

Medical Chemistry Seminar

The power of ONE: Immunology in the age of single cell genomics

Dr. Ido Amit

Weizmann Institute of Science

Date: May 24 (Wed), 2023
Time: AM 10:00–11:30
Venue: Memorial Auditorium
(医学部記念講堂)



The immune system is a complex, dynamic and plastic network composed of various interacting cell types that are constantly sensing and responding to environmental cues. From very early on, the immunology field has invested great efforts to characterize the various immune cell types and elucidate their functions. However, accumulating evidence indicates that current technologies and classification schemes are limited in their ability to account for the functional heterogeneity of immune processes. Single cell genomics hold the potential to revolutionize the way we characterize complex immune cell assemblies and study their spatial organization, dynamics, clonal distribution, pathways, and crosstalk. This emerging field can greatly affect basic and translational research of the immune system. I will discuss how recent single cell genomic studies are changing our perspective of various immune related pathologies from cancer to autoimmune disease and neurodegeneration. Finally, I will consider recent and forthcoming technological and analytical advances in single cell genomics and their huge potential impact on the future of immunology research and immunotherapy.

日本学術振興会 研究拠点形成事業セミナー

 **MIP** Kyoto University
Graduate Program for Medical Innovation



KYOTO UNIVERSITY
FACULTY / GRADUATE SCHOOL OF MEDICINE

Contact: Prof. Osamu Takeuchi
E-mail: otake@mfour.med.kyoto-u.ac.jp
Hosted by Department of Medical Chemistry
Graduate School of Medicine, Kyoto University