

- Faculté des sciences
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Biosynthesis and function of secondary compounds (3BL2212)

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 Printemps

Equipe enseignante

Profs
KESSLER Felix
VERMEER Joop

Contenu

It is crucial for plant survival to be able to adapt to their environment. This means that they need to cope with pathogens, compete for space with neighboring plants and they need to be able to extract enough nutrients and water from the soil. This so-called developmental plasticity is as important above and below ground. In the "The basics of chemical ecology" you have heard about spectacular examples of plants using secondary compounds to defend themselves against insects. In this course we want to take a more holistic view into different process that are required for plants to adapt to their growth environment. A few topics, linking the plant biochemistry to aspects of chemical ecology and sustainable agriculture will be proposed together with a few landmarks papers that will form the basis of the course. The students will use this as a starting point to prepare in small groups a lecture about a topic of their choice, including a proposition of future perspectives for the research, to present before the end of the course.

Forme de l'évaluation

The course uses a continuous evaluation mode (graded). The final grade will be based on your final presentation and the active participation in the presentations of the other groups (ask questions!).

Modalités de rattrapage

In case of a non sufficient final presentation, you will need to write a 4-page essay about a topic selected by the teachers and defend this essay in a 15-minute oral exam.

Documentation

Will be available on Moodle

Pré-requis

Bachelor in biology

Forme de l'enseignement

Lecture, presentation by the students and discussion of original articles dealing with biosynthesis and ecological functions of secondary compounds

Objectifs d'apprentissage

Au terme de la formation l'étudiant-e doit être capable de :

- Relate aspects of plant biochemistry and physiology with the adaptation of the plants to the environment.
- Use scientific literature data to support a hypothesis on a specific topic.
- Combine the information from different sources to produce a coherent discussion.
- Identify weaknesses and strengths of an experimental approach.
- Extract the most pertinent information from the available scientific literature to discuss a specific topic.
- Explore the proposed topics in plant adaptation adding a personal contribution.

Compétences transférables

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- Teach a biological subject
- Carry out a presentation
- Organise the work in a team.
- Present scientific findings
- Interpret scientific literature