

Symposia

Symposium 1

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

S1. Immuno-metabolism in cancer immunity US-Japan Immunology Program Co-organized Session

Chairpersons: Yutaka Kawakami (Keio University)
Heiichiro Udono (Okayama University)

S1-1

9:30 ~ 10:00

Anti-diabetes drug, metformin, drives metabolic reprogramming in tumor microenvironment, leading to sustained anti-tumor immunity

Heiichiro Udono | Department of Immunology, Okayama University Graduate School of Medicine, Okayama, Japan

S1-2

10:00 ~ 10:35

Metabolic Regulation of T Cell Longevity and Function in Tumor Immunotherapy

Madhusudhanan Sukumar | Surgery Branch, Center for Cancer Research, National Cancer Institute, National Institutes of Health, Bethesda, United States of America

S1-3

10:35 ~ 11:10

Tumor-mediated Immune Evasion and Immunotherapy Resistance via Dendritic Cell Metabolic Reprogramming

Brent A. Hanks | Division of Medical Oncology, Department of Medicine, Department of Pharmacology and Cancer Biology, Duke University, Durham, NC, USA

S1-4

11:10 ~ 11:35

Enhancement of anti-tumor effects of PD-1/PD-L1 inhibitors by modulation of signaling and metabolism in tumor microenvironment

Yutaka Kawakami | International University of Health and Welfare School of Medicine, Chiba, Japan / Division of Cellular Signaling, Institute for Advanced Medical Research, Keio University School of Medicine, Tokyo, Japan

S1-5

11:35 ~ 12:00

Metabolites as a communication tool in cancer-related immunity

Michio Miyajima | Laboratory for Mucosal Immunity, RIKEN CENTER for Integrative Medical Sciences (IMS), Yokohama, Japan

S2. Allergy: pathogenesis and its clinical application

Chairpersons: Kenji Kabashima (Kyoto University)
Kenji Izuhara (Saga University)

S2-1

9:30 ~ 10:00

Identifying and rationally modulating cellular drivers of enhanced and diminished immunity

Alex K. Shalek IMES, Chemistry, and Koch Institute, MIT, Cambridge, USA

S2-2

10:00 ~ 10:30

Skin barrier defects and in vivo pH imaging of stratum corneum

Masayuki Amagai Department of Dermatology, Keio University School of Medicine, Tokyo, Japan / Laboratory for Skin Homeostasis, RIKEN Center for Integrative Medical Sciences, Yokohama, Japan

S2-3

10:30 ~ 11:00

Single-cell RNA sequencing-guided personalized medicine in severe drug hypersensitivity

Keisuke Nagao Dermatology, National Institute of Arthritis and Musculoskeletal and Skin Diseases, National Institutes of Health, Bethesda, USA

S2-4

11:00 ~ 11:30

Role of IL-25 in development of contact dermatitis

Susumu Nakae The Institute of Medical Science, The University of Tokyo, Tokyo, Japan

S2-5

11:30 ~ 12:00

Role of innate immunity in the development of allergic diseases

Hideaki Morita Division of Allergy, Department of Allergy and Clinical Immunology, National Research Institute for Child Health and Development, Tokyo, Japan

S3. Immunometabolism and inflammation

Chairpersons: Atsushi Kumanogoh (Osaka University)
Jun Kunisawa (National Institute of Biomedical Innovation, Health and Nutrition)

S3-1

9:30 ~ 10:00

Interaction between dietary lipids and commensals for the control of host immunity and inflammation

Jun Kunisawa NIBIOHN, Osaka, Japan

S3-2

10:00 ~ 10:30

Tissue integrity maintained by mTOR-mediated signalling in macrophages

Thomas Weichhart Medical University of Vienna, Vienna, Austria

S3-3

10:30 ~ 11:00

Improvement of the PD-1 blockade cancer immunotherapy by regulating immune metabolism

Kenji Chamoto Department of Immunology and Genomic Medicine, Kyoto University Graduate School of Medicine, Kyoto, Japan

S3-4

11:00 ~ 11:30

Metabolic reprogramming of human macrophages during bacterial infection

Pedro Escoll Biology of Intracellular Bacteria Unit, Department of Microbiology, Institut Pasteur, Paris, France

S3-5

11:30 ~ 12:00

Semaphorin 6D reverse signaling couples with immune and metabolic system

Sujin Kang Immune Regulation, Immunology Frontier Research Center, Osaka University, Osaka, Japan

