Joint Symposium

JS1. Host-microbe interaction in physiology and pathology:
The Japanese Society for Mucosal Immunology (JSMI) and The Society for
Mucosal Immunology (SMI) Co-organized Session

Chairpersons: Hiroshi Ohno (RIKEN)
Kiyoshi Takeda (Osaka University)

JS1-1
9:30 ~ 10:00
Manipulation of the microbiota for the treatment of cancer and IBD
Kenya Honda Department of Microbiology and Immunology, Keio University School of Medicine, Tokyo, Japan / Laboratory for Gut Homeostasis, RIKEN Center for Integrative Medical Sciences (ICAMS), Yokohama, Japan

JS1-2
10:00 ~ 10:30
ILC2s regulate mucosal homeostasis in the stomach
Naoko Satoh-Takayama Laboratory for Intestinal Ecosystem, Center for Integrative Medical Science, RIKEN, Yokohama, Japan

JS1-3
10:30 ~ 11:00
Developmental effects of impaired perinatal microbial colonization
Maria Gloria Dominguez-Bello Biochemistry and Microbiology, Rutgers University, New Brunswick, USA

JS1-4
11:00 ~ 11:30
Perturbing the early life microbiota affects immunologic development and disease
Martin J Blaser Department of Translational Medicine, New York University Langone Medical Center, New York, United States

JS1-5
11:30 ~ 12:00
Prevention of autoimmunity by regulatory T cells induced through interplay between helminth and microbiota
Hajime Hisaeda Department of Parasitology, National Institute of Infectious Diseases, Tokyo, Japan

Joint Symposium 2

JS2. Cross talk between immune and nervous system at surface barriers: The Japanese Society for Mucosal Immunology (JSMI) and The Society for Mucosal Immunology (SMI) + US-Japan Immunology Program Co-organized Session

Chairpersons: Masayuki Amagai (Keio University)
Hiroshi Kiyono (The University of Tokyo)

JS2-1
14:10 ~ 14:40
The Neuro-Immune Axis in Chronic Itch
Brian Kim Dermatology, Department of Medicine, Washington University School of Medicine, St. Louis, USA

JS2-2
14:40 ~ 15:10
Imaging of the epidermal nerve dynamics and activity in normal and pruritic dermatitis conditions
Takaharu Okada RIKEN Center for Integrative Medical Sciences, Yokohama, Japan

JS2-3
15:10 ~ 15:40
Nociceptors are Sufficient to Initiate Cutaneous Type-17 Inflammation
Daniel Kaplan Department of Dermatology and Immunology, University of Pittsburgh, Pittsburgh, United States

JS2-4
15:40 ~ 16:10
Interaction between immune cells and peripheral nerves in the skin: neuropeptide PACAP promotes cutaneous dendritic cell functions in contact hypersensitivity
Kenji Kabashima Department of Dermatology, Kyoto University Graduate School of Medicine, Kyoto, Japan
Semaphorin 6D reverse signaling controls anti-inflammatory polarization of intestinal macrophages by lipid metabolism

Atsushi Kumanogoh  Department of Respiratory Medicine and Clinical Immunology, Osaka University Graduate School of Medicine, Osaka, Japan
Symposia

Symposium 1  Room D  9:30 ~ 12:00, December 10

S1. Tolerance and immune regulation

Chairpersons: Hiroshi Takayanagi (The University of Tokyo)
Shohei Hori (The University of Tokyo)

S1-1  9:30 ~ 10:00
Molecular control of effector regulatory T cell differentiation and tissue accumulation
Shohei Hori  Laboratory of Immunology and Microbiology, Graduate School of Pharmaceutical Sciences, The University of Tokyo, Tokyo, Japan

S1-2  10:00 ~ 10:30
On the molecular control of thymic epithelial cell development and function
Georg A Hollander  University of Oxford, Oxford, United Kingdom

