

**14th Congress of the International Society for Immunology of Reproduction/
The 34th Annual Meeting of the Japanese Society for Immunology of Reproduction**

Date

November 13 (Wed) – 16 (Sat), 2019

Venue

Nara Kasugano International Forum –I·RA·KA–
101, Kasugano-cho, Nara-shi, Nara 630-8212, Japan

Day 1: Scientific program

Day 1 14:00-15:00, Nov. 13 (Wed) / Room 1

• **Opening Ceremony**

Opening remarks:

- Shigeru Saito
Congress chair of 14th Congress of the International Society for Immunology of Reproduction (University of Toyama, Japan)
- Hiroshi Kobayashi
Congress chair of The 34th Annual Meeting of the Japanese Society for Immunology of Reproduction (Nara Medical University, Japan)

Day 1 15:00-15:30, Nov. 13 (Wed) / Room 1

• **Professor Koyama Memorial Lecture**

Chairs: Satish K. Gupta (India), Charles R. Wira (USA), Tatsuo Yamamoto (Japan)

15:00-15:10 ***Many precious memories of Koji with his family***

Shinsuke Koyama (Osaka Rosai Hospital, Japan)

15:10-15:20 ***The Study of Anti-Zona Pellucida Antibody***

Akiko Hasegawa (Hyogo College of Medicine, Japan)

15:20-15:30 ***His research on anti-sperm antibody***

Hiroaki Shibahara (Hyogo College of Medicine, Japan)

【Day 1】 15:30-16:30, Nov. 13 (Wed) / Room 1

- **Special Lecture**

Chair: Hiroaki Shibahara (Japan)

Applying novel techniques to reproductive immunology; imaging, cellular movement, and gene and protein expression at single cell level

Michio Tomura (Osaka Ohtani University, Japan)

【Day 1】 16:40-17:40, Nov. 13 (Wed) / Room 1

- **Opening Lecture**

Chair: Shigeru Saito (Japan)

Control of immune responses by regulatory T cells

Shimon Sakaguchi (Osaka University, Japan)

【Day 1】 18:00-20:00, Nov. 13 (Wed) / Reception Hall 2 (annex building)

- **Welcome Reception**

Day 2: Scientific program

【Day 2】 AM 8:00-10:00, Nov. 14 (Thu) / Room 1

- **Symposium 1: New Immunological Approaches for Diagnosis and Therapy of Pregnancy Complications and Infertility**

Chairs: Meirong Du (China), Claire Roberts (Australia), Toshiyuki Takeshita (Japan)

8:00-8:30 ***Association between biomarkers of the fetal immune system with birth weight and preterm delivery in the prospective PRINCE birth cohort***

Anke Diemert (University of Hamburg, Germany)

8:30-9:00 ***Tim-3-expressing NK cell is the mother's greatest gift to the baby***

Meirong Du (Fudan University Shanghai Medical College, China)

9:00-9:30 ***Role of innate immune cells in murine and human reproduction***

【ISIR 2019/34th JSIR】 Program

Yasuyuki Negishi (Nippon Medical School, Japan)
9:30-10:00 ***Risk prediction for pregnancy complications: Can immunology help?***
Claire Roberts (University of Adelaide, Australia)

Day 2 AM 8:00-10:00, Nov. 14 (Thu) / Room 2

- **Symposium 2: Preeclampsia**

Chairs: Alison Care (Australia), Guillermina Girardi (UK), Tatsuo Yamamoto (Japan)

8:00-8:30 ***Regulatory T cells and maternal vascular adaptations to pregnancy***
Alison Care (University of Adelaide, Australia)
8:30-9:00 ***Placental adenosine signaling in the pathogenesis of preeclampsia***
Takayuki Iriyama (The University of Tokyo, Japan)
9:00-9:30 ***Pravastatin for prevention of preeclampsia: from mice to human***
Keiichi Kumasawa (The University of Tokyo, Japan)
9:30-10:00 ***Preeclampsia and Immunology: New model mouse clarifies the immunological pathogenesis***
Keiichi Matsubara (Ehime University, Japan)

Day 2 AM 8:00-9:00, Nov. 14 (Thu) / Room 3

- **Symposium 3: Male Infertility: Includes Contraception and Vaccines**

Chairs: Maciej Kurpicz (Poland), Andreas Meinhardt (Germany), Tomohiko Wakayama (Japan)

