with two thirds of the 314 affected employees and are continuing to seek socially acceptable agreements for the remainder. We sold our French production site in Pithiviers to Orgasynth, which will carry on the existing business activities with almost all employees.

A total of 9,090 employees work in Germany – this number includes 460 trainees, who make an important contribution to securing Merck's future at its site in Darmstadt (an extensive school sponsorship program in the Darmstadt region also makes a contribution). The company headquarters manage all divisions and provides key central services. In terms of function, 11% of employees work in research, 30% in production, 30% in sales and marketing; the remainder work in various central administrative functions, such as human resources and accounting, as well as business development.

#### International senior management development programs continue to evolve

Our high standards for dealing responsibly with employees also extend to education, further training and development. In this respect, Merck pursues the strategic objective of internationalizing

Number of Employees  
as of Dec. 31, 2004





Darmstadt | Germany \_\_\_\_\_ Janine Schönborn – pictured here with her instructor Klaus Pruhs at a filter press – is one of the 460 trainees at Merck in Germany; we sponsor a further 44 trainees at external companies that work for Merck.

human resources management and creating a common understanding worldwide for interaction between employees and senior executives, while consistently focusing on our core businesses. The challenges for senior executives simultaneously include mastering the strategic areas of innovation, employees and social responsibility. The “Merck Leadership Compass” was introduced at the Corporate Meeting in June 2004 in Wiesbaden as the globally applicable competence model. The aim in future is to methodically advance certain competencies at all levels of hierarchy and to adapt management training schemes and programs accordingly at the regional companies.

As a means of qualification we launched the “Merck Leadership Curriculum” in 2004 – a systematic concept for senior management training, which expands the existing global management development tools. This includes consistent processes for discovering, supporting and retaining senior management talent, such as the International Management Program for upcoming managers and the top talent pool for succession planning, as well as standard principles for setting targets, evaluating performance, and rewarding it. Concrete results have already been seen from the development process started in Asia and Latin America in 2002, where further talent training sessions, with modules in Shanghai, Singapore and India, were held in 2004. A large number of the particularly talented employees identified have already taken on new challenges within the global Merck Group. This allows us to form a new balance between locally developed and internationally experienced senior executives from the headquarters – after all, Merck generates more than 90% of its sales with customers outside Germany.

The ability to lead employees and inspire them to achieve common goals is becoming more and more important for ensuring long-term business success. Paying our entrepreneurial employees a share in the company profits, as we do in Germany, for example, when we achieve a good return on capital employed (ROCE of at least 10%), also contributes to this.



### Environmental protection and safety play a key role in responsibility

As in the previous year, spending on environmental protection, health and safety amounted to around EUR 95 million in 2004. We are increasingly exchanging information and experiences at an international level with regard to environmental and safety matters, in order to meet the growing legal requirements in this area. The forthcoming reform of EU chemicals policy (REACH – Registration, Evaluation, and Authorization of Chemicals) was an important issue for Merck in 2004: We actively collaborate with the relevant associations to develop suggestions for making the REACH system more efficient. The aim is to make safety-relevant information in Europe more transparent and more reliable – in accordance with the already existing obligation undertaken by the chemical industry – while also ensuring that the cost of registering chemicals remains economically viable. We have also been intensively involved in the plans for European CO<sub>2</sub> emissions trading that begins in 2005. This includes our major production sites in Darmstadt and Gernsheim, where we operate our own power plants.

Merck is committed to its responsibilities with regard to manufacturing and marketing its products: Its popular ChemDat® service, for example – a database containing safety data sheets and other useful information – has been available online for many years now.

In 2004, we founded a Corporate Responsibility Committee for the Merck Group, which defines and communicates our positions and objectives regarding responsibility for employees, the environment, and the community. This interdisciplinary committee meets regularly to develop global strategies and create the general terms and conditions for their implementation.

### Value added with a higher share of net income

Total operating performance, i.e., the sum of sales, other income and financial income, was EUR 6,474 million in 2004. After deduction of material costs, other purchased services, and depreciation and write-downs, the statement of source shows net value added of EUR 2,614 million, 11% higher than the previous year.

With a share of 59%, the majority of net value added as shown in the statement of distribution was allocated to employees in the form of salaries, social security contributions and pension expenses. Tax expenses accounted for around 11%, while net income for 2004 accounted for a particularly high percentage at 26%, due to the proceeds from the divestiture of VWR.

▶ [www.chemdat.info](http://www.chemdat.info)

▶ [www.responsibility.merck.de](http://www.responsibility.merck.de)

### Source of value added

EUR million	2004	2003
Sales	5,859	7,202
Other income	598	271
Financial income	17	13
Total operating performance	6,474	7,486
Material costs	-1,849	-2,876
Other purchased services/ expenses	-1,636	-1,786
Gross value added	2,989	2,824
Depreciation and write-downs	-375	-471
Net value added	2,614	2,353

### Distribution of value added

EUR million	2004	2003
Employees	1,554	1,802
Financial expenses	99	128
Income tax	289	205
Net income for the year	672	218
Net value added	2,614	2,353

## Pharmaceuticals business sector

### Oncology business area launches its first product

#### Steady growth in the international pharmaceutical market

Adjusted for currency effects, the key countries of the global pharmaceutical market recorded an increase in sales of around 7% in 2004, according to calculations by the market research institute IMS Health; growth in the previous year was 8%. As in previous years, the growth driver was the North American market, which grew by 8%. The United States accounted for more than half the sales generated by the 13 key pharmaceutical markets, which totaled USD 345 billion. This unregulated market continues to be decisive for growth, since innovative and patented drugs have a large market share here. Although generics play a major role in the U.S. healthcare system, their impact on sales growth is small. Sales in the key European markets, Germany, France, Italy, the United Kingdom and Spain, increased by 6%. The Japanese market – the second largest pharmaceutical market after the United States – only grew by a mere 2%, while the Latin American market recorded strong growth.

www.pharmaceuticals.merck.de

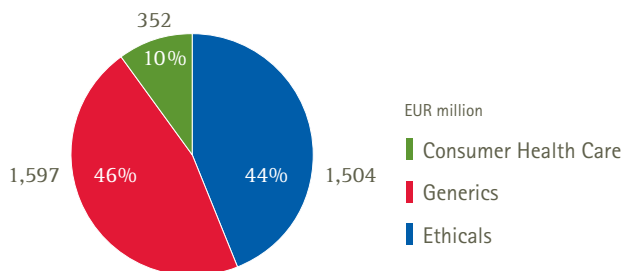
#### Sales development improved in the second half of 2004

Our pharmaceutical business comprises prescription and patented drugs (Ethicals – e.g. for the treatment of cancer, cardiovascular diseases and metabolic disorders), off-patent drugs (Generics) and over-the-counter products (Consumer Health Care). Sales in the Pharmaceuticals business sector increased by 4.5% overall in 2004, to EUR 3,452 million – growing respectively in the third and fourth quarters by an encouraging 6.7%. Organic growth was 6.2%. The Consumer Health Care division, in particular, achieved outstanding growth. As a result of the successful launch of the cancer drug Erbitux®, sales in the Ethicals division also rose again in the second half of the year.

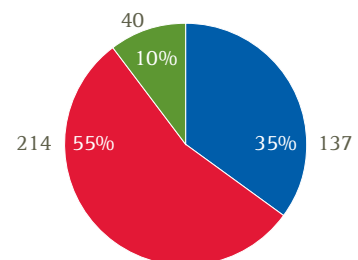
#### Successful license agreements strengthen result

The operating result of the Pharmaceuticals business sector was EUR 391 million, barely changing from the previous year. Accordingly, return on sales (ROS) remained on much the same level, at 11.3%, as did return on capital employed (ROCE), at 14.3%. Both these key figures still fell short of our ambitious target of 20%, but they did increase over the course of the year, due to the successive growth of Erbitux® sales, which far exceeded our expectations. License payments also had a positive effect: We received EUR 27 million from Forest Laboratories for our alcohol dependence treatment Campral®. In October, Merck outlicensed its insomnia treatment, the 5HT2A antagonist EMD 281014, to Eli Lilly, in return for EUR 23 million. R&D expenditure was 2.9% less than in the previous year. We believe that the substantial investments in our research activities and the current market launches of new preparations will strengthen the profitability of our pharmaceutical business in the long term.

Sales by division



Operating result by division





**Napa, California | United States** — Our subsidiary Dey manufactures drugs for the treatment of respiratory disorders. Mona el Badawi, Jill Brians and Florence Abimora test the purity and content of pharmaceutical active substances.

**Above-average growth in Europe**

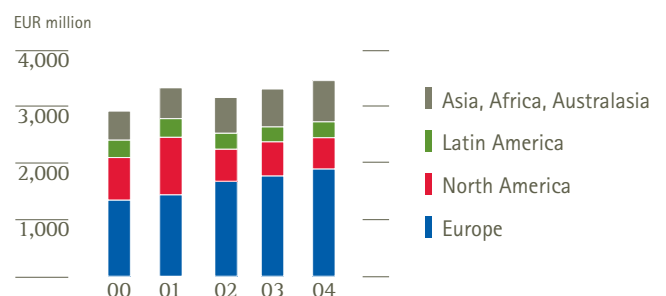
Our largest market, **Europe**, accounted for 55% of sales and recorded year-on-year growth of 7.0% to EUR 1,894 million. Growth was high in Spain, at 18%, the Benelux countries, at 14%, and in our largest market, France, at 12%. Sales in **North America** declined by 8.5% to EUR 551 million. Whereas our business in the United States was impaired by generic competition for Glucophage®, growth at our subsidiary Genpharm, in Canada, was encouraging. Our sales in **Asia, Africa and Australasia** increased by 8.9% to EUR 725 million – our subsidiary Alphapharm, in Australia, was again the main growth driver. Sales in **Latin America** rose by 6.5% to EUR 281 million – currency effects curtailed the high growth in the Consumer Health Care division.

**Pharmaceuticals | Key figures**

EUR million	2004	2003	Change in %
Sales	3,452	3,303	4.5
Operating result	391	389*	0.6
R&D	491	506	-2.9
Free cash flow	398	233	71
ROS in %	11.3	11.8	
ROCE in %	14.3	13.6	

\* The reporting segment Corporate, Consolidation and Other was introduced for the first time in 2004. The operating result for 2003 was adjusted retrospectively.

**Pharmaceuticals | Sales by region**



## Ethicals

### Successful launch of colorectal cancer drug Erbitux®

The products offered by the Ethicals division include prescription drugs: We focus particularly on the therapeutic areas cancer, cardiovascular diseases, diabetes, dyslipidemia and thyroid disorders. Sales in this division reached EUR 1,504 million in 2004, corresponding to an increase of 2.5%, which is equivalent to 44% of overall sales in the Pharmaceuticals business sector. Our U.S. subsidiary Dey, which specializes in respiratory disorders, was integrated into the Generics division at the beginning of 2004. The previous year's sales figures were adjusted accordingly.

The operating result of the Ethicals division increased by 15% to EUR 137 million, due primarily to special effects resulting from license payments from Eli Lilly and Forest Laboratories. Slightly declining research expenditure was offset by increased marketing and selling expenses for new product launches. The substantial increase in free cash flow to EUR 297 million is mainly attributable to the sale of our interest in BioMer in the second quarter of 2004.

### Strongest regional growth in Asia, Africa and Australasia

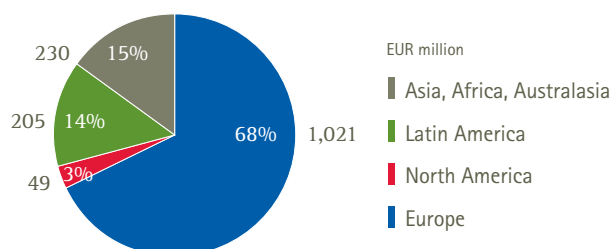
Taking Dey's reallocation into consideration, the Ethicals division generated 68% of its sales in Europe. They increased in 2004 by an encouraging 8.7% to EUR 1,021 million. The market launch of Erbitux® in this region had a positive effect, particularly in Germany, France and Spain. Merck restructured its prescription drug business in Germany: Merck Pharma GmbH was founded on November 1, 2004, as a legally independent regional company that can thus react with greater flexibility to the changing demands of the health care market. Within the scope of optimizing our research and production network we focused pharmaceutical research in France on our site in Chilly-Mazarin and are planning to discontinue pharmaceutical production in Lyon-Lacassagne by mid-2006. Our business in North America continued to be characterized by continually declining sales of the Glucophage® franchise, due to generic competition and strong currency effects. As a result, sales volume in this region remained low. For cost reasons we restructured our U.S. subsidiary EMD Pharmaceuticals.

As a result of the strong euro, our sales in Latin America, which increased by 4.6%, did not reflect the market growth there. We reached particularly high growth rates in Venezuela, Chile and Colombia. In the region Asia, Africa and Australasia, sales rose by 13% – attributable in particular to several Asian countries, such as China and South Korea, as well as South Africa.

### Ethicals | Key figures

EUR million	2004	2003	Change in %
Sales	1,504	1,467	2.5
Operating result	137	120	15
R&D	381	401	-5.0
Free cash flow	297	31	
ROS in %	9.1	8.1	
ROCE in %	10.0	7.7	

### Ethicals | Sales by region







Frankfurt | Germany \_\_\_\_\_ The team that laid the foundations for the development and marketing approval of the new cancer drug Erbitux® won the internal "Innovation Award" this year. On the occasion of the Corporate Meeting Bernhard Scheuble congratulated the 17 winners and presented team leader Claudia Herrmann the prize of EUR 25,000.

### Oncology business area: Erbitux® exceeds our expectations

Erbitux® (cetuximab) sales reached EUR 77 million in the product's first year on the market, exceeding our expectations significantly. The drug received marketing authorization for colorectal cancer in combination with chemotherapy in Switzerland in December 2003, following a fast-track regulatory designation. This was the first marketing authorization to be granted for Erbitux® worldwide, and the first for a product from Merck's Oncology pipeline. To date, Erbitux® is the first monoclonal antibody available on the market that specifically targets and blocks the epidermal growth factor receptor (EGFR). Since marketing authorization was granted on June 29, 2004, for all 25 member states of the EU, plus Iceland and Norway, we have now launched Erbitux® in 18 EU countries. As a result, sales increased to EUR 25 million in the third quarter and to EUR 36 million in the fourth quarter. According to published sales figures, Erbitux® has been one of the most successful launches of a cancer drug in Europe to date. In a survey conducted among oncologists in Germany by the specialist magazine PharmaBarometer, Erbitux® was named the most innovative oncology product of the year. Market launches in the other countries will follow successively after conclusion of reimbursement negotiations with the respective health authorities.

► [www.erbitux.com](http://www.erbitux.com)

Erbitux® represents an important step forward in the battle against colorectal cancer, for which there were no adequate treatment options for a long time. Colorectal cancer is the third most common cancer being diagnosed worldwide. About 360,000 new cases are diagnosed every year in Europe alone – usually at an advanced stage. About 80% of metastatic colorectal tumors have an increased number of EGF receptors on their cell surface.

### Well prepared for the launch of Erbitux®

Cancer drugs are among the fastest growing type of medications worldwide. According to IMS Health statistics, sales of these drugs increased by 15% in 2003; sales of antineoplastic agents – the class Erbitux® belongs to – increased by as much as 45%. Our experience in clinical development, as well as intensive cooperation with clinical oncologists, prepared us well for the successful global



Mollet del Vallès | Spain \_\_\_\_\_ Regina Manzanera and Lidia Prades work in drug manufacture. They are checking a plant for packaging tablets in blister packs.

market launch of Erbitux®. A key to this was the creation and implementation of a uniform brand strategy by our marketing team. A specialist oncology sales team has been set up as an investment in Merck's future in this growing market segment.

By the end of 2004, Erbitux® had marketing authorization in the following countries: Switzerland, Mexico, Argentina, Chile, Iceland, Norway, and the 25 member states of the EU. Erbitux®, which is a licensed trademark of ImClone Systems Inc. in New York, is also approved in the United States. The monoclonal antibody is approved for second-line therapy in combination with the chemotherapeutic agent irinotecan for patients with metastatic colorectal cancer who are no longer responding to standard chemotherapy with irinotecan. In the United States, Chile and Mexico, it is also approved for use as a single agent. Merck licensed the marketing and development rights to Erbitux® outside the United States and Canada from ImClone in 1998. In Japan, Merck, ImClone and Bristol-Myers Squibb hold co-exclusive marketing rights.

### CardioMetabolic Care business area: Integrated approach improves therapy



[www.cardiometaboliccare.merck.de](http://www.cardiometaboliccare.merck.de)

We have combined our drugs for treating cardiovascular diseases, diabetes and thyroid disorders in the CardioMetabolic Care business area. From a medical point of view, there are a lot of reasons to combine these activities. There has been a better and better understanding over the past few years of the interrelations between high blood pressure, diabetes, dyslipidemia and thyroid disorders. Doctors can therefore treat the often complex symptoms – also known as metabolic syndrome – more effectively by taking a holistic approach. For example, many patients with type 2 diabetes suffer from obesity, elevated cholesterol levels and hypertension. Integrated therapies can significantly reduce the risk of secondary diseases. In terms of business, the integrated concept creates synergies in marketing and sales, as well as in the development of innovative products.

### Cardiovascular and diabetes drugs are important sales drivers

Total sales of the active substance in the beta-blocker bisoprolol increased in 2004 by an encouraging 8.8% to EUR 290 million. Sales of our brand products of the Concor® family increased by as much as 12%. The bisoprolol group was thus the top-selling product group, ahead of the diabetes drugs of the Glucophage® franchise (active substance metformin). These two product groups accounted for almost 38% of the Ethicals division's sales. This sales growth is attributable above all to the advanced products – the low-dose combination preparation Lodoz® for treating hypertension, which increased its sales by 20%, and ConcorCOR®, used in the indication chronic heart failure, which achieved sales growth of 34%. The development of bisoprolol in the indication heart failure was particularly positive in France and the United Kingdom – we launched the substance for this indication in Italy in 2004. Merck is investigating the efficacy of two therapeutic regimens for chronic heart failure in the current CIBIS III study: The additional administration of beta-blockers in this disease is one of the greatest advances in therapy of the past few years.

► [www.cardiovascular.merck.de](http://www.cardiovascular.merck.de)

More than six million patients worldwide – that is more than half of all patients who are prescribed the active substance metformin – are given a product from the Glucophage® family of oral antidiabetics. At the beginning of 2004, Glucophage® became the first oral antidiabetic in Europe to be granted an extension of marketing approval for use in children. In adults, the active substance has long been what is typically referred to as the “gold standard” in drug therapy for type 2 diabetes. Due to generic competition, sales of the Glucophage® franchise declined by a total of 15%, to EUR 274 million – primarily affected were sales of the active substance metformin to our licensee Bristol-Myers Squibb in the United States. Sales of brand products of the Glucophage® franchise that we distribute ourselves, on the other hand, increased by 8.3%, thus stabilizing the product group as a whole. Sales growth here is also attributable to the advanced preparations, such as Glucovance®, a combination of metformin and glibenclamide, as well as Glucophage® XR (a once-a-day formulation) and Glucophage® 1000 mg. Glucovance® is now approved in 56 countries worldwide – we were particularly successful in the Latin American market.

► [www.diabetes.merck.de](http://www.diabetes.merck.de)

### Benefits of therapy with the HDL raiser Niaspan® widely communicated

Our nicotinic acid preparation Niaspan® for treating dyslipidemia has a new underlying therapeutic approach. Compared to lipid modulators, e.g. statins, which target “bad” LDL cholesterol, what makes Niaspan® special is its ability to increase in particular “good” HDL cholesterol (HDL-C). Experts at all European congresses are unanimous that increasing HDL-C is very important when treating dyslipidemia. According to a current publication on HDL-C by the European Consensus Committee, nicotinic acid is currently the most effective agent for raising the levels of “good” HDL-C cholesterol, and thus helps reduce the risk of cardiovascular diseases. As the forerunner in this market, Merck has set itself the goal of raising awareness about the decisive role of HDL-C, by providing information to doctors with their own practices. The preparation is now available in four European countries, including the large markets Germany and the United Kingdom.

► [www.dyslipidemia.merck.de](http://www.dyslipidemia.merck.de)

### Thyroid drugs continue growth trend

Merck is among the three leading suppliers of thyroid preparations worldwide. Sales of our products increased by 7.3% in 2004, to EUR 99 million. The thyroid hormone Euthyrox® showed particularly strong growth: Amounting to EUR 78 million, its sales increased by 11%, thus showing significant above-market growth. All products showed above-average development in Asia and Latin America, with sales increasing by 23% and 24%, respectively. Euthyrox® is already available in more than 60 countries worldwide; almost seven million patients with hypothyroidism take Euthyrox®. Merck is collaborating with the World Health Organization (WHO) in the battle against iodine-deficiency diseases, since only a fraction of patients suffering from these disorders are currently receiving adequate treatment.

► [www.thyroid.merck.de](http://www.thyroid.merck.de)

### Women's Health business area: Stable business in hormone replacement therapy

►  
www.womenshealth.  
merck.de

The Women's Health business area is managed by our Monaco-based subsidiary, Thérámex. Our product range for treating menopausal complaints suffered due to the publication of several studies questioning the use of hormone replacement therapy. In spite of a persistently difficult market environment, sales were sustained at around EUR 99 million. In France – our most important market – we increased our market share to 25%. We have held initial negotiations with the U.S. Food and Drug Administration (FDA) with regard to obtaining marketing authorization for our new combination preparation, the Fem7<sup>®</sup> Evo patch. We also successfully concluded phase II trials with EMM 310066, a new oral contraceptive we are developing, and discussed further steps with the FDA.

### Research: Focus on Oncology and CardioMetabolic Care

In 2004, our research spending in the Ethicals division amounted to EUR 381 million. This corresponds to 25% of the division's sales, and is thus higher than the global average among pharmaceutical companies. The focus is on drugs for which there is a high medical need in the therapeutic areas Oncology and CardioMetabolic Care, which covers diabetes and cardiovascular diseases. Our research pipeline includes 11 promising substances in various phases of clinical development.

We currently have six projects in clinical development in our core field Oncology. We have a new project undergoing phase I clinical trials in our CardioMetabolic Care business area: EMD 503982 is an oral factor Xa inhibitor that works to reduce blood coagulation; in other words, it has an antithrombotic effect. The marketing authorization procedure for Advicor<sup>™</sup>, a Niaspan-lovastatin combination product, has been delayed. We have discontinued the development of both the oral NHE inhibitor for treating severe chronic heart failure, and the PDE-V inhibitor for erectile dysfunction, in order to focus more on high-potential projects in Oncology and CardioMetabolic Care. Considerable financial and human resources are necessary to fully develop a new drug and ensure a quick time to market. This is why we focus on our core areas of activity and have successfully outlicensed substances from other indication areas.