S1-3  10:30 ~ 11:00
Thymic Regulatory T cells arise via two distinct developmental programs that are both required for immune tolerance
Michael A Farrar  Center for Immunology, Department of Laboratory Medicine and Pathology, University of Minnesota, Minneapolis, USA

S1-4  11:00 ~ 11:30
Self-Reflection by Tolerogenic Factors: Promiscuous Gene Expression in the Thymus
Hiroyuki Takaba  Department of Immunology, The University of Tokyo, Department of Medicine, Bunkyo, Tokyo, Japan

S1-5  11:30 ~ 12:00
Molecular targeting of Treg cells for control of immune responses
Shimon Sakaguchi  Immunology Frontier Research Center, Osaka University, Osaka, Japan

Symposium 2  Room E  9:30 ~ 12:00, December 10

S2. Humoral immunity and diseases

Chairpersons: Yoshihiro Baba (Kyushu University)
Tomohiro Kurosaki (Osaka University)

S2-1  9:30 ~ 10:00
Epigenetic control of peripheral B cell differentiation, persistence and antigen responsiveness
Stefano Casola  IFOM, The Institute of Molecular Oncology, Milan, Italy

S2-2  10:00 ~ 10:30
The regulation of gene expression in during humoral immunity
Stephen Nutt  Molecular Immunology Division, The Walter and Eliza Hall Institute, Parkville, Australia

S2-3  10:30 ~ 11:00
SHP-1-activating inhibitory B cell co-receptors and autoimmune diseases
Takeshi Tsubata  Department of Immunology, Medical Research Institute, Tokyo Medical and Dental University, Tokyo, Japan

S2-4  11:00 ~ 11:30
Tet2 and Tet3 regulate B cell tolerance
Shinya Tanaka  Division of Immunology and Genome Biology, Department of Molecular Genetics, Medical Institute of Bioregulation, Kyushu University, Fukuoka, Japan

S2-5  11:30 ~ 12:00
Role of CD4+CD25+LAG3+ regulatory T cells in the maintenance of humoral immune tolerance
Tomohisa Okamura  Department of Functional Genomics and Immunological Diseases, Graduate School of Medicine, The University of Tokyo, Tokyo, Japan / Max Planck-University of Tokyo Center for Integrative Immunology, The University of Tokyo, Tokyo, Japan / Department of Allergy and Rheumatology, Graduate School of Medicine, The University of Tokyo, Tokyo, Japan
Symposium 3  Room F  9:30 ~ 12:00, December 10

S3. Novel technologies in immunology research: US-Japan Immunology Program Co-organized Session

Chairpersons: Keishi Fujio (The University of Tokyo)
Piero Carninci (RIKEN Center for Integrative Medical Sciences)

S3-1  9:30 ~ 10:00
High-dimensional cellular immune profiling: Asking T cells about what they ‘see’ in cancer
Evan Newell  Vaccine and Infectious Disease Division, Fred Hutchinson Cancer Research Center, Seattle, US / Singapore Immunology Network, Agency for Science Technology and Research, Singapore, Singapore

S3-2  10:00 ~ 10:30
Microbiota-Host Immune Cell Interactions in Autoimmunity
Martin Kriegel  Department of Immunobiology, Yale School of Medicine, New Haven, CT, USA

S3-3  10:30 ~ 11:00
An emerging landscape of transcriptional complexity
Piero Carninci  RIKEN Center for Integrative Medical Sciences, Yokohama, Japan

S3-4  11:00 ~ 11:30
Recent advances in the study of human inborn errors of immunity
Tsubasa Okano  Department of Pediatrics and Developmental Biology, Tokyo Medical and Dental University (TMDU), Tokyo, Japan

S3-5  11:30 ~ 12:00
Functional genomics analysis of synovial fibroblast from rheumatoid arthritis
Keishi Fujio  Department of Allergy and Rheumatology, University of Tokyo, Tokyo, Japan

