

Advanced Course

Integrative approaches to perceive responses of organisms to environmental challenges

University of Aveiro, 16 – 20 July

Course overview

The advanced course on **Integrative approaches to perceive responses of organisms to environmental challenges** aims to provide practical knowledge on the application of different methodologies perceive effects of different environmental factors on organism's and their responses to these challenges. The course will be comprised of lectures and practical activities. Lectures will outlook the challenges organisms face to present and future conditions and the changes need to respond and survive to the prevalent conditions. The strong focus of the practical activities will offer participants hands-on experience with some of the most important tools in this field of study.

A set of pre-selected samples for the training sessions will be used.
Attendants should bring their personal computers.

Main topics

Lecture 1 – Traditional biochemical biomarkers in ecology/environment

Lecture 2 – Environmental challenges to organisms: present and future

Lecture 3 – Influência dos fatores ambientais na composição química e bioatividade dos alimentos

Course lecturers

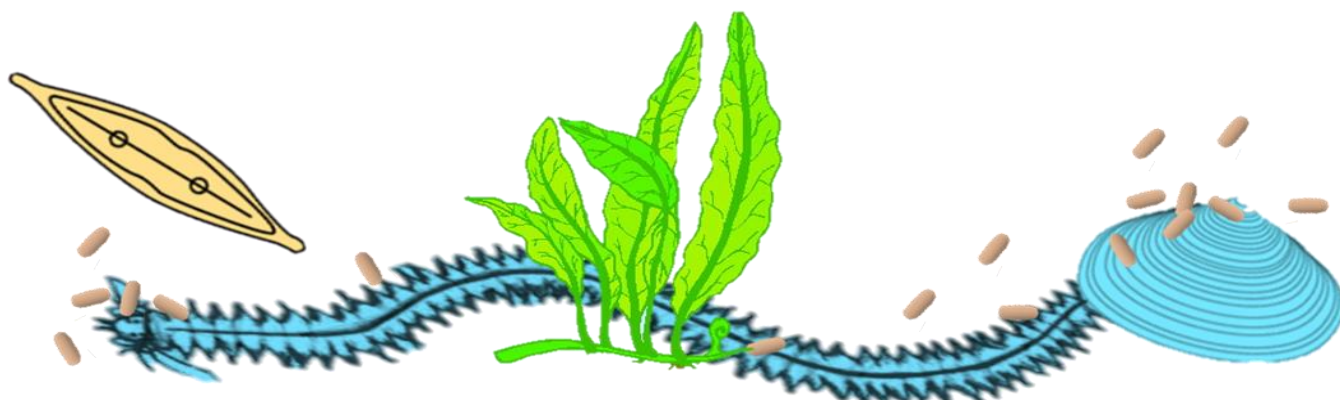
Beatriz Oliveira (F Farmácia - U. Porto)

Cristina Cruz (F. Ciências – U. Lisboa)

Carmen Bedía (IDAEA, CSIC, Barcelona)

Etelvina Figueira (D Bio – U. Aveiro)

Rosa Freitas (D Bio – U. Aveiro)



COURSE PROGRAM

Monday, 16th July

10h00 – 10h30 - Welcome session

10h30 – 12h30 - *Lecture 1* – Traditional biochemical and physiological markers in ecology/ environment
Etelvina Figueira and Rosa Freitas (U. Aveiro)

12h30 – 14h00 - Lunch

14h00 – 16:00 *Lecture 2* – The metabolomics of the plant microbiome recruitment
Cristina Cruz (U. Lisboa)

16h00 – 18:00 - *Training session 1 (part 1)* – *Biomarkers hands-on* (Etelvina Figueira/Rosa Freitas)

Tuesday, 17th July

9h00 – 11h00 - *Training session 1 (part 2)* – *Biomarkers hands-on* (Etelvina Figueira/Rosa Freitas)

11h00 – 11h30 - Coffee break

11h30 – 12h30 - *Training session 1 (part 3)* – *Biomarkers hands-on* (Etelvina Figueira/Rosa Freitas)

12h30 – 14h00 - Lunch

14h00 – 18h00 *Training session 1 (part 4)* – *Biomarkers hands-on* (Etelvina Figueira/Rosa Freitas)

Wednesday, 18th July

9h00 – 11h00 – *Training session 1 (part 5)* – *Data analysis* (Rosa Freitas/Paulo Cardoso)

11h00 – 11h30 - Coffee break

11h30 – 12h30 - Presentation of previous works by home students (*part 1*)

Carmen Bedia (CSIC, Barcelona)

12h30 - 14h00 - Lunch

14h00 – 16h00 - *Training session 2* – Instrumental techniques for metabolomics (Carmen Bedia - CSIC, Barcelona)

16h00 – 18h00 - *Training session 3* – Metabolomics data analysis (*part 1*) (Carmen Bedia)

Thursday, 19th July

9h00 – 11h00 *Training session 3* – Metabolomics data analysis (*part 2*) (Carmen Bedia)

11h00 – 11h30 - Coffee break

11h30– 12h30 - Presentations of previous works by home students (*part 2*)

12h30 – 14:00 - Lunch

14h00 – 16h00 - *Training session 4 - Hands-on metabolomics data treatment* (Carmen Bedia)

16h00 – 19h00 - Tutorial Work

Friday, 20st July

9h00 – 11h30 – Oral presentations by participants and discussion of the results obtained

11h30-12h30 *Lecture 3* – Influência dos fatores ambientais na composição química e bioatividade dos alimentos - Beatriz Oliveira (U. Porto)

12h30 – 13h00 – Closing session and discussion

