

WCRB2017 Scientific Program

September 27 (Wed)

WCRB registration

10:00 AM –

(Site 1)

Poster set up

12:00 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) TGF β 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)

	<p>Chairs : You-Qiang Su (Nanjing Medical University, China) Keith T. Jones (University of Southampton, UK)</p>	<p>Chairs : Monika A. Ward (University of Hawaii, USA) Masahito Ikawa (Osaka University, Japan)</p>	<p>Chairs : Yan-Ling Wang (Institute of Zoology, CAS, China) David Simmons (The University of Queensland, Australia)</p>
15:00	<p>Hisataka Iwata (Tokyo University of Agriculture, Japan) Granulosa cell number and oocyte growth (C-2)</p>	<p>Jibak Lee (Kobe University, Japan) Meiotic cohesins during spermatogenesis (C-5)</p>	<p>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)</p>
15:30	<p>Yuta Matsuno (The University of Tokyo, Japan) Mouse granulosa cells secrete functional extracellular vesicles in vitro (P1-62)</p>	<p>Elizabeth G. Bromfield (The University of Newcastle, Australia) The Targeted Disruption of Lipoxygenase Enzymes Prevents Oxidative Stress in the Male Germline (P2-102)</p>	<p>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)</p>
15:45	<p>Shyamal K. Roy (University of Nebraska Medical Center, USA) Estrogen Stimulation of Primordial Follicle Assembly Requires BMP2 Action (P1-7)</p>	<p>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)</p>	<p>Lois A. Salamonsen (Hudson Institute of Medical Research, Australia) New Insights into human endometrial-embryo interaction: secretome and exosomes during implantation (P4-33)</p>
16:00	<p>Aleksandar Rajkovic (University of Pittsburgh, USA) Oocyte differentiation during embryogenesis is independent of meiosis and driven by interplay of multiple transcriptional regulators (C-3)</p>	<p>Kate A.L. Loveland (Monash University, Australia) A nucleocytoplasmic transport protein essential for gametogenesis (C-6)</p>	<p>Hakhyun Ka (Yonsei University, Korea) The role of cytokines during the implantation period at the maternal-conceptus interface in pigs (C-9)</p>

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 – 20:00 PM

(Exhibition Hall)

September 28 (Thu)

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) 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	Zhe Wei (The University of Queensland, Australia) A new mode of Nampt-dependent metabolic control involving APC-Cdc20 and asymmetric division in mouse oocytes (P1- 50)	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 Inc. Chair : Takeshi Osawa (University of Miyazaki)	Program by SRD Young Scientist Committee Chairs : Kasane Kishi (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 (<i>L-1</i>)	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. <i>P1-66, P1-87, P2-106, P2-9, P2-22, P2-23, P2-92, P3-38, P3-58, P3-66, P4-35, P6-114</i>

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

(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 (C23)
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)	Sarah Kimmins (McGill University, Canada) Environmental influences on the sperm epigenome: implications for development and disease (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 (K 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*)

Young scientists' programs

12:00 PM – 13:00 PM

Young Scientists Session 2 (Site 2)	Young Scientists Session 3 (Site 3)
<p>Program by SRD Young Scientist Committee</p> <p>Chairs :</p> <p>Asako Okamoto (Prefectural University of Hiroshima, Japan)</p> <p>Kohei Umezumi (Tohoku University, Japan)</p>	<p>Program by SRD Young Scientist Committee</p> <p>Chairs :</p> <p>Orie Hikabe (Kyushu University, Japan)</p> <p>Kohtaro Morita (Kindai University, Japan)</p>
<p>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.</p> <p><i>P1-6, P1-22, P1-60, P1-74, P1-82, P1-86, P1-88, P1-102, P2-6, P2-8, P2-10, P2-50</i></p>	<p>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.</p> <p><i>P2-80, P2-104, P3-62, P3-68, P3-106, P4-16, P4-24, P4-36, P4-40, P4-54, P5-6, P5-48</i></p>

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

(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
15:50	Joy Pate (The Pennsylvania State University, USA) Cells and networks that facilitate luteal survival for pregnancy success (J-3)	Takuro Horii (Gunma University, Japan) Targeted manipulation of epigenome using CRISPR/Cas9 (S-4)
16:00		Scott Fahrenkrug Sponsored by Recombinetics, Inc. (Recombinetics, Inc., USA) Cells and networks that facilitate luteal survival for pregnancy success (S-5)



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)