

11 DEC
2025

Thursday

LECTURE

MEET & EAT *

Light lunch provided
Salle Barbara Mc CLINTOCK

11.00am - 12.00pm

12.00pm - 1.00pm



Noncoding RNA in the Coordination of DNA Replication and Genomic Stability

ABSTRACT

Nuclear RNAs, whether coding or noncoding, interact closely with the chromatin, influencing chromatin-related processes like the gene expression, which has strong implications for the cell function and the development of pathologies. However, their role in DNA replication and genomic stability is still not fully understood. Our recent research uncovered that RNAs are involved in initiating DNA replication. Specifically, the ORC1 subunit of the human Origin Recognition Complex binds with RNAs transcribed from genes containing origins at their transcription start sites. These RNAs regulate ORC1's phosphorylation and chromatin dissociation, essential for efficient replication origin activation. Beyond initiation, new findings highlight long non-coding RNAs as involved in DNA replication and its stress response. Intriguingly, we found a new class of repetitive long noncoding RNAs enriched at replication forks. These lncRNAs negatively impact DNA synthesis by slowing its rate and reducing efficiency, while favoring the correct packaging of chromatin. I will present our latest findings on these noncoding RNAs' distinct roles, revealing their dynamic functions in coordinating transcription and replication processes in human cells.



SPEAKER

Prof Maite Huarte

Director of the DNA and RNA Medicine Division Cima, Univ. of Navarra, Spain

Principal Investigator, RNA and Gene Regulation in Cancer Laboratory. DNA and RNA Medicine Division/ RNA Biology and Therapeutics/Cima/Univ. of Navarra

HOST:

Luxembourg Institute of Health

RESPONSIBLE SCIENTIST:

Dr Sabrina Fritah (Sabrina.Fritah@lih.lu)

*Please note that registration for Meet and Eat is mandatory via the following link: <https://lsurvey.lih.lu/index.php/562248>

Location:

Lecture:

CHL - Centre
Room: Amphitheatre
4, rue Ernest Barblé
L-1210 Luxembourg

JOIN

Event number: 2783 184 0883
Event password: QVqnUBmC274