### Targeted cancer therapies enhance quality of life

►  
www.oncology.merck.de

Cancer is a disease that continues to claim countless lives and impact the quality of life of all those affected by such a diagnosis. Although a cure for many types of cancer remains elusive, the progress being made with new therapeutic options is impressive. For the most part, these new agents have fewer side effects than the cornerstones of traditional cancer therapy – surgery, radiotherapy and chemotherapy. Oncology research at both Merck and our U.S. subsidiary EMD Pharmaceuticals focuses on the development of new therapies that specifically target cancer cells.

Using this targeted approach, Merck aims to prolong the survival time of cancer patients and improve their quality of life. Another goal of targeted therapies is to mitigate, or at least not exacerbate, the cumbersome side effects of chemotherapy. Our in-house oncology research activities are focused on identifying targeted compounds that interfere with one or more of many key processes and pathways of a tumor. These activities together with partnerships have resulted in a highly focused pipeline exploring a number of novel compounds in clinical development.

### Focus of development on new fields of application for Erbitux<sup>®</sup>

Since EGF receptors are overexpressed on the surface of about one third of all solid tumors, Erbitux<sup>®</sup> may be effective in the treatment of various types of cancer. Merck is performing phase III clinical trials in three indications for first-line therapy with Erbitux<sup>®</sup>: metastatic colorectal cancer, non-small-cell lung carcinoma (NSCLC), and head and neck cancer. New phase II clinical trial data highlight the potential benefit of using the substance in combination with standard chemotherapies for first-line treatment of metastatic colorectal cancer. These data demonstrate safety and efficacy, even in early stages of treatment. Other studies showed the potential of Erbitux<sup>®</sup> as a first-line therapy for locally advanced head and neck cancer and non-small-cell lung carcinoma.

At the 2004 Annual Meeting of the American Society of Clinical Oncology (ASCO), Merck presen-





**Darmstadt | Germany** \_\_\_\_\_ The search for customized active substances based on the spatial structure of the target molecule is highly significant in modern pharmaceutical research. Bioinformatics specialists Oliver Maria Wilbert and Kah Tong Seow are pictured here looking at the molecule model of an inhibitor substance.

ted the results of a phase III study with Erbitux® and high-dose radiation (second-line therapy) in locally advanced head and neck carcinoma. Statistically significant improvements were documented for both tumor control and overall survival time. We intend to apply for marketing authorization for this indication in Europe in the second half of 2005.

#### **Matuzumab: Humanized antibody from Merck's own research labs**

Matuzumab (EMD 72000) is also an EGFR-specific monoclonal antibody and was developed by Merck in Darmstadt. While Erbitux® is only partly made up of human protein components, matuzumab consists almost entirely of human protein, making it what is called a humanized antibody. Matuzumab is currently undergoing clinical testing in several countries for cervical, gastric and ovarian cancer. Europe is running phase II clinical trials in patients with cervical cancer, as well as a phase I/II trial in gastric cancer patients. The phase I trial in Japan to investigate the safety and tolerability of matuzumab has been concluded. Additional international phase II studies are planned for the first half of 2005.

#### **Fast-track regulatory procedure for cancer vaccine L-BLP25**

We are developing the L-BLP25 liposomal vaccine for treating NSCLC in collaboration with the Canadian biotech company Biomira Inc. Encouraging results of a phase IIb study of L-BLP25 in patients with stage IIIB and IV NSCLC were presented during the Presidential Symposium at the Conference of the European Society for Medical Oncology (ESMO) in November 2004. Results of a planned survival update for that phase IIb study were announced in December and continued to show promise for L-BLP25 in the treatment of NSCLC. Based on the data, a large multinational phase III study is planned.

The U.S. Food and Drug Administration (FDA) granted L-BLP25 fast-track status in September 2004 for its proposed use in the treatment of NSCLC, in part based upon the results of the phase IIb study. That designation is designed to facilitate the development and expedite review of drugs that are intended to treat serious or life-threatening conditions and that demonstrate the poten-



**Billerica, Massachusetts, United States** \_\_\_\_\_ Suzanne McKenzie works in a laboratory investigating active substances using chromatography separation methods. It is hard to imagine the development of new drugs without these high-performance systems.

tial to address unmet medical needs. Lung cancer claims more lives worldwide than any other type of cancer. Nearly 1.2 million new cases are diagnosed each year – about one quarter of these are non-small-cell lung cancer.

#### **Focusing resources**

In June 2004, Merck returned the development and marketing rights to the cancer vaccine Theratope® to Biomira. Merck had licensed the rights to this active substance for the treatment of metastatic breast cancer in March 2001. Merck decided not to pursue Theratope® because additional trials would probably have been required to support registration, thus the vaccine, therefore, no longer meets Merck's commercial timetable for a near-term product launch. Following the analysis of the phase III data, Merck and ImClone agreed to discontinue the development of the tumor vaccine mitumomab (BEC-2).

#### **High-potential cancer drugs in early stages of development**

The angiogenesis inhibitor cilengitide is showing promising results in the treatment of aggressive brain tumors (glioblastomas). Cilengitide works by preventing the tumor from forming its own blood vessels, thus suppressing the growth and spread of tumor cells. A phase I/II dose-finding study sponsored by the U.S. National Cancer Institute (NCI) gives grounds for hope. Phase II trials using cilengitide to treat aggressive brain tumors have been underway since October 2004.

The immunocytokines EMD 273063 and EMD 273066 are undergoing phase II and I/II studies, respectively, for the treatment of different types of solid tumors. Cancer researchers from Merck's subsidiary EMD Lexigen near Boston (Massachusetts), United States, developed the immunocytokine technology that allows various antibodies to be combined with cytokines.

### Strategy with other development projects successfully implemented

We also develop drugs in indications outside our core areas, for which there is a high medical need. One therapeutic innovation is Sarizotan, a substance we are developing to treat therapy-related involuntary movements (dyskinesia) caused by the drug therapy of Parkinson's disease. In 2004, we successfully started our global phase III program. In mid-2004, we received marketing authorization for our alcohol dependence treatment Campral® in the United States. Here we pursue a partner strategy: Our U.S. licensee Forest Laboratories has been commercializing the product there since the beginning of 2005.

We also successfully out licensed two other development projects. The granting of global exclusive rights to the antidepressant Vilazodone to the U.S. biotechnology company Genaisance gives Merck – in addition to milestone payments and license fees – the opportunity to cooperate in the innovative field of “personalized medicine”, which involves using genetic markers to identify the patients who respond to this substance. Merck transferred the development and distribution rights to the 5HT2A antagonist EMD 281014 – a molecule from our own research laboratories for the treatment of insomnia – to Eli Lilly. As part of this deal, Merck received milestone payments of EUR 23 million in 2004. Further payments are planned, depending on the progress of the project, as well as participation in the potential sales. As one of the leading companies in the area of central nervous system disorders, Eli Lilly will continue to investigate this new substance in clinical studies, allowing us to dedicate our resources to our core areas.

► [www.pipeline.merck.de](http://www.pipeline.merck.de)

### Current status of our pipeline substances

Therapeutic area	Compound	Indication	Status <sup>1</sup>
Oncology	Erbix® (cetuximab), EGFR-specific monoclonal antibody <sup>2</sup>	EGFR-expressing tumors: e.g. colorectal, head & neck, non-small-cell lung cancer	launched <sup>3</sup>
	Matuzumab (EMD 72000), humanized EGFR-specific monoclonal antibody	EGFR-expressing tumors: various solid tumors	Phase II
	L-BLP25, liposomal cancer vaccine	MUC1-expressing tumors: e.g. non-small-cell lung cancer	Phase II
	Cilengitide (EMD 121974), angiogenesis inhibitor	Glioblastoma <sup>4</sup>	Phase II
	EMD 273063 (hu14.18-IL2), immunocytokine	GD2-expressing tumors: e.g. melanoma <sup>4</sup>	Phase II
	EMD 273066 (huKS-IL2), immunocytokine	EPCAM-expressing tumors: e.g. ovarian, non-small-cell lung cancer	Phase I/II
CardioMetabolic Care and other indications	Advicor™	Dyslipidemia	Approval application submitted <sup>5</sup>
	EMD 503982, Factor Xa inhibitor	Venous thromboembolism	Phase I
	Sarizotan	Dyskinesia in parkinsonism	Phase III
	Asimadoline, kappa-agonist	Irritable bowel syndrome	Phase II
	EMM 310066	Contraceptive	Phase II

<sup>1</sup> Clinical status (for the most advanced indication)

<sup>2</sup> Developed in cooperation with ImClone Systems Incorporated, Erbix is a trademark of ImClone Systems Incorporated.

<sup>3</sup> Launched in 18 EU countries, Norway and Switzerland for the treatment of metastatic colorectal cancer

<sup>4</sup> Further indications under development in cooperation with American National Cancer Institute (NCI)

<sup>5</sup> Marketing authorization application submitted in the United Kingdom

EGFR = epidermal growth factor receptor

EPCAM = epithelial cell adhesion molecule

MUC = mucinous adenocarcinoma of the stomach

GD2 = cancer-associated ganglioside

## Generics

### Effective therapies at low costs

►  
www.generics.merck.de

Almost all industrialized countries are struggling with increasing healthcare costs as a result of demographic changes and medical progress. Regulatory government intervention favors the use of generics in many countries. The demand from healthcare systems for economical basic patient care, coupled with patent expirations on drugs with high sales, will promote further growth in the global generics market. IMS Health is forecasting annual growth of 20% until 2008 to USD 80 billion, although we now see forecasts that predict growth rates of around 10% annually due to very stiff price competition and legislated price reductions in many markets around the world. This trend became evident in the generics market in the course of 2004, with many generics companies reporting declining growth rates.

#### Two types of generics markets

The first market type, which includes countries such as the United States, the United Kingdom and Germany, can be described as mature. Mature markets are characterized by substantial price competition and well-established and often regulated pricing and reimbursement schemes. In these markets, doctors determine which active substance to prescribe for their patients, while pharmacists decide which generic product to actually dispense. Market growth is generated primarily by patent expirations of frequently prescribed drugs. The second group consists mainly of comparatively young markets where the generic market share is still small: Examples are France, Spain and Portugal. These markets also depend on patent expirations but are expected to grow faster than mature markets.

The success strategy of Merck Generics was, and still is, to establish itself in these young generics markets early on and to participate fully in their growth. Today, we rank among the top ten generics companies worldwide in the highly competitive generics market. Sales in the Generics division increased in 2004 by 5.4% to EUR 1,597 million. The previous year's sales for the Ethicals and Generics divisions were adjusted for the integration of our U.S. subsidiary Dey, Inc. into the Generics division. This move increased the Generics division's share in overall sales of the Pharmaceuticals business sector to 46%, making Generics the Merck Group's largest division in terms of sales.

Its operating result declined 7.5% to EUR 214 million because of the absence of high licensing income booked in 2003 for generic omeprazole in the United States. In addition, the Generics division increased its investments in the development of new generic drugs by 4.2%. Our acquisition in Scandinavia was the primary reason for the decrease of free cash flow to EUR 59 million.

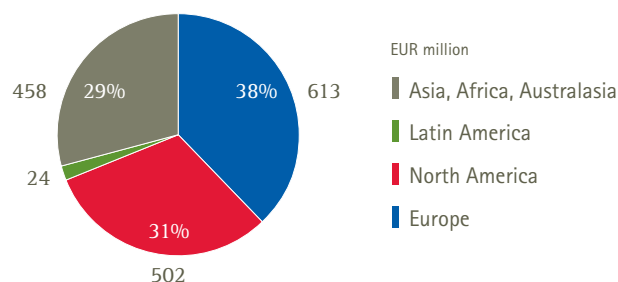
#### Successful business in France

Sales development in Europe reflects the very different market conditions in the individual countries: Overall, sales increased by a mere 3.4% to EUR 613 million in 2004, fueled primarily by sales growth in our young markets. Our French subsidiary Merck Génériques, now our largest unit in

### Generics | Key figures

EUR million	2004	2003	Change in %
Sales	1,597	1,515	5.4
Operating result	214	231	-7.5
R&D	101	97	4.2
Free cash flow	59	182	-68
ROS in %	13.4	15.3	
ROCE in %	20.1	23.2	

### Generics | Sales by region







**Saint André de Corcy, France** \_\_\_\_\_ Pharmacist Thierry Savoyat discusses low-cost drugs with Merck Génériques sales representative Gaëlle Boillot. The French government firmly supports the use of generics: Their market share is expected to double over the next two to three years.

Europe, increased its sales by 28% to EUR 234 million, further extending its market leadership. Particularly successful was the launch of the generic ulcer drug omeprazole, as well as the anti-diabetic agent Metformin Merck 1000 mg (generic of Glucophage®). In Spain and Portugal, we achieved growth of 39% and 11%, respectively. Sales in mature markets, on the other hand, declined: Although unit sales in the United Kingdom remained strong, stiffer price competition there caused sales revenue to fall. We strengthened our market presence in Scandinavia: The acquisition of NM Pharma, Pfizer's generics business, puts Merck in first place there. The company, which is headquartered in Stockholm, generated sales of EUR 31 million in 2004. As NM Pharma was a well-known brand, it now operates under the name Merck NM.

#### **Integration of Dey as the basis for strategic reorientation**

In addition to growth in young markets, Merck Generics focuses not only on its standard business, but also on the development of high-value specialty products that have growth opportunities primarily in the mature generics markets. This was the reason for integrating our U.S. subsidiary Dey into the Generics division in 2004. Dey develops and markets innovative respiratory and allergy medicines formulated with off-patent drug molecules. These products give patients added value because of their specialized drug-delivery systems. Dey's top two products are DuoNeb®, a unit-dose inhalation solution for treating chronic obstructive respiratory diseases, sales of which increased organically by 34%, and EpiPen®, an autoinjector for the emergency treatment of life-threatening (anaphylactic) allergic reactions, whose sales increased by 10%. Dey sales grew organically by 12%, but due to the weakness of the U.S. dollar, sales in the United States increased by a mere 3.7%. Sales of our Canadian subsidiary, Genpharm, increased by an encouraging 17% – due, among other things, to the launch of two antidepressant drugs, paroxetine and citalopram. This further consolidated Genpharm's market position as a leading generics supplier in Canada. Overall sales in **North America** totaled EUR 502 million in 2004, corresponding to an increase of 6.2% compared to adjusted sales figures for the previous year. This now represents a reasonable critical mass in this large market. In **Latin America**, we generated sales of EUR 24 million, corresponding to a significant growth rate of 19%.

In the region **Asia, Africa and Australasia**, sales grew a solid 6.5% to EUR 458 million. Our subsidiary **Alphapharm** – undisputed market leader in the generics segment in Australia, and likewise the largest pharmaceutical company in terms of volume – generated sales growth of 6.6% to EUR 293 million. The sales situation in Japan reflects the difficult market environment: Despite an increase in unit sales, sales revenue showed a slight decline.

#### Innovative products for high-growth indications

In 2004, we received licenses for 39 new formulations – we now market more than 400 substances covering all therapeutic areas. Future growth and profitability will come from the expansion of our traditional generics business into new markets. We will also continue to expand our portfolio at an accelerated rate. The integration of **Dey** into the Generics division was a major milestone in the further development of our specialty generics business: Specialized dosage forms and drug-delivery systems – patented where possible – should feature more prominently within our portfolio over the next few years. This will be funded by increased investment in research. Using our own internal resources, coupled with potential acquisitions and alliances, we aim to be one of the top three global generics companies.

## Consumer Health Care

### Above-market sales growth



[www.consumerhealthcare.merck.de](http://www.consumerhealthcare.merck.de)

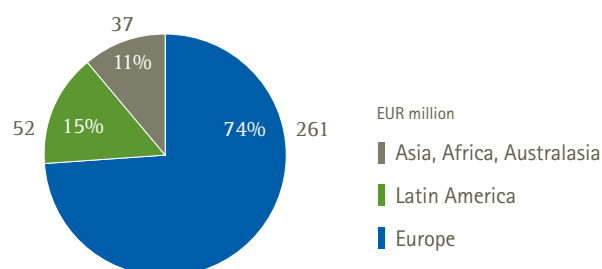
Sales in the Consumer Health Care division showed stronger growth than the global OTC market and increased by an encouraging 9.6% to EUR 352 million, thus accounting for 10% of total sales in the Pharmaceuticals business sector. The operating result climbed 5.3% to EUR 40 million: Firstly, we increased our marketing and sales expenditure in our core markets, and secondly, we invested EUR 9.9 million in researching and developing new formulations for our core products – 17% more than in the previous year. The substantially higher free cash flow in 2004 is attributable to the acquisition of **Lamberts Healthcare Ltd.** in 2003.

Sales in our largest market, **Europe**, grew by 9.1%. We were particularly successful in the United Kingdom, where sales increased by 25% to EUR 85 million. Part of this growth is attributable to the acquisition of **Lamberts Healthcare**, which made the United Kingdom our largest market, ahead of France and Germany. Our subsidiary **Seven Seas** achieved strong growth of 28% with the probiotic vitamin preparation **Bion<sup>®</sup>3**. **Merck Médication Familiale**, our subsidiary in France, sustained its sales at the high level of the previous year. **Bion<sup>®</sup>3** also showed strong growth here: While the overall market for multivitamins and tonics stagnated, **Bion<sup>®</sup>3** increased its sales by 55%. Despite suffering a slight decline in sales, **Merck Selbstmedikation**, our subsidiary in Germany, developed considerably better than the extremely depressed OTC market. We recorded encouraging growth in the Benelux countries, where sales increased by 11%, and in Austria, where sales rose by 20%. Sales at our Eastern European subsidiaries also increased (e.g. in Poland, with 21%).

### Consumer Health Care | Key figures

EUR million	2004	2003	Change in %
Sales	352	321	9.6
Operating result	40	38	5.3
R & D	9.9	8.4	17
Free cash flow	43	20	112
ROS in %	11.3	11.7	
ROCE in %	12.9	12.0	

### Consumer Health Care | Sales by region





Mexico City | Mexico ————— Merck employees Israel Díaz and Cesar Roa inform pharmacist Josefina Moreno about the successful cold remedy Sedalmerck®. Merck is one of the fastest growing manufacturers in the country.

In spite of negative currency effects, we increased our sales in **Latin America** by 9.0% – organic sales growth of companies there was an impressive 24%. Our largest market, Mexico, grew by 6.0%; sales in Brazil increased by 15%, while in Chile, sales rose from a low level by as much as 48%. The cold remedy Sedalmerck® sold particularly well in Mexico; the big seller in Brazil was the vitamin preparation Cebion®. Business in the region **Asia, Africa and Australasia** continued to develop very well, with growth of 15%, although negative currency effects also had a curbing effect here. In South Africa, sales increased by 30% – thanks to the good performance of the cold remedy Nasivin®.

#### Expanding market position through innovative products and advertising campaigns

In 2004, we generated 33% of our global sales with vitamins and minerals (e.g. Bion®3, Sangobion®, Femibion®, Cebion®), 29% with preparations of plant and marine raw materials (Seven Seas®), 20% with cold remedies (Nasivin®, Sedalmerck®), and 18% with other over-the-counter products. Part of our strategy is to continue to grow in our existing markets. One example is our success in the United Kingdom: In 2004, Seven Seas increased its sales in the market segment for “JointCare” products to strengthen joints by 58%, making it the market leader. We have consistently enhanced our products and widely communicated their scientifically proven benefits. Seven Seas is still the leading supplier in the market segment for omega-3 products and holds two thirds of the market with its fish oil products. Sales of this largest product group increased by 9.7%: A marketing campaign organized by Seven Seas made the public aware of the benefits of fish oil for the joints, winning the company the “PR Week Award 2004” from the marketing magazine of the same name.

Thanks to one innovative product, Merck also progressed well in the German market: Femibion® – a folic acid preparation – gained a 22% market share among vitamin preparations for pregnant women. Femibion® was also successful in Belgium and Poland. We have succeeded in maintaining our market leadership position in all three of these countries. Promising enhancements of our preparations and our use of new, additional distribution channels ensure our position as an innovation leader in the self-medication market. Our entry into the mail-order business in the United Kingdom (via the acquisition of Lamberts Healthcare) will enable us to meet consumer expectations faster and even more efficiently in future. The division’s prospects for further growth in the three regions Latin America, Asia and Europe are good.

## Chemicals business sector

### Market leadership extended

#### Economic boom also felt in the chemical industry

►  
www.chemicals.merck.de

After a slight delay, the chemical industry followed the rest of the economy and benefited from global economic growth in 2004. With a market share of around one third, the European Union is the leading global manufacturer of chemical products, ahead of North America and Asia. Chemical production in Europe grew by 1.5%; sales increased by 4.1%, due primarily to a rise in exports. High crude oil prices and the strong euro had a curbing effect on the upswing. However, the chemicals business in the United States developed very well: Due to the strong demand and higher prices, domestic sales increased, while exports benefited significantly from the weak dollar. On the whole, sales increased by 10.3%; production grew by 2.8%. Production in Germany – the world's third largest chemicals manufacturer after the United States and Japan – increased by 2.2%, and sales rose by 4.0%, although its market share showed a decline overall. Impetus for growth again came from abroad – Germany was already export leader for chemical products in 2003. Growing demand can be seen in Asia, particularly in China, and in Eastern Europe. This optimism is dampened, however, by the slowdown in growth momentum in Japan and the United States, as well as by high oil prices, the weak dollar and general consumer resistance.

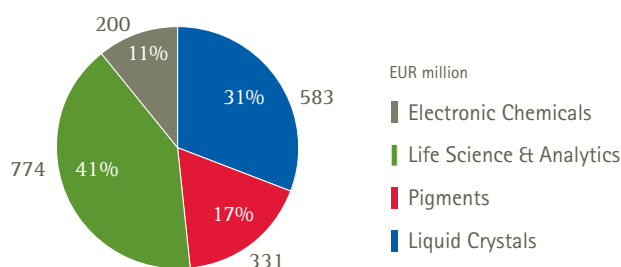
#### Investment in research and new products bears fruit

The Chemicals business sector comprises four divisions supplying industrial and laboratory chemicals for high-tech applications in research, industry, and daily life: the Liquid Crystals division as the undisputed technology and market leader for liquid crystals for displays, the Pigments division with effect pigments and specialty chemicals for the optics and cosmetic industries, and the Life Science & Analytics division, formed in April 2004 when two divisions were merged. The latter offers products and services for the entire process chain of drug research, development and manufacture, as well as reagents, chromatography products and test kits for industry, research laboratories and mobile analysis. The fourth division, Electronic Chemicals, comprises the business with ultrapure chemicals for chip manufacture.

