GENERAL INFORMATION

SPONSORS

BRAIN AG, Zwingenberg

TU Hamburg-Harburg

SUPPORTING ORGANISATIONS

TRAVEL

With public transport

By train: ICE to Karlsruhe, then local tram S1 from Karlsruhe main station to Bad Herrenalb via Ettlingen (further information: www.bahn.de).

By bus: from Pforzheim, Baden Baden or Wildbad/Calw.

From Bad Herrenalb station it takes approximately 10 minutes by foot or by taxi.

By car

From Freiburg/Basel/Strasbourg: A5

From Stuttgart/Ulm/München: A8

From Mannheim/Frankfurt/Koblenz: A5/A61

From Karlsruhe via Ettlingen through the Alb valley to Bad Herrenalb. In the town centre, left direction Dobel/Pforzheim.

There are car parks above the conference venue on the right hand side.

VENUE AND ACCOMMODATION

Evangelische Akademie Baden
Dobler Str. 51, 76332 Bad Herrenalb
Germany

SCHEDULE

Beginning: Sunday, 24 August 2014, 2 pm
End: Wednesday, 27 August 2014, 1 pm

LANGUAGE

The course will be held in English.

APPLICATION

Please send your application to:

DECHEMA-Forschungsinstitut
Training department
P.O. Box 17 03 52
D-60077 Frankfurt am Main

Phone: +49 69 7564 253
Fax: +49 69 7564 414
E-mail: gruss@dechema.de
Internet: http://dechema-dfi.de/kwi/en/biotransformations.html

REGISTRATION FEE

Postdocs industry: 450,- €

Postdocs academia: 375,- €

PhD students: 290,- €

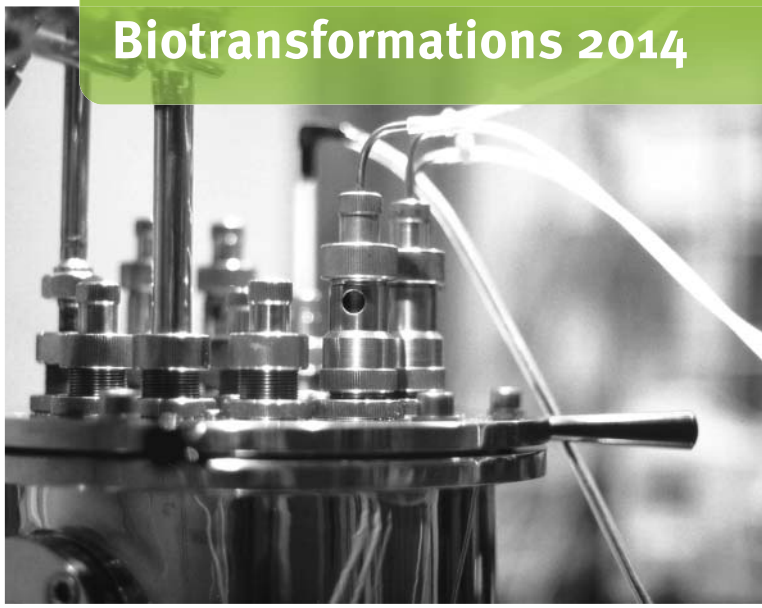
(incl. accommodation, board, course materials, certificate of attendance, soft drinks and VAT)

Deadline: 16 June 2014

3RD SUMMER SCHOOL

24 - 27 August 2014
Bad Herrenalb / Germany

Biotransformations 2014



DECHEMA Biotechnologie

TOPIC

Biotransformations have become an important tool in all areas of industry, where high yielding chemo-, regio-, and enantioselective reactions often are critical. Here the following fundamental aspects are in the focus:

- Screening and development of new catalysts considering the specific requirements of a distinct process.
- Efficiency of production systems considering the qualitative and quantitative mass and energy fluxes.
- Reaction engineering based optimisation of bioprocesses considering side reactions and scale-up.
- Development and implementation of new and efficient processes of downstream processing.

Working fields range from microbial screening, enzyme discovery and optimisation of methods via bio-chemo-catalysis, whole cell biotransformations, the use of enzyme cascades to downstream processing methods and economic as well as environmental aspects. Tailor-designed biocatalysts implemented in innovative and optimized processes for industrial purposes can lead to fine chemicals and valuable pharmaceutical intermediates. In order to make potential of novel and/or engineered enzymes and techniques for biotransformation processes, young scientists with a molecular understanding in the mentioned interdisciplinary fields have to be educated and brought together. The latter is the main and ambitious goal of the Summer School for Biotransformations in 2014.

