4th World Congress of Reproductive Biology

WCRB

Sep. 27-29, 2017

Okinawa Convention Center

Okinawa, JAPAN

Organized by
the Society for Reproduction and Development
in full partnership with the following sister societies

SRD

50 SSR
50 Years of Research
Looking Back & Moving Forward

Society for Reproductive Biology

SRF
Society for Reproduction and Fertility

CSRB

K.S.A.R.
KOREAN SOCIETY OF ANIMAL REPRODUCTION

Contents

Cover design: Nahoko Ieda & Sho Nakamura

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1. Welcome & introduction

Dear Colleagues,

Welcome to the 4th World Congress of Reproductive Biology (WCRB 2017), held in Okinawa, Japan from September 27 to 29, 2017. On behalf of the Local Organizing Committee, I would like to extend our appreciation to you for joining us over the next three days. The Congress is hosted by the Society for Reproduction and Development (SRD), and aims to bring together leading academic scientists, researchers and research scholars to exchange and share their interests, experiences and research findings about all aspects of reproductive biology. The Congress provides plenary lectures, concurrent sessions, a WCRB–JSRE Special Joint Session, a sponsored Symposium, a luncheon seminar, a young scientists' "meet the professors" session, and poster sessions for all the participants to present and discuss the recent trends and concerns in the field of reproductive biology. We also appreciate your contribution to this international conference, as scientists from 33 countries across the globe have submitted over 600 papers to present. We hope you will share with us the outstanding tradition of the WCRB and develop further values at the Congress.

The WCRB 2017 is organized by six international societies in partnership: the Society for the Study of Reproduction (SSR, USA), the Society for Reproductive Biology (SRB, Australia), the Society for Reproduction and Fertility (SRF, UK), the Chinese Society of Reproductive Biology (CSRB, China), the Korean Society of Animal Reproduction (KSAR, Korea), and the SRD (Japan). We appreciate the six sister societies for their partnership and scientific advice as well as financial support. In addition, we are grateful to the agencies, companies, and organizations that have generously committed financial support to this congress.

Thank you again for joining us here in Okinawa, which is one of the most beautiful islands in the world, surrounded by the Pacific Ocean, with Nature, a peaceful atmosphere, historical places and Ryukyuan cuisine. If there is any way we can make the congress more productive and enjoyable, please do not hesitate to ask me, the conference staff, or other members of the Organizing Committee. Enjoy the congress!

Sincerely,

Prof. Hiroko Tsukamura
Local Organizing Committee Chair, WCRB 2017

WCRB History
The first WCRB (WCRB 2008) hosted by SSR in Kona, Hawaii
The 2nd WCRB (WCRB 2011) hosted by SRB in Cairns, Australia
The 3rd WCRB (WCRB 2014) hosted by SRF in Edinburgh, Scotland

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International Scientific Advisory Board

Dr. Hiroko Tsukamura (for SRD)
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Dr. Takeshi Osawa (Fund raising)
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Dr. Fuko Matsuda
Dr. Naojiro Minami
Dr. Takashi Miyano
Dr. Satoshi Ohkura
Dr. Kiyoshi Okuda
Dr. Ken Sawai
Dr. Mariko Shirota
Dr. Tomomi Tanaka

Category Editors

Dr. Satoshi Akagi (Fertilization and embryos)
Dr. Hiroki Hirayama (Uterus, implantation and placentas)
Dr. Hisataka Iwata (Reproductive technology and stem cells)
Dr. Shiro Kurusu (Ovary and follicles)
Dr. Yasuo Nambo (Reproductive endocrinology)
Dr. Goro Yoshizaki (Testis and spermatozoa)

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2. Participant information

Okinawa Convention Center (OCC) is located in the seaside area of Ginowan city on the west coast of central Okinawa Island. OCC is the largest multifunction complex in the Prefecture with a theater, exhibition hall, and 12 large and small conference rooms.
The OCC offers a range of other facilities, including a sun-filled restaurant fully equipped with accessible facilities for the disabled, such as toilets, designated car parking, and wheelchair lifts.
Adjoining the beach, a marina, a seaside park, and an open-air amphitheater, the area offers the best of resort and meetings, incentives, conferences, and events (MICE) tourism destinations.

Access to Conference Centre

Arriving by bus

Access form Naha Bus Terminal Station

To the Okinawa Convention Center Bus Stop

Route Number: No.26, No.32, No.43, No.55
(takes 40-60 minutes) Fare: ¥530
Route Number: No.112 (takes 50 minutes) No.99 (takes 60 minutes)

To the Mashiki Bus Stop (11-minute walk to the Okinawa Convention Center)

Route Number: No.20, No.77, No.120
(takes 45 minutes via Kokusai Street) Fare: ¥530
Route Number: No.23, No.28, No.29, No.63
(takes 35 minutes via Kumoji Street) Fare: ¥530
Route Number: No.31 (takes 50 minutes via Kumoji Street) Fare: ¥530

Access from Naha International Airport

50-70 minutes from Naha International Airport (Bus Station No 3)
to Okinawa Convention Center Bus Stop. Fare: ¥570
Route Number: No.26 (takes 50 minutes), No.99 (takes 70 minutes)

Airport Limousine Bus

The Okinawa Convention Center is easily accessible by Airport Limousine Bus.
*Additional note: This limousine liner does not stop at the convention center. Please get off at Laguna Garden Hotel bus stop and walk to the center for 10 minutes. (takes 55 minutes) Fare: ¥600

Arriving by taxi

Takes approximately 40 minutes (14 kilometers) and costs on average ¥3,500 from Naha Airport.
Takes approximately 30 minutes (10 kilometers) and costs on average ¥3,000 from the center of Naha city.

Arriving by chartered bus

A chartered shuttle bus (bus fare; free) will be available between Omoromachi Station and the conference site (OCC)
(Timetable)

	Conference site	Omoromachi Sta	Conference site
Sept. 26 (Tue)	18:30 lv.	19:00 arr.	
Sept. 27 (Wed)	20:30 lv.	21:00 arr.	
Sept. 28 (Thu)		7:45 lv.	8:15 arr.
Sept. 28 (Thu)	18:45 lv.	19:15 arr.	
Sept. 28 (Thu)	21:00 lv.	21:30 arr.	
Sept. 29 (Fri)		7:30 lv.	8:00 arr.

After Conference Dinner
Sept. 29 (Fri) : LAGUNA GARDEN HOTEL 21:15 lv. ⇒ Omoromachi Sta. 21:45 arr.

Parking

Parking lots will be available for participants.

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3. Conference information

Registration

All conference participants are asked to register at the WCRB2017 registration desk located in the lobby of the Theater Building. You will receive your name badge and your conference bag containing the program book and other items. The opening hours of the registration desk are as follows:

Sept. 26 (Tue)	11:00–18:00
Sept. 27 (Wed)	08:00–19:00
Sept. 28 (Thu)	08:00–19:00
Sept. 29 (Fri)	08:00–19:00

Travel information desk

If you have any questions about the following transportation options, please feel free to ask the staff at the Travel Desk.

- Optional tour
- Shuttle bus
- Airport limousine bus from Laguna Garden Hotel
- Travel information

*If you have any questions about the conference program, please go to the Inquiry Desk. Opening hours are as follows:

Sept. 26 (Tue)	14:00–18:00
Sept. 27 (Wed)	08:00–19:00
Sept. 28 (Thu)	08:00–19:00
Sept. 29 (Fri)	08:00–18:00

Refreshment

Refreshment breaks will take place in the Exhibition Hall. Please note that no food and drinks are allowed in the Theater Building or on the upper floor (audience seating area) of the Exhibition Hall.

Lunch

A lunch box will be served on Sept. 28 and 29 free of charge.

