



LECTURE SERIES & WORKSHOPS

INFECTION & IMMUNITY

28

JUNE 2018
Thursday

LECTURE

*Lycée Technique
d'Esch/Alzette
Salle de Projection**

11.00 am - 12.00 pm

MEET & EAT*

light lunch provided
*House of BioHealth,
Room Françoise
Barré-Sinoussi*

12.30 - 2.00 pm



*Please register sending a mail to florence.henry@lih.lu



SPEAKER

Prof Ido AMIT

Professor of Department of Immunology,
Weizmann Institute of Science, Rehovot, Israel

HOST:

Department of Infection
and Immunity

RESPONSIBLE LIH SCIENTIST:

Dr Feng He
(feng.he@lih.lu)

THE POWER OF ONE: IMMUNOLOGY IN THE AGE OF SINGLE CELL GENOMICS

ABSTRACT

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 and ingenuity 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 neurodegeneration. Finally, I will consider recent and forthcoming technological and analytical advances in single cell genomics and their potential impact on the future of immunology research and immunotherapy.