

# 24 Nov 2022

 Thursday  
LECTURE

**11.00 - 12.15 pm**
**MEET & EAT\***

Light lunch provided

**12.45 - 2 pm**


## Dissecting host-microbiota interactions across the immune system: lessons from gnotobiotic mice and human monogenic disorders

### ABSTRACT

The gut microbiota has emerged as a key determinant of health and disease. The complexity of this community of microbes and the highly dynamic nature of the dialogue evolved with their hosts put however considerable challenges to identify key species and host mechanisms that are indispensable for building, maintaining or restoring a healthy relationship. In order to address these questions, our team has taken two approaches. The first one relies on the use of gnotobiotic mice colonized at chosen times by selected individual or complex microbiota in order to identify key species indispensable to drive the post-natal maturation of the gut immune barrier. I will show how our results have led to identify the role, in mice, of segmented filamentous bacteria (SFB). I will discuss the particular partnership evolved by these bacteria with their hosts in order to set up a physiological state of inflammation necessary to build a healthy gut barrier that can resist enteropathogens and protect against inflammation. A second approach is based on the genetic dissection of a cohort of individuals, mainly children, developing Mendelian diseases impairing the gut barrier. I will discuss how such analysis allows to hierarchize the mechanisms indispensable to cope with the gut microbiota and maintain homeostasis in the human distal gut.



### SPEAKER

**Dr Nadine Cerf-Bensussan**

Institut IMAGINE-INSERM 1163, Université Paris Cité, Paris, France

### HOST:

Department of Infection and Immunity (LIH)

### RESPONSIBLE SCIENTIST:

Mahesh Desai/ (mahesh.desai@lih.lu)

\* Please note that registration is mandatory by sending an email to [carole.weis@lih.lu](mailto:carole.weis@lih.lu) or [michelle.roderes@lih.lu](mailto:michelle.roderes@lih.lu)

### Locations:

#### Lecture:

 Lycée Guillaume Kroll  
d'Esch/Alzette  
Room: Salle de Projection\*

#### Meet & eat:

 House of BioHealth  
Salle Françoise Barré Sinoussi  
29, rue Henri Koch,  
L-4354 Esch-sur-Alzette  
Registration mandatory

\*Opposite Luxembourg Institute of Health, House of BioHealth, 29, rue Henri Koch, L-4354 Esch-sur-Alzette