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**Enzymes in synthesis:
Bridging the gap between academia and industry**

*Prof. Dr. Francesca Paradisi
Department of Chemistry, Biochemistry and Pharmaceutical Sciences
University of Bern*

**21.05.2024, 4:15 pm
Lecture hall EG16, DCBP**

Drinks are offered after the seminar in front of EG16

Abstract:

The move towards sustainable syntheses is a widespread effort which sees academia and industry developing new strategies and solutions. But why is it that biocatalysis, in general, is still not part of the standard toolbox of a chemist? Enzymes are felt to be challenging to work with, they would require a major revolution of the set-up of an existing process, it appears easier to just replace the catalyst with a more efficient newer one which can be just slotted in in a well-established multi-step chemical cascade. We are trying to change this by making enzymatic steps just as easy to be at least considered. Flow chemistry for example, and in general the flow set up, with the compartmentalization of different steps in dedicated reactors, offers new possibility to integrate biocatalytic steps within a chemical cascade, often without the need to redesign the whole pathway. Here I will present the challenges we feel are still very much a hurdle in the field, and how we have approached them.

About the speaker: Prof. Dr. Francesca Paradisi

Prof. Paradisi graduated with a BSc in Chemistry and then a PhD in synthetic organic chemistry from the University of Bologna. In 2002 she joined the group of Prof. Engel at University College Dublin for her post doc and started working in the area of Biocatalysis. She got her first academic position in the School of Chemistry in UCD in 2006 where she remained till 2016. She was recruited then by the University of Nottingham as Associate Professor in Biocatalysis and promoted to Full Professor in 2019. In the same year however, she was offered the Chair of Sustainable Pharmaceutical Chemistry at the University of Bern and relocated to Switzerland. Flow-biocatalysis and enzyme immobilization are core technologies of the Paradisi Lab. She is the recipient of the Green and Sustainable Chemistry Award 2021 jointly sponsored by the Swiss Chemical Society and Syngenta for her ground-breaking work in developing eco-friendly and ultra-efficient biotransformations for the synthesis of high-value chemicals, dramatically increasing the applicability of biocatalysis.

More information: <https://www.pharmabern.ch>