S4. Pathogen immune evasion and immunity US-Japan Immunology Program Co-organized Session

Chairpersons: Yoshimasa Takahashi (National Institute of Infectious Diseases)
Masahiro Yamamoto (Osaka University)

S4-1

9:30 ~ 10:00

HUman antibodies to HIV-1 in Prevention and Therapy

Michel C Nussenzweig HHMI, The Rockefeller University, New York, USA

S4-2

10:00 ~ 10:30

Innate immunity to cytosolic LPS: pyroptosis and beyond

Feng Shao National Institute of Biological Sciences, Beijing, Beijing, CHINA

S4-3

10:30 ~ 11:00

Regulation of host defense and inflammation by autophagy related proteins

Masahiro Yamamoto Department of Immunoparasitology, RIMD, Osaka University, Osaka, Japan / Laboratory of Immunoparasitology, IFRc, Osaka University, Osaka, Japan

S4-4

11:00 ~ 11:30

Novel Evasion Mechanisms against Innate and Adaptive Immune Responses by Herpes Simplex Virus

Yasushi Kawaguchi Division of Molecular Virology, Department of Microbiology and Immunology, The Institute of Medical Science, The University of Tokyo, Tokyo, Japan

S4-5

11:30 ~ 12:00

Broad Protection Provided by Antibodies to a Conserved Influenza Hemagglutinin Head Interface Epitope

Masayuki Kuraoka Immunology, Duke University, Durham, USA

S5. Memory and Vaccination US-Japan Immunology Program Co-organized Session

Chairpersons: Tomohiro Kurosaki (Osaka University)
Ken Ishii (The University of Tokyo)

S5-1

9:30 ~ 10:05

Enhancing Immunity through Fc Receptor Engagement

Jeffrey V. Ravetch Molecular Genetics and Immunology, The Rockefeller University, New York, USA

S5-2

10:05 ~ 10:30

mTORC1 and BCR signal regulate the formation of memory precursors in the germinal center

Takeshi Inoue Immunology Frontier Research Center, Osaka University, Osaka, Japan

S5-3

10:30 ~ 10:55

Development of anti-cancer therapeutic cellular drug as *in vivo* DC targeting therapy

Shin-ichiro Fujii Laboratory for Immunotherapy, RIKEN Center for Integrative Medical Sciences (IMS), Yokohama, Japan / RIKEN Program for Drug Discovery and Medical Technology Platforms (DMP), Yokohama, Japan

S5-4

10:55 ~ 11:20

Tolerogenic vaccine development against atherosclerosis

Kouji Kobiyama Division of Vaccine Science, Department of Microbiology and Immunology, The Institute of Medical Science, The University of Tokyo, Tokyo, Japan / Division of Inflammation Biology, La Jolla Institute for Immunology, La Jolla, USA

S5-5

11:20 ~ 11:55

Extracellular ATP sensing via P2RX7 promotes CD8 tissue-resident memory T cells by promoting TGF- β sensitivity

Stephen C. Jameson Center for Immunology, Laboratory Medicine and Pathology, University of Minnesota, Minneapolis, Minnesota, USA

S6. T cell-dependent regulation of immunity and tissue homeostasis

Germany-Japan Immunology Program Co-organized Session

Chairpersons: Shohei Hori (The University of Tokyo)
Taku Okazaki (Tokushima University)

S6-1

9:30~9:55

The cellular and molecular mechanisms underlying the induction of fibrotic responses in the lung

Kiyoshi Hirahara Department of Immunology, Graduate School of Medicine, Chiba University, Chiba, Japan / AMED-PRIME, AMED, Chiba, Japan

S6-2

9:55~10:20

Restriction of PD-1 function for optimal T cell responses

Taku Okazaki Division of Immune Regulation, Institute of Advanced Medical Sciences, Tokushima University, Tokushima, Japan / Division of Molecular Immunology, Institute for Quantitative Biosciences, The University of Tokyo, Tokyo, Japan

S6-3

10:20~10:55

InTOXication causes T-cell exhaustion in chronic infection

Dietmar Zehn Division of Animal Physiology and Immunology, Technical University of Munich, Munich, Germany

S6-4

10:55~11:25

Role of regulatory T cells in neural protection at the chronic phase of ischemic brain injury