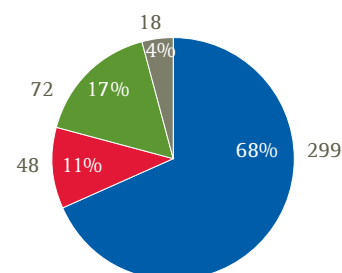
Sales of the Chemicals business sector increased by 11% to EUR 1,888 million; organic growth was as high as 15%. Since Asia and the United States accounted for more than half of sales, currency effects had a negative impact. The sector's operating result increased by an encouraging 39% to EUR 438 million. We increased R&D expenditure to EUR 108 million. With a return on sales (ROS) of 23.2% and a return on capital employed (ROCE) of 22.3%, we exceeded our ambitious target of 15% for both these key figures.

#### Double-digit sales growth in Asia

Sales  
by division



Operating result  
by division







Tokyo | Japan ————— High-resolution, bright LC displays are an important requirement for high-quality recordings at night. Merck is market leader for high-tech liquid crystals applications, seen here giving sales assistant Kaoru Takahashi a sharp image on her camera screen, irrespective of the angle of vision.

Sales increased in **Europe** by 1.5% to EUR 612 million; the greatest growth was recorded in the three largest markets after Germany: 7.6% in France, 10% in the United Kingdom and 20% in the Benelux countries. Sales increased by 4.5% in **North America** and by 7.7% in **Latin America** – we achieved double-digit growth in all countries here, with the exception of Brazil and Ecuador.

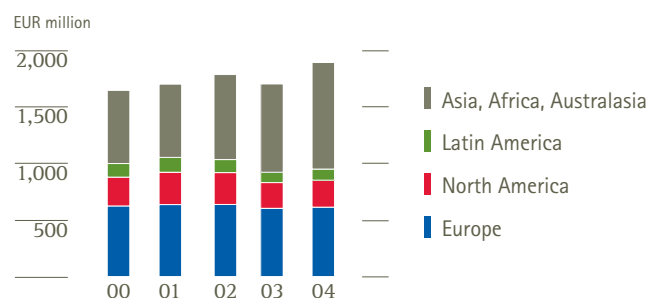
Strong sales growth of 21% was achieved in our largest market, **Asia, Africa and Australasia**. The main drivers of sales were liquid crystals, with their most important markets in South Korea, Japan and Taiwan.

### Chemicals | Key figures

EUR million	2004	2003	Change in %
Sales	1,888	1,700	11
Operating result	438	316*	39
R&D	108	99	9.0
Free cash flow	427	290	47
ROS in %	23.2	18.6	
ROCE in %	22.3	15.9	

\* The reporting segment Corporate, Consolidation and Other was introduced for the first time in 2004. The operating result for 2003 was adjusted retrospectively.

### Chemicals | Sales by region



## Liquid Crystals

Technology leadership again ensured strong growth



[www.liquidcrystals.merck.de](http://www.liquidcrystals.merck.de)

With a share of around 70%, Merck is global market leader for liquid crystals (LCs) used in high-quality, flat-screen displays for PCs and televisions, notebooks, mobile telephones and many other applications. Over the past ten years, we have been able – with the exception of some stagnation in 2001 – to continually increase sales. In 2004, sales increased by 33% to EUR 583 million. Sales are generated almost exclusively with customers in Asia, with whom we cooperate closely to continually drive forward innovations in the LCD industry. The gross margin was EUR 375 million, minus comparatively low marketing and selling expenses. In spite of the 25% increase in research and development expenditure to EUR 45 million, the operating result rose by 37% to EUR 299 million. This resulted in an almost unchanged return on sales of 51.4%. This encouraging result is attributable to decades of investment in this area of activity. It creates a sound basis for the anticipated costs of expanding production capacities and research facilities: These will enable us to continually supply our customers and update our product portfolio to keep pace with the extremely dynamic growth of the LCD market.

The number of flat-screen LCD monitors outstripped the number of cathode ray tube monitors being produced for the first time in 2004. In 2002, around two thirds of all computer monitors sold were still the traditional cathode ray tube devices, but sales of these were overtaken in 2003 by energy-saving, lightweight LCD monitors. In terms of display area, market research institutes say that 28% of the large active-matrix LCDs was used in notebooks and 50% in LCD monitors. Computer monitors and notebooks thus remain – also as a result of falling retail prices – the main market for liquid crystals.

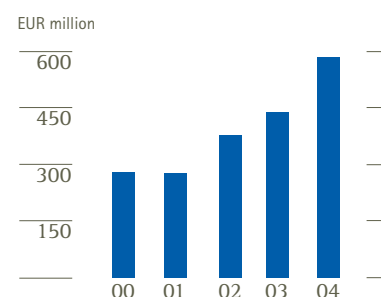
Large-screen LCD televisions, currently available in sizes of up to 65 inches (165 cm), are the fastest-growing market segment. With more than nine million sold in 2004, more and more consumers were captivated by these flat, high-resolution devices with a longer lifespan that will shape the development of LCDs in coming years. According to forecasts, their share of the whole television market will increase to over 20% in 2008. Around 55 million LCD televisions with an average screen size of 30 inches (76 cm) are expected to be sold in 2008. We are the main supplier of liquid crystals for new LCD technologies, such as Vertical Alignment (VA), Advanced Super View (ASV) and In-Plane Switching (IPS). Our investments in new synthesis capacities in Germany, which began in 2004, and the expansion of mixture production in Asia ensure that we are prepared for this rapid growth.

The demand for mobile telephones with color displays also increased in 2004 – our facilities for manufacturing ITO glass (ITO = Indium Tin Oxide) were running at full capacity at Merck Display Technologies Ltd. in Taiwan, which we founded ten years ago. We will continue to invest in new coating plants for the growing color LCD market. The focus of the investments begun in Taiwan

### Liquid Crystals | Key figures

EUR million	2004	2003	Change in %
Sales	583	438	33
Operating result	299	218	37
R&D	45	36	25
Free cash flow	250	144	74
ROS in %	51.4	49.8	
ROCE in %	54.1	45.1	

### Liquid Crystals | Sales development





Kuan Yin | Taiwan \_\_\_\_\_ The foundation stone for the new Liquid Crystals Center to expand production capacities was laid in September 2004 by Managing Director Klaus Bischoff, Deputy Minister for the Economy Shih Yen Shiang, new Head of Division Paul Breddels, and Managing Director of Merck Display Technologies Thomas Lee.

in 2004 will be on plants for manufacturing LC mixtures. Taiwan will thus be the division's third pillar in Asia alongside Seoul in Korea (since 2002) and Atsugi in Japan (since 1980).

These expanded production capacities, a patent portfolio that covers all current fields of LC and LCD technology, and research expenditure of EUR 45 million in 2004, will enable us to further expand our liquid crystal business and our strong market position.

We acquired Schott AG's OLED research and development project based in Mainz, Germany, at the beginning of 2005: The aim of this project is to develop new light sources based on organic light-emitting diodes (OLEDs). This expands our own activities in the areas of glass treatment, ITO coating and color filter production. Applications are expected to include in particular household appliances, LCD background lighting and the automotive industry.

We will continue to meet the high demands of the LCD industry in direct contact with our key customers, both in terms of the number of new LC mixtures we produce and the speed with which we implement the new developments. Parallel to growth in the LCD market, therefore, we are also predicting dynamic development in our Liquid Crystals division over the next few years.

## Pigments

### Success with innovative effect pigments



The focus on effect pigments provides the necessary technical and commercial basis for a successful business with established and innovative products. In less cyclical markets we reliably supply our customers in various industries with growing quantities of products out of three major production sites located in Germany, Japan and the United States.

As a result of a good performance by all five business segments, sales in the Pigments division increased by 5.0% to EUR 331 million. Excluding negative currency effects, organic growth was 9.3%. Sales in our largest market, **Europe**, increased by 5.4% to EUR 137 million, EUR 42 million of which was generated in Germany. Sales in **Asia, Africa and Australasia** rose by 5.2%, with China's growth of 29% making a significant contribution. We were also successful in **North America**: Currency effects almost offset the organic growth of 11% in the United States. Growth in **Latin America** was also encouragingly high at 13%, borne mostly by Brazil. Our operating result grew 16% to EUR 48 million, despite the increase in research spending by 8.8% to a substantial EUR 31 million. Return on sales rose from 13.2% to 14.6%.

#### Premiere of new carrier technology for cosmetic pigments

Sales of cosmetic pigments developed particularly well, increasing by 9.2%. In line with our expectations, sales of the new product class of Ronastar® pigments were good: These layer pigments exhibit a stronger glitter effect and more intense interference colors than comparable mica effect pigments. January 2004 saw the market launch of the first silver-white pigment based on the new carrier technology: Ronastar® Noble Sparks add a rainbow sparkle to cosmetic products. Production in Gernsheim has begun to meet the growing demand for these ultrathin, highly transparent flake pigments.

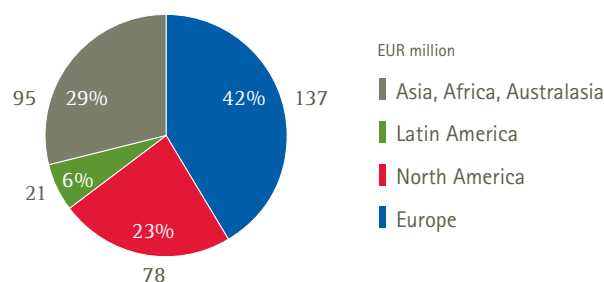
#### Xirallic® on the road to success

Sales of pigments for paint applications also increased, particularly as a result of the 16% growth of our premium Xirallic® pigments. This innovation gives automotive paints a distinctive crystal luster and the demand continues to grow. Sales increased by 3.9% in the industrial pigments business for the printing and plastics industries, mainly due to the strength of the Iridin® business - the classic mica-based pigments. Sales of our innovative Colorstream® pigments almost tripled, but are still a smaller business. These premium pigments change color depending on the angle of vision, allowing designers to create unique effects in a variety of applications. We are investing in an additional production line for our successful Xirallic® pigments in Onahama, Japan. Our good business position in the up-and-coming Chinese market is improving continuously with high growth rates; we expanded our application technology laboratories in Shanghai in 2004.

### Pigments | Key figures

EUR million	2004	2003	Änderung in %
Sales	331	315	5.0
Operating result	48	42	16
R&D	31	28	8.8
Free cash flow	58	48	21
ROS in %	14.6	13.2	
ROCE in %	10.4	8.7	

### Pigments | Sales by region







**Gernsheim | Germany** ————— Elke Schulz tells Volker Hilarius about the new class of effect pigments based on glass particles that she developed with her team: The Ronastar® and Miraval® pigments produced at the Gernsheim site bring sparkle to more than just lipsticks.

#### **Growth with cosmetic active substances and optical applications**

Sales in the growth market for cosmetic active ingredients increased by 4.6%; growth in the strategic product segment for innovative active ingredients was significantly stronger, since these also bring our customers greater success. The increasing use of our inorganic UV light filters reflects a rise in consumer awareness. The growing desire worldwide to have a healthy suntan also made our self-tanning agents the products of choice.

Sales in the Optics business segment increased by 2.8%; in Asia, they increased by as much as 16%. We are market leader for vapor-deposition chemicals for optical coating (Patinal®) and are benefiting from the good development of products such as digital cameras, beamers, DVD players and mobile phones with an integrated camera.

The division's research teams are working on several promising new technology and product developments. One example from nanotechnology is silicon beads for coating anti-reflex glass to substantially improve the energy yield of solar energy systems. Whether it is in the area of security – by providing visible or invisible brand protection for the consumer and manufacturer, for example – or in the cosmetics field, where we systematically search natural substances for cosmetic active ingredients for the skin: Our researchers open up new markets that promise us good future growth.

## Life Science & Analytics

Focus on growth markets biotechnology and pharmaceuticals

www.lifescienceanalytics.  
merck.de

The new division was formed at the beginning of 2004 by merging the divisions Analytics & Reagents and Life Science Products. Sales increased by only 1.0 % to EUR 774 million due to currency effects. Organic growth, however, was 4.7%. The operating result increased by 50% to EUR 72 million. The already high free cash flow increased again to EUR 102 million; return on sales rose to 9.4%.

We succeeded in integrating these two divisions, which dealt with some of the same customers, very quickly; more than 35,000 products have been managed under the new structure since July 2004. Even after the divestiture, we are retaining VWR International as our strong laboratory distribution partner. The long-term general agreement led to the expected business development in 2004.

The division generated around half its sales in **Europe**. While sales in Germany stagnated, significant growth was achieved in the United Kingdom, Austria, Spain and Hungary. In **North America**, sales increased by 5.5%. The joining of the divisions means that we are now of a size that provides a good basis for further growth in this region. While sales in **Asia, Africa and Australasia** grew by only 0.5% due to unfavorable currency effects, sales in **Latin America** increased by 6.6%, with substantial growth being recorded particularly in Argentina and Chile.

### Leading supplier of analytical reagents worldwide

Sales increased to EUR 298 million in the largest business segment, Reagents & Chemicals: Merck is the global leader for analytical reagents in the pharmaceutical, chemical and food industries. Sales of inorganic products, in particular, increased due to the introduction of new standards for instrumental analysis. Major product lines for analytical chromatography, microbiology, food and environmental analysis, as well as solvents and organic chemicals, are developing well, while custom synthesis declined due to the loss of several major customers.

By focusing on certain market segments, our business with raw materials for pharmaceutical production grew by 14%. In 2004, we launched EMPROVE® – the top brand in fine chemicals and services for the pharmaceutical manufacturing process: We did this in anticipation of the ever-rising demands of legislators and our customers for more and more detailed documentation on our chemicals.

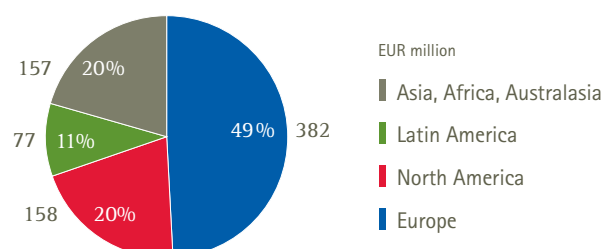
### Increasing sales with new products

With growth of 13% we were also successful in the growing processing market, where our range of products includes materials for purifying monoclonal antibodies to treat cancer, for example. Our U.S. subsidiary EMD Biosciences enjoyed success with innovative products for active sub-

### Life Science & Analytics | Key figures

EUR million	2004	2003	Change in %
Sales	774	766	1.0
Operating result	72	48	50
R&D	27	29	-7.8
Free cash flow	102	91	12
ROS in %	9.4	6.3	
ROCE in %	9.4	5.8	

### Life Science & Analytics | Sales by region





Newport, Wales | United Kingdom \_\_\_\_\_ Ian Watkins, Julie Jones and Paul Kau are part of the team that developed the successful rapid test for detecting microorganisms in airplane fuel tanks, which uses the mini tried-and-tested mobile HY-LiTE® test devices.

Our technology platform combines automated, parallel sample processing with the simultaneous performance of various tests in miniaturized form to obtain large quantities of data. The most recent examples of Merck proteomics products are the Chromolith® CapROD™ capillary separation columns, ProteoPlex™ protein microarrays and the ProteoExtract™ range of sample preparation kits. New synergies are presenting themselves in this area due to the new organization of our divisions, particularly in research; we will be investing more heavily here. Promising markets for the future also include environmental and food analysis, where we grew 6.7%, due, among other things, to our photometry-based rapid test and “analysis chips”. The patented innovation HY-LiTE® Jet AI Tests for detecting microorganisms in air fuel uses this mobile, standard technology for a new group of customers.

#### Focusing on three strategic areas

Our largest Chemicals division will focus in the future on three strategic areas: Traditional reagents, where we will expand our market leadership through production expertise and an efficient process chain to the customer in a non-cyclical business; Bioscience & Analytics, where we offer solutions for the latest research challenges using a high level of innovation; Life Science Solutions, where we want to grow through special customer proximity along the entire value-added chain of research-driven pharmaceutical and biotechnology companies (life sciences) with a full range of products and services. The streamlining of our portfolio to include higher-value products and the centrally coordinated marketing activities of the laboratory business – more cost-efficient since the merging of the divisions – mean we can expect favorable sales development.

## Electronic Chemicals

Double-digit sales growth in both regions

► [www.electronicchemicals.merck.de](http://www.electronicchemicals.merck.de)

As a result of positive economic development in the semiconductor industry and our good market position in Asia and Europe, sales in the Electronic Chemicals division increased by 11% to EUR 200 million; excluding currency effects, organic growth was even 16%. The operating result more than doubled to EUR 18 million after being impaired the previous year by one-off special effects. This was due not only to the increase in sales, but also to an improved cost structure. Sales growth in Europe was 14%; in Asia, it was 8.9%. Besides our production site for European customers in Darmstadt, we also produce our process chemicals for chip manufacture at sites in Taiwan, Singapore and Malaysia. Since Asia is the focus of the microchip industry, the Electronic Chemicals division generates 59% of its sales there.

### Successful with process chemicals for chip manufacture

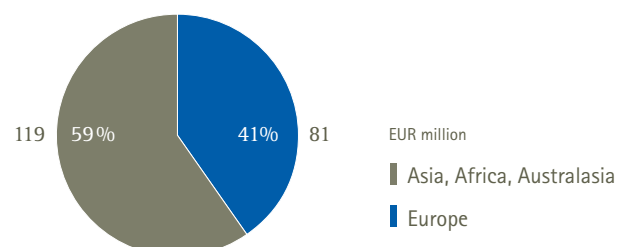
The Electronic Chemicals business has been operating as a wholly owned subsidiary of Merck KGaA since 2003 under the umbrella of Merck Electronic Chemicals Holding GmbH – with its own companies in Germany, France, The Netherlands, Taiwan, Singapore, Malaysia and, since January 2004, China. In addition to providing a variety of services, our core business comprises process chemicals for purification and etching in chip manufacture. Along with high purity requirements and consistent quality guarantee, we also offer reliable and flexible delivery using a sophisticated system of special reusable containers. New technological developments, such as in the manufacture of large flat-screens, expand our customer base, since we can use our know-how in this field to develop and offer specific products. The chemical expertise of Merck researchers is also in demand for the technology change from aluminum to copper as conductor material in microchips: The more conductive copper enables the production of smaller and therefore faster chips. Merck has patented its first products for the wet chemistry process here.

In July 2004, the division acquired the Taiwanese start-up company, Qualitech, which was founded in 1999. This acquisition means that the division can now also offer customers process chemicals for chemical mechanical planarization (CMP) in chip manufacture, so-called CMP slurries. These are currently the fastest-growing product segment in the entire electronic chemicals market. Since the boom in the microchip industry – in a highly cyclical market environment – looks set to hold until next year, we are anticipating at least constant quantity growth of electronic chemicals. Irrespective of this, Merck is currently negotiating with potentially interested partners with regard to selling this business, in line with our decision to focus on our core businesses (further details on page 95).

### Electronic Chemicals | Key figures

EUR million	2004	2003	Change in %
Sales	200	180	11
Operating result	18	7.5	136
R&D	5.0	5.3	-6.4
Free cash flow	18	7.5	138
ROS in %	8.8	4.2	
ROCE in %	10.4	4.0	

### Electronic Chemicals | Sales by region





## Laboratory Distribution business sector

### VWR International still a major partner

The Laboratory Distribution business sector, which operates under the name VWR International, Inc., was sold on April 7, 2004. VWR International is one of the world's leading full-service providers in the laboratory distribution business, offering laboratory chemicals, equipment and consumables, plus a comprehensive range of services. Its customers include the pharmaceutical industry, companies in the life sciences sector, the food processing industry, as well as universities, research institutes, environmental laboratories and schools. As stipulated in the divestment agreement, VWR will continue to be the Life Science & Analytics division's exclusive distribution partner for laboratory products in Europe, and a major partner in North America.

The business sector is carried under Discontinuing Operations in 2004. With EUR 2,427 million, VWR accounted for 33% of the Merck Group's sales in 2003, and 11% of its operating result. It contributed EUR 582 million to sales in 2004 - 4.5% less than in the year-ago period. The business, two thirds of which is carried out in North America, suffered from the conversion to the reporting currency, euros, due to the falling exchange rate of the U.S. dollar: In local currency, strong growth of 7.8% was recorded.

The Merck Group greatly appreciates the contribution made by VWR and its motivated employees over the years and wishes them, as important business partners, all the best for the future.

## Corporate, Consolidation and Other

### New segment

The segment Corporate, Consolidation and Other, which was established on January 1, 2004, enables differentiated reporting on the activities of the Merck Group. It includes the income and expenses of all departments that work for the entire Merck Group, but cannot be allocated on a cost-causative basis to individual operative segments. All income taxes and certain exceptional items are also booked here. The sales of this segment are intragroup sales between the business sectors. The profit before tax of EUR 287 million gained on the divestiture of VWR International is carried as an exceptional item in this new segment.

#### Laboratory Distribution | Key figures

EUR million	2004	2003
Sales	582	2,427
Operating result	21	79
R & D	0	0
Free cash flow	41	149
ROS in %	3.7	3.3
ROCE in %	3.8	6.4

#### Corporate, Consolidation and Other | Key figures

EUR million	2004	2003
Sales	-63	-228
Operating result	-74	-48
Exceptional items	246	0
Free cash flow	1,016	-231

## Risk report of the Merck Group

### Lower risks through diversification

#### Risk management system

Risk management within the Merck Group is described for all risk owners in a detailed guideline. This defines the principles of risk management, outlines roles and responsibilities, and helps those responsible to implement the legal and operational requirements. Specific terminology and standard risk reports harmonize the risk management process worldwide. Risk reports are submitted to the Executive Board at six-monthly intervals or, in special cases, on an ad-hoc basis. The Internal Auditing department inspects the risk management system.

#### Risks for the Merck Group

##### Overall risk position

No risks have been identified that pose a risk to the continued existence of the Merck Group. This is the finding of this risk report, which was prepared in accordance with German Accounting Standard 5.

##### Business-related risks

Merck integrates the risk management system into its ongoing business planning processes. Potential negative developments are described and evaluated in the risk reports, so that we can take countermeasures in good time if any events should lead to deviations from our business plan.

The Merck Group operates 61 production plants in various countries and takes appropriate measures to minimize the risk of a delivery bottleneck for its main products. The sales and operating result of the Merck Group are sustained by a large number of pharmaceutical and chemical products for various industries. This diversification itself minimizes risk, since the markets differ in their structure and economic cycles. We try to prepare for the potential risks of a changing market environment by continually observing market developments and acting with the appropriate foresight.