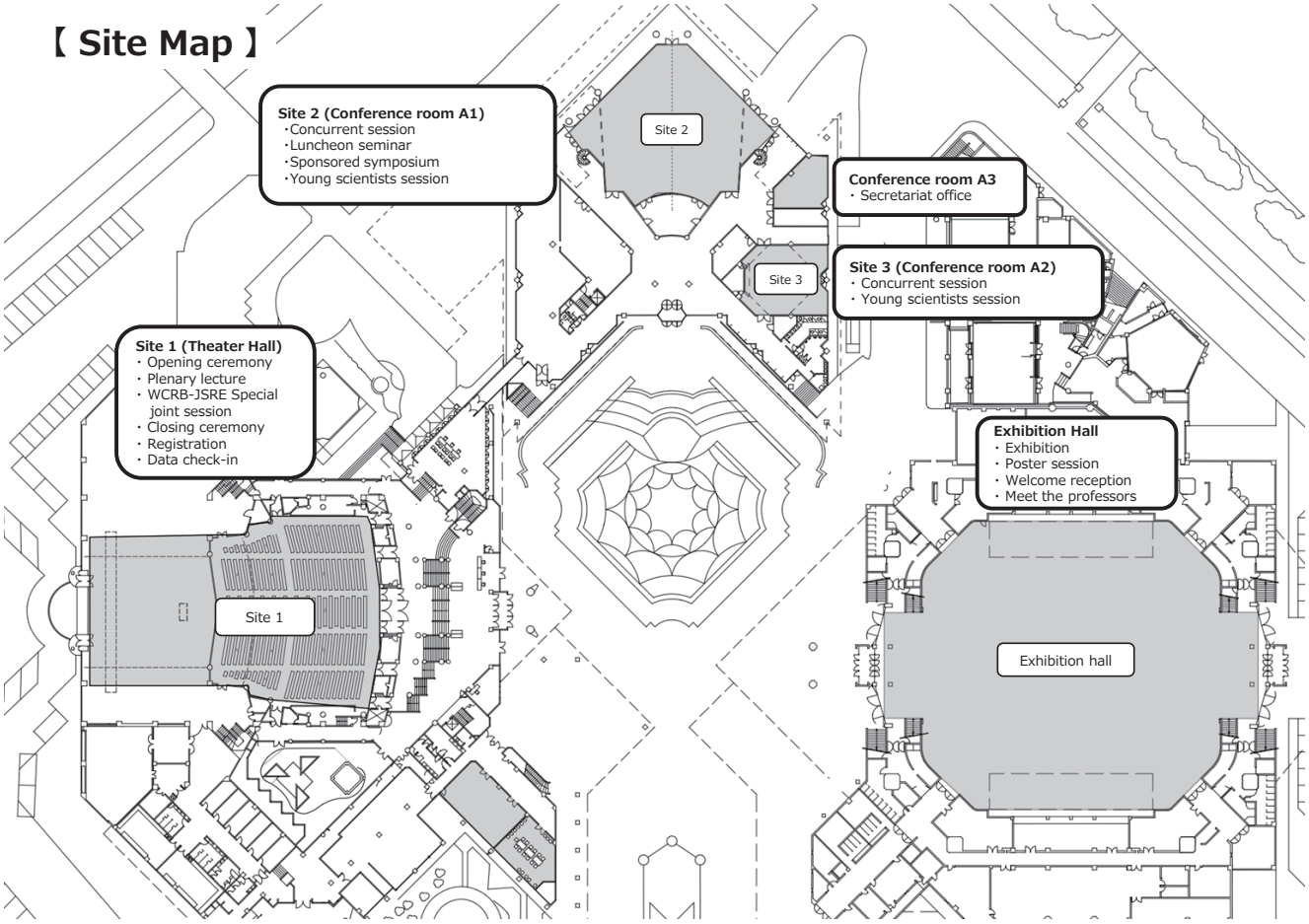
Luncheon seminar

The luncheon seminar tickets (limited to 200) will be distributed in exchange for a free lunch box ticket at the registration desk in the morning of Sept. 28. The attendees will receive a special lunch at the site.

Dress code

You are welcome to wear casual or comfortable clothes.

4. Floor plan



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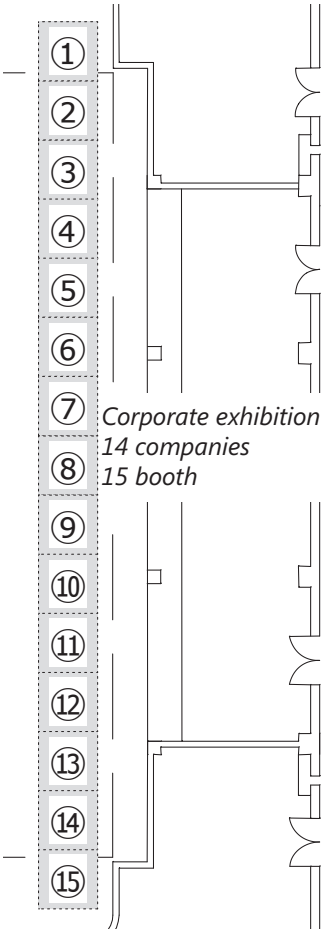
5. Trade exhibition

We extend our sincere thanks to the following sponsors for their demonstrations at the trade exhibition.

Opening Hours

Sept. 27 (Wed)	9:00–18:00
Sept. 28 (Thu)	9:00–18:00
Sept. 29 (Fri)	9:00–17:00



Booth No.	Company Name
①	Society for the Study of Reproduction / Biology of Reproduction
②	S CO., LTD
③/④	The Society for Reproduction and Fertility (SRF) / *Reproduction* Journal
⑤	Nepa Gene Co., Ltd.
⑥	RIKEN BioResource Center (RIKEN BRC)
⑦	NSK Ltd. / Central Institute for Experimental Animals / Nomura Jimusho, Inc.
⑧	BEX Co.,Ltd.
⑨	The Society for Reproduction and Development / Journal of Reproduction and Development
⑩	Misawa Medical Industry Co., Ltd.
⑪	Tokai Hit Co., Ltd.
⑫	Interuniversity Bio-Backup Project (IBBP)
⑬	NARISHIGE CO., LTD.
⑭	NPO Biotechnology Research and Development
⑮	KYUDO.CO., LTD.

6. Overview

PROGRAM AT A GLANCE

	September 27 (Wed)			September 28 (Thu)			September 29 (Fri)		
Site	1	2	3	1	2	3	1	2	3
8:00	WCRB registration (Site 1) Opening hours of the registration desk Sept. 26 (Tue) 11:00–18:00 Sept. 27 (Wed) 08:00–19:00 Sept. 28 (Thu) 08:00–19:00 Sept. 29 (Fri) 08:00–19:00								
9:00				Concurrent session 4 Ovary and follicles 2	Concurrent session 5 Testis and spermatozoa 2	Concurrent session 6 Uterus, implantation and placentas 2	Concurrent session 10 Reproductive technology and stem cells 2	Concurrent session 11 Fertilization and early embryos 2	Concurrent session 12 Reproductive endocrinology 2
10:00				Coffee / Poster viewing (Exhibition Hall)			Coffee / Poster viewing (Exhibition Hall)		
11:00				Plenary lecture 3 Prof. Moira K. O'Bryan [SRB] (Site 1)			Plenary lecture 5 Prof. Jae Yong Han [KSAR] (Site 1)		
12:00	Opening ceremony (Site 1)				Luncheon seminar Supported by Zoetis Japan	Young scientists session 1 (*)		Young scientists session 2 (*)	Young scientists session 3 (*)
13:00	Plenary lecture 1 Prof. Takashi Miyano [SRD] (Site 1)			Posters 1 [Odd numbers] (Exhibition Hall) *Coffee will be provided*			Posters 2 [Even numbers] (Exhibition Hall) *Coffee will be provided*		
14:00	Coffee (Exhibition Hall)								
15:00	Concurrent session 1 Ovary and follicles 1	Concurrent session 2 Testis and spermatozoa 1	Concurrent session 3 Uterus, implantation and placentas 1	Concurrent session 7 Reproductive technology and stem cells 1	Concurrent session 8 Fertilization and early embryos 1	Concurrent session 9 Reproductive endocrinology 1	WCRB-JSRE special joint session	Sponsored symposium "Genome Editing in mammals"	
16:00									
17:00	Plenary lecture 2 Prof. Tom P. Fleming [SRF] (Site 1)			Plenary lecture 4 Prof. Heng-yu Fan [CSRB] (Site 1)			Plenary lecture 6 Prof. Michael J. Soares [SSR] (Site 1)		
18:00							Closing ceremony (Site 1)		
19:00	Welcome reception (Exhibition Hall)			Meet the professors (*) (Exhibition Hall)			Conference dinner (Laguna Garden Hotel)		
20:00									
21:00									
	Site 1, Theater Hall; Site 2, Conference room A1; Site 3, Conference room A2								

(*), Programs by SRD Young Scientist Committee

Meetings of Related Societies

Sept. 26 (Tue)	9:30 AM – 16:00 PM	SRD (JAPAN) Administrative Meetings
Sept. 30 (Sat)	9:00 AM – 17:00 PM	Japan Society of Reproductive Endocrinology Meeting (Site 2 & 3)
Sept. 30 (Sat)	9:00 AM – 14:00 PM	Japanese Society of Spermatology (Room B5 & B6)

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7. Scientific program

WCRB2017 Scientific Program

September 27 (Wed)

WCRB registration
8:00 AM – 19:00 PM See page 5 for other opening hours of registration desk (Site 1)

Poster set up
9:00 AM – 14:00 PM All posters must be set up by the noon of September 28 (Thu) (Exhibition Hall)

Opening ceremony
12:00 PM – 12:30 PM (Site 1)

Plenary lecture 1
12:30 PM – 13:30 PM (Site 1)
Chair : Kei-ichiro Maeda (President of SRD, The University of Tokyo, Japan)

Takashi Miyano (Kobe University, Japan)
In vitro growth of oocytes: from mice to domestic animals (*Plenary 1*)

Concurrent sessions 1-3
14:00 PM – 16:30 PM

	Concurrent session 1 (Site 1)	Concurrent session 2 (Site 2)	Concurrent session 3 (Site 3)
	Ovary and follicles 1	Testis and spermatozoa 1	Uterus, implantation and placentas 1
	Chairs : Aleksandar Rajkovic (University of Pittsburgh, USA) Koji Sugiura (The University of Tokyo, Japan)	Chairs : Jibak Lee (Kobe University, Japan) Kate A.L. Loveland (Monash University, Australia)	Chairs : Shuangbo Kong (Medical College of Xiamen University, China) Hakhyun Ka (Yonsei University, Korea)
14:00	**Mark A. Fenwick** (University of Sheffield, UK) TGFβ as a master regulator of early follicle development (*C-1*)	**Hyuk Song** (Konkuk University, Korea) Spermatogonia Stem cells in Domestic animal (*C-4*)	**Kelle H. Moley** (Washington University in St. Louis, USA) Maternal metabolic disorders, oocyte quality and longterm offspring health (*C-7*)
14:30	**Michael W. Pankhurst** (University of Otago, New Zealand) Normal ovulation, but reduced developing follicle pool in an infertile strain of AMH-overexpressing mouse (*P1-8*)	**Manabu Ozawa** (The University of Tokyo, Japan) The histone demethylase KDM2A regulates differentiation of spermatogonia in mice (*P2-4*)	**Yuki Yamamoto** (Okayama University, Japan) Calcium and chloride ion current responsible for spontaneous contractions of bovine oviduct (*P4-48*)
14:45	**Dulama Richani** (University of New South Wales Australia, Australia) Cyclic AMP modulated-IVM differentially impacts oocyte and cumulus cell metabolism (*P1-72*)	**Hiroki Inoue** (Bioresource Center, RIKEN, Japan) Mouse D1Pas1, a DEAD-box RNA helicase, is required for the completion of first meiotic prophase in male germ cells (*P2-14*)	**Li Nie** (Sichuan University, China) The Role of miR-152 in Early Embryonic Development and Implantation by Down-regulating GLUT3 in Mouse Endometrial Epithelial Cells (*P4-26*)