Symposium 4  Room A  9:30 ~ 12:00, December 11

S4. Tumor immunity and cancer immunotherapies

Chairpersons: Hiroyoshi Nishikawa (National Cancer Center)
Andrea Schieteringer (Memorial Sloan Kettering Cancer Center)

S4-1  9:30 ~ 10:00
Molecular and epigenetic programs defining tumor-specific T cell dysfunction and therapeutic reprogrammability
Andrea Schieteringer  Memorial Sloan Kettering Cancer Center, New York, United States

S4-2  10:00 ~ 10:30
Immune suppressive network in tumor microenvironment (TME)
Hiroyoshi Nishikawa  Division of Cancer Immunology, National Cancer Center, Tokyo, Japan / Department of Immunology, Nagoya University Graduate School of Medicine, Nagoya, Japan

S4-4  11:00 ~ 11:30
Harnessing the personalized antitumor T-cell response to treat cancer
Alena Gros  Tumor Immunology and Immunotherapy, Vall d’Hebron Institute of Oncology, Barcelona, Spain

S4-5  11:30 ~ 12:00
Novel platform technology of CAR-T cells targeting solid tumors
Koji Tamada  Department of Immunology, Yamaguchi University Graduate School of Medicine, Yamaguchi, Japan
**Symposium 5**

9:20 ~ 12:00, December 11

**S5. Immune response and cell metabolism:**
US-Japan Immunology Program Co-organized Session

Chairpersons: Yoshihiro Ogawa (Kyushu University)
Takayoshi Suganami (Nagoya University)

**S5-1**

NLRP3 Inflammasome mediated inflammation in aging
Vishwa D. Dixit  
Yale University School of Medicine, New Haven, United States

**S5-2**

Role of dsRNA pathways and miRNA-regulatory machinery in chronic inflammation
Takahisa Nakamura  
Pediatric Endocrinology, Cincinnati Children’s Hospital Medical Center, Cincinnati, USA

**S5-3**

CD11c-positive macrophages drive obesity-induced liver fibrosis in a murin model of NASH
Michiko Itoh  
Graduate School of Medical and Dental Sciences, Department of Organ Network and Metabolism, Tokyo Medical and Dental University, Tokyo, Japan

**S5-4**

Neutrophils in IL-1-mediated adipose tissue inflammation
Yoshinori Nagai  
Department of Pharmaceutical Engineering, Faculty of Engineering, Toyama Prefectural University, Toyama, Japan / Department of Immunobiology and Pharmacological Genetics, Graduate School of Medicine and Pharmaceutical Sciences for Research, University of Toyama, Toyama, Japan

**S5-5**

Visualization of immune-brain metabolic competition between brain and lymph nodes by mass spectrometry imaging
Yuki Sugiura  
Department of Biochemistry, Keio University, School of Medicine, Tokyo, Japan

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**Symposium 6**

9:30 ~ 12:00, December 11

**S6. Autoimmunity**

Chairpersons: Kazuhiko Yamamoto (RIKEN)
Soumya Raychaudhuri (Brigham and Women’s Hospital)

**S6-1**

Using genetics and genomics to define pathogenic pathways in rheumatoid arthritis
Soumya Raychaudhuri  
Center for Data Sciences, Brigham and Women’s Hospital, Boston, MA

**S6-2**

cGAS-STING in Mouse and Human Autoimmunity
Keith Elkon  
Rheumatology, Department of Medicine & Immunology, University of Washington, Seattle, US

**S6-3**

The bona fide structure of the AIM/IgM-pentamer complex and its involvement in autoimmunity
Toru Miyazaki  
Laboratory of Molecular Biomedicine for Pathogenesis, Faculty of Medicine, The University of Tokyo, Tokyo, Japan

**S6-4**

Autoimmune Th17 cells instruct ILC secretion of inflammatory GM-CSF to initiate and augment autoimmune arthritis
Keiji Hirota  
Laboratory of Integrative Biological Science, Institute for Frontier Life and Medical Sciences, Kyoto, Japan

