

25 JUN
2026

Thursday

LECTURE

MEET & EAT *

FBS room

10:30 - 11:30 + 30 min. Q&A

12:30 - 14:00



Irritable bowel syndrome: when food is a pain in the gut



ABSTRACT

Irritable Bowel Syndrome (IBS) patients suffer from abnormal abdominal pain, or visceral hypersensitivity (VHS), associated with altered bowel habits in the absence of an organic detectable cause. The pathophysiology of the disease is incompletely understood but immune activation, and particularly chronic mast cell activation, is increasingly recognized to alter the function of visceral pain sensing nerves or nociceptors leading to abnormal pain signalling. By releasing increased levels of mediators, including histamine acting on histamine 1 receptors, mast cells sensitize enteric nociceptors and lead to VHS development. We recently showed that a bacterial infection and psychological stress can lead to a local break in oral tolerance to food antigens leading to IgE-mediated mast cell activation and food-induced abdominal pain in mice. Of interest, in humans, intramucosal injections in the rectosigmoid of food antigens results in a local response in IBS patients but not in control subjects. Single cell RNA sequencing of human intestinal mast cells identifies different clusters and shows upregulation of IgE in IBS patients, in line with our preclinical models. Finally, blockade of histamine 1 receptor activation results in symptom improvement in approximately 50% of IBS patients, underscoring the clinical relevance of this neuro-immune axis.

SPEAKER

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HOST:

Lecture series coordinated by the Luxembourg Institute of Health, the University of Luxembourg, and the Luxembourg Institute of Science and Technology, and organized within the framework of the MICRO-PATH Doctoral Training Unit coordinated by the University of Luxembourg and the Luxembourg Institute of Health

RESPONSIBLE SCIENTIST:

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* Please note that registration is mandatory for meeting after presentation by sending an email to michelle.roderes@lih.lu

Location:

House of BioHealth
Big conference room at the ground floor
29, rue Henri Koch,
L-4354 Esch-sur-Alzette