

- Faculté des sciences
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Molecular methods (3BL2195)

| Filières concernées | Nombre d'heures | Validation | Crédits ECTS |
|---------------------------|--------------------|-----------------|--------------|
| Master en biologie | Cours: 7 dj | Voir ci-dessous | 3 |

ph=période hebdomadaire, pg=période globale, j=jour, dj=demi-jour, h=heure, min=minute

Période d'enseignement:

- Semestre Automne

Equipe enseignante:

KESSLER Felix
NEUHAUS Jean-Marc
LONGONI Paolo
VENKATASALAM Shanmugabalaji
Assistants

Objectifs:

Learn molecular biology skills that allow to synthesize a protein starting from its coding DNA

Contenu:

Modern molecular biological methods are now so powerful that they have become indispensable in practically all areas of biology. For one thing, the molecular biology toolbox allows us to study genes and their products in isolation. In the "Molecular Methods" course we will head for the lab and see how a protein can be made in the lab starting from a gene. To do this, the coding DNA (cDNA) of a protein of interest will be amplified by PCR and inserted into a suitable expression vector. In the following, we will use this vector for in vitro protein synthesis using a cell-free reticulocyte lysate. In parallel, we will use the plasmid to transform E. coli cells to overexpress the protein in bacteria. This course offers an introduction to the modern molecular biology toolbox and will be of relevance for the different specialization modules in the Master of biology. Both practical and theoretical aspects will be discussed.

Forme de l'évaluation:

CA (graded)

Documentation:

Will be available on Moodle

Pré-requis:

Bachelor in Biology

Forme de l'enseignement:

Practical course