Jun Inamo, M.D., Ph.D.

Department of Microbiology and Immunology/Division of Rheumatology

Keio University School of Medicine

Email: juninamo@keio.jp

Google Scholar: GitHub: ORCiD

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PERSONAL STATEMENT

I am a computational biologist and rheumatologist with a strong interest in unraveling the mechanisms of autoimmune diseases. My research focuses on advancing precision medicine.

RESEARCH EXPERIENCE

2025-Current   **Keio University School of Medicine**

Assistant Professor

2021-Current   **Tokyo Medical and Dental University**

Postdoctoral Fellow (2021-2022) and Instructor (part-time, 2022-Current)

Advisor: Prof. Yuta Kochi

- Generated comprehensive full-length transcript atlas using long-read sequencing datasets from 29 human immune cell subsets.
- Using this atlas, we revealed 1) characteristics of new isoforms including cell-type-specific expression, functional domain motif, repetitive elements, etc. 2) effect of common genetic variants on isoform expression, and 3) association with immune-related disorders.

2022-2025   **University of Colorado School of Medicine**

Post-doctoral Research Fellow

Advisor: Prof. Fan Zhang

- My research focused on the disease progression of rheumatoid arthritis during the pre-clinical stage.
- I have led analysis using large-scale single-cell multi-omics datasets (mass cytometry, CITE-seq). This project is a multi-institutional collaboration with supported from Accelerating Medicines Partnership® Rheumatoid Arthritis and Systemic Lupus Erythematosus (AMP® RA/SLE) Program.

2017-2025   **Keio University School of Medicine**

Clinical (2017-2022) and Specially Appointed Assistant Professor (2022-2025)

Advisor: Prof. Tsutomu Takeuchi

- Identified dysregulated genes and co-expressed gene network using blood specimens from patients with primary Sjögren's syndrome.
- Identified dysregulated pathways according to types of auto-antibodies using skin samples from patients with systemic sclerosis
- Identified remission signature genes in CD4 and CD8 T cells applying a partial least-squares regression to transcriptome data of blood specimens from patients with rheumatoid arthritis.
- Collaborated with industry researchers to explore drug targets for auto-immune diseases.

EDUCATION

2021	**Keio University School of Medicine**
	Ph.D. in Rheumatology and Immunology
2014	**Keio University School of Medicine**
	M.D. in Medicine

AWARDS

2024   Colorado Clinical and Translational Sciences Institute Pilot Grant Award

2024 – 2025   Grant-in-Aid for JSPS Overseas Research Fellows

2023   Emerging Investigator Excellence Award, American College of Rheumatology Convergence

2023 – 2024   Uehara Memorial Foundation Postdoctoral Fellowship

2023 – 2025   Grant-in-Aid for Early-Career Scientists, JSPS

2022   Mochida Memorial Foundation for Medical and Pharmaceutical Research

2021 – 2024   Grant-in-Aid for JSPS Fellows, JSPS

2019   Travel Award, the 19th International Vasculitis & ANCA Workshop

2017-2019   Keio University Graduate School Scholarship

TEACHING EXPERIENCE

2022-Current   **University of Colorado School of Medicine**
- Supervising research projects of M.D.-Ph.D. students

2018-2022   **Keio University School of Medicine**
- Teaching clinical medicine to undergraduate medical students

MEDICAL LICENSURE

2014   Full Medical License (Japan) #467556

CLINICAL TRAINING

2017-2021 **Fellow in Rheumatology,** Keio University School of Medicine, Japan

2016-2017 **Internal Medicine**, Kawasaki Municipal Hospital, Japan

2014-2016 **Residency**, Yokohama Municipal Citizen's Hospital, Japan

BOARD CERTIFICATION

2023 Board Certified Trainer of the Japan College of Rheumatology

2020 Board Certified Member of the Japan College of Rheumatology

2017 Board Certified Member of the Japanese Society of Internal Medicine

BIBLIOGRAPHY

<u>Publications</u> **(selected)**

1. <u>**Jun Inamo**</u>, Masaru Takeshita, Katsuya Suzuki, …, Yuko Kaneko. Comparative single-cell and spatial profiling of anti-SSA-positive and anti-centromere-positive Sjögren's disease reveals common and distinct immune activation and fibroblast-mediated inflammation. ***Nature Communications***. 2025. doi: https://doi.org/10.1038/s41467-025-63935-9

2. <u>**Jun Inamo**</u>, Joshua Keegan, Alec Griffith, …, The Accelerating Medicines Partnership RA/SLE Network, V. Michael Holers, Kevin D. Deane, James Lederer, Deepak A. Rao, Fan Zhang. Deep immunophenotyping reveals circulating activated lymphocytes in individuals at risk for rheumatoid arthritis. ***The Journal of Clinical Investigation***. Published March 17, 2025. doi: https://doi.org/10.1172/JCI185217

