

THE KYOTO IMMUNOLOGY SYMPOSIUM

Day 1 **Feb 10** Mon

Day 2 **Feb 11** Tue

Day 3 **Feb 12** Wed

10:20- Registration
10:40-10:50 Opening Remarks

Session 1

When the Immune System Fails: Cancer and Immunodeficiency

10:50-11:15
Hiroyoshi Nishikawa | NCC/NagoyaU., Japan
11:15-11:40
Stuart Tangye | Garvan Institute, Australia
11:40-11:55 **Yixin Zou** | Kyoto U., Japan
11:55-12:10 **Koji Kitaoka** | Kyoto U., Japan
12:10-13:30 Lunch Break

Session 2 Decoding T Cell Diversity

13:30-13:55
Federica Sallusto | ETH Zurich, Switzerland
13:55-14:20
Paul Thomas | St. Jude, U.S.A.
14:20-14:45
Eui-Cheol Shin | KAIST, KOREA

Roundtable with Editors

14:45-15:15 **Nick Bernard** | Nature Immunology
Christiana Fogg | Science Immunology
Peter Lee | Immunity
15:15-15:35 Coffee Break

Session 3 Wisdom from Legends

15:35-16:00
Jacques Banchereau | Immunai, U.S.A.
16:00-16:25
Mark Davis | Stanford, U.S.A.
16:25-16:40 **Yuki Masuo** | Kyoto U., Japan
16:40-16:55 **Ryuya Edahiro** | Osaka U., Japan
16:55-18:20 **Poster Session**
19:00- **Guest Speakers Dinner**
[Co-hosted by **Cytek**]

Session 4

Age and Sex: Shaping the Immune Landscape

9:00-9:25
Weiping Zou | U. of Michigan, U.S.A
9:25-9:50
Donna Farber | Columbia, U.S.A.
9:50-10:15
Hideki Ueno | Kyoto U., Japan
10:15-10:35 Break
10:35-11:00
Akiko Iwasaki | Yale, U.S.A
11:00-11:15 **Mikako Katagiri** | U. of Tokyo, Japan
11:15-12:15 **Poster Session**
12:15-
Excursion / Kyoto City Tour

18:30- **Networking Dinner**
[Co-hosted by **Cytek**]

Session 5

The Genetic Code of Immunity

9:00-9:25
Yasuhiro Murakawa | Kyoto U, Japan
9:25-9:50
John S Tsang | Yale, U.S.A
9:50-10:05 **Ryunosuke Saiki** | Kyoto U., Japan
10:05-10:20 **Fumiya Wada** | Kyoto U., Japan
10:20-10:40 Break
10:40-11:05
Sebastian Amigorena | Curie, France
11:05-11:30
Kazuhiko Yamamoto | RIKEN, Japan
11:30-11:45 **Namkoong Ho** | Keio U., Japan
11:45-12:00 **Yukinori Okada** | RIKEN, Japan
12:00-12:15 **Masaki Miyazaki** | Kyoto U., Japan
12:15-13:30 Lunch Break

Session 6

Dual Roles of Immunity: Infection Defense and Autoimmune Reactions

13:30-13:55
Shane Crotty | La Jolla Institute, U.S.A.
13:55-14:20
Virginia Pascual | Cornell, U.S.A.
14:20-14:45
Antonio Lanzavecchia | INGM, Italy
14:45-15:00 **Hiroyuki Yoshitomi** | Kyoto U., Japan
15:00-15:15 **Dongyun Lu** | Kyoto U., Japan
15:15-15:35 Break

Session 7

Innovations from Japan: Pioneering Studies by Young Researchers

15:35-15:50 **Chaoqi Liu** | U. of Tokyo, Japan
15:50-16:05 **Anunya Opasawatchai** | RIKEN, Japan
16:05-16:20 **Yoshitaka Honda** | Kyoto U., Japan
16:20-16:30 Poster Award
16:30-16:40 Closing Remarks

THE KYOTO IMMUNOLOGY SYMPOSIUM

AMED 先進的研究開発戦略センター (SCARDA)
「ワクチン開発のための世界トップレベル研究開発拠点の形成事業」
第4回 サポート機関合同シンポジウム

Monday, February 10 (Day 1)

10:20- Registration

10:40- 10:50 Opening Remarks

Session 1 **When the Immune System Fails: Cancer and Immunodeficiency**

10:50- 11:15 **Balancing the immune response is a key component of effective cancer immunotherapy**

Hiroyoshi Nishikawa | NCC/Nagoya U., Japan

Molecular regulation of human immunity – elucidating critical requirements for adaptive immunity one gene at a time

Stuart Tangye | Garvan Institute, Australia

11:40- 11:55 **Spermidine rescues ER stress-mediated dysfunction in tumor-infiltrating CD8+ T cells by promoting BiP chaperone activity in aged mice**

Yixin ZOU | Kyoto U., Japan

11:55- 12:10 **T cell exhaustion steps according to mitochondrial status and the analysis of their glycolytic function**

Koji Kitaoka | Kyoto U., Japan

12:10- 13:30 Break

Session 2 **Decoding T Cell Diversity**

13:30- 13:55 **T cell activation, differentiation and immune regulation**

Federica Sallusto | ETH Zurich, Switzerland

13:55- 14:20 **Specificity Matters: T cell responses to infections and tumors**

Paul Thomas | St. Jude, U.S.A.