The special risks in pharmaceutical development are constantly monitored by the portfolio and project management system that has been integrated at the Merck Group. As a research-driven pharmaceutical company, there is the risk for Merck of development projects being canceled or having to be discontinued – after substantial investment – at a late phase of clinical development, before they can be marketed. The important decisions we make – such as those relating to the transition to the next clinical phase – are taken responsibly, in order to minimize risk. The same applies to investment decisions, for which we use detailed risk guidelines.

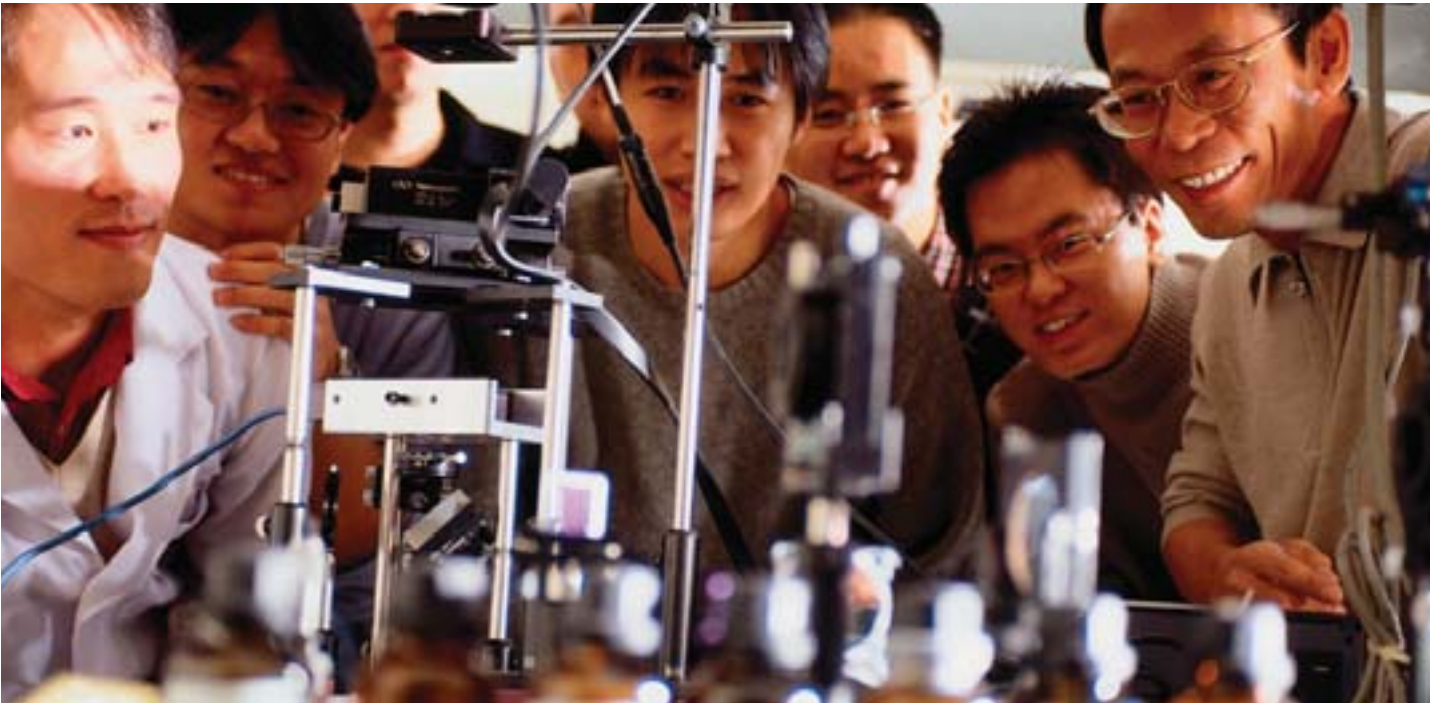
##### Financial risks

Due to its international business transactions in various currencies, the Merck Group is exposed to currency risks. Merck uses derivatives to control the currency risk related to transactions carried in the balance sheet. In certain cases, we also hedge anticipated sales for a period of up to one year, preferably in U.S. dollars and Japanese yen.

To the greatest possible extent, Merck hedges activities financed in foreign currencies against potential currency fluctuations. Due to its international activities, the Merck Group is also exposed to currency risks in connection with foreign investments, but does not hedge additionally against the loss in value of its foreign investments. We use derivatives exclusively to hedge transactions and the related financial transactions.

##### Legal risks

Merck is engaged in legal proceedings, the outcome of which cannot currently be predicted. These proceedings relate in particular to cases in the United States and the United Kingdom in connection



Seoul | Korea \_\_\_\_\_ Professor Sin-Doo Lee (right) teaches his doctoral students Chang-Jae Yu, Cherlhyun Jeong, Eunje Jang, Sung-Jin Kim and Yeon-Tae Kim at Seoul National University: The electrical engineers are measuring the electro-optical effect of liquid crystals. Merck equipment and products help them with their research.

► with generics pricing. We have taken all possible measures to protect our own legal position. For further information on this matter, please refer to page 82 of the explanatory notes to the consolidated financial statements. As a research-driven company, Merck has a valuable portfolio of industrial property rights, such as patents and brand names. This can become the target of attacks and infringements. We have taken the necessary precautions to identify threats and defend our rights where necessary.

Generally, we do everything we can to try and prevent legal risks from arising. Our employees participate worldwide in a compliance program that enjoins them to comply with laws and guidelines, and provides them with the relevant training and support. The core of the program is the Merck Code of Conduct, which defines ethical behavior guidelines. This is supplemented by an Internet-based training and testing program, as well as by the activities of employees in a global network of compliance officers. Insofar as possible and practical, we limit liability and damage risks through insurance cover, the type and scope of which we continually adjust to current requirements.

#### Information technology risks

We have set up redundant critical installations and application systems in relevant networks. Access to business-related data is secure. There are global security guidelines that include appropriate organizational, technical and software-related precautions for access control, access rights, virus protection and data protection. We monitor the adherence to and efficacy of these measures continuously.

#### Environmental and safety risks

Global adherence to high technical standards prevents potential damage, minimizes the potential effects of such damage, and thus ensures the continuity of plant and material resources. We update these preventive measures regularly; we systematically carry out internal health and environmental safety audits, and through checks we endeavor to minimize the risks for humans and the environment.

## Outlook 2005

### Looking to the future with optimism

The global economy looks set to continue growing in 2005 - economists are, however, expecting economic development to become less dynamic. The institutes of the Euroframe group are anticipating global growth of 4.1% in 2005. Risks include in particular a growing current account deficit in the United States, a weak dollar, rising interest rates in the United States and overheating of the economy in China. Assuming that the euro exchange rate does not rise any further, growth in the euro zone may improve slightly to 2.0%. Experts in the United States are even predicting an increase of 3.1%. High oil prices are likely to continue to hinder expansion in the first half of 2005. However, the economy should regain some of its momentum over the course of the year if oil prices retreat. Forecasts for the export-driven German economy are quite varied for 2005: While the Kiel Institute for World Economics predicts growth of just 1.0% - adjusted for the effect of different numbers of working days - the Euroframe group is predicting 1.7%.

Regarding the Merck Group, we are expecting all divisions of our Pharmaceuticals and Chemicals business sectors to continue to perform well in 2005.

We are optimistic about the Ethicals division, particularly with respect to sales development for our cancer drug Erbitux<sup>®</sup>, which we launched successfully in 18 EU member states in 2004. The CardioMetabolic Care business area continues to be a solid sales base. In order to ensure growth and profitability in our Generics division in the highly competitive generics market, we are reinforcing our research endeavors and are focusing more on innovative dosage forms and high-value specialty businesses. The Consumer Health Care division will build on its success in 2004, meaning that we expect good growth in sales.

In the Chemicals business sector, prospects look very good for our business with high-grade liquid crystals for large displays, especially televisions. Sales of color filters and coated glass for displays also show potential for growth. Merck is planning to expand its share in the growing display market to include further components. We are expecting the Pigments division to generate solid growth, particularly with its successful Xirallic<sup>®</sup> effect pigments, as well as new endeavors in the fields of security and cosmetics. We are expecting sales to increase in the Life Science & Analytics division through positive synergy effects of centrally coordinated marketing activities and a streamlined portfolio.

In the medium term, we, as a research-based company, will continue to expand our core businesses in Pharmaceuticals and Chemicals by means of strategic acquisitions of research-driven and high-potential businesses; but, above all, we shall do this with our own resources through innovations from talented, entrepreneurial employees.



## Corporate Governance

### Joint Report of the Executive Board and the Supervisory Board according to section 3.10 of the German Corporate Governance Code

The German Corporate Governance Code, which is also applicable to Merck as a “Kommanditgesellschaft auf Aktien” (partnership limited by shares), entered into effect in 2002. Since this Code is geared exclusively towards the conditions at an “Aktiengesellschaft” (German Stock Corporation), Merck KGaA had to independently examine and decide how it can be applied logically to serve the interests of the shareholders.

The Executive Board and Supervisory Board of Merck KGaA and the general partner E. Merck OHG have discussed the Code in detail and are striving to implement the Code’s recommendations at Merck KGaA as fully as possible.

In order to enable the shareholders to compare the situation at other companies more easily, we have decided to base corporate governance on the conduct recommendations made by the Code Commission relating to management and supervision (governance) and to forego having our own code, which is also permissible. On this basis, we ascertain that the recommendations of the Code are observed and indicate the remaining exceptions.

The Foreword to the German Corporate Governance Code states that: “The Code clarifies the rights of shareholders, who provide the company with the required equity capital and who carry the entrepreneurial risk.” The following gives a general explanation – in accordance with this Foreword – of the KGaA company form, followed by the specific situation at Merck.

#### **Kommanditgesellschaft auf Aktien**

“The Kommanditgesellschaft auf Aktien (KGaA – partnership limited by shares) is a company with its own legal personality, at which at least one partner has unlimited liability for the company’s creditors (general partner) and the others hold an interest in the share capital without any personal liability for the company’s debts (limited liability shareholders)” (section 278 (1) AktG). It is therefore a hybrid of an Aktiengesellschaft (German Stock Corporation) and a Kommanditgesellschaft with a focus on stock corporation law.

Striking differences to the Aktiengesellschaft include the presence of general partners, who essentially also manage the company’s business activities, the lack of a board of directors and the restriction of rights and obligations of the supervisory board. In particular, the supervisory board is not responsible for appointing general partners or for regulating the terms and conditions of contracts, while at the Aktiengesellschaft it appoints the board; at the KGaA, it also does not have the authority to issue rules of procedure for the general partners or a catalog of business transactions requiring approval.

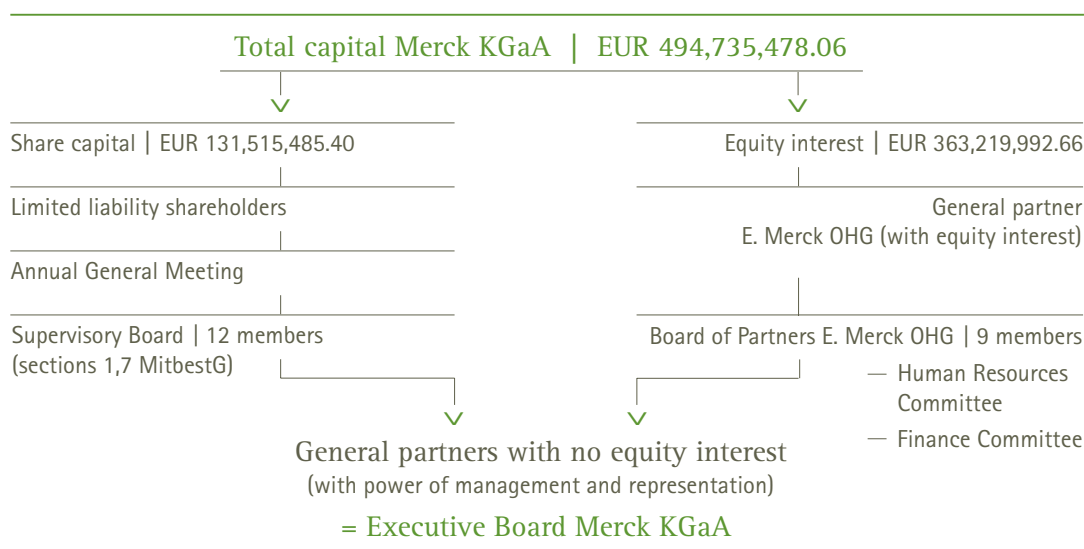
The KGaA also has some peculiarities with regard to the Annual General Meeting; for example, many of the resolutions made require the approval of the general partners (section 285 (2) AktG), including the adoption of the annual financial statements (section 286 (1) AktG). A large number of the conduct recommendations contained in the Code, which is geared towards Aktiengesellschaften, can therefore only be applied to a KGaA as appropriate.

### Merck KGaA

The general partner E. Merck OHG holds around 73% of the total capital of Merck KGaA (equity interest); the limited liability shareholders hold the remainder, which is divided into shares (share capital). Both groups together thus provide – in accordance with the Foreword to the Code – “the company with the required equity capital and carry the entrepreneurial risk”. E. Merck OHG is excluded from the management of business activities. The general partners with no equity interest (Executive Board), on the other hand, manage business activities. Due to its substantial capital investment and unlimited personal liability, E. Merck OHG is an influential authority with a strong interest in compliance with procedures and efficiency of business operations at Merck KGaA.

Merck KGaA’s participation in the profits of E. Merck OHG in accordance with sections 26 ff. of the Articles of Incorporation provides for further harmonization of the interests of the limited liability shareholders and E. Merck OHG. E. Merck OHG appoints and dismisses the Executive Board. E. Merck OHG created the necessary tools – in addition to the expertise and activities of the Supervisory Board – to ensure that the Executive Board is monitored and advised. This applies primarily to the Board of Partners of E. Merck OHG. Based on the provisions of the German Stock Corporation Act, the Articles of Incorporation of Merck KGaA and the rules of procedure of the various committees, Merck KGaA has a set of regulations for the Executive Board and its supervision that meet the requirements of the Code. The investors, who carry the entrepreneurial risk, are protected as foreseen by the Code. This is clarified by the following chart.

### Holdings and supervision at Merck KGaA (as of December 31, 2004)



#### Deviations from the Corporate Governance Code:

- 1.-Contrary to section 3.8 (2), the Directors & Officers insurance policy, which Merck KGaA maintains for its committee members, does not include a self-insured retention.
- 2.-Contrary to section 4.2.4, the remuneration paid to the general partners, i.e., the members of the Executive Board, is not stated on an individualized basis.
- 3.-Contrary to section 5.4.5 (1), committee members are not remunerated separately.
- 4.-Contrary to section 5.4.5 (3), the remuneration paid to the members of the Supervisory Board is not stated on an individualized basis.

### Main features of the Executive Board remuneration system and structure of the stock option program (section 4.2.3 of the German Corporate Governance Code)

The remuneration of the general partners, namely the Executive Board of Merck KGaA, is composed of salary payments (fixed portion), profit participation and additions to pension provisions. Profit participation is based on the rolling three-year average of profit after tax. Payments in fiscal year 2004 were as follows: Salaries EUR 2.6 million, profit participation (based on profit after tax for fiscal years 2004, 2003 and 2002) EUR 9.7 million, provisions for pensions EUR 1.4 million. This remuneration is paid by the general partner E. Merck OHG.

Merck KGaA's Annual General Meeting in 2000 resolved a stock option program for senior executives, in which members of the Executive Board also participate. From the maximum of 2,200,000 stock options, 2,153,500 were issued in two separate tranches. The program is thus fully utilized. The members of the Executive Board hold 198,000 stock options from the first tranche and 209,750 from the second tranche; 32,250 stock options have expired (as of December 31, 2004).

The term of the program ends after six years – in 2006 for the first tranche, and 2008 for the second tranche. Both tranches are subject to a lock-up period of 25 months. Subscription rights may only be exercised after the minimum vesting period has expired, if the closing price as of the balance sheet date is at least 30% higher than the exercise price. The exercise price is the mean value of the Merck share during the 30 trading days prior to the date of issue of the stock rights. In addition, stock options may not be exercised during the two calendar weeks prior to publication of the first and third quarterly reports, or during the eight calendar weeks prior to publication of the half-yearly or annual reports. The exercise provisions may only be amended for the purpose of antidilution protection within capital measures.

Since October 2002, the options in the first tranche may be exercised at an exercise price of EUR 37.41, provided that the Merck share is listed at a price of at least EUR 48.63. Since mid May 2004, the stock options in the second tranche may be exercised at an exercise price of EUR 34.35, provided the Merck share has reached a price of at least EUR 44.66. The options of both tranches have been exercised for the first time on several occasions since then, since their minimum prices were reached. One option therefore has – subject to the continuity of its minimum price – a realizable value amounting to the difference between the exercise price and the current share price at exercise.

## Supervisory Board of Merck KGaA

Peter Zühlsdorff, Chairman | Flavio Battisti\*, Vice Chairman  
 Jon Baumhauer | Klaus Brauer\* | Prof. Dr. Christoph Clemm<sup>1</sup> | Claudia Flauaus\*  
 Michael Fletterich\* | Dr. Reinhard Freudenberg<sup>2</sup> | Dr. Heinrich Hornef<sup>2</sup> | Dr. Michael Kasper\*  
 Dr. Karl-Ludwig Kley<sup>3</sup> | Albrecht Merck<sup>4</sup> | Dr. Arend Oetker | Prof. Dr. Wilhelm Simson<sup>3</sup>  
 Osman Ulusoy\*

\* Employee representative  
<sup>1</sup> until December 31, 2004  
<sup>2</sup> until March 26, 2004  
<sup>3</sup> from March 27, 2004  
<sup>4</sup> from January 1, 2005

## Report of the Supervisory Board

During fiscal year 2004, the Executive Board provided the Supervisory Board with regular written and verbal reports on the business development of Merck KGaA and the Merck Group. In particular, the Supervisory Board was informed about the market and sales situation of the company against the background of the macroeconomic environment, the financial position of the company and its subsidiaries, as well as their earnings development and corporate planning. Important business policy matters were discussed in four joint meetings with the Executive Board. At its meeting on April 28, 2004, the Supervisory Board carried out an extensive examination of the efficiency of its activities: The results were positive. No Supervisory Board committees were set up.

The annual financial statements of Merck KGaA, the consolidated financial statements of the Merck Group, and the management reports for Merck KGaA and the Merck Group, including the accounting, were audited by KPMG Deutsche Treuhand-Gesellschaft Aktiengesellschaft Wirtschaftsprüfungsgesellschaft. The auditors issued an unqualified audit certificate on the annual financial statements and management report for Merck KGaA in accordance with German Auditing Standards. The auditors issued the auditor's certificate – reproduced in the Annual Report of the Merck Group – in accordance with International Financial Reporting Standards, as well as German Auditing Standards, for the consolidated financial statements prepared in accordance with International Accounting Standards. In addition, the auditors audited the calculation of Merck KGaA's participation in the profits of E. Merck OHG in accordance with Art. 27 (3) of the Articles of Incorporation. The annual financial statements of Merck KGaA, the consolidated financial statements of the Merck Group, the management reports for Merck KGaA and the Merck Group, and the proposal by the Executive Board for the appropriation of net retained profits were presented and distributed to the Supervisory Board, together with the auditor's reports.

In accordance with Art. 14 (2) of the Articles of Incorporation, the Supervisory Board also examined the annual financial statements of Merck KGaA, the management report for Merck KGaA, the proposal for the appropriation of net retained profits and the auditor's report presented in accordance with Art. 27 (3) of the Articles of Incorporation. It also examined the consolidated financial statements of the Merck Group, the management report for the Merck Group, and took note of the auditor's report of KPMG Deutsche Treuhand-Gesellschaft Aktiengesellschaft Wirtschaftsprüfungsgesellschaft.

The discussion of the relevant agenda item at the Supervisory Board's meeting on February 16, 2005, to approve the financial statements was also attended by the auditors signing the audit opinion on the annual financial statements of Merck KGaA and the consolidated financial statements of the Merck Group, who reported on their audit. The Supervisory Board took note of and approved the results of the audit. On completion of its examination, the Supervisory Board found no objections and thus approves the annual financial statements and management report for Merck KGaA, the consolidated financial statements of the Merck Group and the management report of the Merck Group prepared by the Executive Board, as well as the report presented by the auditors in accordance with Art. 27 (3) of the Articles of Incorporation. The Supervisory Board gives its consent to the proposal for the appropriation of net retained profits.

On March 26, 2004, the Annual General Meeting of Merck KGaA elected Dr. Karl-Ludwig Kley and Prof. Dr. Wilhelm Simson to the Supervisory Board to replace Dr. Heinrich Hornef and Dr. Reinhard Freudenberg, who had resigned their positions. Since January 1, 2005, Albrecht Merck has been a delegated member of the Supervisory Board pursuant to section 6 (5) of the Articles of Incorporation. He succeeds Prof. Dr. Christoph Clemm, who resigned from office as of December 31, 2004. The Supervisory Board and the general partner E. Merck OHG have thanked Prof. Clemm, who had been a member of the Supervisory board since 1995, for his valuable services, highlighting the particular value of his medical expertise for the Board's activities, especially in the area of oncology.