(Continued on the next page)

	Chairs : You-Qiang Su (Nanjing Medical University, China) Keith T. Jones (University of Southampton, UK)	Chairs : Monika A. Ward (University of Hawaii, USA) Masahito Ikawa (Osaka University, Japan)	Chairs : Yan-Ling Wang (Institute of Zoology, CAS, China) David Simmons (The University of Queensland, Australia)
15:00	**Hisataka Iwata** (Tokyo University of Agriculture, Japan) Granulosa cell number and oocyte growth (*C-2*)	**Jibak Lee** (Kobe University, Japan) Meiotic cohesins during spermatogenesis (*C-5*)	**Shuangbo Kong** (Medical College of Xiamen University, China) Bmi-1 determines uterine progesterone responsiveness via modulating PR ubiquitination in a Polycomb complex independent manner essential for normal embryo implantation (*C-8*)
15:30	**Yuta Matsuno** (The University of Tokyo, Japan) Mouse granulosa cells secrete functional extracellular vesicles in vitro (*P1-62*)	**Elizabeth G. Bromfield** (The University of Newcastle, Australia) The Targeted Disruption of Lipoxygenase Enzymes Prevents Oxidative Stress in the Male Germline (*P2-102*)	**Samson N. Dowland** (The University of Sydney, Australia) Prominin-1 and -2 are uniquely found in flattened membranes in uterine epithelial cells during early pregnancy (*P4-1*)
15:45	**Shyamal K. Roy** (University of Nebraska Medical Center, USA) Estrogen Stimulation of Primordial Follicle Assembly Requires BMP2 Action (*P1-7*)	**Diqi Yang** (Northwest A&F University, China) Inhibition of ER stress alleviates ZEA-induced apoptosis in Leydig cells through modulation of UPR pathway (*P2-90*)	**Lois A. Salamonsen** (Hudson Institute of Medical Research, Australia) New Insights into human endometrial-embryo interaction: secretome and exosomes during implantation (*P4-33*)
16:00	**Aleksandar Rajkovic** (University of Pittsburgh, USA) Oocyte differentiation during embryogenesis is independent of meiosis and driven by interplay of multiple transcriptional regulators (*C-3*)	**Kate A.L. Loveland** (Monash University, Australia) A nucleocytoplasmic transport protein essential for gametogenesis (*C-6*)	**Hakhyun Ka** (Yonsei University, Korea) The role of cytokines during the implantation period at the maternal-conceptus interface in pigs (*C-9*)

Plenary lecture 2

17:00 PM – 18:00 PM (Site 1)

Chair : Tony Michael (Chair of SRF, Queen Mary University of London, UK)

Tom P. Fleming (University of Southampton, UK)

Environmental programming of the early embryo: how mother's nutrition can influence health and disease risk throughout life (*Plenary 2*)

Welcome reception

18:30 PM – 20:30 PM (Exhibition Hall)

September 28 (Thu)

Poster set up

8:00 AM – 12:00 PM All posters must be set up by the noon (Exhibition Hall)

Concurrent sessions 4-6

8:30 AM – 10:30 AM

	Concurrent session 4 (Site 1)	Concurrent session 5 (Site 2)	Concurrent session 6 (Site 3)
	Ovary and follicles 2	Testis and spermatozoa 2	Uterus, implantation and placentas 2
	Chairs : Bruce D. Murphy (Université de Montréal, Canada) Mark A. Fenwick (University of Sheffield, UK)	Chairs : Martin M. Matzuk (Baylor College of Medicine, USA) Hyuk Song (Konkuk University, Korea)	Chairs : Kelle H. Moley (Washington University in St. Louis, USA) Satoshi Tanaka (The University of Tokyo, Japan)
8:30	**Keith T. Jones** (University of Southampton, UK) Arresting oocytes in meiosis I: mechanisms to stop the creation of a bad egg (*C-10*)	**Monika A. Ward** (University of Hawaii, USA) The role of Y chromosome in directing spermatogenesis (*C-12*)	**David Simmons** (The University of Queensland, Australia) Impaired placental development causes embryonic heart defects and midgestational lethality in Ly6e mutant mice (*C-14*)
9:00	**Sugako Ogushi** (University of Oxford, UK) Loss of sister kinetochore co-orientation and peri-centromeric cohesin protection after meiosis I depends on cleavage of REC8 at centromeres (*P1-49*)	**Ying Shen** (Sichuan University, China) Immotile short-tail sperm defect related gene QRICH2 regulates AKAP4 expression during the development of sperm flagellum (*P2-31*)	**Li Tang** (Sichuan University, China) Dicer controls the proliferation and invasion of HTR8 cells and may modulate the intracellular communication between HTR8 cells and HUVECs (*P4-27*)
9:15	**Guangyi Cao** (Nanjing Medical University, China) MARF1 controls oocyte meiotic progression in mice (*P1-48*)	**Hidenobu Okuda** (Monash University, Australia) LRGUK1 is required for manchette function, forming multiprotein complex with intracellular transportation proteins (*P2-28*)	**Koji Hayakawa** (The University of Tokyo, Japan) Nucleosomes of polyploid trophoblast giant cells mostly consist of histone variants and form an unstable chromatin structure (*P4-45*)
9:30	**You-Qiang Su** (Nanjing Medical University, China) Identification of new players in the control of oocyte maturation (*C-11*)	**Masahito Ikawa** (Osaka University, Japan) CRISPR/Cas9 mediated genome editing and its application for the study of reproduction (*C-13*)	**Yan-Ling Wang** (Institute of Zoology, CAS, China) The relevance of placental endocrine dysfunction to preeclampsia (*C-15*)
10:00	**Suzannah A Williams** (University of Oxford, UK) Dissociated adult ovarian somatic cells can reorganise to form follicles (*P1-11*)	**Adam J. Watkins** (Aston University, UK) Paternal diet impacts on adult offspring health through sperm- and seminal fluid-specific mechanisms (*P2-109*)	**Isao Tamura** (Yamaguchi University Graduate School of Medicine, Japan) Importance of WT1 in the regulation of IGFBP1 and PRL in human endometrial stromal cells undergoing decidualization (*P4-2*)
10:15	**Sanghoon Lee** (Seoul National University, Korea) Comparison among resveratrol, melatonin and their combination in improving in vitro maturation of porcine oocytes (*P1-31*)	**Katerina Dvorakova-Hortova** (Charles University and IBT, Czech Republic) Protein-protein interactions in the sperm membrane prior to fusion with the egg (*P2-33*)	**Victor H. Parraguez** (University of Chile, Chile) Hypoxia associated with twin and/or undernourished pregnancies contributes to fetal growth restriction in sheep (*P4-46*)

Plenary lecture 3

11:00 AM – 12:00 PM (Site 1)

Chair : Mark P. Green (Secretary general of SRB, University of Melbourne, Australia)

Moira K. O'Bryan (Monash University, Australia)

Microtubules as the masters of sperm function (*Plenary 3*)

Luncheon seminar / Young scientists' program

12:00 PM – 13:00 PM

Luncheon seminar (Site 2)	Young scientists session 1 (Site 3)
Sponsored by Zoetis Japan Chair : Takeshi Osawa (University of Miyazaki)	Program by SRD Young Scientist Committee Chairs : Kasane Kishi (The University of Tokyo, Japan) Takuya Sasaki (Nagoya University, Japan)
Fernando A. Di Croce (Director, Global Genetics Technical Services, Zoetis Inc.) Usage of genomic information for improvement of fertility and health in dairy cows (*L-1*)	This session offers the opportunity to the awardees of the WCRB 2017 Students Travel Fund to introduce their poster presentation. The awardees (poster no. listed below) will be invited to present their works within 3 minutes. *P1-66, P1-87, P2-9, P2-22, P2-23, P2-92, P2-106, P3-38, P3-58, P3-66, P4-35, P6-114*

Poster session 1 (Odd numbers)

13:00 PM – 14:30 PM *Coffee will be provided* (Exhibition Hall)

Concurrent sessions 7-9

14:30 PM – 17:00 PM

	Concurrent session 7 (Site 1)	Concurrent session 8 (Site 2)	Concurrent session 9 (Site 3)
	Reproductive technology and stem cells 1	Fertilization and early embryos 1	Reproductive endocrinology 1
	Chairs : Mark P. Green (University of Melbourne, Australia) Katsuhiko Hayashi (Kyushu University, Japan)	Chairs : Jennifer R. Wood (University of Nebraska - Lincoln, USA) Lei Li (Institute of Zoology, CAS, China)	Chairs : Daniel J. Bernard (McGill University, Canada) Yoshihisa Uenoyama (Nagoya University, Japan)
14:30	**Franchesca D. Houghton** (University of Southamp, UK) Hypoxic regulation of human embryonic stem cells: a metabolic perspective (*C-16*)	**Rebecca Robker** (University of Adelaide, Australia) Obesity, oocyte quality and the legacy of the egg (*C-19*)	**Richard A. Anderson** (University of Edinburgh, UK) The new neuroendocrinology: novel pathways, and their clinical applications (*C-22*)
15:00	**Arata Honda** (University of Miyazaki, Japan) Germ Cells from Induced Pluripotent Stem Cells of an Endangered Species, *Tokudaia Osimensis* (*P6-56*)	**Qinghua Zhang** (Monash University, Australia) Cyclin A2 prevents merotelic attachments and lagging chromosomes specifically in meiosis II (*P3-2*)	**Rukmali Wijayarathna** (Monash University, Australia) Interactions between activins, follistatin, and inhibin in the male reproductive tract (*P5-10*)
15:15	**Lih-Ren Chen** (Livestock Research Institute, Taiwan) Establishment of induced pluripotent stem cell lines from Taiwan black silkie chicken (*P6-24*)	**Jia-Qiao Zhu** (Yangzhou University, China) Lack of coordination between sister chromatid segregation and cytokinesis in the oocyets of B6.YTIR (XY) sex-reversal female mice (*P3-4*)	**Lei Gao** (Northwest A&F University, China) Regulation of Testosterone Production by Circadian Clockwork in Mouse Leydig Cells (*P5-8*)

