



LECTURE SERIES & WORKSHOPS

# INFECTION & IMMUNITY

# 17

NOV. 2016

Thursday

## LECTURE

*Lycée Technique  
d'Esch/Alzette*  
Salle de Projection\*  
**1.00 - 2.30 pm**

## MEET & GREET\* with cakes and coffee

*House of BioHealth,  
Room Françoise  
Barré-Sinoussi*  
**3.00 - 4.30 pm**



\*Please register sending a mail to  
[florence.henry@lih.lu](mailto:florence.henry@lih.lu)



### SPEAKER

**Dr. Brigitta STOCKINGER**

Senior Group leader Francis Crick Institute

### HOST:

Department of Infection  
and Immunity

### RESPONSIBLE LIH SCIENTIST:

**Prof. Dirk BRENNER**  
([dirk.brenner@lih.lu](mailto:dirk.brenner@lih.lu))

## ENVIRONMENT/IMMUNE SYSTEM INTERACTIONS IN HEALTH AND DISEASE

### ABSTRACT

Inflammatory immune responses are influenced by environmental factors that remain poorly defined at present. We are interested in the transcription factor aryl hydrocarbon receptor (AhR) that responds to environmental signals and has substantial influence on immune responses. The AhR is well known in the pharmacology/toxicology field for its role in mediating the toxicity of xenobiotics, but has now attracted the attention of immunologists. The evolutionary conservation of this transcription factor and its widespread expression in the immune system point to important physiological functions that are slowly being unravelled. In particular the emphasis is now shifting from the role of AhR in the xenobiotic pathway towards its

mode of action in response to physiological ligands. Our current focus is on understanding the molecular interactions and functions of AhR in the immune system in steady state and in presence of infection and inflammation, particularly in barrier organs such as the skin, the gut and the lung. An important principle for the function of AhR is a tight control of AhR signalling, which is due to the action of feedback mechanisms such as the induction of metabolising enzymes, which degrade AhR ligands, thereby terminating signalling. In contrast to the negative image of AhR in its toxicological roles it is becoming increasingly clear that AhR deficiency in haematopoietic as well as non-haematopoietic cells has detrimental consequences for their function.

\* Opposite Luxembourg Institute of Health, House of BioHealth,  
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