Darmstadt, February 16, 2005 | The Supervisory Board of Merck KGaA



Peter Zühlsdorff, Chairman



# Merck Group consolidated financial statements

## as of December 31, 2004

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## Balance sheet

► Notes to the Balance Sheet: see page 72

### Assets

EUR million	Note	Dec. 31, 2004	Dec. 31, 2003
<b>Noncurrent assets</b>			
Intangible assets	► [1]	949.0	1,641.1
Property, plant, and equipment	► [2]	1,856.3	2,020.4
Long-term investments	► [3]	120.4	204.3
		2,925.7	3,865.8
<b>Current assets</b>			
Inventories	► [4]	1,023.2	1,166.7
Trade accounts receivable	► [5]	960.9	1,133.6
Other receivables and other assets	► [6]	268.4	339.0
Cash and cash equivalents	► [7]	369.7	297.8
		2,622.2	2,937.1
Deferred tax assets	► [8]	174.2	179.2
		5,722.1	6,982.1

### Equity and liabilities

EUR million	Note	Dec. 31, 2004	Dec. 31, 2003
<b>Net equity</b>			
Equity capital	► [9]	494.7	491.9
Reserves		2,358.2	1,841.7
Minority interest		41.9	29.2
		2,894.8	2,362.8
<b>Provisions</b>			
Provisions for pensions and other post-employment benefits	► [10]	931.1	931.3
Other provisions	► [11]	778.0	784.1
		1,709.1	1,715.4
<b>Liabilities</b>			
Financial obligations	► [12]		
Trade accounts payable	► [13]	212.1	1,764.2
Other liabilities	► [14]	370.3	468.3
	► [15]	490.0	572.7
		1,072.4	2,805.2
Deferred tax liabilities	► [16]	45.8	98.7
		5,722.1	6,982.1

## Income statement

► Notes to the income statement: see page 86

EUR million	Note	Dec. 31, 2004	Dec. 31, 2003
Sales	► [17]	5,859.3	7,202.1
<i>Sales of discontinuing operations (Laboratory Distribution)</i>		-582.3	-2,427.3
<i>Intragroup sales (Laboratory Distribution)</i>		62.5	228.2
<b>Sales of continuing operations</b>		<b>5,339.5</b>	<b>5,003.0</b>
Cost of sales	► [18]	-2,249.3	-2,074.4
<b>Gross margin</b>		<b>3,090.2</b>	<b>2,928.6</b>
Marketing and selling expenses	► [19]	-1,335.8	-1,238.5
Administration expenses	► [20]	-329.2	-329.5
Other operating income and expenses	► [21]	-146.7	-182.8
Research and development	► [22]	-599.0	-604.6
Patent and license revenues	► [23]	134.6	140.6
Investment result	► [24]	6.6	15.1
Amortization of goodwill	► [25]	-65.8	-72.5
<b>Operating result (continuing operations)</b>		<b>754.9</b>	<b>656.4</b>
Exceptional items	► [26]	-19.7	-197.5
<b>Earnings before interest and tax (EBIT) (continuing operations)</b>		<b>735.2</b>	<b>458.9</b>
<i>Result of discontinuing operations (Laboratory Distribution)</i>	► [27]	21.3	79.1
Exceptional items from discontinuing operations (Laboratory Distribution)	► [26]	287.0	-
<b>Earnings before interest and tax (EBIT)</b>		<b>1,043.5</b>	<b>538.0</b>
Financial result	► [28]	-82.7	-115.4
<b>Profit before tax</b>		<b>960.8</b>	<b>422.6</b>
Income tax	► [29]	-288.9	-204.9
<b>Profit after tax</b>		<b>671.9</b>	<b>217.7</b>
Minority interest	► [30]	-13.3	-9.4
<b>Net profit after minority interest</b>		<b>658.6</b>	<b>208.3</b>
Earnings per share (in EUR) (undiluted/diluted)	► [31]	3.47	1.15

## Segment reporting

► Notes to the segment reporting: see page 90

EUR million	Ethicals		Generics		Consumer Health Care		Pharmaceuticals		Liquid Crystals	
	2004	2003	2004	2003	2004	2003	2004	2003	2004	2003
Sales	1,503.7	1,466.8	1,596.7	1,515.3	351.6	320.9	3,452.0	3,303.0	582.9	438.4
Sales (continuing operations)	1,503.7	1,466.8	1,596.7	1,515.3	351.6	320.9	3,452.0	3,303.0	582.9	438.4
Gross margin (continuing operations)	1,113.5	1,119.1	762.0	737.2	230.4	212.0	2,105.9	2,068.3	375.0	280.9
Operating result (continuing operations)	137.1	119.5	214.0	231.4	39.6	37.6	390.7	388.5	299.4	218.3
Operating result	137.1	119.5	214.0	231.4	39.6	37.6	390.7	388.5	299.4	218.3
Exceptional items	29.6	-171.9	-8.1	-25.7	-	-	21.6	-197.5	-	-
Earnings before interest and tax (EBIT)	166.7	-52.3	206.0	205.7	39.6	37.6	412.3	191.0	299.4	218.3
Operating assets	1,244.9	1,494.3	1,130.1	997.8	296.8	317.1	2,671.8	2,809.2	596.5	509.9
Trade accounts payable	82.3	86.5	168.5	140.5	21.9	18.0	272.7	245.0	26.4	19.8
Investments in property, plant, and equipment	59.2	79.6	38.5	40.2	4.1	5.5	101.8	125.3	56.4	74.8
Free cash flow	296.6	31.3	58.7	181.5	43.0	20.3	398.3	233.1	250.0	143.8
Research and development	380.6	400.6	100.9	96.8	9.9	8.4	491.4	505.8	45.2	36.1

EUR million	Germany		France		Rest of Europe		North America	
	2004	2003	2004	2003	2004	2003	2004	2003
External sales by customer location	557.8	697.5	796.6	818.2	1,311.2	1,501.5	1,142.0	2,358.4
External sales by company	806.7	863.9	927.1	1,036.8	1,115.5	1,84.4	1,103.6	2,235.7
Intragroup sales with other regions	910.1	800.8	107.9	98.4	125.1	144.8	37.9	44.2
Operating result	184.4	-14.4	151.7	222.2	75.7	163.2	92.8	157.5
Exceptional items	132.3	-23.7	-	-121.3	-41.2	-	176.2	-52.5
Earnings before interest and tax (EBIT)	316.7	-38.1	151.7	100.9	34.5	163.2	269.1	105.0
Operating assets	2,086.1	1,975.2	615.2	682.1	548.9	992.5	529.0	1,355.2
Investments in property, plant, and equipment	122.5	157.3	11.3	12.5	26.5	26.1	23.2	47.9
Research and development	296.7	326.1	134.6	115.6	51.2	47.3	88.2	90.5
Number of employees	9,090	9,600	2,907	3,739	4,123	5,432	2,901	5,998



Pigments		Life Science & Analytics		Electronic Chemicals		Chemicals		Discontinuing Operations (Lab. Distribution)		Corporate, Consolidation and Other		Group	
2004	2003	2004	2003	2004	2003	2004	2003	2004	2003	2004	2003	2004	2003
330.5	314.7	773.7	766.5	200.4	180.4	1,887.5	1,700.0	582.3	2,427.3	-62.5	-228.2	5,859.3	7,202.1
330.5	314.7	773.7	766.5	200.4	180.4	1,887.5	1,700.0	-	-	-	-	5,339.5	5,003.0
179.1	166.5	373.4	361.7	56.8	51.2	984.3	860.3	-	-	-	-	3,090.2	2,928.6
48.3	41.7	72.4	48.4	17.7	7.5	437.8	315.9	-	-	-73.6	-48.0	754.9	656.4
48.3	41.7	72.4	48.4	17.7	7.5	437.8	315.9	21.3	79.1	-73.6	-48.0	776.1	735.5
-	-	-	-	-	-	-	-	-	-	245.8	-	267.3	-195.5
48.3	41.7	72.4	48.4	17.7	7.5	437.8	315.9	21.3	79.1	172.2	-48.0	1,043.5	538.0
460.6	470.0	757.8	787.0	164.3	177.4	1,979.2	1,944.3	-	1,120.6	4.4	-	4,655.4	5,874.1
19.4	16.3	34.0	30.3	17.8	10.8	97.6	77.2	-	146.1	-	-	370.3	468.3
27.5	19.2	30.4	41.0	14.5	6.7	128.8	141.7	2.4	13.8	1.3	-	234.3	280.8
57.6	47.7	101.8	91.2	17.9	7.5	427.3	290.2	40.7	149.4	1,016.2	-230.7	1,882.5	442.0
30.5	28.1	26.9	29.3	5.0	5.3	107.6	98.8	-	-	-	-	599.0	604.6

Latin America		Asia		Rest of World		Group	
2004	2003	2004	2003	2004	2003	2004	2003
381.1	364.7	1,225.4	1,061.2	445.2	400.6	5,859.3	7,202.1
360.1	343.8	1,132.1	965.5	414.2	372.0	5,859.3	7,202.1
4.6	5.7	28.7	23.8	58.4	36.4	1,272.7	1,154.1
57.0	48.7	167.7	119.7	46.8	38.6	776.1	735.5
-	-	-	-	-	-	267.3	-197.5
57.0	48.7	167.7	119.7	46.8	38.6	1,043.5	538.0
197.1	195.0	541.3	531.4	137.8	142.7	4,655.4	5,874.1
8.0	7.5	34.9	20.1	7.9	9.4	234.3	280.8
2.8	2.0	19.4	17.6	6.1	5.5	599.0	604.6
3,331	3,264	5,254	4,921	1,271	1,252	28,877	34,206

## Cash flow statement

► Notes to the cash flow statement: see page 91

EUR million	Note	2004	2003
Profit after tax		671.9	217.7
Depreciation and amortization (noncurrent assets)		375.0	470.5
Changes in inventories		-79.5	-47.1
Changes in trade receivables		-119.1	-24.5
Changes in trade payables		81.6	-11.4
Changes in provisions		105.0	128.9
Changes in other receivables and payables from operating activities		-101.8	27.0
Gains/Losses on disposal of assets		-339.3	2.3
Other non-cash income and expenses		-22.9	-11.0
Net cash flows from operating activities	► [32]	570.9	752.4
<i>thereof: discontinuing operations (Laboratory Distribution)</i>		42.4	157.7
Purchase of intangible assets		-20.8	-25.6
Purchase of property, plant, and equipment		-234.3	-280.8
Purchase of long-term investments/Changes in companies consolidated		-98.7	-45.2
Disposal of assets		1,665.4	41.2
Net cash flows from investing activities	► [33]	1,311.6	-310.4
<i>thereof: discontinuing operations (Laboratory Distribution)</i>		-1.7	-8.3
Free cash flow		1,882.5	442.0
<i>thereof: discontinuing operations (Laboratory Distribution)</i>		40.7	149.4
Dividend payments		-44.2	-53.9
Capital increase		38.2	404.2
Profit transferred to and reserve appropriation by E. Merck OHG		-161.1	-125.8
Changes in liabilities to E. Merck OHG		65.0	-222.3
Changes in financial obligations		-1,616.9	-469.7
Other changes from financing activities		0.2	6.9
Net cash flows from financing activities	► [34]	-1,718.8	-460.6
Changes in cash and cash equivalents		163.7	-18.6
Changes in cash and cash equivalents due to currency translation		-6.6	-23.1
Changes in cash and cash equivalents due to changes in companies consolidated		-85.2	0.1
Cash and cash equivalents as of January 1		297.8	339.4
Cash and cash equivalents as of December 31	► [35]	369.7	297.8

## Statement of changes in noncurrent assets

EUR million	Intangible assets	Property, plant, and equipment	Long-term investments	Total
Accumulated acquisition cost as of Jan. 1, 2004	2,525.9	4,184.6	224.8	6,935.3
Currency translation	18.8	-28.4	13.2	3.6
Changes in companies consolidated	-762.7	-265.6	967.5	-60.8
Additions	20.8	234.3	96.5	351.6
Disposals	-131.9	-146.8	-1,162.6	-1,441.3
Transfers	7.2	-7.2	-	-
Accumulated acquisition cost as of Dec. 31, 2004	1,678.1	3,970.9	139.4	5,788.4
Accumulated depreciation, amortization, write-downs and fair value adjustments as of Jan. 1, 2004	-884.8	-2,164.2	-20.5	-3,069.5
Currency translation	-4.9	13.8	0.1	9.0
Changes in companies consolidated	240.3	152.0	0.1	392.4
Depreciation, amortization and write-downs	-124.1	-249.1	-1.8	-375.0
Disposals	47.9	127.5	-10.0	165.4
Transfers	-3.6	3.6	-	-
Write-ups	0.1	1.8	-	1.9
Fair value adjustments of financial instruments taken directly to equity	-	-	13.1	13.1
Accumulated depreciation, amortization, write-downs and fair value adjustments as of Dec. 31, 2004	-729.1	-2,114.6	-19.0	-2,862.7
Net carrying amount as of Dec. 31, 2004	949.0	1,856.3	120.4	2,925.7

## Statement of changes in net equity including minority interest

EUR million	Equity capital		Reserves			Minority interest	Total
	General partner's equity Merck KGaA	Subscribed capital Merck KGaA	Capital reserves (share premium) Merck KGaA	Retained earnings/Net retained profits/Consolidated items	Recognition of financial instruments at fair market valuation		
Balance as of Jan. 1, 2003	330.2	117.0	1,407.0	150.3	8.7	40.4	2,053.6
Profit after tax	-	-	-	208.3	-	9.4	217.7
Dividend payments to shareholders of Merck KGaA	-	-	-	-45.0	-	-	-45.0
Dividend payments to other minority shareholders in the Merck Group	-	-	-	-	-	-8.9	-8.9
Profits transferred by Merck Et Cie to E. Merck OHG	-	-	-	-53.7	-	-	-53.7
Profits transferred by E. Merck OHG to Merck KGaA	-	-	-	10.6	-	-	10.6
Profits transferred by Merck KGaA to E. Merck OHG	-	-	-	-97.3	-	-	-97.3
Capital increase	33.0	11.7	359.5	-	-	-	404.2
Appropriation to retained earnings/profit brought forward by E. Merck OHG	-	-	-	14.6	-	-	14.6
Currency translation difference	-	-	-	-132.7	-0.1	-	-132.8
Adjustment from the fair market valuation of financial instruments taken directly to equity	-	-	-	-	10.0	-	10.0
Changes in companies consolidated/Other	-	-	-	1.5	-	-11.7	-10.2
Balance as of Dec. 31, 2003	363.2	128.7	1,766.5	56.6	18.6	29.2	2,362.8
Balance as of Jan. 1, 2004	363.2	128.7	1,766.5	56.6	18.6	29.2	2,362.8
Profit after tax	-	-	-	658.6	-	13.3	671.9
Dividend payments to shareholders of Merck KGaA	-	-	-	-39.6	-	-	-39.6
Dividend payments to other minority shareholders in the Merck Group	-	-	-	-	-	-4.6	-4.6
Profits transferred by Merck Et Cie to E. Merck OHG	-	-	-	-26.7	-	-	-26.7
Profits transferred by E. Merck OHG to Merck KGaA	-	-	-	0.8	-	-	0.8
Profits transferred by Merck KGaA to E. Merck OHG	-	-	-	-308.2	-	-	-308.2
Appropriation to retained earnings/profit carried forward by E. Merck OHG	-	-	-	173.0	-	-	173.0
Capital increase from the exercise of stock options	-	2.8	35.4	-	-	-	38.2
Currency translation difference	-	-	-	25.7	0.1	-	25.8
Adjustment from the fair market valuation of financial instruments taken directly to equity	-	-	-	-	1.8	-	1.8
Changes in companies consolidated/Other	-	-	-	-4.4	-	4.0	-0.4
Balance as of Dec. 31, 2004	363.2	131.5	1,801.9	535.8	20.5	41.9	2,894.8



## Notes

**Preliminary remarks** The accompanying consolidated financial statements have been prepared with Merck KGaA – which manages the operations of the Merck Group – as parent company. In addition, in accordance with the provisions of the Publizitätsgesetz (German Disclosure Act), consolidated financial statements have also been prepared for E. Merck OHG – the general partner in Merck KGaA with a 73.4% share in equity. This includes Merck KGaA and its subsidiaries, and is published in the Bundesanzeiger (Federal Gazette) and filed with the commercial register of Darmstadt under the number HR A 3614.

**Application of international financial reporting standards (IFRS)** The consolidated financial statements of the Merck Group for 2004 – with Merck KGaA as parent company – have been prepared in accordance with consistent accounting policies using the International Accounting Standards published by the International Accounting Standards Board (IASB) applicable as of the balance sheet date.

The following material differences as against the accounting and valuation policies of the Handelsgesetzbuch (“HGB” – German Commercial Code) apply to the Merck Group’s consolidated financial statements:

- Monetary items in foreign currencies which are carried in the single-entity financial statements of the companies consolidated are valued at closing rates in accordance with IAS 21; the HGB requires application of the imparity principle for long-term receivables and liabilities.
- The concept of temporary differences for which deferred taxes must be recognized is interpreted more broadly under IFRS than the HGB.
- Under IAS 39 (rev. 2000), financial instruments originated by the company and classified as available for sale must be carried at their fair value, whereas the HGB requires these to be carried at acquisition cost. IAS 39 (rev. 2000) also states that derivative financial instruments must be carried as an asset or a liability at their fair value. The HGB does not permit the recognition of the fair values of derivatives.

For acquisitions that took place after March 31, 2004, IFRS 3, IAS 36, IAS 38 (rev. 2004) were applied in the fiscal year. In accordance with the transitional provision of the standard, goodwill in the amount of EUR 26.8 million which arose after March 31, 2004 was no longer amortized but subjected to an annual impairment test. Goodwill of EUR 813.3 million which arose before March 31, 2004 will no longer be amortized from next year but subjected to an annual impairment test. In accordance with the transitional provisions, IFRS 2 was also applied to the notes disclosures.

**Companies consolidated** Including the parent company, Merck KGaA, Darmstadt, 171 companies are fully consolidated in the financial statements of the Merck Group. A further 4 associates are included using the equity method. 36 investments are not consolidated as a result of their minor importance and 23 are not consolidated due to a lack of financial control. They are carried under long-term investments in the consolidated financial statements. During the current fiscal year, 9 companies were included in the consolidated financial statements for the first time. In 2004, a total of 35 companies were deconsolidated, primarily due to the disposal of the VWR Group.

At the beginning of April 2004, Merck divested its interest in VWR International, Inc., USA, for USD 1.68 billion; thus 32 companies have been deconsolidated. In the second quarter, Merck also disposed of its joint venture BioMer, which was previously included using the equity method. The proceeds from the disposal amounted to USD 300 million.

In January 2004, Merck acquired the outstanding shares of 19.8% of Merck Pharma S.p.A., Milan, for EUR 10.8 million. At the end of September, Merck acquired a 100% interest in NM Pharma AB, Stockholm, the generics business of Pfizer in Scandinavia, at a purchase price of EUR 49.1 million, renaming the business Merck NM. The acquisition enables Merck Generics to further expand its leading market position and become the market leader in the Scandinavian generics market. All acquisitions and disposals of the fiscal year were made by cash payment.

Overall, the changes in the companies consolidated due to acquisitions and disposals of companies had the following effects on the consolidated balance sheet:

EUR million	Acquisitions/ First-time consolidations	Disposals/ Deconsolidations
Intangible assets	54.2	-571.8
Property, plant, and equipment	-	-115.5
Long-term investments	-	-6.8
Current assets	11.9	-629.7
Liabilities/Provisions	6.3	-318.9

These amounts relate to the disposal of VWR, the acquisition of NM Pharma AB, Stockholm, and the purchase of the outstanding shares of Merck Pharma S.p.A., Milan. In addition, intangible assets and long-term investments decreased by EUR 82.8 million and EUR 111.8 million respectively as a result of the disposal of Merck's share in the BioMer joint venture.

Including acquisitions that were only recorded pro rata in the previous year's financial statements, as well as intraperiod disposals, sales and earnings during the fiscal year were impacted by the following effects on the consolidated financial statements caused by changes in companies consolidated:

EUR million	Acquisitions/ First-time consolidations	Disposals/ Deconsolidations
Sales	16.5	-1.655.3
Operating result	-0.1	-63.5

**Discontinuing operations** With the disposal of its interest in VWR International Inc., USA, at the beginning of April 2004, Merck discontinued its Laboratory Distribution business sector. This segment is reported as a discontinuing operation in accordance with IAS 35 (Discontinuing Operations). The previous presentation of the income statement has been adjusted in both the current and the past year: sales, expenses and EBIT are presented for the continuing operations. VWR's contribution to the operating result and exceptional income from the disposal of VWR are shown separately.

**Consolidation methods** The consolidated financial statements are based on the single-entity financial statements of the consolidated companies as of December 31, 2004, which were prepared using consistent accounting policies in accordance with IFRS, and audited by certified auditors.

The capital consolidation used the purchase method for acquisitions in accordance with IAS 22 and, for acquisitions made after March 31, 2004 in accordance with IFRS 3. The carrying values at the time of acquisition were applied for subsidiaries consolidated for the first time in the year under review, on the basis of corresponding interim financial statements. Resulting differences are taken to assets and liabilities to the extent that their fair values differ from the values actually carried in the financial statements. Any remaining difference is taken to goodwill in the noncurrent asset. Goodwill which is attributable to acquisitions before March 31, 2004, is amortized over its expected useful life using the straight-line method until December 31, 2004. Goodwill arising after April 1, 2004 will no longer be amortized. It will be subjected to a regular impairment test. From 2005, this also applies to goodwill from prior periods. To the extent that this measurement results in lower fair values, any impairment is recognized in income.

Intragroup sales, expenses and income, as well as all receivables and payables between the consolidated companies, were eliminated. The carrying value of assets from intragroup deliveries carried under noncurrent assets and inventories was adjusted by eliminating any intragroup profits.

**Currency translation** The functional currency concept applies to the translation of financial statements of consolidated companies prepared in foreign currencies. As the companies of the Merck Group conduct their business operations independently, they are treated as “foreign entities” as defined by IAS 21. This standard requires that assets and liabilities are translated at the closing rate, and income and expenses at the average rate for the year. Any resulting difference is not recognized in income and is taken to equity. If Group companies are deconsolidated, existing currency differences are reversed and recognized in income.

Foreign currency monetary items (cash and cash equivalents, receivables and payables) in the single-entity financial statements of the consolidated companies prepared in the local currency are translated at the closing rates in accordance with IAS 21. Hedged items are also valued at the closing rates in accordance with IAS 21. The resulting unrealized gains or losses are eliminated against offsetting amounts from the fair value recognition of derivatives in the income statement. Non-monetary items denominated in foreign currencies are carried at their historical values. Exchange differences from the translation of monetary items are recognized in income.

The income statement contains exchange rate losses from financing activities involving foreign exchange transactions totaling EUR 0.8 million (previous year: EUR 2.3 million exchange rate gains). These are reported in the financial result. Exchange rate gains from operating activities amounted to EUR 4.2 million, and primarily related to the exchange rate development of the yen (previous year: EUR 5.3 million exchange rate gains). These exchange differences are included in other operating income and expenses.

## Notes to the balance sheet

## ◀ [1] Intangible assets

EUR million	Patents, licenses and similar rights, as well as brands and trademarks	Goodwill	Software	Advance payments	Total
Accumulated acquisition cost as of Jan. 1, 2004	313.6	2,205.4	–	6.9	2,525.9
Currency translation	–1.1	19.9	–	–	18.8
Changes in companies consolidated	15.0	–763.1	–14.6	–	–762.7
Additions	11.9	0.3	4.5	4.1	20.8
Disposals	–4.2	–120.1	–7.5	–0.1	–131.9
Transfers	–92.7	5.3	99.6	–5.0	7.2
Accumulated acquisition cost as of Dec. 31, 2004	242.5	1,347.7	82.0	5.9	1,678.1
Accumulated depreciation, amortization and write-downs as of Jan. 1, 2004	–216.3	–668.5	–	–	–884.8
Currency translation	0.8	–5.7	–	–	–4.9
Changes in companies consolidated	7.1	221.9	11.3	–	240.3
Amortization and write-downs	–17.1	–92.9	–14.1	–	–124.1
Disposals	3.0	37.6	7.3	–	47.9
Transfers	59.5	–	–63.1	–	–3.6
Write-ups	–	–	0.1	–	0.1
Accumulated depreciation, amortization and write-downs as of Dec. 31, 2004	–163.0	–507.6	–58.5	–	–729.1
Net carrying amount as of Dec. 31, 2004	79.5	840.1	23.5	5.9	949.0

Acquired intangible assets are carried at cost less regular straight-line amortization over their useful lives. The useful lives of acquired concessions, property rights, licenses, patents, brand names, trademarks and software are between 3 and 10 years. As a rule, goodwill is amortized over a 20-year period in accordance with IAS 22. Impairment losses are recognized where required. In accordance with IFRS 3, goodwill acquired after March 31, 2004 is no longer amortized, but is instead tested for impairment annually. As of the balance sheet date, all intangible assets had finite lives.