14:20- 14:45 **What we learned about human CD8+ T cells during the COVID-19 pandemic**

Eui-Cheol Shin | KAIST, KOREA

Roundtable with Editors

14:45- 15:15 Nick Bernard | Nature Immunology

Christiana Fogg | Science Immunology

Peter Lee | Immunity

15:15- 15:30 Break

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Session 3

Wisdom from Legends

15:35- 16:00 TBD
Jacques Banchereau | Immunai, U.S.A.

16:00- 16:25 **Immune organoids and combinations to advance our understanding of autoimmunity, vaccination and infection**
Mark Davis | Stanford, U.S.A.

16:25- 16:40 **Dynamic functional and spatial transition of peripheral helper T cells in rheumatoid arthritis**
Yuki Masuo | Kyoto U., Japan

16:40- 16:55 **Deciphering state-dependent immune features from multi-layer human omics at single-cell resolution**
Ryuya Edahiro | Osaka U., Japan

16:55- 18:20 **Poster Session**

19:00- **Guest Speakers Dinner** [cohosted by **Cytel**]

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Tuesday, February 11 (Day 2)

Session 4 **Age and Sex: Shaping the Immune Landscape**

9:00- 9:25 **Sex hormones regulate onco-fetal immune tolerance**
Weiping Zou | U. of Michigan, U.S.A.

9:25- 9:50 **Tissue resident immunity across the lifespan**
Donna Farber | Columbia, U.S.A.

9:50- 10:15 **Multiple Roles of Antigen-Specific High-Avidity CD4+ T Cells in Humans**
Hideki Ueno | Kyoto U., Japan

10:15- 10:35 Break

10:35- 11:00 **Mucosal antiviral vaccine strategies**
Akiko Iwasaki | Yale, U.S.A.

11:00- 11:15 **Elucidating the Molecular Mechanisms of Cardiac Sarcoidosis by Multi-Omics Analysis**
Mikako Katagiri | U. of Tokyo, Japan

11:15- 12:15 **Poster Session**

12:15- **Excursion - Kyoto City Tour**
(Invited Speakers & Registered members)

18:30- **Networking Dinner** [cohosted by **Cytek**]
(Invited Speakers & Registered members)

held at: **Restaurant NANANOICHI, THE HOTEL HIGASHIYAMA KYOTO TOKYU**
3-175-2 Ebisu-cho, Higashiyama-ku, Kyoto, 605-0033

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Wednesday, February 12 (Day 3)

Session 5

The Genetic Code of Immunity

- 9:00- 9:25 **Decoding the complexity and diversity of human gene structures**
Yasuhiro Murakawa | Kyoto U., Japan
- 9:25- 9:50 **Human immune setpoint and immune health** (tentative)
John S Tsang | Yale, U.S.A.
- 9:50- 10:05 **A Large-Scale Analysis of Disease Susceptibility Driven by Clonal Hematopoiesis**
Ryunosuke Saiki | Kyoto U., Japan
- 10:05- 10:20 **Single-cell transcriptomic landscape of human bone marrow**
Fumiya Wada | Kyoto U., Japan
- 10:20- 10:40 Break
- 10:40- 11:05 **TE exonization reveals a “dark proteome”**
Sebastian Amigorena | Curie, France
- 11:05- 11:30 **Genetics of human immune system**
Kazuhiko Yamamoto | RIKEN, Japan
- 11:30- 11:45 **Germline variants and mosaic chromosomal alterations affect COVID-19 vaccine immunogenicity**
Namkoong Ho | KEIO U., Japan
- 11:45- 12:00 **Multimodal human omics as immune cell atlas, and its application to vaccine development**
Yukinori Okada | RIKEN, Japan
- 12:00- 12:15 **A Feedback Amplifier Circuit with Notch and E2A Orchestrates T cell Fate and Suppresses the Innate Lymphoid Cell Lineages During Thymic Ontogeny**
Masaki Miyazaki | Kyoto U., Japan
- 12:15- 13:30 Break

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Session 6 **Dual Roles of Immunity: Infection Defense and Autoimmune Reactions**