8:00-8:30 ***Molecular aspects of male infertility; genomic and proteomic analysis for diagnosis and treatment***
Maciej Kurpicz (Polish Academy of Sciences, Poland)
8:30-9:00 ***The immune system of the testis and epididymis: an infectious story***
Andreas Meinhardt (Justus-Liebig-University Giessen, Germany)

Day 2 AM 9:00-10:00, Nov. 14 (Thu) / Room 3

- **Symposium 4: Immunometabolism and its Impact on Reproduction**

Chairs: Petra Arck (Germany), Tomoyuki Fujii (Japan), Sarah Robertson (Australia)

9:00-9:30 ***Obesity Alters Seminal Vesicle Fluid Composition and Signaling Capacity in Mice***

John Schjenken (University of Adelaide, Australia)

9:30-10:00 ***Immune cell metabolism and its functional relevancy in the context of reproduction***

Kristin Thiele (University Medical Center Hamburg-Eppendorf, Germany)

Day 2 AM 10:00-10:45, Nov. 14 (Thu) / Foyer

- **Coffee break**

Day 2 AM 10:45-12:15, Nov. 14 (Thu) / Room 1

- **Symposium 5: Autophagy, Immunity & Pregnancy**

Chairs: Udo R. Markert (Germany), Surendra Sharma (USA), Mancy Tong (USA)

10:45-11:15 ***Disruption of collaboration between autophagy and lysosomes induces preeclampsia: comparative study between trophoblasts-specific Atg7 knockout-mediated poor placentation and human preeclamptic placentas***

Akitoshi Nakashima (University of Toyama, Japan)

11:15-11:45 ***Understanding preeclampsia using Alzheimer's etiology and leveraging it for therapeutic intervention***

Surendra Sharma (Brown University, USA)

11:45-12:15 ***Innate Immune Function at the Maternal-Fetal Interface***

Mancy Tong (Yale School of Medicine, USA)

Day 2 AM 10:45-12:15, Nov 14. (Thu) / Room 2

- **Symposium 6: Gut and Female Genital Tract Microbiome and Adverse Pregnancy Outcomes**

Chairs: Kei Kawana (Japan), TBD

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10:45-11:15	<i>The diet and its effects on the immune system and the possible consequences on feto-maternal tolerance</i> Nicola Gagliani (University Medical Center Hamburg-Eppendorf, Germany)
11:15-11:45	<i>A novel HPV-targeting mucosal immunotherapy for treatment of cervical neoplasia: Phase I/II clinical trials</i> Kei Kawana (Nihon University School of Medicine, Japan)
11:45-12:15	<i>Dysbiosis in vaginal microbiota contributes to impaired antiviral immunity in the genital mucosa</i> Heung Kyu Lee (Korea Advanced Institute of Science and Technology, Korea)

Day 2 12:25-13:25, Nov. 14 (Thu) / Room 3

- **Lunchtime Seminar 1 (Sponsored by UCB Japan Co. Ltd.)**
Chair: Atsuko Murashima (Japan)
Speaker: Shigeru Saito (Japan)

Day 2 13:35-15:05, Nov. 14 (Thu) / Poster Room

- **Poster Session**

Day 2 14:30-16:00, Nov. 14 (Thu) / Room 2

- **ESRI (European Society for Reproductive Immunology) New Investigator Award Competition**
Chairs: Petra Arck (Germany), Julia Szekeres-Bartho (Hungary), Udo Markert (Germany), Marie-Pierre Piccinni (Italy)

14:30-14:45 ***ESRI-1: Apoptosis signal-regulating kinase1 (ASK1) promotes uterine inflammation leading to pathological preterm birth by sensing excessive reactive oxygen species***

Midori Yoshikawa (The University of Tokyo, Japan)

14:45-15:00 ***ESRI-2: Prophylactic vaccination protects mouse sperm quality after Chlamydia muridarum challenge***

Emily R. Bryan (Queensland University of Technology, Australia)