Following the allocation of the purchase price to identifiable assets (primarily brands), the acquisition of NM Pharma resulted in goodwill of EUR 26.7 million. In the fiscal year there were special write-downs on goodwill due to impairment in the amount of EUR 17.1 million (Ethicals division). A 7.0% discount rate was applied in calculating the write-down, which was recognized in the income statement under exceptional items.

## ◀ [2] Property, plant, and equipment

EUR million	Land, land rights, and buildings, including buildings on third-party land	Plant and machinery	Other facilities, operating and office equipment	Construction in progress and advance pay- ments to vendors and contractors	Total
Accumulated acquisition cost as of Jan. 1, 2004	1,262.1	1,989.5	677.5	255.5	4,184.6
Currency translation	-10.7	-10.9	-5.6	-1.2	-28.4
Changes in companies consolidated	-95.9	-136.8	-31.5	-1.4	-265.6
Additions	16.4	65.8	39.3	112.8	234.3
Disposals	-24.7	-77.2	-43.6	-1.3	-146.8
Transfers	58.3	167.6	21.7	-254.8	-7.2
Accumulated acquisition cost as of Dec. 31, 2004	1,205.5	1,998.0	657.8	109.6	3,970.9
Accumulated depreciation, amortization and write-downs as of Jan. 1, 2004	-479.9	-1,234.3	-438.6	-11.4	-2,164.2
Currency translation	2.5	8.0	3.4	-0.1	13.8
Changes in companies consolidated	38.0	93.1	21.3	-0.4	152.0
Depreciation and write-downs	-42.1	-138.0	-69.0	-	-249.1
Disposals	18.0	69.5	39.7	0.3	127.5
Transfers	1.1	0.6	1.9	-	3.6
Write-ups	1.3	0.2	-	0.3	1.8
Accumulated depreciation, amortization and write-downs as of Dec. 31, 2004	-461.1	-1,200.9	-441.3	-11.3	-2,114.6
Net carrying amount as of Dec. 31, 2004	744.4	797.1	216.5	98.3	1,856.3

Property, plant, and equipment is carried at acquisition or manufacturing cost, less depreciation and write-downs. Subsequent acquisition costs are capitalized. The manufacturing cost of self-constructed property, plant, and equipment is calculated on the basis of the directly attributable unit costs as well as an appropriate share of overheads, including depreciation and write-downs. Financing costs are not capitalized. In the case of acquisitions denominated in foreign currencies, subsequent exchange rate movements do not affect recognition of the asset at the original acquisition or manufacturing cost.

In accordance with IAS 20, acquisition or manufacturing costs are reduced by the amount of government grants or subsidies in those cases where such grants or subsidies have been paid for the acquisition or manufacture of assets (investment grants). Grants related to income that will no longer be offset by future expenses are taken to income. Total government grants and subsidies during the fiscal year amounted to EUR 4.0 million (previous year: EUR 3.8 million).

Property, plant, and equipment is written down by straight-line depreciation over the useful life of the asset concerned. The useful life applied to production buildings is a maximum of 33 years. Administration buildings are depreciated over a maximum of 40 years. For technical equipment the depreciation period is between 8 and 20 years, and 4 to 10 years for other facilities, operating and office equipment. The useful life is regularly reviewed and adjusted to the expected life. Special write-downs are charged where required in accordance with IAS 36, and these are subsequently reversed if the original grounds for the write-down no longer apply. In the year under review, impairment losses in the amount of EUR 19.0 million (previous year: EUR 38.1 million) were recognized on property, plant, and equipment in connection with the closure of production facilities and underutilization. This includes write-downs on plant and machinery (mainly the Life Science & Analytics and Pigments divisions) and on production facilities in China (Ethicals division).



The adjustment for the value in use is based on discount factors of 7.5% to 9%. This is reported in the income statement under other operating expenses.

Where assets are rented or leased and economic ownership lies with the respective Group company (finance leases), they are recognized as assets at the present value of the lease payments or at a lower fair value in accordance with IAS 17 (revised 1997) and written down over the useful life of the asset. The corresponding payment obligations from future lease payments are recorded as liabilities. The total value of capitalized leased assets amounts to EUR 9.9 million and the corresponding obligations amount to EUR 3.7 million (please refer to the explanatory notes, section [13] 'Financial obligations').

The capitalized leased assets are as follows:

EUR million	Dec. 31, 2004	Dec. 31, 2003
Capitalized leased land	2.1	2.1
Capitalized leased buildings	7.2	16.5
Capitalized leased facilities	0.5	0.8
Capitalized leased vehicles	0.1	0.6
Unrealized gains/losses	9.9	20.0

### ◀ [3] Long-term investments

Long-term investments classified as available-for-sale are generally carried at fair value. Changes in fair value are taken directly to equity. If there are indications of lasting impairment, an impairment test is performed and any resulting write-downs are recognized in income. If the fair value cannot be reliably estimated, investments are valued at acquisition cost less write-downs if necessary. For this reason, long-term investments were valued at cost with a carrying amount of EUR 3.0 million as of December 31, 2004. For the same reason, the interests in subsidiaries disclosed under other investments, which are not consolidated as they are of minor importance, are valued at acquisition cost. Interests in associates are accounted for at equity unless they are of minor importance. All other long-term investments are carried at (amortized) acquisition cost less write-downs if necessary.

No material items were reclassified between the individual categories of financial instruments during the fiscal year. The following amounts arising from long-term investments classified as available-for-sale were recognized in equity as of the balance sheet date:

EUR million	Available-for-sale investments	Available-for-sale securities	Total Dec. 31, 2004
Fair values/carrying amounts	44.3	1.7	46.1
Amortized acquisition cost	-28.6	-1.7	-30.3
Unrealized gains/losses	15.8	-	15.8

No significant liability risks or capital commitments connected with joint ventures exist as of the balance sheet date.

EUR million	Investments in:			Other securities		Loans to:		Total
	associates	companies classified as "available- for-sale"	other affiliates	classified as "available- for-sale"	classified as "held-to- maturity"	other affiliates	other companies	
Accumulated acquisition cost as of Jan. 1, 2004	150.8	50.1	5.4	6.3	1.1	0.1	11.0	224.8
Currency translation	13.1	0.1	-	-	-	-	-	13.2
Changes in companies consolidated	-6.1	-	974.4	-0.1	-0.2	-	-0.5	967.5
Additions	4.1	6.0	66.5	-	-	-	19.9	96.5
Disposals	-111.9	-6.2	-1,041.8	-0.2	-0.1	-	-2.4	-1,162.6
Accumulated acquisition cost as of Dec. 31, 2004	50.0	50.0	4.5	6.0	0.8	0.1	28.0	139.4
Accumulated depreciation, amortization, write-downs and fair value adjustments as of Jan. 1, 2004	-7.2	-7.8	-0.8	-4.3	-	-	-0.4	-20.5
Currency translation	0.1	-	-	-	-	-	-	0.1
Changes in companies consolidated	-	-	-	-	-	-	0.1	0.1
Amortization and write-downs/discounts	-1.5	-0.2	-	-	-	-	-0.1	-1.8
Disposals	-	-10.7	0.7	-	-	-	-	-10.0
Fair value adjustments of long-term investments taken directly to equity	-	13.1	-	-	-	-	-	13.1
Accumulated depreciation, amortization, write-downs and fair value adjustments as of Dec. 31, 2004	-8.6	-5.6	-0.1	-4.3	-	-	-0.4	-19.0
Net carrying amount as of Dec. 31, 2004	41.4	44.4	4.4	1.7	0.8	0.1	27.6	120.4

A statement of Merck KGaA's equity interests is filed with the commercial register of Darmstadt Local Court under the number HR B6164. Major companies of the Merck Group as of December 31, 2004 are presented in the following table:

	Direct equity interest in %	Sales <sup>1)</sup> EUR million	Profit after tax <sup>1)</sup> EUR million	Net equity <sup>1)</sup> EUR million	Employees <sup>1)</sup>
<b>Major companies of the Merck Group:</b>					
<b>Germany/Europe</b>					
	Parent				
Merck KGaA, Darmstadt, Germany	company	1,463.6	113.2	3,060.5	7,947
Merck Santé S.A.S., Lyon, France	100.00	361.2	78.6	411.6	1,351
Merck Lipha Santé S.A.S., Lyon, France	100.00	282.5	20.3	61.2	475
Merck Génériques France S.C.S., Lyon, France	100.00	246.2	32.8	39.1	278
Merck Spain Group, Mollet del Vallès, Spain	100.00	153.1	11.7	57.2	748
Generics (UK) Ltd., Potters Bar, United Kingdom	100.00	132.1	-16.0	5.8	454
Laboratoire Théramex S.A.M., Monaco	100.00	106.7	8.4	27.1	445
McDermott Laboratories Ltd. (Gerard), Dublin, Ireland	100.00	102.6	11.2	43.9	324
Seven Seas Group, Hull, United Kingdom	100.00	97.4	6.6	22.9	399
Merck Médication Familiale S.A.S., Lyon, France	100.00	88.6	3.2	27.7	196
Merck N.V.-S.A., Overijse, Belgium	100.00	69.3	6.4	12.0	162
Merck Chimie S.A.S., Fontenay s/Bois, France	100.00	60.9	4.6	36.1	53
Merck Austria Group, Vienna, Austria	100.00	50.6	2.7	7.1	97
Merck Et Cie KG, Altdorf, Switzerland	99.84	47.9	26.0	50.2	84
Merck AG, Zug, Switzerland and Darmstadt, Germany	100.00	-	124.8	508.1	4
<b>North America</b>					
Dey, Inc., Napa, United States	100.00	321.3	44.5	91.1	1,017
EMD Chemicals, Inc., Hawthorne, United States	100.00	199.1	109.2	334.5	681
Genpharm, Inc., Etobicoke, Canada	100.00	189.7	20.9	72.8	604
EMD Biosciences Group, San Diego, United States	100.00	63.2	2.5	29.0	360
EMD Pharmaceuticals, Inc., Durham, United States	100.00	-	-27.0	57.3	101
<b>Latin America</b>					
Merck S.A. de C.V., Estado de México, Mexico	100.00	114.3	14.6	43.9	850
Merck S.A., Rio de Janeiro, Brazil	100.00	93.2	4.4	32.9	968
Merck S.A., Bogota, Colombia	100.00	35.4	2.7	20.7	389
<b>Asia, Africa, Australasia</b>					
Merck Ltd., Tokyo, Japan	100.00	393.7	29.8	81.3	385
Alphapharm Pty. Ltd., Sydney, Australia	100.00	376.2	25.1	90.9	718
Korean companies, South Korea	100.00	225.5	33.9	52.9	215
Merck EC Taiwan Group, Taoyuan, Taiwan	100.00	100.5	9.4	39.3	274
Merck Hoei Ltd., Osaka, Japan	93.50	97.7	8.2	27.0	219
Merck Ltd., Mumbai, India	51.00	66.8	12.2	45.3	927
Merck Display Technologies Ltd., Taoyuan, Taiwan	100.00	49.4	9.1	31.4	331
Pacific Pharmaceuticals Ltd., Auckland, New Zealand	100.00	38.7	3.6	16.2	183
Merck Indonesia Group, Jakarta, Indonesia	73.99	33.5	5.1	12.2	553
Merck Marker (Pvt.) Ltd., Karachi, Pakistan	75.00	33.2	5.2	13.0	776

<sup>1)</sup> Figures for the entire company unconsolidated, irrespective of the equity interest

#### ◀ [4] Inventories

EUR million	Dec. 31, 2004	Dec. 31, 2003
Raw materials and production supplies	229.4	215.7
Work in progress, finished goods and goods purchased for resale	793.4	949.1
Advance payments	0.4	1.9
	1,023.2	1,166.7

Inventories are carried at cost. In addition to directly attributable unit costs, manufacturing costs also include overheads attributable to the production process, including an appropriate share of depreciation charges on production facilities, in accordance with IAS 2. Financing costs are not recognized. The lower realizable net selling price (recoverable amount) is applied if required. Write-downs on inventories as of the balance sheet date amount to EUR 102.1 million (previous year: EUR 110.6 million); the carrying amount of inventories that have been written down amounts to EUR 236.3 million (previous year: EUR 279.2 million). As of the balance sheet date, inventories were not used to secure liabilities. There were no significant contracts to be accounted for in accordance with IAS 11 (Construction Contracts) as of the balance sheet date.

#### ◀ [5] Trade accounts receivable

EUR million	thereof due in less than 1 year	thereof due after more than 1 year	Total Dec. 31, 2004	thereof due in less than 1 year	thereof due after more than 1 year	Total Dec. 31, 2003
from associates	–	–	–	1.7	–	1.7
from other affiliates	1.0	–	1.0	0.8	–	0.8
from other companies	959.9	–	959.9	1,124.8	6.3	1,131.1
	960.9	–	960.9	1,127.3	6.3	1,133.6

Trade accounts receivable are carried at their principal amount. Unless they are covered by insurance policies, write-downs are charged for default risks.

#### ◀ [6] Other receivables and other assets

EUR million	thereof due in less than 1 year	thereof due after more than 1 year	Total Dec. 31, 2004	thereof due in less than 1 year	thereof due after more than 1 year	Total Dec. 31, 2003
from associates	–	–	–	0.1	–	0.1
from other affiliates	7.5	–	7.5	3.4	–	3.4
Tax receivables	100.1	–	100.1	143.5	0.3	143.8
Derivative financial instruments	17.9	–	17.9	12.5	–	12.5
Receivables from related parties	16.5	–	16.5	5.1	–	5.1
Other receivables from other companies	67.7	1.2	68.9	53.8	1.4	55.2
Prepaid expenses	21.4	2.9	24.3	41.8	5.6	47.4
Deferred pension payments	3.1	–	3.1	28.7	–	28.7
Other assets	24.2	5.9	30.1	38.7	4.1	42.8
	258.4	10.0	268.4	327.6	11.4	339.0

Other receivables and other assets are reported at par and carried at their principal amount, less write-downs for any default or other risks.

## ◀ [7] Cash and cash equivalents

EUR million	Dec. 31, 2004	Dec. 31, 2003
Cheques, cash and bank balances	158.8	199.8
Held-to-maturity securities	15.0	22.2
Available-for-sale securities	34.3	21.8
Short-term investments	161.6	54.0
	369.7	297.8

Changes in cash and cash equivalents as defined by IAS 7 are presented in the cash flow statement.

Cash and bank balances are carried at their principal amount. Securities comprise marketable short-term securities. Held-to-maturity securities are valued at acquisition cost. These are short-term investments. Available-for-sale securities are carried at fair value, and changes associated with the normal volatility of fair values are recognized directly in net equity. In the fiscal year, the recognition of securities held as "available-for-sale" at fair value did not generate any changes in equity.

As of the balance sheet date, the fair value of available-for-sale securities corresponded to their cost.

EUR million	Dec. 31, 2004
Fair value	34.3
Amortized cost	-34.3
Unrealized gains/losses	0.0

No reclassifications of securities were performed across the individual categories during the fiscal year.

- ▶ ◀ [8] **Deferred tax assets** Deferred tax assets result from differences in the carrying amounts in the financial and tax accounts of Group companies as well as from consolidation measures, in so far as these differences reverse over time. Deferred tax assets are recognized in accordance with IAS 12. In accordance with the liability method, the tax rates that are applicable or enacted as of the balance sheet date are applied. Additional explanatory notes on deferred tax assets are contained in section [29] 'Income tax'.

- ▶ ◀ [9] **Net equity** Changes in net equity are presented in a separate statement on page 68. As of the balance sheet date, the subscribed capital of Merck KGaA is composed of 50,582,879 no-par value shares. The number of shares in the fiscal year increased by 1,082,880 due to the issue of new shares as part of Merck KGaA's stock option program. E. Merck OHG, the general partner of Merck KGaA, did not exercise its right to increase the general partner's capital in the same proportion and, in this case, does not intend to increase its capital to keep the shareholding ratios constant. In addition to the reserves of Merck KGaA, the reserves contain the retained earnings of the consolidated subsidiaries and the effects of consolidation measures. The disclosure of minority interest is based on the stated equity of the subsidiaries concerned after any adjustment required to ensure compliance with the accounting and reporting policies of the Merck Group, as well as proportionate consolidation entries.

In addition to the dividend payments to the shareholders of Merck KGaA and to minority shareholders in subsidiary companies of the Merck Group, the appropriation of profits includes the transfer of profits from Merck & Cie KG to E. Merck OHG in accordance with the company agreements and the reciprocal transfer of profits between E. Merck OHG and Merck KGaA, also in accordance with the Articles of Incorporation. In proportion to its share of capital E. Merck OHG participates in EUR 363.2 million (73.4-%) of the profits of Merck KGaA, and Merck KGaA participates in EUR 131.5 million (26.6-%) of the profits of E. Merck OHG. Merck KGaA's profit from ordinary activities less trade income tax, on which the appropriation of its profits is based, amounts to EUR 419.8 million. E. Merck OHG's result, on which the appropriation of its profits is based, amounts to EUR 3.2 million, and is composed of expenses totaling EUR 24.6 million and earnings of EUR 27.8 million (primarily investment income of Merck & Cie KG).



The following table shows the development of changes taken directly to equity as a result of recognizing financial instruments at fair value in accordance with IAS 39.

EUR million	Available-for-sale long-term investments	Derivative financial instruments	Total
Balance as of Jan. 1, 2004	13.6	5.0	18.6
Fair value adjustments	13.1	-1.2	11.9
Deferred taxes recognized in equity	-	1.2	1.2
Reclassification to income statement	-10.9	-0.4	-11.3
Total subsequent measurement in fiscal year	2.2	-0.4	1.8
Currency translation difference	-	0.1	0.1
Balance as of Dec. 31, 2004	15.8	4.7	20.5

As part of the stock option program for senior executives resolved by the Merck KGaA Annual General Meeting 2000, the creation of EUR 5,720,000 contingent capital for issuing stock rights was approved. A maximum of 2,200,000 stock options may be issued from the approved contingent capital. To date, 2,153,500 options have been granted in two tranches. Each option entitles the bearer to acquire one share of Merck KGaA, provided that the exercise requirements are met. The term of the program for both tranches is six years. Both tranches had a minimum vesting period of 25 months. Stock options may only be exercised after the minimum vesting period, if the stock price on the day before exercise is at least 30-% higher than the option exercise price. The exercise price is the mean value of Merck's shares in the Frankfurt Xetra trading system, commencing 30 days before the date of issue of the stock rights. In addition, the rights are subject to a lockup that begins two calendar weeks before the date of publication of the Q1 and Q3 reports and eight calendar weeks before the date of publication of the H1 and Annual Reports. When granted, the first tranche included 766,500 options. As of October 2002, options from the first tranche may be exercised at the exercise price of EUR 37.41, provided that Merck's share price is not below EUR 48.63. When granted, the second tranche included 1,387,000 options. These stock options may be exercised as of May 2004, at an exercise price of EUR 34.35, provided that Merck's share price is not below EUR 44.66. Upon exercising the options, the resulting shares carry dividend rights for the current and following fiscal years. The development of all options on shares of Merck KGaA is presented in the following table:

	2004		2003	
	Tranche 1	Tranche 2	Tranche 1	Tranche 2
Outstanding options as of January 1	706,750	1,260,250	708,500	1,346,000
Options exercised during the period	318,100	764,780	-	-
Options converted/forfeited during the period	36,750	58,500	1,750	85,750
Outstanding options as of December 31	351,900	436,970	706,750	1,260,250
- thereof exercisable as of Dec. 31	351,900	436,970	-	-
Recognized capital increase (in EUR million)	11.9	26.3	-	-

The weighted average price of Merck KGaA's shares in XETRA trading at the time of exercise of the stock options in the past fiscal year was EUR 46.58.

In the fiscal year, 61,750 options were converted into cash payments. The amount of cash obtainable is the product of the number of stock options converted by the employees and the difference between the exercise price (EUR 37.41 and 34.35) and the closing price of the share on the day of the conversion. This conversion resulted in an expense of EUR 705,883 in the past fiscal year. There were no outstanding liabilities from this transaction at December 31, 2004.

In addition, all stock options that were not exercised and not converted were not recognized in the balance sheet or in the income statement of the accompanying annual financial statements.

- ◀ [10] Provisions for pensions and other post-employment benefits Different retirement benefit systems are provided for the employees of the Merck Group depending on the legal, economic and fiscal circumstances prevailing in each country. As a rule, these systems are based on the length of service and salary of the employees. Pension obligations in the Merck Group relate to both defined benefit and defined contribution plans, and comprise both obligations from current pensions and accrued benefits for pensions payable in the future.

Defined benefit plans in the Merck Group are both funded and unfunded. The bulk of obligations from current pensions and accrued benefits for pensions payable in the future is covered by the provisions recognized in the balance sheet, while the rest is externally funded. The provisions also contain other post-employment benefits, such as accrued future healthcare costs for pensioners (USA).

The following actuarial parameters are used:

	2004	2003
Discount rate	5.0%	5.5%
Future salary growth	3.1%	3.2%
Future pension increases	1.9%	1.9%
Fluctuation	2.2%	2.8%
Expected return on plan assets	6.4%	6.9%

The obligations of our companies under defined benefit plans are measured using the projected unit credit method in accordance with IAS 19. Under the projected unit credit method, dynamic parameters are taken into account in calculating the expected benefit payments after an insured event occurs; these payments are spread over the entire period of service of the participating employees. Actuarial valuations are prepared annually for this purpose. The actuarial assumptions detailed in the table above form the basis of measurement for our companies' obligations. These are average values weighted by the present value of the respective benefit obligation. The average expected return on plan assets is weighted by the fair value of the respective plan assets. Plan assets for funded benefit obligations primarily comprise equities, fixed-income securities and real estate. They do not include financial instruments issued by Merck Group companies or real estate used by Group companies.