(Continued on the next page)

	Chairs : Goo Jang (Seoul National University, Korea) Franchesca D. Houghton (University of Southamp, UK)	Chairs : Inchul Choi (Chungnam National University, Korea) Karl Swann (Cardiff University, UK)	Chairs : Kirsty A. Walters (University of New South Wales, Australia) Toshiya Matsuzaki (Tokushima University, Japan)
15:30	**Wei Li** (Institute of Zoology, CAS, China) Generation and application of mammalian haploid and interspecies allodiploid stem cells (*C-17*)	**Lei Li** (Institute of Zoology, CAS, China) Molecular mechanism of the subcortical maternal complex (*C-20*)	**Yoshihisa Uenoyama** (Nagoya University, Japan) Brain mechanism regulating puberty onset in mammals (*C-23*)
16:00	**Yoshiaki Nakamura** (National Institute for Basic Biology, Japan) Understanding the post-transplantation behavior of mouse spermatogenic stem cells (*P6-64*)	**Bo Xiong** (Nanjing Agricultural University, China) A Unique Egg Cortical Granule Localization Motif Is Required for Ovastacin Sequestration to Prevent Premature ZP2 Cleavage and Ensure Female Fertility in Mice (*P3-94*)	**Shiori Minabe** (The University of Tokyo, Japan) Kisspeptin neurons in the arcuate nucleus is a target of estrogen in the developing brain to lead reproductive toxicity in male rats (*P5-34*)
16:15	**Bo Ram Lee** (Seoul National University, Korea) A Unique Epigenetic and Transcriptional Program of Chicken Primordial Germ Cells (*P6-58*)	**Keiji Mochida** (Bioresource Center, RIKEN, Japan) Rapid production of next generations by in vitro fertilization using spermatozoa from prepubertal male mice (*P3-88*)	**Yiliyasi Mayila** (Tokushima University, Japan) Infectious stress in neonatal period delayed the onset of puberty in male and female rats (*P5-32*)
16:30	**Katsuhiko Hayashi** (Kyushu University, Japan) Understanding of PGC-oocyte differentiation using in vitro reconstitution system (*C-18*)	**Jennifer R. Wood** (University of Nebraska – Lincoln, USA) Maternal Obesity, the Gut Microbiota, and Oocyte mRNAs: Potential Impact on the Developing Embryo and Fetus (*C-21*)	**W. W.P.N. Weerakoon** (Osaka Prefecture University, Japan) Comparison of plasma insulin-like growth factor-I, insulin-like peptide 3, testosterone and inhibin concentrations around puberty in Japanese Black beef bulls between normal and abnormal semen (*P5-72*)

Plenary lecture 4

17:30 PM – 18:30 PM (Site 1)

Chair : Qing-Yuan Sun (President of CSRB, Institute of Zoology, CAS, China)

Heng-yu Fan (Zhejiang University, China)

Role of newly discovered oocyte factors in regulating maternal-zygotic transition in mammals

(*Plenary 4*)

Meet the Professors

Program by SRD Young Scientist Committee

19:00 PM – 20:30 PM (Exhibition Hall)

This event provides young researchers/trainees with the special opportunity to talk to professors / scientists of their interest about careers and science during the Conference. The plenary speakers of the Conference are planned to participate in this event. Light meals and drinks will be served.

September 29 (Fri)

Concurrent sessions 10-12

8:30 AM – 10:30 AM

	Concurrent session 10 (Site 1)	Concurrent session 11 (Site 2)	Concurrent session 12 (Site 3)
	Reproductive technology and stem cells 2	Fertilization and early embryos 2	Reproductive endocrinology 2
	Chairs : Wei Li (Institute of Zoology, CAS, China) David N. Wells (AgResearch, New Zealand)	Chairs : Teruko Taketo (McGill University, Canada) Rebecca Robker (University of Adelaide, Australia)	Chairs : Joy Pate (The Pennsylvania State University, USA) Richard A. Anderson (University of Edinburgh, UK)
8:30	**Mark P. Green** (University of Melbourne, Australia) Sorting sperm by microfluidics: A practical solution (*C-24*)	**Karl Swann** (Cardiff University, UK) The mechanism of sperm induced Ca^{2+} oscillations that activate mammalian eggs (*C-26*)	**Daniel J. Bernard** (McGill University, Canada) Beware of dogma: Revisiting the role of activin B in FSH synthesis (*C-28*)
9:00	**Tawny N.A. Scanlan** (UC Davis, USA) Cryopreservation of rainbow trout whole gonads by vitrification to maintain reproductive stem cell potential (*P6-106*)	**John Parrington** (University of Oxford, UK) PLCzeta is the physiological trigger of embryogenesis in mammals, but offspring can be conceived naturally in its absence (*P3-82*)	**Tomasz Schwarz** (Agricultural University of Krakow, Poland) The influence of azaperone treatment at weaning on reproductive function in sows: Ovarian activity and endocrine profiles during the weaning-to-ovulation interval (*P5-42*)
9:15	**Takayuki Hirota** (The Francis Crick Institute, UK) Chromosome elimination as a therapy for infertility (*P6-138*)	**Masatoshi Ooga** (University of Yamanashi, Japan) Disrupted parental asymmetry of chromatin structure in ROSI-derived zygotes (*P3-6*)	**Leila Arbabi** (Monash University, Australia) The effects of gut peptides on reproductive function at the level of the median eminence of hypothalamus (*P5-54*)
9:30	**Goo Jang** (Seoul National University, Korea) Genome engineering technologies in cattle (*C-25*)	**Inchul Choi** (Chungnam National University, Korea) Intercellular Junctions formation during preimplantation development (*C-27*)	**Kirsty A. Walters** (University of New South Wales, Australia) Unravelling the role of androgens in polycystic ovary syndrome (PCOS) (*C-29*)
10:00	**Effrosyni Fatira** (University of South Bohemia in CB, Czech Republic) Somatic cell nuclear transfer in a real endangered species, Sturgeon (*P6-86*)	**Chika Higuchi** (Kindai University, Japan) Proper degradation of a maternal protein during maternal-to-zygotic transition is important for normal development (*P3-12*)	**Aneta Andronowska** (Institute of Animal Reproduction and Food Research Polish Academy of Sciences, Poland) Do exogenous gonadotropins affect factors regulating oviductal functions expressed in the porcine oviductal epithelial cells (POEC)? (*P5-44*)
10:15	**Marta Czernik** (University of Teramo, Italy) Ultrastructural analysis reveals abnormal mitochondria in cloned blastocysts (*P6-84*)	**Young Sun Hwang** (Seoul National University, Korea) The molecular characteristics of avian blastoderm dormancy (*P3-80*)	**Alexander Goikoetxea** (University of Otago, New Zealand) Sex and stress: Is cortisol a mediator of sex change in fish? (*P5-2*)

Plenary lecture 5

11:00 AM – 12:00 PM (Site 1)

Chair : Man-Jong Kang (President of KSAR, Chonnam National University, Korea)

Jae Yong Han (Seoul National University, Korea)

Primordial germ cell as a key modulator for avian genome modification (*Plenary 5*)

WCRB business meeting

12:00 PM – 13:00 PM (TAIYO-ICHIBA)

Young scientists' programs

12:00 PM – 13:00 PM

Young scientists session 2 (Site 2)	Young scientists session 3 (Site 3)
Program by SRD Young Scientist Committee Chairs : Asako Okamoto (Prefectural University of Hiroshima, Japan) Kohei Umezu (Tohoku University, Japan)	Program by SRD Young Scientist Committee Chairs : Orie Hikabe (Kyushu University, Japan) Kohtaro Morita (Kindai University, Japan)
This session offers the opportunity to the awardees of the WCRB 2017 Students Travel Fund to introduce their poster presentation. The awardees (poster no. listed below) will be invited to present their works within 3 minutes. *P1-6, P1-22, P1-60, P1-74, P1-82, P1-86, P1-88, P1-102, P2-6, P2-8, P2-10, P2-50*	This session offers the opportunity to the awardees of the WCRB 2017 Students Travel Fund to introduce their poster presentation. The awardees (poster no. listed below) will be invited to present their works within 3 minutes. *P2-80, P2-104, P3-62, P3-68, P3-106, P4-16, P4-24, P4-36, P4-40, P4-54, P5-6, P5-48*

Poster session 2 (Even numbers)

13:00 PM – 14:30 PM (Exhibition Hall)