15:00-15:15	ESRI-3: The vertical transfer of maternal immune cells during pregnancy promotes neonatal immunity against viral infections Christopher Urbschat (University Medical Center Hamburg, Germany)
15:15-15:30	ESRI-4: Failure of clonal expansion of decidual regulatory T cells is present in preeclampsia, but not in miscarriage, suggesting that fetal antigen - specific tolerance might be disturbed in preeclampsia Sayaka Tsuda (University of Toyama, Japan)
15:30-15:45	ESRI-5: TCR repertoire analysis of cytotoxic T cells in tumor-infiltrating lymphocytes and peripheral blood lymphocytes in uterine endometrial cancers Kei Tsuda (University of Toyama, Japan)
15:45-16:00	ESRI-6: Altered microRNA expression in granulosa cells between elder and young; women with diminished ovarian reserve Fang Lian (Shandong University of Traditional Chinese Medicine, China)

Day 2 14:15-16:00, Nov. 14 (Thu) / Room 3

- **Oral Session 1**

Chairs: Stefan Gold (Germany), Suchita Nadkarni (UK), Diana M. Morales Prieto (Germany)

14:15-14:30	OS 1-1: Cytokine Profiling in patients with diminished ovarian reserve XUE JIAO (Shandong University, China)
14:30-14:45	OS 1-2: The anti-thyroperoxidase antibody but not TSH is associated with IVF/ICSI outcome Qiaohua He (Rosalind Franklin University of Medicine and Science, USA)
14:45-15:00	OS 1-3: Forkhead box P3 is selectively expressed in human trophoblasts and decreased in recurrent pregnancy loss Xiao-Hui Hu (Huazhong University of Science and Technology, China)

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15:00-15:15	OS 1-4: miR-543 increase the absorption rate of embryos through inhibiting the expression of IL-33 in decidua Yanran Sheng (Fudan University, China)
15:15-15:30	OS 1-5: Immune profile of endometrium in patients with recurrent implantation failures in ART programs Iryna Sudoma (Clinic of Reproductive Medicine NADIYA, Ukraine)
15:30-15:45	OS 1-6: Postmenopausal Cytokine Profiles Suggest a Pro-Inflammatory Bias in Osteoporosis Raj Raghupathy (Kuwait University, Kuwait)
15:45-16:00	OS 1-7: Neutrophil extracellular traps represent a novel mechanism for HIV prevention in the female genital tract Marta Rodriguez-Garcia (Tufts University School of Medicine at Dartmouth, USA)

Day 2 AM 16:00-16:30, Nov. 14 (Thu) / Foyer

- **Coffee break**

Day 2 16:30-19:30, Nov. 14 (Thu) / Room 1

- **Symposium 7: Immunological Tolerance at the Maternal-Fetal Interface and its Consequences for Children's Health**
Chairs: Katsuhiko Naruse (Japan), Shigeru Saito (Japan), Sicco Scherjon (Netherlands)

16:30-17:00	Fetal origin of brain functions: of mediators, mechanisms and mothers Petra Arck (University Medical Centre Hamburg-Eppendorf, Germany)
17:00-17:30	Helper, cytotoxic, and regulatory T cells in the decidua from miscarriage Yasuhiko Ebina (Kobe University, Japan)
17:30-18:00	Prenatal inflammation and newborn development: using the placenta to identify high risk babies Sylvie Girard (Universite de Montreal, Canada)
18:00-18:30	Reproductive benefits of microchimeric cells Jeremy Kinder (Cincinnati Children's Hospital, USA)

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18:30-19:00	<i>Regulatory T cell phenotype in miscarriage and preeclampsia</i>
	Shigeru Saito (University of Toyama, Japan)
19:00-19:30	<i>Metabolic syndrome, macrophages and fetal neurodevelopment</i>
	Sicco Scherjon (University Medical Centre Groningen, Netherlands)

Day 2 16:30-19:30, Nov. 14 (Thu) / Room 2

- **Symposium 8: Infectious Immunity in Pregnant or Non-pregnant Women (Influenza, CMV, HIV, HPV, etc.)**
Chairs: Charles R. Wira (USA), TBD

