

FOCIS 2023 Member Society Symposium
Japanese Society of Clinical Immunology (JSCI)

Date & Time: Tuesday 20 June 2023, 10:00 am - 12:00 am

Symposium Title: *Trans-omics assessment in clinical immunology*



Chairs

Yoshiya Tanaka, MD, PhD

The First Department of Internal Medicine, School of Medicine,
University of Occupational and Environmental Health Kitakyushu, Japan

Isao Matsumoto, MD, PhD

Department of Rheumatology, Institute of Medicine, University of Tsukuba

Speakers

Keishi Fujio, MD, PhD

The University of Tokyo

Title: Functional genome analysis reveals immunological structure of systemic lupus erythematosus.

Content: Functional genome analysis of systemic lupus erythematosus (SLE) identified two distinct signatures, disease-state signature and disease-activity signature. In particular, the mitochondrial pathway in the disease-state signature was associated with organ damage and genetic risk of SLE.

Katsuya Suzuki, MD, PhD

Keio University

Title: Multi-omic molecular profiling of immune-mediated inflammatory diseases

Content: Molecular profiling using multi-omics analysis is a powerful approach to precisely understand the pathogenesis of complex immune-mediated inflammatory diseases. I would like to introduce our recent studies on Sjögren's syndrome, rheumatoid arthritis, and vasculitis, and explain their challenges and prospects.

Yukinori Okada, MD, PhD

Osaka University

Title: Trans-omics deconvolution of human disease immunology

Content: Human disease immunology is characterized by orchestration of disrupted immune systems. Human omics resources, including genomics, transcriptome, metagenome, are useful to deconvolute hidden immunological modalities in human diseases. In particular, integration of large-scale human genomics and single cell technology provide cell type-specific features in disease biology. Here, we introduce our trans-omics approaches in autoimmune and infectious diseases.

Hikomitsu Asashima, MD PhD

Tsukuba University

Title: Local immune responses to SARS-CoV-2 mRNA vaccination in B-cell depleted patients

Content: B-cell depletion therapies are effective for preventing disease activity among patients with multiple sclerosis, but most treated patients fail to mount humoral immune responses after SARS-CoV-2 vaccinations. To date, vaccine studies have evaluated only systemic immune responses, and tissue-specific immune responses remain unknown. Here, we collect vaccinated skins from B-cell depleted patients and evaluate immune responses with single cell RNA-seq and spatial transcriptome (DBiT-seq). These data will elucidate the impact of B-cell depletion therapies on local immune responses after vaccinations in humans.