Akihiko Yoshimura Department of Microbiology and Immunology, Keio University School of Medicine, Tokyo, Japan

S6-5

11:25~12:00

IMMUNOREGULATORY CELL NETWORKS INDUCED BY PEPTIDE-MAJOR-HISTOCOMPATIBILITY COMPLEX-BASED NANOMEDICINES

Pere Santamaria Department of Microbiology, Immunology and Infectious Diseases, Cumming School of Medicine, University of Calgary, Calgary, Canada

S7. Innate type T cells and lymphocytes

Chairpersons: Sho Yamasaki (Osaka University)
Shinichiro Sawa (Kyushu University)

S7-1

9:30 ~ 10:00

The Surprising Nature of Autoreactive T cell Responses to CD1a in Human Skin

D. Branch Moody Division of Rheumatology, Department of Medicine, Brigham and Women's Hospital, Harvard Medical School, Boston, US / Monash University, Melbourne, Australia

S7-2

10:00 ~ 10:30

Factors controlling antigen-specific MAIT cell activation and protective immunity

James McCluskey Peter Doherty Institute for Infection and Immunity, Microbiology and Immunology, The University of Melbourne, Parkville, Australia

S7-3

10:30 ~ 11:00

Pathogenic potential of MR1-restricted $\alpha\beta$ T cells in autoimmune disease

Kensuke Shibata Department of Microbiology and Immunology, Yamaguchi University Graduate School of Medicine, Ube, Japan

S7-4

11:00 ~ 11:30

Group 2 Innate lymphoid cells regulate allergic susceptibility

Yasutaka Motomura Laboratory for Innate Immune Systems, Department of Microbiology and Immunology, Graduate School of Medicine, Osaka University, Osaka, Japan

S7-5

11:30 ~ 12:00

LTi-like cell conducts maturation of intestinal immune system

Shinichiro Sawa Division of Mucosal Immunology, Medical Institute of Bioregulation, Kyushu University, Fukuoka, Japan

S8. Immuno-neural connections International Immunology-JSI Co-organized Session

Chairpersons: Kazuhiro Suzuki (Osaka University)
Takashi Shichita (Tokyo Metropolitan Institute of Medical Science)

S8-1

9:30 ~ 10:00

Neuronal regulation of group 2 innate lymphoid cell responses and type 2 inflammation

Saya Moriyama Department of Immunology, National Institute of Infectious Diseases, Tokyo, Japan

S8-2

10:00 ~ 10:30

Pulmonary phagocyte-derived NPY controls the pathology of severe influenza virus infection

Yumiko Imai National Institutes of Biomedical Innovation, Health and Nutrition, Osaka, Japan

S8-3

10:30 ~ 11:00

Control of immunity by glucocorticoids

Akihiro Shimba Human Health Sciences, Kyoto University, Kyoto, Japan

S8-4

11:00 ~ 11:30

Modulatory roles of the immune system in shaping animal behaviors

Jun R. Huh Harvard Medical School, Boston, USA

S8-5

11:30 ~ 12:00

Relationships between cerebral post-ischemic inflammation and neural repair

Takashi Shichita Stroke Renaissance Project, Tokyo Metropolitan Institute of Medical Science, Tokyo, Japan

S9. Skin and Mucosal Barrier

Chairpersons: Yoshiki Tokura (Hamamatsu University School of Medicine)
Reiko Shinkura (The University of Tokyo)

S9-1

9:30 ~ 10:00

Barrier homeostasis on the skin surface

Akiharu Kubo Department of Dermatology, Keio University School of Medicine, Tokyo, Japan

S9-2

10:00 ~ 10:30

Commensal microbiota trigger type I IFN-dependent repair responses in injured skin

Michel Gilliet Department of Dermatology, University Hospital of Lausanne (CHUV), Lausanne, Switzerland

S9-3

10:30 ~ 11:00

Gut microbiota and autoimmune diseases

Hiroshi Ohno Laboratory for Epithelial Ecosystem, RIKEN Center for Integrative Medical Sciences, Yokohama, Japan / Intestinal Microbiota Project, Kanagawa Institute of Industrial Science and Technology, Kawasaki, Japan

S9-4

11:00 ~ 11:30

Gut mycobiota shapes host immunity and inflammatory disease

Iliyan D. Iliev Department of Medicine, Weill Cornell Medicine, New York, USA

S9-5

11:30 ~ 12:00

Nutritional signals regulate lymphocyte homing to gut-associated lymphoid tissue

Koji Hase Division of Biochemistry, Faculty of Pharmacy, Keio University, Tokyo, Japan