Symposia

14:30 PM – 16:30 PM

	WCRB-JSRE Special Joint Session (Site 1)	Sponsored Symposium (Site 2)
	Control of HPG axis to improve the fertility in animals and humans Chairs : Kei-ichiro Maeda (The University of Tokyo, Japan) Norihiro Sugino (Yamaguchi University Yamaguchi School of Medicine, Japan)	Genome editing in mammals: recent technical innovation and advancement in application Sponsored by Recombinetics, Nepa Gene Co., Ltd., BEX Co., Ltd., S Co., Ltd., and MUPEL Ltd. Chair : Hiroshi Nagashima (Meiji University, Japan)
14:30	**Toshiya Matsuzaki** (Tokushima University, Japan) Manipulating hypothalamus using rat models of anovulation and optimizing ovulation induction in human (*J-1*)	Part-1: Technical innovation of genome editing **Sayaka Yashima** Sponsored by S Co. Ltd., and MUPEL Ltd. (Meiji University, Japan) Generation of genome edited pigs by cytoplasmic injection of TALEN or CRISPR/cas9 mRNA into zygotes (*S-1*)
14:50		**Fuminori Tanihara** Sponsored by BEX Co., Ltd. (Tokushima University, Japan) A simple-step generation of genetically modified pigs by genome editing by electroporation of Cas9 protein (GEEP) method (*S-2*)

(Continued on the next page)

15:10	**John S. Davis** (University of Nebraska Medical Center, USA) The Aging Pituitary-Ovary Axis: implications for fertility and the menopause (*J-2*)	**Tomoji Mashimo**	Sponsored by Nepa Gene Co., Ltd.
		(Osaka University, Japan) Highly efficient genome editing in embryos by using the Super Electroporator NEPA21 (*S-3*)	
15:35		Part-2: Advancement in application of genome editing	
		Takuro Horii (Gunma University, Japan) Targeted manipulation of epigenome using CRISPR/Cas9 (*S-4*)	
15:50	**Joy Pate** (The Pennsylvania State University, USA) Cells and networks that facilitate luteal survival for pregnancy success (*J-3*)		
16:00		**Scott Fahrenkrug**	Sponsored by Recombinetics, Inc.
		(Recombinetics, Inc ., USA) Subverting porcine genetics and tissue ontogeny for regenerative medicine (*S-5*)	

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Plenary lecture 6
17:00 PM – 18:00 PM (Site 1)
Chair : John S. Davis (President of SSR, University of Nebraska Medical Center, USA)
Michael J. Soares (University of Kansas Medical Center, USA)
Plasticity, invasive trophoblast, and placental health (*Plenary 6*)

Closing ceremony
18:00 PM – 18:15 PM (Site 1)

Conference dinner
19:00 PM – 21:00 PM (Laguna Garden Hotel)

Meetings of Related Domestic Societies

SRD (JAPAN) Administrative Meetings
Tuesday, Sept. 26 9:30 AM – 16:00 PM

Japan Society of Reproductive Endocrinology Meeting
Saturday, Sept. 30 9:00 AM – 17:00 PM (Site 2 & 3)

Japanese Society of Spermatology
Saturday, Sept. 30 9:00 AM – 14:00 PM (Room B5 & B6)

8. Plenary speaker biographies

SRD

Prof. Takashi Miyano
Kobe University, Japan

Prof. Takashi Miyano received his B.A. from Kyoto University, Japan in 1978 and his Ph.D. in Agriculture in 1985 under the supervision of Professor Akira Iritani. After he worked in the Laboratory of Pharmacology, Sumitomo Chemical Co. Japan (1982-1987), he joined the Faculty of Agriculture in Kobe University in 1987 as an Assistant Professor and started studies on mammalian oocyte growth with his first student Yuji Hirao. During 1990-1991, he visited Bob Moor's Laboratory in the Babraham Institute, UK as a JSPS Research Fellow, where he conducted studies on the mammalian oocyte maturation. In 1999, he and his colleagues reported the first production of a calf derived from oocytes grown in culture for 2 weeks, and Dr. Hirao reported the second calf production from in vitro grown oocytes in 2004. Miyano has received the Outstanding Research Award in 2004 for "In Vitro Growth of Mammalian Oocytes" from the Japanese Society of Animal Reproduction (JSAR/SRD). He has served on the SRD as a Director and an Editorial Board Member of the Journal of Reproduction and Development (JRD). He is currently a Professor in the Laboratory of Developmental Biotechnology, Graduate School of Agricultural Science, Kobe University (2002-), having previously served as the Vice Dean (2008-2013) and the Dean (2013-2017) of the Faculty of Agriculture and the Graduate School of Agricultural Science, Kobe University.

SRF

Prof. Tom Fleming
University of Southampton, UK

Prof. Tom Fleming is Professor of Developmental Biology in Biological Sciences at University of Southampton, UK. Tom graduated in Zoology from University of Wales (1972), obtained his PhD from University of London (1979), was a postdoc at University of Keele until 1981 and then Senior Research Associate at Cambridge University before moving to Southampton in 1988. Tom's group are currently interested in how the environment of the preimplantation embryo may influence the developmental programme and long-term potential into adulthood. Tom has been Editor-in-Chief of *Reproduction* over 2008-end 2012, is an editorial board member for several reproductive and development journals, is a Council member and current Treasurer of the Society of Reproduction and Fertility (SRF), and sits on various grant committees and advisory boards. He was awarded an Honorary Fellow of Royal College of Obstetricians and Gynaecologists in 2013 and the Marshall Medal from SRF also in 2013.

SRB

Prof. Moira O'Bryan
Monash Biomedicine Discovery Institute, Monash University, Australia

Prof. Moira O'Bryan graduated from The University of Melbourne in 1994, after which she was awarded an Andrew Mellon Foundation Fellowship to work at The Population Council in New York. She returned to Australian in 1996 as a National Health and Medical Research Council (NHMRC) Peter Doherty Fellowship to work at Monash Institute of Reproduction and Development, Monash University where she established a highly productive lab working on sperm development and the genetics of male infertility. Since this time Moira has received numerous fellowships. She is currently a Professor, NHMRC Principal Research Fellow and Program Lead within the Biomedical Discovery Institute at Monash University. In August 2017, she will take up the position of the Head of the School of Biological Sciences at Monash University. The focus of her lab encompasses: sperm and cilia development and function, genetic causes of human infertility and the implications for 'reproductive' proteins on health broadly.
Moira has received research-based awards from the Australian Academy of Science, The Fertility Society of Australia,

The Endocrine Society of Australia, and the Society for Reproductive Biology the 2006 RCRH Award for Excellence in Reproductive Biology. She was the 2008 American Society of Andrology "Young Andrologist of the Year", the 2015 Anne McLaren Memorial Lecturer (UK) and the 2015 President's Lecturer (Australia).
She is also an active member of several professional societies. She currently holds committee positions within the American Society of Andrology (ASA), the Society for the Study of Reproduction, and the International Society of Andrology. Amongst other roles she is a past President of Women in Andrology for the American Society of Andrology (ASA, 2010-11). She is a member of the Australian Academy of Science "National Committee - Cellular and Developmental Biology".

CSRB

Prof. Heng-yu Fan
Life Sciences Institute, Zhejiang University, China

Prof. Heng-Yu Fan obtained his PhD degree in 2003 from the Institute of Zoology, Chinese Academy of Sciences, where he was mentored by Dr. Qing-Yuan Sun and started his career in reproductive biology. Then he worked as a postdoctoral researcher at the Baylor College of Medicine, USA, under the supervision of Dr. JoAnne Richards. In 2010, he took an position of Principal Investigator at the Life Science Institute, Zhejiang University. His research focuses on biology of oocyte, follicle, and preimplantation embryo development including epigenetic modification, RNA synthesis/decay, and hormonal signaling.

KSAR

Prof. Jae Yong Han
Seoul National University, Korea

Prof. Jae Yong Han received his bachelor and master degrees in Seoul National University, Korea. Since his completion of Ph.D. degree in University of Minnesota in 1991, he appointed as a professor of Department of Agricultural Biotechnology, Seoul National University. His academic specialties are avian transgenesis, genome editing and germ cell biology. He has made outstanding achievements in his researches on production of germline chimera by germ cell manipulation and genome editing. Also his laboratory developed in vitro long-term culture system of chicken primordial germ cells (PGCs) and subsequently established micromanipulation technology for PGCs. More recently, he has reported the efficient transgenic system, and germ cell development in very early embryo. Up to date, he has published more than 200 research articles in the internationally well-known journals. He was awarded 2012 World's Poultry Science Association Award (Research) and the project "Center for Avian Germ Cell Modulation and Cloning"

SSR

Prof. Michael Soares
Kansas University Medical Center, USA

Prof. Michael J. Soares is a University Distinguished Professor at the University of Kansas, with appointments in the Departments of Pathology and Laboratory Medicine and Pediatrics. He also serves as Director of the Institute for Reproductive and Perinatal Research at the University of Kansas. Dr. Soares research program has been supported by the NIH for more than 30 years and produced more than 230 publications. His research program has focused on regulatory processes associated with pregnancy, especially the biology of the establishment of pregnancy and development of the hemochorial placenta. He has directly supervised the training of 8 graduate students and 41 postdoctoral fellows, and mentored 6 junior faculty in his laboratory. Dr. Soares research program has been recognized by the University of Kansas (1989, 2001, 2004, 2007), International Federation of Placental Associations (1995), and Society for the Study of Reproduction (2016) with prestigious research awards.