**S6-5**

Lymphocyte subset-specific transcriptome analyses revealed the involvement of mitochondria in B cells abnormality of systemic lupus erythematosus (SLE)
Kazuhiko Yamamoto  
Laboratory for Autoimmune Diseases, Division of Human Immunology, RIKEN Center for Integrative Medical Sciences, Yokohama, Japan / Department of Allergy and Rheumatology, Graduate School of Medicine, the University of Tokyo, Tokyo, Japan
Symposium 7  
Room F  9:30 ~ 12:00, December 11

S7. Neuroimmunology and effector T cells

Chairpersons: Masaaki Murakami (Hokkaido University)  
Takashi Yamamura (National Institute of Neuroscience, NCNP)

S7-1  
9:30 ~ 10:00  
Specific neural activations establish gateways for autoreactive T cells to enter the CNS  
Masaaki Murakami  
Division of Molecular Psychoneuroimmunology, Institute for Genetic Medicine, Hokkaido University, Sapporo, Japan

S7-2  
10:00 ~ 10:30  
Imaging T-cell-mediated autoimmunity of the CNS  
Alexander Flügel  
Institute for Neurommunology and Multiple Sclerosis Research, University Medical Center Goettingen, Goettingen, Germany

S7-3  
10:30 ~ 11:00  
The biochemical dialog between major physiological systems mediated by the immune cells  
Sidonia Fagarasan  
Laboratory for Mucosal Immunity, CENTER for Integrative Medical Sciences (IMS), RIKEN, Yokohama, Kanagawa, Japan

S7-4  
11:00 ~ 11:30  
Maintenance of regulatory T cell identity at sites of inflammation through epigenetic imprinting  
Thomas Korn  
Klinikum rechts der Isar, Dept. of Neuroimmunology, Technical University of Munich, Munich, Germany /  Technical University of Munich, Dept. of Neuroimmunology, Munich Cluster for Systems Neurology, Munich, Germany

S7-5  
11:30 ~ 12:00  
The switch from acute to chronic neuroinflammation: Role of Eomes-expressing Th cells  
Takashi Yamamura  
Department of Immunology, National Institute of Neuroscience, NCNP, Kodaira, Tokyo, Japan

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Symposium 8  
Room A  9:00 ~ 11:30, December 12

S8. Innate Immunity

Chairpersons: Kazuyo Moro (RIKEN-IMS)  
Takashi Satoh (Osaka university)

S8-1  
9:00 ~ 9:30  
The roles and mechanisms of SASP in aging and cancer  
Elji Hara  
Research Institute for Microbial Diseases, Osaka University, Suita, Japan /  Immunology Frontier Research Center, Osaka University, Suita, Japan /  The Cancer Institute, Japanese Foundation for Cancer Research, Tokyo, Japan

S8-2  
9:30 ~ 10:00  
The adjuvant activity of MAIT cells and their agonist ligands  
Mariolina Salio  
MRC Human Immunology Unit, Radcliffe Department of Medicine, University of Oxford, Oxford, UK

S8-3  
10:00 ~ 10:30  
Group 2 innate lymphoid cell and allergic disorders  
Kazuho Moro  
Laboratory for Innate Immune Systems, RIKEN-IMS, Yokohama, Japan

S8-4  
10:30 ~ 11:00  
TBD

S8-5  
11:00 ~ 11:30  
Investigation of the mechanism of fibrosis onset  
Takashi Satoh  
Laboratory of Host Defense, Immunology Frontier Research Center, Osaka university, Osaka, Japan
Symposium 9  Room D  9:05 ~ 11:25, December 12

S9. Mechanism-Guided Therapy of Immunologic Diseases

Chairpersons: Yoshiya Tanaka (University of Occupational and Environmental Health, Japan)  Tsutomu Takeuchi (Keio University School of Medicine)

