Zurich University
of Applied Sciences

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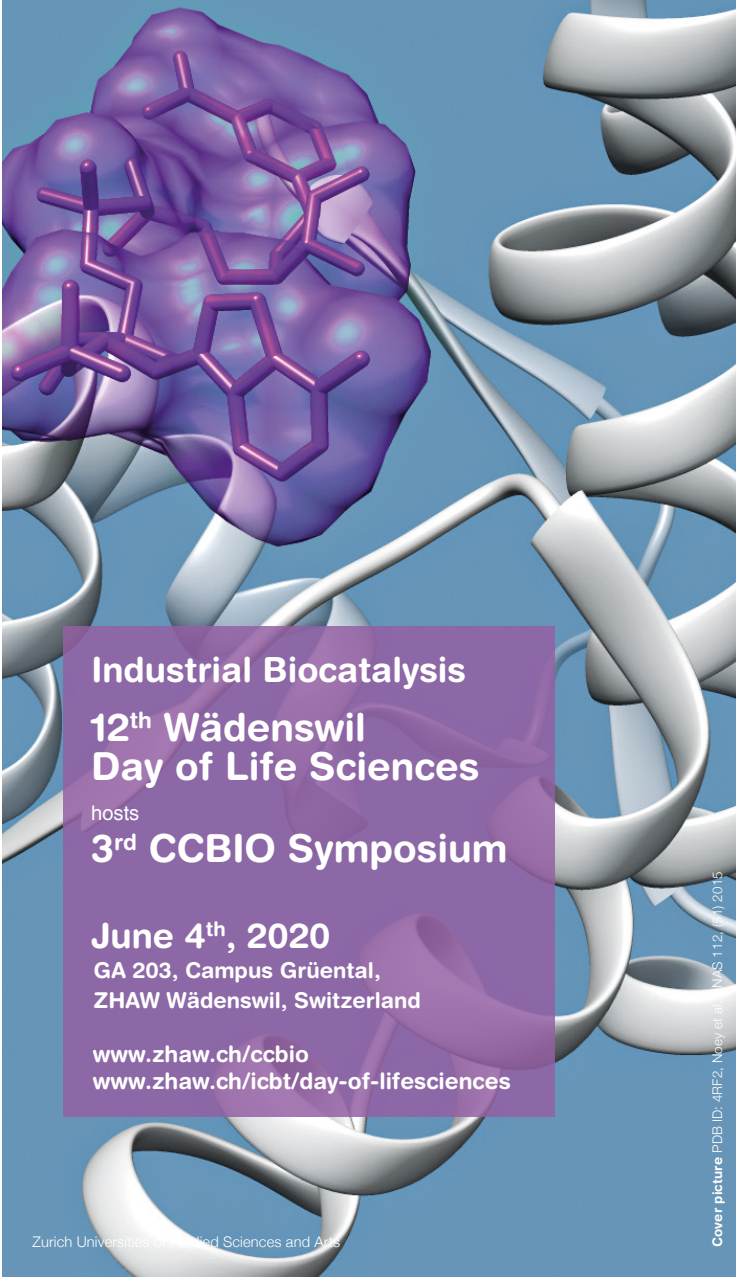
Life Sciences and Facility Management

Institute of
Chemistry and Biotechnology



Industrial Biocatalysis

12th Wädenswil Day of Life Sciences

hosts

3rd CCBIO Symposium

June 4th, 2020

GA 203, Campus Grüental,
ZHAW Wädenswil, Switzerland

www.zhaw.ch/ccbio
www.zhaw.ch/icbt/day-of-lifesciences

Zurich Universities of Applied Sciences and Arts

Cover picture PDB ID: 4RF2, Noey et al., PNAS 112, (1) 2015

Introduction

Biocatalysis has become a vibrant scientific discipline with an increasing number of industrial applications emerging in recent years. Products manufactured by enzymatic transformations are used in the food, feed, chemical, pharmaceutical and cosmetic industries and the number of compounds produced using biocatalysts is expected to increase further.