9. Posters

*Selected for oral presentaions

P1-1	**Single-cell RNA-seq analysis of human germline cells and their niche cells** Fuchou Tang
P1-2	**Exploring the DNA repair mechanisms responsible for safeguarding oocyte quality** Jessica Miriam Stringer and Karla Hutt
P1-3	**Does DAZL regulate germ cell apoptosis via CASP7 in the fetal ovary?** Roseanne Rosario, Alma K M Torokoff and Richard A Anderson
P1-4	**Uncovering the gene-networks regulating oogenesis** Nobuhiko Hamazaki, So Shimamoto, Orie Hikabe, Norio Hamada and Katsuhiko Hayashi
P1-5	**Unique method for producing oocyte that decreased spindle formation factors** Shunsuke Konno, Shunsuke Konno, Masatoshi Ooga, Satoshi Kamimura, Sayaka Wakayama and Teruhiko Wakayama
P1-6	**A novel culture system to recapitulate mouse oogenesis from fetal gonads of 12.5 day post-coitum:toward a large scale production of mature oocytes** Taiki Aritomi, Yayoi Obata and Yuji Hirao
*** P1-7**	**Estrogen Stimulation of Primordial Follicle Assembly Requires BMP2 Action** Shyamal K Roy and Prabuddha Chakraborty
*** P1-8**	**Normal ovulation, but reduced developing follicle pool in an infertile strain of AMH-overexpressing mouse.** Michael W Pankhurst and Nicola J Batchelor
P1-9	**Analysis of follicle development in cultured and transplanted reaggregated ovaries** Belinda K.M. Lo, Sairah Sheikh and Suzannah A. Williams
P1-10	**The regulation of high insulin levels on ovary apoptosis in early pregnant mice** Fei Ru Gao, Chen Zhang, Juan Wu, Lin Jun He, Qing Xue Liu, Mei Xue Chen, Chao Tong, Bin Yu Ding, Qing Yan Geng, Qi Wen Chen and Xiong Ying Wang
*** P1-11**	**Dissociated adult ovarian somatic cells can reorganise to form follicles** Sairah Sheikh, Heidy Kaune, Belinda KM Lo, Anna Deleva and Suzannah A Williams
P1-12	**The role of Janus kinase 1 (JAK1) in primordial follicle activation** Jessie Maree Sutherland, Emily R Frost, Emmalee Ford, Kate A Redgrove and Eileen A McLaughlin
P1-13	**Difference in antral follicle count of daughters and testosterone concentration during pregnancy between heifers and lactating cows** Keisuke Koyama, Yojiro Yanagawa, Takeshi Koyama, Yoshitaka Matsui, Naohito Kusakari and Masahito Sugimoto
P1-14	**Poly-ADP-ribosylation dependent autophagy signaling is involved during the process follicular development and atresia in pig ovarie** Quanwei Wei, Wei Ding, Jun Xing, Siyu Sun, Yueqiao Zhang, Dagan Mao and Fangxiong Shi
P1-15	**Relationships between antral follicle count, developmental competence of oocytes, and steroidogenesis of granulosa cells in cattle** Kenichiro Sakaguchi, Takashi Tanida, Katsuhisa Nagai, Yinghua Yang, Yojiro Yanagawa, Seiji Katagiri and Masashi Nagano

P1-16	**Exogenous growth differentiation factor-9 treatment induces follicle development through downregulation of anti-Mullerian hormone receptor as visualized in the sliced ovarian tissue culture system** Tomohiko Murase, Akira Iwase, Kouji Komatsu, Bayasula Bayasula, Ying Qin, Phuoc Xuan Nguyen, Natsuki Nakanishi, Takashi Nagai, Ken Shimizu, Nao Kato, Satoko Osuka, Sachiko Takikawa, Maki Goto and Fumitaka Kikkawa
P1-17	**Mouse oocyte connects with cumulus cells through the cell-membrane fusion during follicle development** Kouji Komatsu and Satoru Masubuchi
P1-18	**Basal and elevated exposure of primordial follicles to TGFβ1 promotes changes in cell cycle gene expression by alternate signalling mechanisms** Sofia Granados-Aparici and Mark Fenwick
P1-19	**Induction of autophagy in neonatal mice increases the number of primordial follicles** Ren Watanabe and Naoko Kimura
P1-20	**Prenatal husbandry and twin sex affect ovarian follicle populations in pre- and post-pubertal ewe lambs** Cheryl Joy Ashworth, Charis O Hogg, Sarah J Nelson and Kenneth M D Rutherford
P1-21	**Investigating the role of the epidermal growth factor (EGF) receptors (ErbBs) in mouse preantral follicle development** Kacie Thomson, Victoria Atess, Helen Premannandan, Mhairi Laird, Stephen Franks and Kate Hardy
P1-22	**Follicle numbers in the ovary of the juvenile and adult taiep rat.** Luz Patricia Munoz de la Torre, Maria del Carmen Cortes Sanches, Jose Ramon Eguibar Cuenca and Angelica Trujillo Hernandez
P1-23	**BMF and gonadotrophins regulate primordial follicle loss during puberty** Seng Hii Liew, Quynh-Nhu Nguyen, Andreas Strasser, Jock K Findlay and Karla J Hutt
P1-24	**Optimization of three-dimensional culture system for cat preantral follicles** Kaywalee Chatdarong and Grisnarong Wongbandue
P1-25	**Expression of aromatase mRNA and vascularity in FSH and normal saline induced follicular atresia during the final growth of bovine follicular wave** Nattawut Kogram, Vilaivan Khanthusaeng, Surapong Tongrueng, Thunya Bunma and Chainarong Navanukraw
P1-26	**The role of hedgehog signaling in theca cell steroidogenesis and follicle development in the cow** Mhairi Laird, Claire Glister, Warakorn Cheewasopit, Gavin Robertson and Philip G Knight
P1-27	**Oocyte-specific deletion of furin leads to female infertility by causing early secondary follicle arrest in mice** Zhen-Bo Wang, Tie-Gang Meng, Meng-Wen Hu, Xue-Shan Ma, Lin Huang, Qiu-Xia Liang, Yue Yuan, Yi Hou, Hongmei Wang, Heide Schatten and Qing-Yuan Sun
P1-28	**Attempt to discover new functional genes on primordial follicle maintenance.** So Shimamoto, Nobuhiko Hamazaki and Katsuhiko Hayashi
P1-29	**Effects of the hormonal treatment on the locational relationships between the first-wave dominant follicle and the corpus luteum after ovulation in dairy cows.** Motozumi Matsui, Ryotaro Miura, Ken Hazano and Shingo Haneda
P1-30	**TempOral + Poster control of oocyte cyst breakdown and granulosa cell differentiation via inhibition of the estrogen pathway is required for normal follicle assembly** Ren Tanimoto, Kanako Morohaku, Tomohiro Kono, Yuji Hirao and Yayoi Obata

* P1-31	**Comparison among resveratrol, melatonin and their combination in improving in vitro maturation of porcine oocytes** Sanghoon Lee, Jun-Xue Jin, Anukul Taweechaipaisankul, Geon A Kim and Byeong Chun Lee
P1-32	**Melamine negatively affects oocyte development and fertility in mice** Shao-Chen Sun
P1-33	**The association between reproductive age, energy metabolism, chromatin configuration, and gene expression in germinal vesicle-staged sheep oocytes** Chutima Topipat, Paul J McKeegan, Jianping Lu, Esther Collado Fernandez, John D Huntriss and Helen M Picton
P1-34	**Growth factors secreted by human endothelial progenitor cells and adipose stem cells: an in vitro co-culture model for porcine oocyte maturation.** Seok Hee Lee, Hyun Ju Oh, Min Jung Kim, Geon A Kim, Erif Maha Nugraha Setyawan, Yoo Bin Choi and Byeong Chun Lee
P1-35	**Rad51 Is Required for the DNA Damage Response During Porcine Oocyte Maturation** zhe long jin, hai yang wang, tian yi sun, jing guo, xuan jing piao, xiang shun cui and nam hyung kim
P1-36	**Effects of different hormonal treatments on the dynamics of protein disulfide isomerase (PDI) during porcine oocyte maturation.** Konosuke Okada, Satoe Ozawa, Kaoru Hasuo, Rika Ishii, Ayumi Suzuki and Hitoshi Ushijima
P1-37	**Reduced levels of cAMP and cGMP are responsible for the meiotic maturation of porcine small follicle oocytes when denuded at 20 h of culture** Pilar Ferre Pujol, Tomoki Nagahara, Takuya Wakai and Hiroaki Funahashi
P1-38	**Effect of duration for oocyte growth on acquisition of meiotic competence of porcine oocytes derived from early antral follicles** Takayuki Yamochi, Shu Hashimoto, Masaya Yamanaka, Masayasu Inoue, Yoshiharu Nakaoka and Yoshiharu Morimoto
P1-39	**Effect of in vitro maturation medium containing L-carnitine on gene expression during in vitro maturation of mouse embryos** Masayuki Anzai, Rika Azuma, Manami Nishimura, Yoshihiro Noda, Akari Obashi, Rina Ogasawara, Akari Washizu, Chikara Kogiso and Yoshihiko Hosoi
P1-40	**Single-cell transcriptome analysis in XY oocytes of Sry-mutated sex-reversed mice.** Akihiko Sakashita, Chiaki Nishimura and Tomohiro Kono
P1-41	**Stag3 regulates microtubule stability to maintain euploidy during mouse oocyte meiotic maturation** Mianqun Zhang
P1-42	**GDF8 induced mitochondrial membrane potential during porcine oocyte maturation in vitro** Junchul David Yoon and Sang-Hwan Hyun
P1-43	**The Effects of Exogenous Hormones on the Progression of Oocytes through Prophase I of Meiosis** Melissa E Pepling, Sudipta Dutta and Deion M Burks
P1-44	**Natriuretic peptide receptor 2 (NPR2) localized in bovine oocyte membranes underlies a unique mechanism for C-type natriuretic peptide (CNP)-induced meiotic arrest** Guangyin Xi, Jianhui Tian and Lei An
P1-45	**Bovine oocytes grow in vitro in oocyte-cumulus cell complexes collected from early antral follicles** Rie Yamada and Takashi Miyano