The balance sheet item "Provisions for pensions and other post-employment benefits" can be broken down as follows:

EUR million	2004	2003
Present value of benefit obligations funded by provisions	1,010.4	933.2
Present value of funded benefit obligations	290.9	421.8
Present value of all benefit obligations	1,301.3	1,355.0
Fair value of plan assets of all funds	-234.9	-308.8
Funded status	1,066.4	1,046.2
Unrecognized actuarial losses (gains)	-127.8	-137.0
Deferred pension payments	3.1	28.7
Other changes	-10.6	-6.6
Provisions for pensions and other post-employment benefits	931.1	931.3

Actuarial gains and losses arising from changes in actuarial assumptions are recognized using the 10% corridor rule. Accordingly, actuarial gains or losses are recognized in the income statement only if they exceed the greater of 10% of the present value of the defined benefit obligation or 10% of the fair value of plan assets. Actuarial gains and losses outside the 10% corridor are spread over the expected remaining periods of service of the participating employees.

During the period under review, the balance sheet item "Provisions for pensions and other post-employment benefits" changed as detailed in the table below, which also gives a breakdown of the amounts recognized in income:

EUR million	2004		2003	
Provisions for pensions as of Jan. 1		931.3		963.8
Amounts recognized in income				
Current service cost		37.3		39.3
Past service cost		0.5		0.2
Interest cost on pension obligations		62.0		68.1
Expected return on plan assets		-12.3		-16.5
Net recognized actuarial gains (losses) for the period		2.4		8.1
Other effects		3.3	93.2	-8.3
Pension payments during the period/contributions to funds		-56.4		-92.0
Changes in deferred amounts		-25.6		-20.1
Currency translation, changes in companies consolidated and other changes		-11.4		-11.3
Provisions for pensions as of Dec. 31		931.1		931.3

In the year under review, the actual return on plan assets amounted to EUR 12.1 million (previous year: EUR 24.2 million).

Net amounts recognized in the balance sheet as of December 31, 2004 in accordance with IAS 19 amounted to EUR 928.0 million (previous year: EUR 902.6 million). They comprise provisions for pensions in the amount of EUR 931.1 million, less deferred payments for pensions and other post-employment benefits amounting to EUR 3.1 million.

The cost of current contribution payments during the year under review for defined contribution plans that are financed exclusively by external funds and that do not give rise to any obligations for Merck Group companies other than the payment of contributions amounted to EUR 14.1 million (previous year: EUR 11.3 million).

Apart from the interest component of benefit obligations funded by provisions, which is included in the financial result, the relevant costs of defined benefit and defined contribution plans are included in the operating result.

## ◀ [11] Other provisions

EUR million	Balance as of Jan. 1, 2004	Currency translation	Utilizations	Additions	Reversals	Changes in companies con- solidated/Ad- justments/Other	Balance as of Dec. 31, 2004
Provisions for taxes	70.7	-0.4	-34.7	101.5	-18.5	-10.5	108.1
Provisions for litigation	92.7	-	-17.0	44.0	-5.8	-0.3	113.6
Provisions for pending invoices	74.6	-0.2	-81.5	64.4	-6.9	25.7	76.1
Obligations relating to staff costs	278.9	-0.8	-140.4	162.2	-8.6	-28.9	262.4
Provisions for commissions and rebates	48.7	-2.2	-33.6	54.7	-3.2	-6.5	57.9
Provisions for restructuring	70.4	-0.1	-36.1	10.8	-0.1	-0.4	44.5
Other provisions	148.1	-1.3	-42.2	73.0	-7.7	-54.5	115.4
<b>Total</b>	<b>784.1</b>	<b>-5.0</b>	<b>-385.5</b>	<b>510.6</b>	<b>-50.8</b>	<b>-75.4</b>	<b>778.0</b>

In accordance with IAS 37, provisions for legal or de facto obligations are reported in the balance sheet if the net cash used for the payment of liabilities can be reliably estimated. The carrying value of provisions takes into account the amounts needed to cover future payment obligations, recognizable risks and uncertain obligations of the Group. Provisions are discounted where required. Other provisions include provisions for contributions, levies and fees, as well as uncertain obligations associated with environmental measures.

In common with a number of other pharmaceutical companies in the United States, our American subsidiary Dey, Inc. was sued for having allegedly falsely reported certain price information. The plaintiffs argue that as a result of this, refunds to physicians and pharmacists for drugs from the Medicaid and Medicare health insurance programs were higher than the actual purchase costs. They argue that this resulted in financial losses. In addition, it is claimed that Dey and many other pharmaceutical companies illegally used this difference between actual costs and the amount to be reimbursed as a marketing incentive. Since 1995, thirteen US states have filed actions against Dey. A further twelve class action lawsuits have been filed by patients and institutions who paid additional prescription fees. Dey and the other pharmaceutical companies are mounting a defense against the claims. In 2004, Dey settled two further lawsuits with the states of West Virginia and Arkansas with payments of USD 850,000 and USD 600,000 respectively. The settlements were made without acknowledging any legal obligation. The state of Minnesota has withdrawn its lawsuit. As a result, actions from nine states are still pending. As the total number of lawsuits is not known and proceedings are at a very early stage, it is not possible at present to reliably estimate the potential risks. If the final judgement is not in Merck's favor, this could result in material liabilities in the mid term. We will continue to review the need for provisions depending on the further development of proceedings.

- ◀ **[12] Liabilities** The Merck Group's current liabilities are generally carried at their repayment amount. Any difference between the amount paid out and the amount recoverable at final maturity is amortized. Foreign currency liabilities are translated at their closing rates. Hedged items in foreign currencies are also valued at the closing rate in accordance with IAS 21.

The following liabilities were collateralized as of the balance sheet date:

EUR million	secured by real property liens		secured by other liens	
	Dec. 31, 2004	Dec. 31, 2003	Dec. 31, 2004	Dec. 31, 2003
Bank loans and overdrafts	8.5	24.8	-	13.0
Other liabilities	0.5	0.6	-	-
	9.0	25.4	-	13.0

- ◀ **[13] Financial obligations**

EUR million	Remaining maturity less than 1 year	Remaining maturity more than 1 year	Total Dec. 31, 2004	Remaining maturity less than 1 year	Remaining maturity more than 1 year	Total Dec. 31, 2003
Commercial paper obligations	18.6	-	18.6	420.0	-	420.0
Liabilities from finance lease obligations	1.4	2.3	3.7	1.6	8.3	9.9
Loans from affiliates	7.2	-	7.2	-	-	-
	84.8	127.3	212.1	1,073.4	690.8	1,764.2

Financing commitments from banks to Merck Group are composed as follows:

EUR million	Financing commitments from banks	Utilization as of Dec. 31, 2004	Interest	Due
Syndicated loan 2003	700.0	-	variable	2008
Bilateral credit facilities with banks	489.9	13.6	fixed/variable	2006
Bilateral credit facilities with banks	38.1	36.7	fixed/variable	2007
Bilateral credit facilities with banks	73.8	73.0	fixed/variable	2008
Bilateral credit facilities with banks	1.7	1.7	fixed/variable	2009
Bilateral credit facilities with banks	0.5	0.0	fixed	> 2009
Various credit facilities	1,805.9	57.6	fixed/variable	< 1 Year
	3,109.9	182.6		



Credit facilities are generally utilized on a revolving basis with maturities of between 1 and 3 months. Interest charges are mainly based on a variable, currency-dependent base rate with an agreed margin. Due to the long-term financing commitments, the utilization of the aforementioned syndicated loans and bilateral credit facilities due in 2006 or afterwards is disclosed under bank loans and overdrafts with a time to maturity of over 1 year.

The current and non-current liabilities of the Merck Group to banks are denominated in the following currencies:

	Dec. 31, 2004	Dec. 31, 2003
Euros	50.5%	34.1%
U.S. dollars	16.2%	29.7%
Pounds sterling	0.0%	15.1%
Swiss francs	0.3%	9.5%
Yen	18.0%	4.9%
Other currencies	15.0%	6.7%
	100.0%	100.0%

In order to meet short-term capital requirements, Merck KGaA issued a commercial paper program with a volume of EUR 500.0 million, which had not been utilized as of the reporting date. Merck companies in Taiwan issued commercial paper for an equivalent of EUR 18.6 million as of the reporting date.

Liabilities from finance lease obligations represent the discounted amount of future payments arising from finance leases. This position primarily relates to liabilities from finance leases for land, buildings and vehicles.

#### ◀ [14] Trade accounts payable

EUR million	Remaining maturity less than 1 year	Remaining maturity more than 1 year	Total Dec. 31, 2004	Remaining maturity less than 1 year	Remaining maturity more than 1 year	Total Dec. 31, 2003
to associates	1.1	–	1.1	7.8	–	7.8
to other affiliates	2.7	–	2.7	1.7	–	1.7
to other companies	366.5	–	366.5	454.6	4.2	458.8
	370.3	–	370.3	464.1	4.2	468.3

## ◀ [15] Other liabilities

EUR million	Remaining maturity less than 1 year	Remaining maturity more than 1 year	Total Dec. 31, 2004	Remaining maturity less than 1 year	Remaining maturity more than 1 year	Total Dec. 31, 2003
to other affiliates	0.8	–	0.8	7.6	–	7.6
Advances received from customers	3.0	0.1	3.1	7.2	–	7.2
Payroll liabilities	59.8	0.5	60.3	68.4	–	68.4
Tax liabilities	59.7	–	59.7	151.4	–	151.4
Derivative financial instruments	9.7	–	9.7	0.7	–	0.7
Liabilities to general partner E. Merck OHG and other related parties	166.3	–	166.3	91.1	–	91.1
Loans received from third parties	15.3	88.9	104.2	16.4	93.9	110.3
Deferred income	2.9	4.6	7.5	46.3	0.1	46.4
Miscellaneous	75.5	2.9	78.4	87.1	2.5	89.6
	393.0	97.0	490.0	476.2	96.5	572.7

- ▶ [16] **Deferred tax liabilities** Deferred tax liabilities result from differences in the carrying amounts in the financial and tax accounts of Group companies as well as from consolidation measures, in so far as these differences reverse over time. Deferred tax liabilities are recognized in accordance with IAS 12. In accordance with the liability method, the tax rates that are applicable or enacted as of the balance sheet date are applied. Additional explanatory notes on deferred tax liabilities are contained in section [29] 'Income tax'.

## Notes to the income statement

The disposal of VWR is reported as a discontinuing operation within the meaning of IAS 35 (Discontinuing Operations). The income statement has been adjusted to this effect to enhance transparency. In addition to total sales, sales and operating expenses and income for continuing operations are presented. The contribution to the result by VWR itself and the proceeds from the disposal of VWR are presented as separate items. The Merck Group presents the items below EBIT inclusive of VWR.

- ◀ **[17] Sales** Sales are considered realized when the trade and services owed have been rendered. Sales also include revenue from services, but the volume involved is insignificant. Sales are presented by business sector and region in the enclosed 'Segment Reporting' section.
- ▶
- ◀ **[18] Cost of sales** The cost of sales includes the cost of manufactured products as well as goods purchased for resale. In accordance with IAS 2, the cost comprises overheads, including depreciation charges on production facilities, in addition to directly attributable costs, such as the cost of materials, staff and energy.
- ◀ **[19] Marketing and selling expenses** In addition to the cost of sales and marketing departments and of the field sales force, marketing and selling expenses include advertising, logistics and license costs. Suspense items for oncharged freight expenses amounting to EUR 11.4 million have been deducted from marketing and selling expenses (previous year: EUR 4.3 million). In addition, the net amount from commission expenses amounting to EUR 25.2 million (previous year: EUR 26.7 million) and commission income amounting to EUR 23.3 million (previous year: EUR 21.4 million) are also included in this item.
- ◀ **[20] Administration expenses** Staff costs and material expenses of management and administrative functions are disclosed under this item unless they have been charged to other cost centers as internal services.
- ◀ **[21] Other operating income and expenses** Other operating income and expenses can be broken down as follows:

EUR million	2004	2003
Inventory adjustments	-60.1	-60.0
Exchange differences from operating activities	4.2	5.3
Losses from disposal of assets/special write-downs	-20.1	-21.9
Write-downs on receivables	-4.8	-2.3
Project costs	-8.3	-12.6
Premiums, fees and contributions	-36.0	-35.4
Other operating expenses	-135.6	-151.5
Gains from disposal of assets	17.9	8.4
Other operating income	96.1	87.2
	-146.7	-182.8

Other operating expenses primarily include expenses arising from restructurings, environmental protection, production development as well as expenses relating to litigation proceedings. They also include expenses relating to the recognition of staff-related provisions e.g. for the early partial retirement program. Other operating income primarily includes gains from the release of provisions and prior period income.

◀ **[22] Research and development** The breakdown of research and development by divisions and regions is disclosed under 'Segment Reporting'. In addition to the costs of research departments and process development, this item also includes the cost of purchased services and the cost of clinical trials. The costs of research and development are expensed in full in the period in which they are incurred. Development expenses in the Pharmaceuticals business sector cannot be capitalized since the high level of risk up to the time that pharmaceutical products are marketed means that the requirements of IAS 38 are not satisfied in full. Costs incurred after regulatory approval are insignificant. In the same way, the risks involved until products are marketed means that development expenses in the Chemicals and Laboratory Distribution business sectors cannot be capitalized. Reimbursements are netted against research costs for research and development of EUR 7.4 million (previous year: EUR 8.6 million).

◀ **[23] Patent and license revenues** The amounts reported relate principally to income for pharmaceutical active substances such as bisoprolol and metformin, as well as to licensing income from the license agreement with Bracco. In addition, revenues of EUR 26.7 million were generated in the past fiscal year in connection with the outlicensing of Campral for the US market, and a further EUR 22.5 million from the outlicensing of a research project to Eli Lilly.

◀ **[24] Investment result**

EUR million	2004	2003
Dividend income from associates	1.7	12.4
Other investment income	4.9	2.7
	6.6	15.1

The previous year includes investment income for the BioMer joint venture, which was sold in the second quarter of 2004.

◀ **[25] Amortization of goodwill**

EUR million	2004	2003
Pharmaceuticals	-58.8	-65.6
Chemicals	-7.0	-6.9
	-65.8	-72.5

◀ **[26] Exceptional items** Exceptional items are composed as follows:

EUR million	2004	2003
Provision for litigation	-41.2	-
Goodwill impairment	-17.1	-50.0
Adjustment for existing exceptional items	-8.1	-25.7
Expenses relating to the termination of contract manufacturing with GlaxoSmithKline	-	-50.5
Expenses for restructuring programs in France	-	-71.3
Gain on disposal of BioMer	46.7	-
Exceptional items relating to continuing operations	-19.7	-197.5
Gain on disposal of Laboratory Distribution	287.0	-
Exceptional items	267.3	-197.5

The disposal gain before taxes resulting from the disposal of the investment in VWR International, Inc., USA, of EUR 287.0 million is disclosed separately in the income statement as exceptional items from discontinuing operations (Laboratory Distribution).

- ◀ **[27] Result of Discontinuing Operations (Laboratory Distribution)** This item presents the Laboratory Distribution business sector's contribution to the Merck Group's operating result for the first three months of 2004 until the disposal of VWR in early April.

◀ **[28] Financial result**

EUR million	2004	2003
Interest income from loans	2.0	1.0
Other interest and similar income	14.6	12.0
Interest and similar expenses	-43.5	-77.5
	-26.9	-64.5
Interest component of the addition to pension provisions and other provisions for staff costs	-54.6	-53.2
Measurement of interest rate derivatives	-0.4	-
Exchange rate differences from financing activities	-0.8	2.3
	-82.7	-115.4

The decrease in interest and similar expenses is primarily attributable to the utilization of the funds generated from the disposal proceeds for VWR and BioMer for debt redemption.

◀ **[29] Income tax**

EUR million	2004	2003
Taxes in the period under review on operating activities	-246.6	-237.7
Taxes in the period under review on exceptional items	-65.6	25.9
Taxes for other periods	13.2	-1.9
Deferred taxes on operating activities	9.0	-7.7
Deferred taxes on exceptional items	1.1	16.5
	-288.9	-204.9
Tax rate	30%	48%
Tax rate before exceptional items	32%	40%

The tax expense consists of corporation and trade income taxes for the companies domiciled in Germany as well as comparable income taxes for foreign companies. Other taxes besides income taxes are contained in the other operating income and expenses. The deferred taxes relate to temporary differences between the carrying values in the companies' tax bases and the carrying values in the consolidated financial statements using the liability method. As a result of changes in tax rates at individual companies, a total deferred tax expense of EUR 0.5 million was recorded. Taxes from exceptional items mainly comprise taxes on the proceeds on the disposal of VWR in the amount of EUR 68.8 million.

The reconciliation between deferred tax assets and liabilities shown in the balance sheet and deferred taxes in the income statement is presented below:

EUR million	2004	2003
Change in deferred tax assets (balance sheet)	-5.0	-14.0
Change in deferred tax liabilities (balance sheet)	52.9	26.8
Deferred taxes credited/debited to equity	-1.1	0.3
Changes in companies consolidated/Currency translation	-36.7	-4.3
Deferred taxes (income statement)	10.1	8.8



As of the balance sheet date, corporation tax loss carryforwards at Merck KGaA amount to EUR 7.4 million; trade tax loss carryforwards amount to EUR 54.8 million. Income tax loss carryforwards at subsidiaries amount to EUR 88.2 million. In 2004, the income tax burden was reduced by EUR 19.9 million due to the utilization of tax loss carryforwards and tax credits. Deferred tax assets are recognized for tax loss carryforwards only if realization of the related tax benefit is probable. This resulted in total deferred tax assets of EUR 14.6 million (previous year: EUR 6.5 million). The major part of these tax loss carryforwards either have no expiry date or can be carried forward for up to 20 years. Deferred tax assets were not recognized for losses or loss carryforwards at subsidiaries totaling EUR 64.7 million, since future realization of the related tax benefits is currently not expected. Net deferred tax assets amounting to EUR 159.6 million were recognized for other temporary differences.

Deferred tax assets and liabilities are attributable to the following balance sheet items:

EUR million	2004		2003	
	assets	liabilities	assets	liabilities
Intangible assets	6.3	3.2	6.8	30.4
Property, plant, and equipment	3.0	57.4	–	70.1
Long-term investments	0.7	12.2	0.4	15.1
Inventories	53.9	6.6	51.8	16.8
Receivables/other assets	7.0	3.6	8.5	1.2
Provisions for pensions and other post-employment benefits	44.4	1.6	60.9	2.5
Other provisions	81.8	1.0	83.7	2.9
Liabilities	4.9	1.9	4.1	2.4
Tax loss carryforwards	14.6	–	6.5	–
Other	2.8	3.5	4.2	5.0
Offset deferred tax assets and liabilities	-45.2	-45.2	-47.7	-47.7
Total deferred taxes	174.2	45.8	179.2	98.7

The following table contains a reconciliation of the theoretical tax rate for the Merck Group which would result from applying the regular tax rates at the individual german and foreign companies to the effective tax expense before exceptional items and the effective tax expense recognized in the income statement.

EUR million	2004	2003
Consolidated profit before tax	960.8	422.6
Exceptional items	267.3	-197.5
Consolidated profit before tax and exceptional items	693.5	620.1
Theoretical tax rate	30%	32%
Theoretical tax expense before exceptional items	-209.1	-200.6
Tax effect of non-deductible amortization of goodwill	-22.7	-28.7
Tax effect of companies with a negative consolidated contribution	-17.2	-34.2
Taxes for other periods	13.2	-1.9
Effect of deferred taxes on losses and other	11.4	18.1
Tax expense before exceptional items	-224.4	-247.3
Tax rate before exceptional items	32%	40%
Taxes for exceptional items	-64.5	42.4
Tax expense according to income statement	-288.9	-204.9
Tax rate according to income statement	30%	48%

- ◀ **[30] Minority interest** Minority interest in net profit is primarily composed of the minority interests in Société de Participation Pharmaceutique S.C.S., France, Merck Ltd., Thailand, and Merck Marker Ltd., Pakistan, as well as the listed companies Merck Ltd., India and Merck Indonesia Group.
- ◀ **[31] Earnings per share** Basic earnings per share are calculated by dividing the net profit after minority interest by the weighted average number of theoretical shares outstanding. The use of a theoretical number of shares takes into account the fact that the general partner's capital is not represented by shares. The division of the share capital in the amount of EUR 131.5 million into 50,582,879 shares results in the division of the general partner's capital in the amount of EUR 363.2 million into 139,699,997 theoretical shares. Under IAS 33, the 1,082,880 shares issued through the Merck stock option program in 2004 may only be included in basic earnings per share on a time proportionate basis from the date of their conversion.

	2004	2003
Earning after minority interests (EUR million)	658.6	208.3
Weighted average number of theoretical shares outstanding (in millions)	189.6	180.6
Basic earnings per share (EUR)	3.47	1.15

Diluted earnings per share are calculated by dividing the net profit after minority interest by the weighted average number of theoretical shares outstanding, plus all potentially dilutive shares. Potentially dilutive shares in the Merck Group are stock options under the Merck stock option program, provided that their exercise requirements are met at the balance sheet date. In this case, this relates to stock options from both tranches of Merck's stock option program. The resulting dilutive effect is not material. The diluted earnings per share thus correspond to the basic earnings per share. The weighted average number of shares to calculate the dilutive effect amounted to 189,893,339 shares.

## Notes to the segment reporting

The classification of asset and income figures and other key figures by business sector or by region in accordance with IAS 14 (rev. 1997) is presented in 'Segment Reporting'. Segmentation was performed in accordance with the internal reporting of the Merck Group. The operating segments are described in detail in the business sector sections in the Annual Report. Segment Reporting has been expanded as against the previous year. It is no longer restricted to the business sectors, but now contains segment information on all of our divisions. The discontinuation of the Laboratory Distribution segment has resulted in changes in the size of the continuing operations in relation to the company as a whole. In some cases, the thresholds set out in IAS 14 have been exceeded. However, we have decided not to restrict Segment Reporting to the divisions, but instead to report on all divisions, thus ensuring that Segment Reporting reflects the internal management structure.

In addition, we have expanded Segment Reporting to include the new segment "Corporate, Consolidation and Other". This segment includes income and expenses that relate to the Merck Group as a whole and that cannot be directly allocated to the operating segments, as well as income taxes and certain exceptional items. Intragroup sales are also eliminated at this level.

Transfer prices for intragroup sales are determined on an arm's-length basis. There were no substantial internal relationships between the business sectors, with the exception of intragroup sales between the Chemicals and Laboratory Distribution business sectors reported in segment reporting. In the Segment Reporting, the United States and Canada are combined to form a single region 'North America', as the two countries are managed as a single territory in the Merck Group's internal reporting.

