

## UE Bio-targeted chemistry 1





Component UFR Chimie-Biologie

- > Teaching language(s): English
- > Open to exchange students: Yes
- > Code d'export Apogée: YACB9U31

# Presentation

### Description

Course outline:

This course describes synthetic approaches and methods for: the synthesis of library of small[1]molecules, the assembly of peptide and analogs, the engineering of molecular conjugates of biomolecules, and the applications of that family of molecules in therapeutics, diagnostics and nanotechnologies (i.e. biosensors).

Details:

- 1/ Peptides and protein engineering
- I.Structural aspects
- II.Synthetic strategies (SPPS, fragment synthesis, native ligation)
- III.Applications in vectorization (Monoclonal antibodies, cell-penetrating peptides, peptide ligands, nanoparticles)
- IV.Antimicrobial peptides, toxins
- V.Pseudopeptides





- 2/ Chemical ligation
- I. The different reactions
- II.Multiple chemoselective ligations
- III.Installing bioorthogonal functionality into target biomolecules
- IV.In vivo click chemistry
- 3/ Combinatorial chemistry
- I. Drug Discovery
- II.Synthetic strategies (combinatorial vs parallel synthesis; solid vs supported synthesis)
- III.Dynamic Combinatorial Chemistry / Target guided synthesis
- 4/ Biosensors
- I. Medicinal, environment and food safety applications
- II.Biomolecules for molecular recognition
- III.Chemical modifications for immobilization and transduction

### Course parts

UE Bio-targeted chemistry 1 - CM

Period : Semester 9

# Useful info

#### Contacts

Program director

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#### Place

#### Grenoble



Lectures (CM)







> Grenoble - University campus