Future innovations in biocatalysis will be fueled by a close cooperation between experts from chemistry, micro- and molecular biology, biotechnology, bioinformatics and engineering. In a transdisciplinary environment, the 3rd CCBIO Symposium on Industrial Biocatalysis will provide a platform for scientific knowledge transfer and dialog for participants from industry and academia and bring together renowned researchers to discuss recent advances and future directions of the field. The symposium will cover cutting edge topics of biocatalysis, ranging from the evolution of synthetically valuable enzyme families, genetic code expansion and the design and optimization of artificial enzymes, to the development of computational approaches for enzyme engineering. In addition, the symposium will feature several successful biocatalysis examples from industry.

The Competence Center of Biocatalysis at the ZHAW promotes biocatalysis as a complementary method to classic organic synthesis and aims to help bridge the gap between academic laboratories and the production plant. By connecting relevant research competences CCBIO strives to develop a comprehensive biocatalytic toolbox consisting of enzyme libraries and methods, which will facilitate the development of biocatalytic and biosynthetic processes for the chemical and pharmaceutical industry.

Scientific Lead
Prof. Dr. Rebecca Buller,
Head CCBIO,
Institute of Chemistry und Biotechnology,
ZHAW Wädenswil

CC BIO
Competence Center for **Biocatalysis**

Program – Thursday, June 4th, 2020

08.30	Registration and coffee
09.00	**Welcome to the ZHAW, news and outlook** Prof. Dr. Christian Hinderling, Zurich University of Applied Sciences (CH)
09.15	**How esterases evolved into hydroxynitrile lyases** Prof. Dr. Romas Kazlauskas, University of Minnesota (US)
09.45	**Engineered metalloprotein catalysts for selective group transfer reactions** Prof. Dr. Rudi Fasan, University of Rochester (US)
10.15	**Recent advances in enzymatic reduction of carboxylic acids** PD Dr. Margit Winkler, acib GmbH/TU Graz (AT)
10.45	**A biocatalytic process for sustainable Ambrofix production** Dr. Eric Eichhorn Givaudan SA (CH)
11.10	**Evolving Fe/α-ketoglutarate-dependent enzymes** Prof. Dr. Rebecca Buller, Zurich University of Applied Sciences (CH)
11.40	Networking lunch and exhibition
13.15	**Design and evolution of enzymes using an expanded genetic code** Dr. Anthony Green, University of Manchester (UK)
13.45	**Engineering lanthanide-dependent artificial metalloenzymes** Prof. Dr. Cathleen Zeymer, TU Munich (DE)
14.10	**Enzymatic synthesis of hydroxylated pipecolic acids** Dr. Hiroshi Kawabata, Mitsubishi Chemical Company (JP)
14.35	**Development and scale-up of biocatalytic water-addition and oxidation technology for the production of oxy-functionalized products** Dr. Martin Schürmann, InnoSyn B.V. (NL)
15.00	Coffee

Program – Thursday, June 4th, 2020

15.30	**Biocatalysis in the synthesis of active pharmaceutical ingredients** Dr. Hans Iding, F. Hoffmann-La Roche AG (CH)
16.00	**Fast kinetics and microfluidics for biocatalyst engineering** Prof. Dr. Zbyněk Prokop, Masaryk University Brno (CZ)
16.30	**Design of O-methyltransferases with altered subtrate scope and regioselectivity** Prof. Dr. Ioannis Pavlidis, University of Crete (GR)
16.55	**Closing remarks** Dr. Hans-Peter Meyer, HES-SO and Expertinova AG (CH)
17.00	Aperitif & Farewell
Chair	Prof. Dr. Roland Wohlgemuth, Lodz University of Technology (PL)

General Information

Exhibitors

INOFEA AG • TECAN Sales Switzerland AG • Twist Bioscience • Culture Collection of Switzerland AG

Fee

Participants CHF 150.-

Registration

Online registration: www.zhaw.ch/icbt/day-of-lifesciences
E-Mail: weiterbildung.lsfm@zhaw.ch
The registration deadline is May 29th, 2020

Contact:

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