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

Division of Rheumatology | Center for Health Artificial Intelligence University of Colorado School of Medicine

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PERSONAL STATEMENT

I am a computational biologist and board-certified rheumatologist with a strong interest in unraveling the mechanisms of autoimmune diseases. My research focuses on advancing precision medicine through the integration of multi-omics approaches.

Skills

- Programming & Data Analysis: Proficient in R, Python, and Bash for analyzing clinical and biological datasets, including bulk/single-cell transcriptomics, genotyping data, and clinical metadata.
- **Experimental Techniques**: Familiar with basic laboratory methods such as PCR and cell culture.
- **Domain Expertise**: Clinical rheumatology, human immunology, and translational research.
- **Communication & Leadership**: Experienced in mentoring, scientific presentations, and writing research papers and grant proposals.
- Languages: Fluent in English and Japanese.

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 autoimmune 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

Jun Inamo

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

Publications (selected)

Jun Inamo, Joshua Keegan, Alec Griffith, Tusharkanti Ghosh, Alice Horisberger, Kaitlyn Howard, John F. Pulford, Ekaterina Murzin, Brandon Hancock, Salina T. Dominguez, Miranda G. Gurra, Siddarth Gurajala, Anna Helena Jonsson, Jennifer A. Seifert, Marie L. Feser, Jill M. Norris, Ye Cao, William Apruzzese, S. Louis Bridges, Vivian P. Bykerk, Susan Goodman, Laura T. Donlin, Gary S. Firestein, Joan M. Bathon, Laura B. Hughes, Andrew Filer, Costantino Pitzalis, Jennifer H. Anolik, Larry Moreland, Nir Hacohen, Joel M. Guthridge, Judith A. James, Carla M. Cuda, Harris Perlman, Michael B. Brenner, Soumya Raychaudhuri, Jeffrey A. Sparks, The Accelerating Medicines Partnership RA/SLE Network, V. Michael Holers, Kevin D. Deane, James Lederer, Deepak A. Rao, and 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
- Jun Inamo, Akari Suzuki, Mahoko Takahashi Ueda, Kensuke Yamaguchi, Hiroshi Nishida, Katsuya Suzuki, Yuko Kaneko, Tsutomu Takeuchi, Hiroaki Hatano, Kazuyoshi Ishigaki, Yasushi Ishihama, Kazuhiko Yamamoto & 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
- 3. <u>Jun Inamo</u>, 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. *bioRxiv*, 2023. doi: https://doi.org/10.1101/2023.07.03.547507
- 4. Yuichi Mitsui, Tatsuya Suzuki, Kanako Kuniyoshi, <u>Jun Inamo</u>, Kensuke Yamaguchi, Mariko Komuro, Junya Watanabe, Mio Edamoto, Songling Li, Tsukasa Kouno, Seiya Oba, Tadashi Hosoya, Kentaro Masuhiro, Yujiro Naito, Shohei Koyama, Nobuo Sakaguchi, Daron M. Standley, Jay W. Shin, Shizuo Akira, Shinsuke Yasuda, Yasunari Miyazaki, Yuta Kochi, Atsushi Kumanogoh, Toru Okamoto, 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.
- 5. <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.
- Nakazawa M, Suzuki K, Takeshita M, <u>Jun Inamo</u>, 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.
- 7. **Jun Inamo**. Association of differentially expressed genes and autoantibody type in patients with systemic sclerosis. *Rheumatology (Oxford)*. 2021;60:929-939.
- 8. <u>Jun Inamo</u>, 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.

9. **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. PMID: 31744823.

Complete List of Published Work in My Bibliography:

https://www.ncbi.nlm.nih.gov/myncbi/jun.inamo.1/bibliography/public/

Conferences (Lead Author)

- 1. <u>Jun Inamo</u>, 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. <u>Jun Inamo</u>, 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. <u>Jun Inamo</u>, 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. <u>Jun Inamo</u>, 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