- 13:30- 13:55 **Upper airway immune memory in humans, germinal centers, and vaccine immunology**
Shane Crotty | La Jolla Institute, U.S.A.
- 13:55- 14:20 **Novel Pathogenic Players in Human Lupus** (tetative)
Virginia Pascual | Cornell, U.S.A.
- 14:20- 14:45 **Dissecting the human antibody response**
Antonio Lanzavecchia | INGM, Italy
- 14:45- 15:00 **Multifaceted Functions of Tph Cells in Synovial Tissue of Rheumatoid Arthritis**
Hiroyuki Yoshitomi | Kyoto U., Japan
- 15:00- 15:15 **Antigen-specific high avidity CD4+T cells correlate with pre-existing antigen-specific proliferating B cells and neutralizing antibody titers**
Dongyun Lu | Kyoto U., Japan
- 15:15- 15:35 Break

Session 7 **Innovations from Japan: Pioneering Studies by Young Researchers**

- 15:35- 15:50 **Discovery of Autoantibodies as Biomarkers for Lung Cancer Based on Human Serum Profiling**
Chaoqi Liu | U. of Tokyo, Japan
- 15:50- 16:05 **Distinct Immune Cell Alterations Induced by SARS-CoV-2 Vaccination and Infection**
Anunya Opasawatchai | RIKEN, Japan
- 16:05- 16:20 **Functional mapping of MEFV variants elucidates the key regulatory role of pyrin B30.2 domain and its association with pathogenesis.**
Yoshitaka Honda | Kyoto U., Japan
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- 16:20- 16:30 Poster Award
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- 16:30- 16:40 Closing Remarks
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POSTER PRESENTERS

- P-01 **Immune Cell Landscape in the Urine of BCG Treated Bladder Cancer Patients**
Yunni Zhang | Kyoto U., Japan
- P-02 **Hepatic macrophages subsets in the human liver: Heterogeneity, Effect of aging, and Alterations in autoimmune disease**
Shuhe Ma | Kyoto U., Japan
- P-03 **Unraveling Distinctive Immune Microenvironments in Molecular Subtypes of Clear Cell Renal Cell Carcinoma**
Katsuhiro Ito | Kyoto U., Japan
- P-04 **Type-I IFN signaling in the gut lymphoid tissue regulates the polyamine homeostasis in the peripheral CD8+ T cells**
Kana Yamasaki | Kyoto U., Japan
- P-05 **Role of TFH and IL-4 signal in Boost-vaccination with SARS-CoV-2 spike protein**
Khalil Jumana | Kyoto U., Japan
- P-06 **Carcinogenic Pesticides in Smokeless Tobacco in Uzbekistan**
Jasur Juraev | Kyoto U., Japan
- P-07 **Proteomic Landscape of Immune Cell Subsets at Scale**
Koshi Imami | RIKEN, Japan
- P-08 **Human immune assessment methods using multi-omics for understanding genetic diversity and function**
Akari Suzuki | RIKEN, Japan
- P-09 **Genetics of immune response in monocytes from Japanese healthy donors**
Matteo Guerrini | RIKEN, Japan
- P-10 **Bioinformatics pipelines of expression and chromatin accessibility QTL to elucidate gene regulatory systems of diverse immune cell types**
Rintaro Fujimoto | RIKEN, Japan
- P-11 **The lipidome shapes the signatures of human PBMC subsets and their inter-individual variation**
Yosuke Isobe | RIKEN, Japan
- P-12 **Heterogeneity of human liver CD4 T cells and Their Role in CMV Control**
Hajime Morita | Kyoto U., Japan

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POSTER PRESENTERS

- P-13 **Deep Eutectic Solvent (DES) fixation preserves RNA integrity for single-cell RNA applications and adaptive immune receptor repertoire analysis**
Kitano Ayumi | KOTAI Biotechnologies
- P-14 **Ex vivo analyses of human liver-resident immune cells in HBV infection**
Joey Matsuyama | Kyoto U., Japan
- P-15 **The Role of CD45 in Age-induced Immune Suppression**
Sara Delghandi | Kyoto U., Japan
- P-16 **Immuno-pharmacodynamic profiles of the combination of immune checkpoint inhibitor and EP4 blockade for cancer treatment revealed by single cell analysis**
Somsak Prasongtanakij | Kyoto U., Japan
- P-17 **High-dimensional activation-induced marker assay elucidates the link between allergen-specific Th/Tfh cell response, basophil reactivity and clinical status of childhood egg allergy**
Hatanaka Sari | Kyoto U., Japan
- P-18 **Direct analysis of hepatic stellate cells with flow cytometry in specimens derived from the human liver**
Toshiaki Bando | Kyoto U., Japan
- P-19 **Nucleic acid based synthetic tools for Immunoregulation**
Mahima Kumar Kumar | Kyoto U., Japan
- P-20 **A series of CD21^{lo} B cell subsets are recruited to the central nervous system in acute neuromyelitis optica**
Ryusei Nishigori | Kyoto U., Japan