

LECTURE SERIES & WORKSHOPS 2019

# CANCER RESEARCH

# 11

**DEC 2019**  
Wednesday



## LECTURE

**UniLu Belval Campus**  
*Maison du Savoir*  
Room 3.120  
(2, avenue de l'Université  
L-4365 Esch / Alzette)

## MEET, GREET & EAT \*

light lunch provided  
**UniLu Belval Campus**  
*Maison du Savoir*  
Foyer 0342090 (3rd floor)

**11.00 - 12.00 pm** **12.00 - 1.00 pm**



\* Registration is mandatory  
by sending an email to  
florence.henry@lih.lu



### SPEAKER

## Prof Christoph BECKER

Professor for Molecular Gastroenterology,  
Department of Internal Medicine 1,  
Gastroenterology, Pneumology and  
Endocrinology, UKER, FAU, Erlangen, Germany

### HOSTS:

**LIH and UniLu**

### RESPONSIBLE LIH SCIENTISTS:

**Iris Behrmann**

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## CELL DEATH REGULATION IN THE INTESTINAL EPITHELIUM AND ITS IMPACT ON TISSUE AND IMMUNE HOMEOSTASIS

### ABSTRACT

Experimental data from our group demonstrate that independent from each other, a defect in intestinal epithelial cell function as well as a dysregulated immune response of lymphocytes can lead to a breakdown of the immunological balance in the gut. As a consequence, inflammatory bowel disease (Crohn's disease and ulcerative colitis) can develop. Another consequence of uncontrolled immune responses in the gut might be the manifestation of chronic inflammation in other parts of the body and the development of colorectal cancer.

Cell survival and cell death within the intestinal epithelium have to be strictly regulated to prevent inflammation and cancer development in the gut. Our data indicate that both activation and inhibition of caspase-8 mediates alternative modes of programmed cell death (see figure). It therefore requires a

strict control of the expression and activity of caspase-8 to warrant cell survival. Since the discovery of necroptosis, the participation of this form of cell death was demonstrated in various pathophysiological processes. With our own work we have contributed significantly to the understanding of the importance and regulation of necroptosis. Our current projects investigate the pathophysiological relevance of necroptosis and its regulation in diseases of the intestine.

### Further information:

<http://www.medin1.uk-erlangen.de/en/forschung/research-groups/ag-prof-c-becker/focus-on-gut-physiology-and-pathophysiology/>