

INSTITUT PASTEUR COURSE - EDUCATION CENTER

Multiple roles of RNAs

Institut Pasteur, Paris, February 17-28, 2020

This two-weeks theoretical and practical course focuses on the methods used to study the synthesis, maturation and degradation of a large variety of RNA molecules in eukaryotic cells.

In this practical course, we propose to explore in detail the substrates and mechanisms of a major translation-dependent RNA degradation pathway, the Nonsense Mediated mRNA Decay (NMD). NMD degrades transcripts with premature stop codons through poorly understood mechanisms that are conserved from yeast to humans.

The **lectures** will be delivered by RNA specialists who will focus on the multiple roles of RNA and specific technologies related to RNA studies.

The aim of **the practical course** is to learn classical and innovative RNA-related techniques that include transcriptome analysis using **RNA-Seq, northern blots and RT-qPCR** and the study of different RNA populations that physically associate with the NMD machinery. We will compare transcripts from a wild-type and from a mutant yeast strain in which an essential NMD factor gene has been deleted. The analysis of genome-wide results will integrate phenotypic data (changes in RNA abundance) to illustrate the diversity of NMD targets.

See more at:

www.pasteur.fr/course/rna

Co-directors:

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Practical information:

Deadline for application: September 13, 2019

Attendees: 16 students

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