AIM

To increase efficiency of new biotechnological processes it is important that scientists from the diverse fields of chemistry, biology and process engineering work efficiently together in research and development. The aim of this summer school is to educate PhD students and post-docs as well as young industrial co-workers at an early stage of their career in interdisciplinary communication of the different fields.

The summer school will provide the thorough introduction to the latest biocatalysts, modern expression hosts, state of the art directed evolution, high throughput screening and bioprocess engineering methods. The expert lectures will be given in such a manner, that beside educational information of the specific topic, the interdisciplinary approach will be pointed out.

TARGET AUDIENCE

Addressed are outstanding PhD students, post-docs (scientists) from academia as well as young industrial researchers at an early stage of their career. Speakers will stay at least for one night to enable an intensive exchange and discussion among all participants.

PhD students and post-docs should present a poster on their work. Therefore, it is mandatory that all applicants submit a one page abstract.

The number of participants is limited to 80 persons, enabling close interactions of the young academics with leading experts in the field of biotransformation. A scientific advisory board of noted experts will discuss and decide which application will be accepted. The decision will be based on the scientific impact of the abstract as well as the interdisciplinarity of the presented approach. At the summer school all accepted posters will be intensively discussed during the poster sessions. As a special feature of the summer school, each poster will be presented by the author in a "2 minute speed lecture" as a part of the official scientific programme.

PROGRAMME

The summer school will open the panel for intensive discussions of PhD-students and young scientists together with experts from both the academic and industrial research and development fields. In interactive and interdisciplinary discussions, e.g. in the areas of applied biotechnology, biotransformation, downstream processing, enzyme discovery, protein engineering, strain development and organic catalysis, both opportunities and limitations of novel and innovative processes and tailor-made enzymes will be reflected. Besides the plenary presentations of renowned experts, all participants will have the opportunity to introduce their research studies on a poster, which will be presented in scheduled poster sessions. In order to initiate active discussions, all students and young scientists will give a short oral presentation of the key results of their research.

MODULES

Protein discovery 2.0:	Tailor-made novel biocatalysts
	De novo design
From dry to wet lab:	In silico modelling
	Structure-function analysis
Multi-purpose biocatalysis:	Enzyme promiscuity
	Non-conventional reactions
Multi-step bioconversion:	Enzyme cascades
	A combined world of chemo- and biocatalysis
Pimp the production host:	Strain development
	Pathway engineering
	Synthetic Biology
Higher-Faster-Further:	Enzyme engineering & optimisation
	Directed evolution
	Rational design
From reaction to process:	Fermentation
	Integrated bio processes
	Enzyme immobilization
	Separation
	Purification
New topics:	Bioelectrosynthesis
	C1 Substrate

ORGANISATION COMMITTEE

Jürgen Eck	BRAIN AG, Zwingenberg
Dirk Holtmann	DECHEMA-Forschungsinstitut, Frankfurt
Andreas Liese	Technical University of Hamburg-Harburg
Jens Schrader	DECHEMA-Forschungsinstitut, Frankfurt
Christoph Syldatk	Karlsruher Institute of Technology (KIT)

SCIENTIFIC BOARD

Fachgruppe Biotransformationen
Vereinigung für Allgemeine und Angewandte Mikrobiologie (VAAM)
DECHEMA Gesellschaft für Chemische Technik und Biotechnologie e.V.
Frankfurt am Main

Reply form
(Fax-No.: +49 69 7564-414)

DECHEMA-Forschungsinstitut
Training department
P.O. Box 17 03 52
D-60077 Frankfurt am Main

Registration to the DECHEMA summer school 7161 **Biot**
"Biotransformations 2014" Bad Herrenalb, 24-27 August 2014
Deadline for registration: 16 June 2014

Participant

Ms ☐ Mr ☐ Title _____

Name _____ Surname _____

Company _____

Department _____

Street/POB _____

Code/Place _____

Phone/Fax _____ E-mail _____

Industry ☐ University ☐ PhD Student * ☐
* Please attach proof.

Poster abstract is attached ☐

Invoice address

Company _____

Department _____

Street/POB _____

Code/Place _____

Method of payment

☐ bank transfer after receipt of invoice

☐ by credit card:

☐ Mastercard ☐ Visa

Card number _____ Expiration date _____/_____

The course fee amounts to € 450.- (industry), € 375.- (university), € 290.- (PhD students). If we receive a notice of withdrawal at least two weeks prior to the beginning of the course, the participation fee less 10% for administration expenses will be reimbursed. Thereafter, a reimbursement will not be possible.

_____ _____
Place, date signature + company stamp