

01 Dec 2023

Friday

LECTURE

11.00am - 12.00pm

MEET & EAT *

Light lunch provided

12.30pm - 2pm



Trained immunity: a memory for innate host defense

ABSTRACT

The inability of innate immunity to build an immunological memory, considered one of the main characteristics differentiating it from adaptive immunity, has been recently challenged by studies in plants, invertebrates, and mammals. Long-term reprogramming of innate immunity, that induces adaptive traits and has been termed trained immunity characterizes prototypical innate immune cells such as natural killer cells and monocytes, and provides protection against reinfection in a T/B-cell-independent manner. In contrast, trained immunity has been shown to be able to induce protection against reinfection in a lymphocyte-independent manner. Non-specific protective effects dependent on trained immunity have also been shown to be induced after BCG vaccination in humans. Specific signaling mechanisms including the dectin-1/Raf1 and NOD2-mediated pathways induce trained immunity, through induction of histone modifications (methylation, acetylation) and epigenetic reprogramming of monocyte function. Complex immunological and metabolic circuits link cell stimulation to long-term epigenetic reprogramming of the function of myeloid cells and their bone marrow progenitors. The concept of trained immunity represents a paradigm change in immunity and its putative role in infection and inflammation may represent the next step in the design of future vaccines and immunotherapeutic approaches



SPEAKER

Prof. Dr Mihai Netea

Head Lab Experimental Internal Medicine,
Radboud University Medical Centre, Netherlands

HOST:

Department of Infection and Immunity (LIH)

RESPONSIBLE SCIENTIST:

Jacques Zimmer / (jacques.zimmer@lih.lu)

* Please note that registration is mandatory by sending an email to carole.weis@lih.lu or michelle.roderes@lih.lu

Locations:

Lecture:

House of BioHealth
Conference Room
(ground floor 0)
29, rue Henri Koch,
L-4354 Esch-sur-Alzette

Meet & eat:

House of BioHealth
Salle Françoise Barré Sinoussi
Registration mandatory