S9-1  9:05 ~ 9:40
Unravelling the pathways that drive chronicity in rheumatoid arthritis: pathogenetic and biomarker potential
Iain McInnes  College of MVLS, University of Glasgow, Glasgow, UK

S9-2  9:40 ~ 10:15
Statistical genetics towards biology of immune-related diseases
Yukinori Okada  Department of Statistical Genetics, Osaka University Graduate School of Medicine, Osaka, Japan

S9-3  10:15 ~ 10:50
Biomarkers in the treatment of Rheumatoid Arthritis
Tsutomu Takeuchi  Division of Rheumatology, Department of Internal Medicine, Keio University School of Medicine, Tokyo, Japan

S9-4  10:50 ~ 11:25
Control of arthritis and bone loss and by microbiota-derived products- the gut-joint axis
Georg Schett  University of Nürnberg-Erlangen, Germany

Symposium 10  Room E  9:00 ~ 11:30, December 12

S10. Epigenetic regulation of immune response

Chairpersons: Ichiro Taniuchi (RIKEN, Center for integrative Medical Sciences)  Naganari Ohkura (Osaka University)

S10-1  9:00 ~ 9:30
Controlling the access to the genomic regulatory information during macrophage activation
Giacchino Natoli  Humanitas University, Milan, Italy

S10-2  9:30 ~ 10:00
Non-coding RNA ThymoD transcription modulates nuclear architecture to specify T-cell fate and inhibits T-cell malignancies
Takeshi Isoda  Department of Pediatrics and Developmental Biology, Tokyo Medical and Dental University, Tokyo, Japan

S10-3  10:00 ~ 10:30
Significance of naïve Treg-specific DNA hypomethylation in autoimmune disease susceptibility
Naganari Ohkura  Experimental Immunology, IFReC, Osaka University, Suita, Japan

S10-4  10:30 ~ 11:00
Transcriptional and epigenetic programming of CD8 T cell Immunity
Ananda w Goldrath  Biological Sciences, Molecular Biology, University of California San Diego, San Diego, USA

S10-5  11:00 ~ 11:30
Epigenetics in the induction and maintenance of effector and memory Th2 cells
Toshinori Nakayama  Department of Immunology, Graduate School of Medicine, Chiba University, Chiba, Japan
# Symposium 11

**Room F  9:00 ~ 11:30, December 12**

## S11. Dendritic cells and antigen presentation

Chairpersons: Mitsuru Matsumoto (Tokushima University)  
Toshiaki Ohteki (Tokyo Medical and Dental University)

<table>
<thead>
<tr>
<th>Session</th>
<th>Title</th>
<th>Speaker(s)</th>
<th>Institution/Location</th>
</tr>
</thead>
</table>
| S11-1   | A conserved population of plasmacytoid dendritic cells displays classical dendritic cell features | Juliana Idoyaga  
Department of Microbiology and Immunology, Stanford University School of Medicine, Stanford, USA |                                                                                        |
| S11-2   | Adaptive differentiation of dendritic cell progenitors in tissue microenvironments | Toshiaki Ohteki  
Department of Biodefense Research, Medical Research Institute, Tokyo Medical and Dental University, Tokyo, Japan |                                                                                        |
| S11-3   | Integrative biology and omics of T cell – DC encounters                | Bernard Malissen  
Centre d’Immunologie de Marseille Luminy, Marseille, France                                           |                                                                                        |
| S11-4   | Regulatory CLR for fine-tuning of DC function                          | Katsuaki Sato  
Division of Immunology, Department of Infectious Diseases, Faculty of Medicine, University of Miyazaki, Miyazaki, Japan |                                                                                        |
| S11-5   | Amelioration of diabetes development in NOD by the transgenic human AIRE expression in DCs | Mitsuru Matsumoto  
Institute for Enzyme Research, Tokushima University, Tokushima, Japan                                  |                                                                                        |