P1-46	**N -acetyl-L-cysteine promotes maturational competence of pig oocytes during in vitro growth culture** Riki Kawamoto and Takashi Miyano
P1-47	**Mineralocorticoid modulates bovine oocyte nuclear maturation through mineralocorticoid receptor** Masafumi Tetsuka and Ami Kashima
*** P1-48**	**MARF1 controls oocyte meiotic progression in mice** Guangyi Cao, Xiaoyun Zhang, Hong Yin, Mingzhe Li, Lanying Shi and You-Qiang Su
*** P1-49**	**Loss of sister kinetochore co-orientation and peri-centromeric cohesin protection after meiosis I depends on cleavage of REC8 at centromeres** Sugako Ogushi, Ahmed Rattani, Jonathan Godwin, Jean Metson, Lothar Schermelleh and Kim Nasmyth
P1-51	**FMNL1-mDia1-Profilin1 regulates cytoskeleton dynamics during mouse oocyte meiosis** Yu Zhang
P1-52	**Daam1 regulates fascin for actin assembly during mouse oocyte meiosis** Yujie Lu
P1-53	**Plk1 is essential for cortical polarity through actin cap establishment in meiosis I** Wai Shan Yuen, Qing-Hua Zhang, Deepak Adhikari, Guillaume Halet and John Carroll
P1-54	**HDAC8 functions in spindle assembly during mouse oocyte meiosis.** kemei zhang, Kemei Zhang, Yajuan Lu, Chaohua Jiang, Wei Liu, Jing Shu, Xueqin Chen, Yingjiao Shi, Ensheng Wang, Li Wang, Qinbo Hu, Yibo Dai and Bo Xiong
P1-55	**Smc1β is required for activation of SAC during mouse oocyte meiosis** Yilong Miao
P1-56	**Effect of PDE inhibitors on growth and maturational competence of partially meiotic-competent bovine oocytes in vitro** Md Hasanur Alam and Takashi Miyano
P1-57	**Intersectin2 controls actin dynamics and meiotic division in mouse oocytes through Cdc42 pathway** Qiang Wang
P1-58	**Attempts to establish a live imaging system for early mouse oocyte differentiation** Yohei Nishimura, Go Nagamatsu, Hiroshi Kimura, Hiroko Nakamura, Mitsuru Komeya, Hiroyuki Yamanaka, Takehiko Ogawa and Katsuhiko Hayashi
P1-59	**RNA-associated protein LSM14 controls oocyte meiotic maturation through regulating mRNA pools** Ying-Chun Ouyang, Teng Zhang, Yuanyuan Li, Hui Li, Xue-Shan Ma, Yi Hou, Heide Schatten and Qing-Yuan Sun
P1-60	**TGF-beta and Cyclic AMP Regulation of Androgen-specific Genes in Primary Bovine Thecal Cells** NICOLE ANNE BASTIAN, KATJA HUMMITZSCH, NICHOLAS HATZIRODOS, WENDY M. BONNER, HELEN F. IRVING-RODGERS and RAYMOND J. RODGERS
P1-61	**Effect of fibroblast growth factors on theca cell function, health and immediate-early response gene expression** Christopher A Price, Peng Han and Hilda Guerrero-Netro
*** P1-62**	**Mouse granulosa cells secrete functional extracellular vesicles in vitro.** Yuta Matsuno, Wataru Fujii, Kunihiko Naito and Koji Sugiura

P1-63	**Kisspeptin promotes apoptosis and progesterone secretion of bovine ovarian granulosa cells** Hongyu Liu, Zhiyu Yuan, Yunyi Dongyang, Jun Wang and Wenfa Lu
P1-64	**Possibility of transdifferentiating mouse granulosa cells into Sertoli-like cells in vitro** Haruka Ito, Chihiro Emori, Wataru Fujii, Kunihiko Naito and Koji Sugiura
P1-65	**Epigenetic regulation of gonadotropin receptor expression in human granulosa cells** Ken Shimizu, Akira Iwase, Nguyen Xuan Phuoc, Ganieva Umida, Qin Ying, Bayasula Bayasula, Natsuki Nakanishi, Takashi Nagai, Yukiyo Kasahara, Tomohiko Murase, Nao Kato, Chiharu Ishida, Satoko Osuka, Tomoko Nakamura, Sachiko Takikawa, Maki Goto and Fumitaka Kikkawa
P1-66	**Telomere lengths in oocytes and granulosa cells derived from aged cows** Airi Kin, Kazuki Kansaku, Yumie Ueno, Koumei Shirasuna, Takehito Kuwayama and Hisataka Iwata
P1-67	**Effects of NRF-1 on steroidogenesis and cellular apoptosis in goat luteinized granulosa cells in vitro** Guomin Zhang, Mingtian Deng, Yanli Zhang, Yongjie Wan, Haitao Nie, Ziyu Wang, Yixuan Fan, Zhihai Lei and Feng Wang
P1-68	**Effect of hypoxia on angiogenesis and progesterone production in bovine luteinising follicular cells in vitro.** Chinwe U Nwachukwu, Kathryn J Woad and Robert S Robinson
P1-69	**TASK-3 expression is up-regulated by 17β-estradiol in bovine granulosa cells** Dawon Kang, Chang-Woon Kim, Eun-Jin Kim, Ji Hyeon Ryu, Marie Merci Nyiramana, Adrian S. Siregar, Changyong Choe, IL-Keun Kong, Dong-Keun Lee, Seong-Geun Hong and Jaehee Han
P1-70	**Effects of low oxygen condition on expressions of metalloproteinases, tissue inhibitor of metalloproteinases and the production of progesterone in bovine luteinizing granulosa cells** FADHILLAH , Yuki Yamamoto, Kiyoshi Okuda and Koji Kimura
P1-71	**FHL2 formed an autocrine loop with EGF/EGFR signaling pathway to regulate ovarian granulosa cell growth** Guohua Hua and Chen Wang
*** P1-72**	**Cyclic AMP modulated-IVM differentially impacts oocyte and cumulus cell metabolism** Dulama Richani, Sonia Bustamante, Cathy F Lavea, Raji Kanakkaparambil1, Nady Braidy, David J Agapiou, Michael J Bertoldo and Robert B Gilchrist
P1-73	**Transcriptomic signature of the follicular somatic compartment surrounding an oocyte with high developmental competence** Satoshi Sugimura, Norio Kobayashi, Hiroaki Okae, Tadayuki Yamanouchi, Hideo Matsuda, Takumi Kojima, Akira Yajima, Yutaka Hashiyada, Masahiro Kaneda, Kan Sato, Kei Imai, Kentaro Tanemura, Takahiro Arima and Robert B Gilchrist
P1-74	**Mechanism of palmitic acid induced deterioration of in vitro development of porcine oocyte-granulosa cells complexes** Hidenori Shibahara, Nobuhiko Itami, Koumei Shirasuna, Takehito Kuwayama and Hisataka Iwata
P1-75	**Exosome-free follicular fluid has differential ability to support granulosa cell and oocyte development** Yasuhisa Munakata, Shun Takeo, Koumei Shirasuna, Takehito Kuwayama and Hisataka Iwata
P1-76	**Effects of IGF-1 on progesterone production in cumulus cells during in vitro maturation of canine oocyte cumulus complexes.** Akane Sato, Sora Isoyama, Borjigin Sarentongla, Kazuko Ogata, Mio Yamaguchi, Asuka Hara, Khurchabiling Atchalalt, Naoko Sugane, Mayumi Hasegawa, Rika Fukumori and Yoshikazu Nagao

P1-77	**Neurotensin (NTS) induces sustainable activation of ERK1/2 via inductions of EGF-like factor and EGF receptor during ovulation in mice.** Asako Okamoto, Masayuki Shimada and Yasuhisa Yamashita
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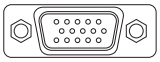
10. Presentation information

For speakers

1) The presentation file must be given on a portable USB stick or a CD-R in Microsoft PowerPoint format to the PC data desk (Theater Hall) at least **1 hour before your session starts** (ideally, on the day before the session).

Please name your file : "Program No_presenter name" (e.g.: P7-20_James Brown).
Presentation data loaded on the provided computers will be completely deleted by the secretariat after your presentation.

If you have a video file embedded in your presentation, we recommend using your own PC. Please bring your PC to the PC data desk with an AC adaptor and a video cable converter (see below*). After registration at the desk, you will be asked to bring your PC to the presentation venue.
*Please ensure that your computer is equipped with the monitor connector of mini D-sub 15 pins. If your computer does not have this connection, please bring an appropriate converter with you.

D-sub 15 pins 

The following operation systems are acceptable.
Windows 7
PPT: 2007, 2010 and 2013

Mac OS X El Capitan
PPT: PowerPoint:mac2011

The opening hours of the PC data desk are as follows:

Sept. 27th (Wed)	09:00–18:00
Sept. 28th (Thu)	07:30–18:00
Sept. 29th (Fri)	07:30–14:30

2) Presentation time:

Plenary lectures	40 min talk and 10 min discussion
Invited lectures at the Concurrent Sessions	25 min talk and 4 min discussion
Selected lectures at the Concurrent Sessions	12 min talk and 2 min discussion

The next speakers are requested to be seated in a chair labeled "Next Speaker," during the presentation in prior to your own.

Poster sessions

1) Venue
Posters will be on display in the Exhibition Hall and will be available to view for the duration of the conference. The poster numbers will appear on the poster boards.

2) Poster discussion
Presenting authors are required to stand alongside their poster during their poster session:

Sept. 28 (Thu)	13:00–14:30	Poster Session 1 (odd numbers)
Sept. 29 (Fri)	13:00–14:30	Poster Session 2 (even numbers)

3) Poster size
Please ensure that your poster does not exceed A0 size (841 mm wide × 1189 mm high, portrait orientation). Posters should include the title of the abstract and the name(s) and affiliation(s) of the author(s). Posters can be mounted with push pins provided in the poster session room.

