

15^{Oct}

Thursday

LECTURE

MEET AND GREAT *

10:30 - 12:00

12:00 - 14:00



Gut microbiome in population cohorts – shaping factors and associations with health



BIOGRAPHY

The gut microbiome is highly variable between individuals and closely linked to health throughout life. In my group, we study how the gut microbiome develops from pregnancy to old age and how different factors shape the gut ecosystem in health and disease. In this lecture, I will first present our analyses of the large adult population cohort Lifelines, focusing on the roles of host genetics and environmental exposures in shaping the gut microbiome and on its associations with disease. I will then discuss our major early-life project, the parent–infant cohort LLNEXT, which includes 1,450 mother–infant pairs followed longitudinally from pregnancy through the first year of life, with extensive multi-omics profiling. Our analyses show that early-life bacterial and viral communities are highly dynamic and are shaped primarily by delivery mode, feeding practices, parity, pre-pregnancy smoking, and delivery duration. Infants share a substantial proportion of bacterial and viral strains with their mothers' gut microbiota, while fewer strains originate from breast milk and the vaginal microbiome. We also identified associations between maternal and early-life microbial signatures and the development of infant eczema.

Together, these findings provide new insights into the factors shaping the gut microbiome across the life course and its links to health.

SPEAKER

Prof. Alexandra Zhernakova

Professor, group leader

University Medical Center Groningen

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:

Mahesh Desai (mahesh.desai@lih.lu)

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

Location:

Lecture:

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

Meet and great:

House of BioHealth
FBS room 2nd floor
29, rue Henri Koch,
L-4354 Esch-sur-Alzette