Visiting Professor Program
Academic Year 2024/2025

TEACHING COMMITMENT: 20 hours

COURSE TITLE
RNA Processing Pathologies: from Cancer to Neurodegeneration

TEACHING PERIOD
2nd term

SCIENTIFIC AREA
Molecular biology

LANGUAGE USED TO TEACH
English

COURSE SUMMARY
In metazoans, alternative splicing is critical for regulating post-transcriptional gene expression and is a major contributor to organismal complexity. Mutations in cis-acting elements on the pre-mRNA that mediate RNA-protein interactions and in trans-acting factors that regulate splicing contribute to disease pathology. Through lectures and presentations, this course will provide students with mechanistic insights into the molecular biology of human disorders that affect post-transcriptional RNA processing, with particular emphasis on cancer and disorders of the nervous system.

LEARNING OBJECTIVES
1. To provide students with fundamental knowledge on alternative splicing as it relates to the regulation of gene expression and to organismal complexity.
2. To understand the basic principles governing the assembly and function of RNA-protein complexes and associated pathologies at the molecular level.
3. To introduce tools and methods in RNA biology research and in the development of therapeutic strategies.

**OTHER ACTIVITIES BESSIDES THE COURSE**
Seminars addressed to PhD students and research fellows.

**VISITING PROFESSOR PROFILE**

**CONTACT REFERENT**
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