

PROGRAM: DAY 1

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

- **Opening Ceremony**

Opening remarks:

- Shigeru Saito
Congress chair of 14th World 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 (Hyogo College of Medicine, 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 (University of Toyama, 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)

- **Welcome Reception**

PROGRAM: DAY 2

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***

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)

- 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) / Gallery

- **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

10:45-11:15 ***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)

11:15-11:45 ***A novel HPV-targeting mucosal immunotherapy for treatment of cervical neoplasia: Phase I/II clinical trials***

Kei Kawana (Nihon University School of Medicine, Japan)

11:45-12:15 ***Dysbiosis in vaginal microbiota contributes to impaired antiviral immunity in the genital mucosa***

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./Astellas Pharma Inc.)

Chair: Atsuko Murashima (National Center for Child Health and Development, Japan)

Management of women of child bearing age complicated with autoimmune diseases

Shigeru Saito (University of Toyama, 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-thyroxidase 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) / Gallery

- **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)

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 ***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 IFN β 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)

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 ***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)

PROGRAM: DAY 3

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)
- 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 Research 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) / Gallery

- **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)

- 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 (National Academy of Medical Science of Ukraine, 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**

PROGRAM: DAY 4

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)
- 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**

Chair: Shigeru Saito (University of Toyama, Japan)

Immunoglobulin therapy for congenital CMV infection and recurrent pregnancy loss

Hideto Yamada (Kobe University, 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***

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)

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**