

NMR of Biomolecules: : structure, dynamics and interactions

 **ECTS**
3 crédits **Etablissement(s)**
UFR Chimie,
UFR des
Sciences
fondamentales
et biomédicales **Volume horaire**
20h **Période de
l'année**
Semestre 3

En bref

- **Langue(s) d'enseignement:** English
- **Forme d'enseignement :** Cours magistral, Travaux dirigés & Travaux pratiques
- **Ouvert aux étudiants en échange:** Non

Présentation

DESCRIPTION

This lecture aims at providing students with a good understanding of the application of NMR to the structural and dynamics analysis of biomolecules and of their interactions. They will learn how to choose and implement the best experiment for the structural or dynamic question that is addressed in the biomedical field. Nuclear relaxation (T1, T2, nOe effect), and its application to structural and dynamic analysis of biomolecules will be studied in the frame of biomolecular studies (NOESY, ROESY experiments, chemical exchange...). Paramagnetic NMR will be introduced, and its application to the study of supramolecular interactions will be explored. NMR Spectroscopy of proteins will be described in detail.

Content:

Basics of biomolecular NMR: proteins and peptides (6h)

Applications of Nuclear Relaxation (6h)

- Structure determination
- Dynamic processes

Supramolecular Interaction (4h)

- Paramagnetic NMR

Pour en savoir plus, rendez-vous sur > u-paris.fr/choisir-sa-formation

- Interaction / exchange

Laboratory Session : Interaction study by NMR (4h)

HEURES D'ENSEIGNEMENT

NMR of Biomolecules: : structure, dynamics and interactions	Cours Magistral	16h
NMR of Biomolecules: : structure, dynamics and interactions	Travaux Pratiques	4h

PRÉ-REQUIS OBLIGATOIRES

Theoretical concepts of NMR: acquisition of a 1D / 2D NMR experiment, relaxation mechanism, nOe, dynamics. Analyzing 1D and 2D spectra recorded on synthetic or natural molecules to determine their structure.

En bref

CONTACTS

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