Operating assets included in 'Segment Reporting' were as follows:

EUR million	Dec. 31, 2004	Dec. 31, 2003
Total assets of the Merck Group	5,722.1	6,982.1
Monetary assets (cash and cash equivalents, loans, securities)	-399.9	-311.6
Non-operating receivables from related parties and tax receivables	-296.5	-328.1
Trade accounts payable	-370.3	-468.3
Operating assets	4,655.4	5,874.1

## Notes to the cash flow statement

We define free cash flow as the total net cash flows from operating and investing activities. It is used as an internal control parameter for measuring the liquidity contributed by our business sectors.

- ◀ **[32] Net cash flows from operating activities** Net cash flows from operating activities include payments for taxes amounting to EUR 265.3 million (previous year: EUR 144.0 million). This includes taxes on the proceeds from the disposal of VWR amounting to EUR 57.0 million as well as payments of the VWR group for the first quarter amounting to EUR 22.2 million. Interest expenses amounted to EUR 38.2 million (previous year: EUR 67.3 million) and interest income amounted to EUR 14.3 million (previous year: EUR 11.8 million).
- ◀ **[33] Net cash flows from investing activities** The acquisition of NM Pharma AB, Stockholm led to cash outflows of EUR 53.8 million. Purchase price reductions in the amount of EUR 4.7 million will have a cash impact in 2005. The acquisition of the outstanding shares (19.8%) in Merck Pharma S.p.A. resulted in cash outflows of EUR 10.8 million. The cash inflow from the sale of VWR amounted to EUR 1,346.3 million before taxes and EUR 1,289.3 million after taxes. Cash proceeds from the disposal of our interests in the BioMer joint venture amounted to EUR 237.5 million.
- ◀ **[34] Net cash flows from financing activities** The funds from the disposal of VWR and BioMer were primarily used for debt redemption. Disclosed dividends paid and transfers of profits in accordance with the Articles of Incorporation disclosed as cash outflows from financing activities were broken down as follows in the fiscal year:

EUR million	2004		2003	
<b>Total dividend payments</b>				
Dividends to shareholders	-39.6		-45.0	
Dividends to external shareholders	-4.6	-44.2	-8.9	-53.9
<b>Net profits transferred by Merck KGaA to E. Merck OHG</b>				
Profit transfer in accordance with the Articles of Incorporation from E. Merck OHG to Merck KGaA	0.8		10.6	
Profit transfer in accordance with the Articles of Incorporation from Merck KGaA to E. Merck OHG	-308.2		-97.3	
Appropriation by E. Merck OHG to reserves/profit carried forward of Merck KGaA	173.0	-134.4	14.6	-72.1
Profit transfer from Merck & Cie to E. Merck OHG		-26.7		-53.7
<b>Total dividend payments and profit transfers</b>		-205.3		-179.7

This resulted in free cash flow for the year after dividends and profit transfers of EUR 1,677.2 million.

- ◀ **[35] Cash and cash equivalents** The composition of cash and cash equivalents is presented under 'Notes to the Balance Sheet'.

## Other disclosures

**[36] Financial instruments** We use derivative financial instruments exclusively to hedge currency and interest rate positions, and thereby minimize currency risks and financing costs caused by exchange rate or interest rate fluctuations. The instruments used are marketable forward exchange contracts and interest rate swaps. The use of such derivatives contracts is governed by internal regulations, and derivative transactions are subject to continuous risk management procedures. Trading, settlement and control functions are strictly separated, and this separation is monitored by our internal audit department. Derivatives contracts are only entered into with prime-rated banks and are restricted to the hedging of our business operations and related financing transactions.

The following derivative financial positions were held as of the balance sheet date:

EUR million	Nominal volume Dec. 31, 2004	Dec. 31, 2003	Fair value Dec. 31, 2004	Dec. 31, 2003
Forward exchange contracts	1,180.6	307.4	8.6	12.1
Interest rate swaps	81.5	22.3	-0.4	-0.3
Cross-currency swaps	9.2	-	-	-
	1,271.3	329.7	8.2	11.8

The nominal volume is the aggregate of all buy and sell amounts relating to derivatives contracts. The fair values result from the valuation of open positions at market prices, ignoring any opposite movements in the value of the underlyings. They correspond to the income or expenses which would result if the derivatives contracts were closed out as of balance sheet date. The fair values are calculated on the basis of quoted prices or current market data provided by a recognized information service.

The fair values of the derivative financial instruments are reported in the balance sheet under other receivables and other assets or under other liabilities. Gains and losses on the fair value of derivatives and underlyings are usually recognized directly in the income statement. If, in the case of future cash flows being hedged, the provisions for hedge accounting in accordance with IAS 39.158 are fulfilled, gains and losses on the fair value of derivatives are recognized in equity until the underlying transaction occurs. These amounts are only reclassified from equity and carried to the income statement after accounting for the underlying transaction. Amounts reclassified to the income statement are either recognized in the operating result, or in the financial result if liabilities have been hedged.

The maturity structure of the hedging transactions (nominal volume) is as follows as of the balance sheet date:

EUR million	Remaining maturity less than 1 year	Remaining maturity more than 1 year	Total Dec. 31, 2004	Remaining maturity less than 1 year	Remaining maturity more than 1 year	Total Dec. 31, 2003
Forward exchange contracts	1,180.6	-	1,180.6	282.0	25.4	307.4
Interest rate swaps	60.0	21.5	81.5	-	22.3	22.3
Cross-currency swaps	9.2	-	9.2	-	-	-
	1,249.8	21.5	1,271.3	282.0	47.7	329.7

The forward exchange contracts that are entered into to reduce the exchange rate risk have a total nominal volume of EUR 1,185.2 million and primarily serve to hedge fluctuations in the exchange rates of the JPY (EUR 96.1 million), the USD (EUR 313.7 million), the GBP (EUR 218.8 million) and the CHF (EUR 166.5 million) to the EUR and fluctuations in the exchange rate of the EUR (EUR 195.8) to the USD and the KRW. Forward exchange contracts and cross-currency swaps primarily serve to hedge loans granted to or raised by Merck Group companies. Forecast transactions are only hedged if the occurrence can be assumed to be highly probable. The nominal volume of hedged future transactions amounted to EUR 192.1 million as of the balance sheet date.

The occurrence of hedged items is expected within the next 12 months. In the fiscal year, a gain of EUR 1.2 million on the remeasurement of derivatives to fair value was taken directly to equity and EUR 0.4 million was removed from equity and included in net profit. This primarily relates to the hedging of future sales in yen and euro.

EUR million	Nominal volume Dec. 31, 2004	Dec. 31, 2003	Fair value Dec. 31, 2004	Dec. 31, 2003
Hedging of forecast transactions	192.1	110.9	6.6	6.5
Hedging of recognized transactions	988.5	196.5	2.0	5.6
<b>Total forward exchange contracts</b>	<b>1,180.6</b>	<b>307.4</b>	<b>8.6</b>	<b>12.1</b>

EUR 21.5 million of JPY financial liabilities was changed from floating to fixed rates to hedge short-term interest rate risks. Overall, the interest rate structure of the Merck Group's assets and liabilities is presented in the following table. The financial obligations secured by interest rate swaps are recognized according to the effect of the swaps:

EUR million	Fixed-rate	Floating-rate	Non-interest-bearing	Total Dec. 31, 2004	Fixed-rate	Floating-rate	Non-interest-bearing	Total Dec. 31, 2003
Loans granted	27.7	-	-	27.7	10.7	-	-	10.7
Cash and cash equivalents	59.9	278.1	31.7	369.7	87.2	149.8	60.8	297.8
Other receivables/assets	2.8	7.9	257.7	268.4	11.3	8.7	319.0	339.0
Financial obligations	107.8	104.3	-	212.1	198.1	1,566.1	-	1,764.2
Other liabilities	100.4	39.4	350.2	490.0	115.4	110.8	346.5	572.7

The trade accounts receivable and payable not included in the table are for the most part non-interest-bearing.

A theoretical credit risk for the existing derivative instruments only applies to the amount of the positive fair values. As of the balance sheet date, these amount to EUR 18.4 million (previous year: EUR 12.1 million) and result exclusively from forward exchange contracts. As the underlying contracts are only concluded with prime-rated banks, we do not believe that these financial instruments involve any actual credit risk. For financial instruments originated by the company, the fair values correspond to the carrying values unless stated otherwise in the notes to the individual balance sheet items. Specific write-downs are charged to cover possible credit risks for financial instruments originated by the company. In addition, the broad-based business structure of the Merck Group means that there is no particular concentration of credit risks as regards either customers or specific countries.

### [37] Contingent liabilities

EUR million	Dec. 31, 2004	thereof subsidiaries	Dec. 31, 2003	thereof subsidiaries
Issuance and endorsement of bills	-	-	0.1	-
Guarantees	197.4	1.9	287.6	1.8
Warranties	5.6	-	4.3	-
Other contingent liabilities	20.1	-	14.9	-

In 2000, Merck sold its interest in Bracco, Italy. It was agreed that a portion of the purchase price would be paid in installments. These outstanding payments have been secured by way of a bank guarantee in favor of Merck. In fiscal year 2002, Merck KGaA sold the residual claim from Bracco to a financial institute (revenues from the disposal: EUR 322.1 million). In this connection, Merck KGaA assumed a guarantee to hedge against the respective residual claim, which amounted to EUR 191.8 million as of December 31, 2004 (previous year: EUR 277.9 million) and is carried under guarantees.



**[38] Other financial obligations**

EUR million	Dec. 31, 2004	thereof subsidiaries	Dec. 31, 2003	thereof subsidiaries
Orders for capital expenditure on property, plant, and equipment	51.8	–	25.0	–
Future rental payments	74.9	–	75.7	–
Future operating lease payments	44.2	–	113.3	–
Long-term purchase commitments	0.4	–	0.2	–
Other financial obligations	88.0	4.9	96.0	5.1
	259.3	4.9	310.2	5.1

Other financial commitments are carried at nominal value. Liabilities from lease agreements are composed as follows:

EUR million	Remaining maturity less than 1 year	Remaining maturity 1–5 years	Remaining maturity more than 5 years	Total Dec. 31, 2004
Present value of future payments from finance leases	1.4	2.2	0.1	3.7
Interest component of finance leases	0.1	0.1	–	0.2
Future finance lease payments	1.5	2.3	0.1	3.9
Future operating lease payments	15.5	26.8	1.9	44.2

**[39] Staff costs/Material costs** Staff costs are composed as follows:

EUR million	2004	2003
Wages and salaries	1,241.5	1,442.7
Compulsory social security contributions and special financial assistance	209.5	250.8
Pension expenses	102.7	108.8
	1,553.7	1,802.3
thereof: discontinuing operations (Laboratory Distribution)	83.0	345.5

Material costs amounted to EUR 1,849 million (previous year: EUR 2,876 million), of which EUR 347 million (previous year: EUR 1,492 million) relates to the discontinued business sector (Laboratory Distribution).

**[40] Corporate Governance** The Statement of Compliance in accordance with section 161 of the Aktiengesetz (AktG – German Stock Corporation Act) was published on our Web site in January 2005 ([www.corporategovernance.merck.de](http://www.corporategovernance.merck.de)), where it is always available.

Subject to the approval of the Annual General Meeting on the proposed distribution of EUR 0.80 dividend per share plus EUR 0.20 bonus per share, the remuneration of the Supervisory Board amounting to EUR 329,600 consists of a fixed element of EUR 92,800 and a variable element of EUR 236,800.

As of December 31, 2004, the members of the Executive Board and the Supervisory Board held 425,506 shares and stock options. In total, this accounts for less than 1% of the outstanding shares of Merck KGaA.

The following disclosures on the purchase and sale of no-par value shares of Merck KGaA (ISIN: DE 000 659 990 5) are to be made in accordance with section 15a of the Wertpapierhandelsgesetz (WpHG – German Securities Trading Act):

On April 30, 2004 the general partner Dr. Michael Becker sold a total of 820 shares at a price of EUR 44.05 per share. These shares were not issued under Merck KGaA's stock option program for senior executives.

On May 20, 2004, Dr. Michael Kasper, a member of the Supervisory Board, purchased a total of 7,500 shares at a price of EUR 34.35 per share. On December 17, 2004, he purchased a further 3,250 shares at a price of EUR 37.41 per share. Dr. Kasper sold 6,200 shares at an average price of EUR 45.07 on May 27, 2004, and a further 3,250 shares at an average price of EUR 48.83 on December 17, 2004. All of these shares purchased and sold by Dr. Kasper were issued under Merck KGaA's stock option program for senior executives.

**[41] Related party disclosures** Related parties as defined by IAS 24 are E. Merck OHG, E. Merck Vermögens KG and their partners.

As of December 31, 2004, there were liabilities by Merck KGaA and Merck & Cie, Altdorf, to E. Merck OHG in the amount of EUR 165.5 million (previous year: EUR 91.1 million liabilities). In addition, Merck KGaA was owed receivables in the amount of EUR 9.5 million by E. Merck OHG as of December 31, 2004. The balances result mainly from the profit transfers by Merck & Cie to E. Merck OHG on the one hand, and the reciprocal profit transfers and ongoing settlements between Merck KGaA and E. Merck OHG on the other. Merck KGaA owed EUR 0.8 million to E. Merck Vermögens KG (previous year: receivables EUR 4.9 million). At the reporting date, Merck KGaA also had receivables from E. Merck Beteiligungen OHG in the amount of EUR 7.0 million (previous year: EUR 0.2 million). In total, an average of EUR 181.9 million liabilities was owed to related parties in the fiscal year (previous year: EUR 166.7 million). These liabilities were subject to standard market interest rates. There were no further material transactions with related parties in 2004.

The remuneration of the Executive Board of Merck KGaA is paid by the general partner, E. Merck OHG, and recorded as an expense in its income statement. In the current year, the total remuneration consists of salaries (fixed portion) totaling EUR 2.6 million, variable remuneration of EUR 9.7 million and allocation to pension provisions of EUR 1.4 million. Profit participation is based on the three-year rolling average of profit after tax, i.e., for 2004, 2003 and 2002. At the balance sheet date, the members of the Executive Board held 198,000 stock options from the first tranche and 209,750 stock options from the second tranche of Merck KGaA's stock option program (refer also to note [9]).

**[42] Events after the balance sheet date** Merck intends to sell its Electronic Chemicals division and has entered into negotiations to this end. On January 27, 2005, the necessary resolutions were adopted. The Electronic Chemicals division is included unchanged in the accompanying financial statements. The assets to be sold in the event of the disposal of the Electronic Chemicals business account for around 3% of the total assets of the Merck Group. Sales of the account for less Electronic Chemicals business than 4% of group sales for continuing operations.

The Executive Board of Merck KGaA  
Darmstadt, January 27, 2005



Bernhard Scheuble



Michael Römer



Michael Becker



Thomas Schreckenbach



Jan Sombroek

## Auditor's report

“We have audited the consolidated financial statements, comprising the balance sheet, the income statement, the statement of changes in net equity, the cash flow statement as well as the notes to the consolidated financial statements prepared by Merck KGaA, Darmstadt, for the Merck Group for the fiscal year from January 1 to December 31, 2004. The preparation and the content of the consolidated financial statements in accordance with International Financial Reporting Standards (IFRS) are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audit.

We conducted our audit of the consolidated financial statements in accordance with German auditing regulations and German generally accepted standards for the audit of financial statements promulgated by the Institut der Wirtschaftsprüfer (IDW) and in supplementary compliance with International Standards on Auditing (ISA). Those standards require that we plan and perform the audit such that it can be assessed with reasonable assurance whether the consolidated financial statements are free of material misstatements. Knowledge of the business activities and the economic and legal environment of the Group and evaluations of possible misstatements are taken into account in the determination of audit procedures. The evidence supporting the amounts and disclosures in the consolidated financial statements is examined on a test basis within the framework of the audit. The audit includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audit provides a reasonable basis for our opinion.

In our opinion, the consolidated financial statements give a true and fair view of the net assets, financial position, results of operations and cash flows of the Group for the business year in accordance with International Financial Reporting Standards.

Our audit, which also extends to the group management report prepared by the Company's management for the business year from January 1 to December 31, 2004, has not led to any reservations. In our opinion on the whole the group management report provides a suitable understanding of the Group's position and suitably presents the risks of future development. In addition, we confirm that the consolidated financial statements and the group management report for the business year from January 1 to December 31, 2004, satisfy the conditions required for the company's exemption from its duty to prepare consolidated financial statements and the group management report in accordance with German law.”

Mannheim, January 28, 2005

KPMG Deutsche Treuhand-Gesellschaft  
Aktiengesellschaft  
Wirtschaftsprüfungsgesellschaft



Walter  
Wirtschaftsprüfer



Heublein  
Wirtschaftsprüfer

# Merck

## Business development 2000 – 2004\*

EUR million	2000	2001	2002	2003	2004	Change in %
Sales	6,740	7,528	7,400	7,202	5,859	-18.6
<i>Sales excluding VWR</i>	4,556	5,020	4,935	5,003	5,339	6.7
Pharmaceuticals	2,914	3,323	3,153	3,303	3,452	4.5
Chemicals	1,642	1,697	1,782	1,700	1,888	11.0
Laboratory Distribution*	2,374	2,754	2,711	2,427	582	-76.0
Intragroup sales Laboratory Distribution	-190	-246	-246	-228	-63	-72.6
Operating result	746	877	616	736	776	5.5
<i>Operating result excluding VWR</i>	702	785	532	656**	755	15.0
Pharmaceuticals	455	581	272	389**	391	0.6
Chemicals	247	204	260	316**	438	38.6
Laboratory Distribution*	44	92	84	79	21	-73.1
Corporate, Consolidation and Other**	0	0	0	-48	-74	53.4
Earnings before interest and tax (EBIT)	747	1,286	559	538	1,044	94.0
<i>Earnings before interest and tax (EBIT) excluding VWR</i>	694	1,176	481	459	735	60.2
Profit before tax	524	1,078	412	423	961	127.4
Profit after tax	262	655	215	218	672	208.7
Free cash flow	324	664	441	442	1,882	325.9
EBITDA	1,184	1,694	985	1,008	1,419	40.7
Investments in property, plant, and equipment	427	470	377	281	234	-16.6
Research and development	546	577	608	605	599	-0.9
Total assets	8,235	8,255	7,511	6,982	5,722	-18.0
Net equity	1,947	2,336	2,054	2,363	2,895	22.5
Employees (number as of Dec. 31)	33,520	34,294	34,504	34,206	28,877	-15.6
<i>Employees excluding VWR (number as of Dec. 31)</i>	27,599***	28,222	28,530	28,325	28,877	1.9
Return on sales in %						
(ROS: operating result/sales)	11.1	11.6	8.3	10.2	13.2	
Return on capital employed in %						
(ROCE: operating result/average operating assets)	11.6	13.5	9.6	12.1	14.7	
Earnings per share in EUR (for calculation see page 16)	1.44	3.66	1.18	1.15	3.47	201.7
Dividend per share in EUR	0.90	0.95	1.00	0.80	0.80	0.0
One-time bonus per share in EUR	-	-	-	-	0.20	

\* The Laboratory Distribution business sector (VWR International) was sold at the beginning of April 2004.

\*\* The reporting segment Corporate, Consolidation and Other was introduced for the first time in 2004. The operating result for 2003 was adjusted retrospectively.

\*\*\* Excluding Merck Eurolab distribution companies

## Merck is not the same as Merck

The two are confused again and again – and yet the direct association between Merck KGaA in Darmstadt and the U.S. pharmaceutical company Merck & Co., Whitehouse Station, New Jersey, ended a long time ago. Merck in Darmstadt is the oldest pharmaceutical and chemical company in the world – and still operates successfully today in both the pharmaceutical and chemical sectors. Merck & Co. became an independent company after World War I.

Our historical roots lie in Darmstadt, where Friedrich Jacob Merck acquired the Engel-Apotheke (“Angel Pharmacy”) in 1668. In 1827, Heinrich Emanuel Merck began the industrial-scale production of alkaloids, plant extracts and other chemicals. The successful export business in the United States led in 1887 to the establishment of a subsidiary in New York. Under Georg Merck, a grandson of Heinrich Emanuel Merck, Merck & Co. was formed in 1891. Following the confiscation of properties that took place as a result of World War I, Merck & Co. became an independent American company.

The two companies are no longer linked to one another today – the only thing they still have in common is the name Merck. Merck & Co. holds the rights to the name within North America; outside this region the U.S. company operates as Merck Sharp and Dohme (MSD) or MSD Sharp & Dohme. Merck KGaA, in turn, holds the rights elsewhere in the world and operates in North America under the umbrella brand EMD, formed from the initials of Emanuel Merck, Darmstadt.

**WE ARE THE OLDEST PHARMACEUTICAL  
AND CHEMICAL COMPANY IN THE WORLD**



## Further information

### Publication contributors

- ▶ More information about Merck can be found on the Internet at [www.merck.de](http://www.merck.de) and in the following media, which you may read online or order (in German and English):

Responsibility for Employees, the Environment, and the Community \_\_\_\_\_ Report 2003

Merck transparent \_\_\_\_\_ (also available in French and Spanish)

Experience the New \_\_\_\_\_ (Company film and further information on DVD)

“Was der Mensch thun kann ...” \_\_\_\_\_ History of Merck – The World’s Oldest Pharmaceutical  
and Chemical Company

TopTopics Oncology \_\_\_\_\_ Merck Breaks New Ground in Cancer Therapy

TopTopics CardioMetabolic Care \_\_\_\_\_ Integrated Management of Cardiovascular  
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- ▶ You may order these publications from Corporate Communications, Merck KGaA, 64271 Darmstadt, Germany, or at the following e-mail address: [corpcom@merck.de](mailto:corpcom@merck.de).

- ▶ The Merck Annual Report 2004 is published in German and English. Both reports are available as online versions on the Internet at [www.financialreports.merck.de](http://www.financialreports.merck.de).

- ▶ Published on February 17, 2005 by Merck KGaA | Corporate Communications | Frankfurter Str. 250 | 64293 Darmstadt | Fax: +49 61 51-72 87 93 | E-mail: [corpcom@merck.de](mailto:corpcom@merck.de) | Internet: [www.merck.de](http://www.merck.de)
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## Dates 2005

Annual Press Conference

Thursday, February 17

Annual General Meeting

Thursday, March 31

Interim Report 1<sup>st</sup> Quarter

Tuesday, April 26

Interim Report 2<sup>nd</sup> Quarter

Thursday, July 21

Autumn Press Conference

Interim Report 3<sup>rd</sup> Quarter

Tuesday, October 25

► [www.merck.de](http://www.merck.de)

