

# 6<sup>th</sup> Course Applied Enzymology

## 6<sup>th</sup> European Summer School on Industrial Biotechnology

Groningen, The Netherlands, April 8-12, 2024

### AIM OF THE COURSE

This course will provide detailed information on the basic principles of enzymes, their engineering and industrial application. Except for lectures by experts, the course includes company visits and training in the use of computational enzyme engineering tools.

### COURSE DESIGN AND PROGRAMME TOPICS

The masterclass consists of a number of lectures (morning sessions) given by experts from academia and industry and provides ample opportunity to exchange knowledge with the experts as well as the participants. Participants are encouraged to bring a poster for a pitch talk and poster session. On two afternoon sessions, computational tools in structural biology and enzyme engineering will be explained and demonstrated. This will include hands-on training in using computational tools.

#### Course topics will include:

- Basic principles of enzymes including structure, function, kinetics, stability and inhibition
- Introduction into cofactor-dependent enzymes
- Enantioselectivity and promiscuity of enzymes
- Enzyme immobilisation approaches
- Enzyme engineering in theory and practice
- Computational tools for enzyme engineers
- New industrial applications of enzymes
- Overview of enzymes being used in biomass valorisation

### PARTICIPANTS

The course is at postgraduate level and will be valuable for PhD candidates and other researchers who are working with enzymes in academia and industry, or are considering to do so, in the fields of biocatalysis, food and feed science, bioprocess engineering, and similar areas that involve the development and use of enzymes.

### ORGANISATION

The course combines the biannual Applied Enzymology course (organised by the universities of Groningen and Wageningen) & the European Summer School on Industrial Biotechnology.

#### Course directors:

Prof. Marco Fraaije, Dr. Edita Jurak, Dr. Mirjam Kabel, Prof. Marina Lotti, Prof. Jürgen Pleiss, Prof. Willem van Berkel

#### Local organisers:

Prof. Marco Fraaije, Dr. Edita Jurak, Dr. Andy-Mark Thunnissen, Dr. Hein Wijma, Mrs. Sandra Haan

### COURSE LECTURERS

Prof. Willem van Berkel (WUR, NL)  
Prof. Marco Fraaije (RUG, NL)  
Prof. Gerrit Poelarends (RUG, NL)  
Dr. Max Fürst (RUG, NL)  
Dr. Clemens Mayer (RUG, NL)  
Dr. René de Jong (dsm-firmenich, NL)  
Prof. Jürgen Pleiss (Uni Stuttgart, DE)  
Dr. Sérgio Marques (Masaryk Uni, CZ)  
Prof. Jiri Damborsky (Masaryk Uni, CZ)  
Prof. Ronald de Vries (WI, NL)  
Dr. Mirjam Kabel (WUR, NL)  
Dr. Hein Wijma (RUG, NL)  
Dr. Andy-Mark Thunnissen (RUG, NL)  
Dr. Edita Jurak (RUG, NL)  
Prof. Lígia Martins (ITQB, PT)  
Dr. Ana Toplak (FK-EnzyPep)  
Prof. John Woodly (DTU, DK)  
Prof. Marc van der Maarel (RUG, NL)  
Dr. August Bekkers (Heineken, NL)

### COURSE FEE \*

PhD	€	350,-
Postdoc	€	600,-
Industry	€	1.500,-

\* Course fee includes materials, coffee/tea, lunches and one dinner

### REGISTRATION AND INFORMATION

Registration

[https://www.formdesk.com/rug/Course\\_Applied\\_Enzymology](https://www.formdesk.com/rug/Course_Applied_Enzymology)

Deadline registration: March 1, 2024

Website

<https://fraaije.info/masterclass-applied-enzymology/>

Contact and information

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