16:30-17:00	<i>Periodontal diseases and adverse pregnancy outcomes</i>
	Shihoko Aizawa (Nihon University School of Medicine, Japan)
17:00-17:30	<i>Virus infections during pregnancy and consequences for maternal and fetal health</i>
	Gülsah Gabriel (Leibniz Institute for Experimental Virology, Germany)
17:30-18:00	<i>Role of placental-derived IFNbeta in the protection of the fetus and the mother against viral infections</i>
	Gil Mor (Mott Center for Human Development WSU, USA)
18:00-18:30	<i>Immune mechanisms underlying infectious-related female subfertility</i>
	Marighoula Varla - Leftherioti (RSA Clinic “Helena Venizelou” Hospital, Greece)
18:30-19:00	<i>Understanding the Complexities of Mucosal Immune Protection in the Female Reproductive Tract: From Sexually Transmitted Infections to Endometrial Cancer</i>
	Charles R. Wira (Geisel School of Medicine at Dartmouth, USA)
19:00-19:30	<i>Congenital cytomegalovirus infection: advances in diagnosis, prevention and treatment</i>
	Hideto Yamada (Kobe University, Japan)

Day 2 16:30-19:30, Nov. 14 (Thu) / Room 3

- **Symposium 9: Autoimmunity, Endocrine Disorders and Reproduction**

Chairs: Guillermina Girardi (UK), Marie-Pierre Piccinni (Italy), Kenneth Tung (USA)

16:30-17:00	<i>Management of pregnancies complicated by systemic lupus erythematosus and antiphospholipid antibody syndrome</i> Masashi Deguchi (Kobe University, Japan)
17:00-17:30	<i>Of mice and women: how animal models helped in the identification of potential treatments in obstetric antiphospholipid syndrome (OAPS)</i> Guillermina Girardi (King's College London, UK)
17:30-18:00	<i>Mechanisms of pregnancy protection from neuroinflammation in multiple sclerosis and its animal model</i> Stefan Gold (Universitätsklinikum Hamburg-Eppendorf, Germany)
18:00-18:30	<i>Cytokines produced by T cells at fetal maternal interface regulate the progression or regression of autoimmune diseases in pregnancy</i> Marie-Pierre Piccinni (University of Florence, Italy)
18:30-19:00	<i>Extremely high levels of multiple cytokines in the cord blood of neonates born to mothers with systemic autoimmune diseases</i> Naoto Takahashi (The University of Tokyo, Japan)
19:00-19:30	<i>REGULATORY T CELL: TOLERANCE TO NALP5 AND ZP3</i> Kenneth Tung (University of Virginia, USA)

Day 3: Scientific program

Day 3 AM 8:00-10:30, Nov. 15 (Fri) / Room 1

- **Symposium 10: New Immunological Cells at Fetomaternal Interface**
Chairs: Marighoula Varla-Leftherioti (Greece), Tamara Tilburgs (USA), TBD

8:00-8:30	<i>Why do we care about glycans?</i> Sandra Blois (Charité Universitätsmedizin Berlin, Germany)
8:30-9:00	<i>Neutrophils induce proangiogenic T cells with a regulatory phenotype in pregnancy</i> Suchita Nadkarni (British Heart Foundation Research, UK)
9:00-9:30	<i>Decidual M1/M2 macrophages in miscarriages with normal fetal chromosome</i> Shigeki Shimada (Mommy's Clinic Chitose, Japan)

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9:30-10:00 ***Immune checkpoint molecules and early-onset preeclampsia***

Laszlo Szereday (University of Pécs, Hungary)

10:00-10:30 ***The role of decidual T cells in maternal-fetal tolerance and immunity to infection***

Tamara Tilburgs (Harvard University, USA)

Day 3 AM 8:00-10:30, Nov. 15 (Fri) / Room 2

- **Symposium 11: Endometriosis**

Chairs: Erin Greaves (UK), Hisashi Narahara (Japan), Chandrakant Tayade (Canada)

8:00-8:30 ***Endometriosis-associated macrophages: a complex population exhibiting different functions, phenotypes and origins***

Erin Greaves (University of Warwick, UK)

8:30-9:00 ***Functional change via epidermal growth factor receptor in human decidual stromal cells***

Yasushi Kawano (Oita University, Japan)

9:00-9:30 ***Immune dysfunction in endometriosis***

Chandrakant Tayade (Queen's University, Canada)

9:30-10:00 ***The Role of NK cells and Cytokines in Endometriosis***

Suk-Ran Yoon (Korea Institute of Bioscience and Biotechnology, Korea)