3. Mahoko Takahashi Ueda, <u>**Jun Inamo**</u>, Fuyuki Miya, Mihoko Shimada, Kensuke Yamaguchi, Yuta Kochi. Functional and dynamic profiling of transcript isoforms reveals essential roles of alternative splicing in interferon response. ***Cell Genomics***. 2024. doi: 10.1016/j.xgen.2024.100654

4. <u>**Jun Inamo**</u>, Akari Suzuki, Mahoko Takahashi Ueda, …, Yuta Kochi. Long-read sequencing for 29 immune cell subsets reveals disease-linked isoforms. ***Nature Communications***. 2024. doi: https://doi.org/10.1038/s41467-024-48615-4

5. Yuichi Mitsui, Tatsuya Suzuki, Kanako Kuniyoshi, <u>**Jun Inamo**</u>, …, Takashi Satoh. Expression of the readthrough transcript CiDRE in alveolar macrophages boosts SARS-CoV-2 susceptibility and promotes COVID-19 severity. ***Immunity***. 2023:S1074-7613(23)00271-6.

6. <u>**Jun Inamo,**</u> Suzuki K, Takeshita M, Kondo Y, Okuzono Y, Koga K, Kassai Y, Takiguchi M,

Kurisu R, Yoshimura A, Takeuchi T. Molecular remission at T cell level in patients with rheumatoid arthritis. *Sci Rep*. 2021;11:16691.

7. Nakazawa M, Suzuki K, Takeshita M, **Jun Inamo**, Kamata H, Ishii M, Oyamada Y, Oshima H, Takeuchi T. Distinct Expression of Coinhibitory Molecules on Alveolar T Cells in Patients With Rheumatoid Arthritis-Associated and Idiopathic Inflammatory Myopathy-Associated Interstitial Lung Disease. *Arthritis Rheumatol*. 2021;73:576-586.

8. **Jun Inamo**. Association of differentially expressed genes and autoantibody type in patients with systemic sclerosis. *Rheumatology (Oxford)*. 2021;60:929-939.

9. **Jun Inamo,** Suzuki K, Takeshita M, Kassai Y, Takiguchi M, Kurisu R, Okuzono Y, Tasaki S, Yoshimura A, Takeuchi T. Identification of novel genes associated with dysregulation of B cells in patients with primary Sjögren's syndrome. *Arthritis Res Ther*. 2020;22:153.

10. **Jun Inamo**. Non-causal association of gut microbiome on the risk of rheumatoid arthritis: a Mendelian randomization study. *Ann Rheum Dis*. 2019. DOI: 10.1136/annrheumdis-2019-216565.

Conferences (Lead Author)

1. **Jun Inamo**, Joshua Keegan, Alec Griffith, Tusharkanti Ghosh, Alice Horisberger, Kaitlyn Howard, John Pulford, Ekaterina Murzin, Brandon Hancock, Anna Helena Jonsson, Jennifer Seifert, Marie L. Feser, Jill M. Norris, Ye Cao, William Apruzzese, S. Louis Bridges, Vivian Bykerk, Susan Goodman, Laura Donlin, Gary S. Firestein, Harris Perlman, Joan M. Bathon, Laura B. Hughes, Darren Tabechian, Andrew Filer, Costantino Pitzalis, Jennifer H. Anolik, Larry Moreland, Joel M. Guthridge, Judith A. James, Michael B. Brenner, Soumya Raychaudhuri, Jeffrey A. Sparks, The Accelerating Medicines Partnership RA/SLE Network, V. Michael Holers, Kevin D. Deane, James A. Lederer, Deepak A. Rao, Fan Zhang, Deep immunophenotyping reveals circulating activated lymphocytes in individuals at risk for rheumatoid arthritis. Oral presentation at ACR 2023

2. **Jun Inamo**, Kikuchi J, Kaneko Y, Takeuchi T. Predictive biomarker for remission achievement with abatacept in patients with seropositive rheumatoid arthritis. Poster presentation at EULAR 2019

3. **Jun Inamo**, Suzuki K, Takeshita M, Kassai Y, Takiguchi M, Kurisu R, Okuzono Y, Tasaki S, Takeuchi T. Identification of novel genes associated with dysregulation of B cells in patients with primary Sjögren's syndrome. Poster presentation at ACR 2019

4. **Jun Inamo**, Kaneko Y, Ota Y, Takeuchi T. Rheumatoid Factor Titer Is Inversely Correlated with ANCA Titer and Relates to Characteristic Manifestations in Patients with Eosinophilic Granulomatosis with Polyangiitis. Poster presentation at the 19th International Vasculitis & ANCA Workshop