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
- Opening 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
- Special 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

Last update date: 20 August 2019
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 Kurpisz (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 Kurpisz (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)

Last update date: 20 August 2019
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
The diet and its effects on the immune system and the possible consequences on feto-maternal tolerance
Nicola Gagliani (University Medical Center Hamburg-Eppendorf, Germany)

A novel HPV-targeting mucosal immunotherapy for treatment of cervical neoplasia: Phase I/II clinical trials
Kei Kawana (Nihon University School of Medicine, Japan)

Dysbiosis in vaginal microbiota contributes to impaired antiviral immunity in the genital mucosa
Heung Kyu Lee (Korea Advanced Institute of Science and Technology, Korea)

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

Poster Session

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)

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)

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)

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**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)
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  **Decidual M1/M2 macrophages in miscarriages with normal fetal chromosome**  
Shigeki Shimada (Mommy’s Clinic Chitose, Japan)

18:00-18:30  **Reproductive benefits of microchimeric cells**  
Jeremy Kinder (Cincinnati Children’s Hospital, USA)
18:30-19:00  Regulatory T cell phenotype in miscarriage and preeclampsia  
Shigeru Saito (University of Toyama, Japan)

19:00-19:30  Metabolic syndrome, macrophages and fetal neurodevelopment  
Sicco Scherjon (University Medical Centre Groningen, Netherlands)

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

- 16:30-17:00  Periodontal diseases and adverse pregnancy outcomes  
Shihoko Aizawa (Nihon University School of Medicine, Japan)

- 17:00-17:30  Virus infections during pregnancy and consequences for maternal and fetal health  
Gülsah Gabriel (Leibniz Institute for Experimental Virology, Germany)

- 17:30-18:00  Role of placental-derived IFNbeta in the protection of the fetus and the mother against viral infections  
Gil Mor (Mott Center for Human Development WSU, USA)

- 18:00-18:30  Immune mechanisms underlying infectious-related female subfertility  
Marighoula Varla-Leftherioti (RSA Clinic “Helena Venizelou” Hospital, Greece)

- 18:30-19:00  Understanding the Complexities of Mucosal Immune Protection in the Female Reproductive Tract: From Sexually Transmitted Infections to Endometrial Cancer  
Charles R. Wira (Geisel School of Medicine at Dartmouth, USA)

- 19:00-19:30  Congenital cytomegalovirus infection: advances in diagnosis, prevention and treatment  
Hideto Yamada (Kobe University, Japan)

**Symposium 9: Autoimmunity, Endocrine Disorders and Reproduction**
Chairs: Guillermina Girardi (UK), Marie-Pierre Piccinni (Italy), Kenneth Tung (USA)

16:30-17:00  
**Management of pregnancies complicated by systemic lupus erythematosus and antiphospholipid antibody syndrome**
Masashi Deguchi (Kobe University, Japan)

17:00-17:30  
**Of mice and women: how animal models helped in the identification of potential treatments in obstetric antiphospholipid syndrome (OAPS)**
Guillermina Girardi (King’s College London, UK)

17:30-18:00  
**Mechanisms of pregnancy protection from neuroinflammation in multiple sclerosis and its animal model**
Stefan Gold (Universitätsklinikum Hamburg-Eppendorf, Germany)

18:00-18:30  
**Cytokines produced by T cells at fetal maternal interface regulate the progression or regression of autoimmune diseases in pregnancy**
Marie-Pierre Piccinni (University of Florence, Italy)

18:30-19:00  
**Extremely high levels of multiple cytokines in the cord blood of neonates born to mothers with systemic autoimmune diseases**
Naoto Takahashi (The University of Tokyo, Japan)

19:00-19:30  
**REGULATORY T CELL: TOLERANCE TO NALP5 AND ZP3**
Kenneth Tung (University of Virginia, USA)

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**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  
  **Why do we care about glycans?**
  Sandra Blois (Charité Universitätsmedizin Berlin, Germany)

  8:30-9:00  
  **Neutrophils induce proangiogenic T cells with a regulatory phenotype in pregnancy**
  Suchita Nadkarni (British Heart Foundation Research, UK)

  9:00-9:30  
  **Prenatal inflammation and newborn development: using the placenta to identify high risk babies**
  Sylvie Girard (Universite de Montreal, Canada)

Last update date: 20 August 2019
9:30-10:00  *Immune checkpoint molecules and early-onset preeclampsia*
Laszlo Szeredey (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)

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**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 Research Institute of Bioscience and Biotechnology, Korea)

  10:00-10:30  *Endometriosis, from where the initial inflammation comes?*
Osamu Yoshino (Kitasato University, Japan)

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

- **Coffee break**

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**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)
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)

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**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)

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**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)

Last update date: 20 August 2019
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 β2-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 Univesity 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**
Chairs: Masashi Deguchi (Japan), Mala Mahendroo (USA), Mathieu Nadeau-Vallee (Canada)

12:30-13:00  *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*
Mathieu Nadeau-Vallee (Centre Hospitalier Universitaire Ste Justine, Canada)

13:00-13:30  *How does the cervical epithelia protect against an ascending infection-mediated preterm birth and what happens when the epithelia does not succeed?*
Mala Mahendroo (Cecil H. and Ida Green Center for Reproductive Biology Sciences, USA)

13:30-14:00  *Regulation of cervical ripening by anti-inflammatory mediators in preterm labor and term delivery*
Takeshi Nagamatsu (The University of Tokyo, Japan)

14:00-14:30  *Role of NLRP3 inflammasome in pregnancy complications*
Koumei Shirasuna (Tokyo University of Agriculture, Japan)

14:30-15:00  *Pathophysiology and novel management strategies for preterm labor patients with intact membranes from viewpoints of intra-amniotic inflammation and/or infection*
Satoshi Yoneda (University of Toyama, Japan)

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**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  *Placental extracellular vesicles and fetomaternal communication*
  Larry Chamley (University of Auckland, New Zealand)

  13:00-13:30  *Trophoblast-immune cell messaging via extracellular vesicles and microRNA*
  Udo R. Markert (University Hospital Jena, Germany)

  13:30-14:00  *MicroRNA regulation of Treg cell generation at implantation*
  Sarah A. Robertson (University of Adelaide, Australia)
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