10:00-10:30 ***Endometriosis, from where the initial inflammation comes?***

Osamu Yoshino (Kitasato University, Japan)

Day 3 AM 10:30-11:00, Nov. 15 (Fri) / Foyer

- **Coffee break**

Day 3 AM 11:00-12:00, Nov. 15 (Fri) / Room 2

- **Oral Session 2**

Chairs: Sylvie Girard (Canada), Jeremy Kinder (USA), Heung Kyu Lee (Korea)

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11:00-11:15	OS 2-1: Cell cell contact with proinflammatory macrophages enhances the immunotherapeutic effect of mesenchymal stem cells in two abortion models Yanhong Li (Fudan University, China)
11:15-11:30	OS 2-2: CD8+ T cell Cytotoxic Activity is Suppressed in Human Endometrial Endometrioid Adenocarcinoma Mickey V. Patel (Geisel School of Medicine at Dartmouth, USA)
11:30-11:45	OS 2-3: Implantation unfavorable phenotype of endometrial lymphocytes in patients with RIF on PGD tested embryo Boris Donskoi (Ukraine)
11:45-12:00	OS 2-4: Targeting Sirt-1 controls autoimmune premature ovarian failure by promoting Treg stability in mice Xin Liang (University of Chengdu TCM, China)

Day 3 AM 11:00-12:00, Nov. 15 (Fri) / Room 3

- **JSIR (Japan Society for Immunology of Reproduction) Award Session**

Chairs: Keiichi Matsubara (Japan), Mikiya Nakatsuka (Japan), Toshitaka Sugi (Japan)

11:00-11:15	JSIR-1: Maternal erythrocyte ENT1-mediated oxygen delivery is necessary for adequate placental oxygenation and fetal growth Seisuke Sayama (The University of Tokyo, Japan)
11:15-11:30	JSIR-2: Hyper-coagulability in the patients with adenomyosis Kanoko Shoji-Kato (Nihon University School of Medicine, Japan)
11:30-11:45	JSIR-3: miR-675-5p generated from lncRNA H19 accelerates the invasive ability of extravillous trophoblasts Manabu Ogoyama (Nippon Medical School, Japan)
11:45-12:00	JSIR-4: Risk factors and outcomes of recurrent pregnancy loss in Japan Keiko Morita (University of Toyama, Japan)

Day 3 13:00-17:00, Nov. 15 (Fri)

- **Half-day Bus Tour to Horyuji Temple**

Day 3 19:00-21:00, Nov. 15 (Fri) / Nara Hotel

- **Gala Dinner**

Day 4: Scientific program

Day 4 AM 9:00-11:00, Nov. 16 (Sat) / Room 1

- **Symposium 12: *Implantation and Assisted Reproductive Technology***

Chairs: Eva Dimitriadis (Australia), Satish K. Gupta (India), Natalie Ledée (France)

9:00-9:30 ***Non-coding RNA influence human implantation via inflammatory mediators***

Eva Dimitriadis (University of Melbourne, Australia)

9:30-10:00 ***Immunological abnormality and its modification for women with IVF failures***

Atsushi Fukui (Hyogo College of Medicine, Japan)

10:00-10:30 ***MicroRNA during placentation: miR-92a-1-5p regulates invasion and syncytialization of trophoblastic cells***

Satish K. Gupta (National Institute of Immunology Aruna Asaf Ali Marg, India)

10:30-11:00 ***Endometrial immune profiling: An Emerging Paradigm***

Natalie Ledée (Hopital des Bluets, France)

Day 4 AM 9:00-11:00, Nov. 16 (Sat) / Room 2

- **Symposium 13: *Recurrent Pregnancy Loss***

Chairs: Ole B. Christiansen (Denmark), Joanne Kwak-Kim (USA), Sung-Ki Lee (Korea)

9:00-9:30 ***Intravenous immunoglobulin and recurrent miscarriage: finding the best protocol***

Ole B. Christiansen (Aalborg University Hospital, Denmark)

9:30-10:00 ***Characteristics of endometrial immune effectors and gene expression in recurrent pregnancy losses***

Joanne Kwak-Kim (Chicago Medical School, USA)

