



Acides nucléiques



Niveau d'étude
BAC +5



ECTS
2 crédits



Composante
Faculté des
Sciences

En bref

- › **Date de début des cours:** 1 sept. 2021
- › **Langue(s) d'enseignement:** Anglais
- › **Méthode d'enseignement:** En présence
- › **Organisation de l'enseignement:** Formation initiale
- › **Ouvert aux étudiants en échange:** Non

Présentation

Description

Discusses nucleic acid structure and function. Reviews methods used to synthesize DNA and RNA-based oligonucleotides, and chemical reactions that lead to modifications of nucleic acids for therapeutic and diagnostic applications. Additional topics include: nucleic acid molecular beacons, antisense and siRNA oligonucleotides and DNA arrays.

Volumes horaires* :

CM : 15 H

TD : 5 H

Objectifs

The lecture aims at providing the students the fundamentals of oligonucleotide synthesis and to enable them to understand the stakes and recent applications in the diagnostic and therapeutic fields.

Pré-requis nécessaires

Organic Chemistry level Master 1

Contrôle des connaissances

Examen écrit terminal de 2h

Documents autorisés : non

Calculatrice non graphique autorisée : oui

Internet autorisé : non

Syllabus

Cours : 15H

DNA is a complex molecule that carries the information necessary for all forms of life. However, in the most basic sense, DNA is a chemical molecule whose properties and arrangements control its ability to code genetic information, as well as its sensitivity to degradation. The notions will be approached from the perspective of the fundamental chemistry of nucleic acids.

1. This course will explore the chemical nature of hereditary material from the perspective of chemical biology.



2. We will explore the structure, function and reactivity of nucleic acids, as well as the mechanisms by which DNA can be damaged and repaired.
3. We will examine how the chemical synthesis of oligonucleotides is integrated into biotechnology and advanced therapies, and how this impacts society.

TD : 5H

The concepts presented in a lecture style format will be reinforced through classroom discussion of articles from scholarly journals.

Infos pratiques

Contacts

Responsable pédagogique

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Lieu(x)

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