

Molecular biology

Introducing

Description

Molecular biology :

- Structure of nucleic acids
- Replication
- Transcription and operons
- RNA maturation
- Regulatory and other non-coding RNAs
- Translation
- Protein folding, modification, interaction, secretion and degradation
- Examples of prokaryotic and eukaryotic gene regulation

Objectives

At the end of this module, the student should have understood and be able to explain (main concepts):

Properties of nucleic acids, organisation of genomes and DNA replication. Gene transcription and translation of messenger RNA leading from DNA to proteins. RNA maturation and modification. Protein folding, modifications, interactions, secretion and degradation. Main modes of regulation of gene expression.

The student should be able to:

Define and describe the main molecular elements involved in the organisation and expression of genomes. Explain and analyse data relating to the

regulation of prokaryotic and eukaryotic genome expression.

Necessary prerequisites

I2BEBS10 Structural biochemistry of carbohydrates, lipids and proteins.

I2BEMI20 Microbiology

Évaluation

L'évaluation des acquis d'apprentissage est réalisée en continu tout le long du semestre. En fonction des enseignements, elle peut prendre différentes formes : examen écrit, oral, compte-rendu, rapport écrit, évaluation par les pairs...

Practical info

Location(s)

 Toulouse