4) Schedule for display & mounting/removing
All posters must be mounted during 9:00-14:00 on Sept. 27 (Wed) or during 8:00-12:00 on Sept. 28 (Thu) and removed by 15:00 on Sept. 29 (Fri). Posters still in place at 17:00 on Sept. 29 (Fri) will be discarded.

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11. Social program

Welcome reception

Free drinks and food. All are welcome to attend.
Exhibition Hall, Convention Center
Sept. 27 (Wed) 18:30–20:30
Dress code: Casual

Conference dinner

This is an excellent occasion to communicate with participants and speakers while enjoying a hotel meal.
Outdoor poolside, Laguna Garden Hotel (or Large Banquet Hall, Laguna Garden Hotel, in case of bad weather)
Sept. 29 (Fri) 19:00–21:00
Dress code: Casual

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12. Facilities information

Internet access

Wi-Fi Internet access will be available free of charge to all participants.

Medical services

Please contact the WCRB2017 registration desk in case of an incident. If it is an emergency, please call 119 (Japanese only) and inform the WCRB staff at the registration desk.

Barrier-free facilities

Barrier-free facilities, including accessible elevators and toilets for disabled people with special needs, are available in the Convention Center area. Please ask the WCRB2017 registration desk, if necessary.

Evacuation routes

In case of fire or other accidents, please follow the evacuation route signs (green sign), which you will find at every hall and passage.

Cloak

A cloakroom is available at a space next to the conference Room A1. Opening hours are as follows:

Sept. 26 (Tue)	08:00-17:30
Sept. 27 (Wed)	08:30-20:30
Sept. 28 (Thu)	08:30-21:00
Sept. 29 (Fri)	08:30-19:00

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13. Further information

Certificates of attendance

Certificates of attendance can be emailed to participants after the conference on request.

Photography and video

Participants are requested not to record any presentations by photography or video without prior permission from the speakers.

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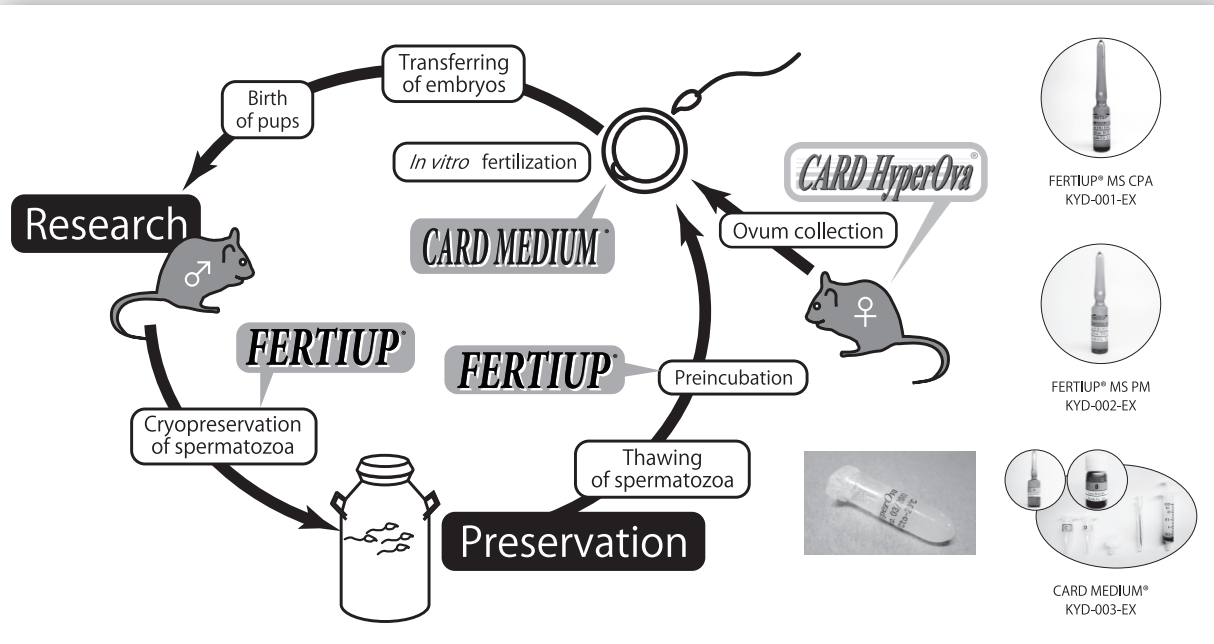

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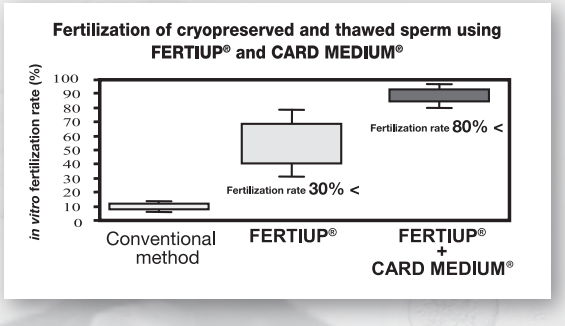

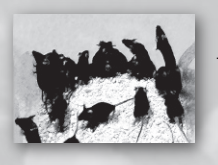

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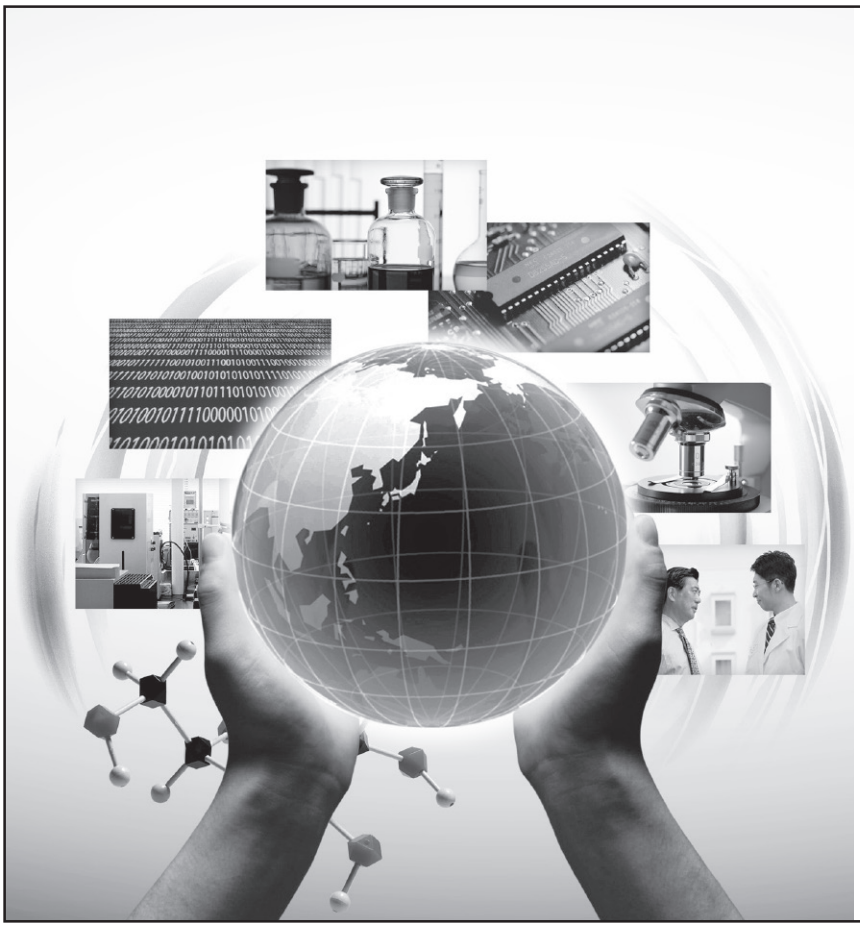

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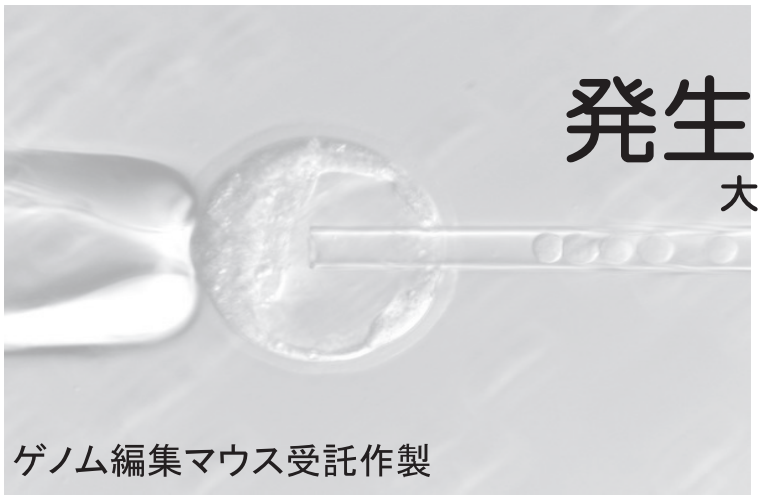

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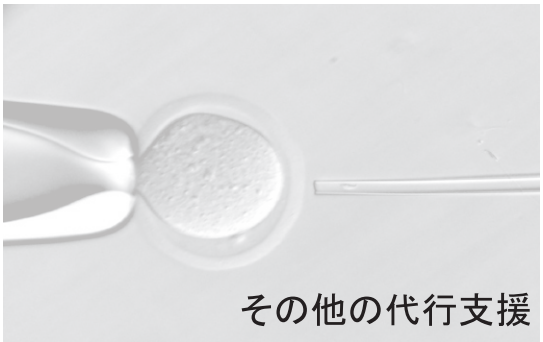

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