S10. Functional diversity of new myeloid subset

Chairpersons: Takashi Satoh (Osaka University)
Ichiro Manabe (Chiba University)

S10-1

9:30 ~ 10:00

Decoding environmentally driven gene regulatory networks in hepatic macrophages

Mashito Sakai Department of Cellular and Molecular Medicine, University of California San Diego, San Diego, USA

S10-2

10:00 ~ 10:30

Macrophages in cardiac biology and pathobiology

Ichiro Manabe Department of Disease Biology and Molecular Medicine, Chiba University, Chiba, Japan

S10-3

10:30 ~ 11:00

Macrophage and Dendritic Cell Biology: From Development to Functions

Florent Ginhoux Singapore Immunology Network (SIgN), A*STAR, Singapore, Singapore

S10-4

11:00 ~ 11:30

Protrusion of dendrites of intestinal CX3CR1⁺ myeloid cells by bacterial metabolites

Kiyoshi Takeda Osaka University, IFRc, Osaka, Japan / Osaka University, Grad Sch Med, Osaka, Japan

S10-5

11:30 ~ 12:00

TBD

Frederic Geissmann Memorial Sloan Kettering Cancer Center, Zuckerman Research Center, New York, USA

S11. Autoimmunity and B cells US-Japan Immunology Program Co-organized Session

Chairpersons: Kazuhiko Yamamoto (RIKEN)
Mark Jay Shlomchik (University of Pittsburgh)

S11-1

9:30 ~ 10:00

Mutations in tolerance checkpoints: shared pathogenesis of autoimmunity and lymphoid cancer

Christopher C Goodnow Garvan Institute of Medical Research, UNSW Sydney, Darlinghurst, NSW, Australia

S11-2

10:00 ~ 10:30

Regulation of plasma cell differentiation from germinal center

Wataru Ise Laboratory of Lymphocyte Differentiation, WPI Immunology Frontier Research Center, Osaka, Japan

S11-3

10:30 ~ 11:00

Functional genomics reveals cell metabolism alteration of B cells in systemic lupus erythematosus

Keishi Fujio Department of Allergy and Rheumatology, Graduate School of Medicine, The University of Tokyo, Tokyo, Japan

S11-4

11:00 ~ 11:30

B Cell and T Cell Interactions in Autoimmunity

Mark Shlomchik Department of Immunology, University of Pittsburgh, Pittsburgh, USA

S11-5

11:30 ~ 12:00

Chaperon-like function of MHC class II molecules for misfolded proteins: A new mechanism for autoimmune diseases

Hisashi Arase Laboratory of Immunochemistry, WPI Immunology Frontier Research Center, Osaka University, Suita, Osaka, Japan / Department of Immunochemistry, Research Institute for Microbial Diseases, Osaka University, Suita, Osaka, Japan

S12. Lympho-hematopoiesis and its niche microenvironments

Chairpersons: Takashi Nagasawa (Osaka University)
Yoko Hamazaki (Kyoto University)

S12-1

9:30 ~ 10:00

Chemically-defined culture enables massive expansion of functional hematopoietic stem cells

Satoshi Yamazaki | Stem cell biology, The University of Tokyo, Tokyo, Japan

S12-2

10:00 ~ 10:30

Bone marrow microenvironmental niches for hematopoietic stem cells and immune cells

Takashi Nagasawa | Laboratory of Stem Cell Biology and Developmental Immunology, Graduate School of Frontier Biosciences and Graduate School of Medicine, Osaka University, Suita, Japan / WPI-IFReC, Osaka University, Suita, Japan

S12-3

10:30 ~ 11:00

The cytokine-producing immune microenvironment for innate lymphocytes

Koichi Ikuta | Laboratory of Immune Regulation, Institute for Frontier Life and Medical Sciences, Kyoto University, Kyoto, Japan

S12-4

11:00 ~ 11:30

Neutrophils: The Power of Many

Lai Guan Ng | Singapore Immunology Network, Singapore, Singapore

S12-5

11:30 ~ 12:00

Heterogeneity of thymic epithelium in mouse and human

Mark Anderson | Diabetes Center, University of California, San Francisco, San Francisco, USA