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10:00-10:30 ***Immunotherapy for women with recurrent pregnancy loss***
Sung-Ki Lee (Konyang University Hospital, Korea)

10:30-11:00 ***Neo-self antibody against β 2-glycoprotein/HLA-DR complex as a risk factor for recurrent pregnancy loss***
Kenji Tanimura (Kobe University, Japan)

Day 4 11:15-12:15, Nov. 16 (Sat) / Room 3

- **Lunchtime Seminar 2 (Sponsored by Japan Blood Products Organization)**
Chair: Shigeru Saito (Japan)
Speaker: Hideto Yamada (Japan)

Day 4 12:30-15:00, Nov. 16 (Sat) / Room 1

- **Symposium 14: Cancer Immunology and Immunotherapy**
Chairs: Kenneth Beaman (USA), Hiroshi Kobayashi (Japan)

12:30-13:00 ***Suppression of anti-tumor function of NK cells in ovarian cancer and strategies for its prevention***
Animesh Barua (Rush University Medical Center, USA)

13:00-13:30 ***Targeting pH regulators in tumor microenvironment for treating ovarian cancer***
Kenneth Beaman (Rosalind Franklin University of Medicine and Science, USA)

13:30-14:00 ***Immune checkpoint inhibition for Gynecologic cancers - Perspectives and Issues -***
Junzo Hamanishi (Kyoto University, Japan)

14:00-14:30 ***Ovarian cancer cells meet macrophages: The role of macrophages in ovarian cancer progression***
Yuko Imamura (Kumamoto University, Japan)

14:30-15:00 ***Myeloid-derived suppressor cells and their role in gynecological malignancies***
Seiji Mabuchi (Nara Medical University, Japan)

Day 4 12:30-15:00, Nov. 16 (Sat) / Room 2

- **Symposium 15: Inflammation and Preterm Birth**

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Chairs: Masashi Deguchi (Japan), Mala Mahendroo (USA), TBD

12:30-13:00	<i>Protective effect of a novel noncompetitive IL-1 receptor-blased ligand in an infection- and inflammation-induced preterm birth as well as in fetal injury and developmental outcomes</i> Mathieu Nadeau-Vallee (Centre Hospitalier Universitaire Ste Justine, Canada)
13:00-13:30	<i>How does the cervical epithelia protect against an ascending infection-mediated preterm birth and what happens when the epithelia does not succeed?</i> Mala Mahendroo (Cecil H. and Ida Green Center for Reproductive Biology Sciences, USA)
13:30-14:00	<i>Regulation of cervical ripening by anti-inflammatory mediators in preterm labor and term delivery</i> Takeshi Nagamatsu (The University of Tokyo, Japan)
14:00-14:30	<i>Role of NLRP3 inflammasome in pregnancy complications</i> Koumei Shirasuna (Tokyo University of Agriculture, Japan)
14:30-15:00	<i>Pathophysiology and novel management strategies for preterm labor patients with intact membranes from viewpoints of intra-amniotic inflammation and/or infection</i> Satoshi Yoneda (University of Toyama, Japan)

Day 4 12:30-15:00, Nov. 16 (Sat) / Room 3

- **Symposium 16: Placental Exosome and Micro-RNAs in Reproduction**
Chairs: Julia Szekeres-Bartho (Hungary), Larry Chamley (New Zealand), Toshihiro Takizawa (Japan)

12:30-13:00	<i>Placental extracellular vesicles and fetomaternal communication</i> Larry Chamley (University of Auckland, New Zealand)
13:00-13:30	<i>Trophoblast-immune cell messaging via extracellular vesicles and microRNA</i> Udo R. Markert (University Hospital Jena, Germany)
13:30-14:00	<i>MicroRNA regulation of Treg cell generation at implantation</i> Sarah A. Robertson (University of Adelaide, Australia)

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14:00-14:30 ***Embryo-derived extracellular vesicles affect the maternal immune response***

Julia Szekeres-Bartho (University of Pécs, Hungary)

14:30-15:00 ***Placenta-associated noncoding RNAs: microRNAs and long noncoding RNAs***

Toshihiro Takizawa (Nippon Medical School, Japan)

Day 4 15:00-15:20, Nov. 16 (Sat) / Room 1

- **Closing Ceremony**