



**Life Sciences and  
Facility Management**

**BioTech 2008 & 4<sup>th</sup> Swiss-Czech Symposium**

# **Biopharmaceuticals: why use yeasts?**

**22 – 23 May 2008**

**Institute of Biotechnology  
Zurich University of Applied Sciences ZHAW**

**Campus Grüental, Wädenswil, Switzerland**

**www.biotech2008.ch  
www.swiss-czech.net**

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Zurich Parkside

The further potential of recombinant yeasts, in particular *Pichia pastoris*, *Hansenula polymorpha*, *Yarrowia lipolytica*, *Arxula adenivorans* and *Schizosaccharomyces pombe* in the production of biopharmaceuticals will be evaluated in comparison to other expression systems (*Aspergillus*, *Chryso sporium*, *Penicillium*, *Saccharomyces*, *Talaromyces*, etc.).

Finally, from the applications in focus (i.e. therapeutic proteins, enzymes for the synthesis/modification of pharmaceuticals, drug target proteins, and proteins for diagnostics), particular products appropriate for manufacture using yeasts will be identified.

The sessions and panel discussions will address the following topics:

- Molecular biology tools for pathway engineering and custom-designed glycosylation
- Combined *in vivo* and *in vitro* approaches (i.e. interactions of strain design, process control and chemical post-treatment)
- Further opportunities for advanced yeast expression systems

Moreover, the opinions of the audience will be continually sought and summarised, and recommendations relating to the future of microbial (industrial) biotechnology in research and manufacturing published in a post-conference position paper.

## Scientific Committee

Karin Kovar	ZHAW, Institute of Biotechnology, Wädenswil CH
Karel Melzoch	Institute of Chemical Technology, Prague CZ
Tobias Merseburger	ZHAW, Institute of Biotechnology, Wädenswil CH
Hans-Peter Meyer	Lonza Ltd, Visp CH

## Organising Committee

Domenico Alexakis	Swiss Biotech Association, Zurich CH
Daniel Gygax	Biotechnet Switzerland, Basel CH
Jan Káš	Czech Biotechnology Society, Prague CZ
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Leona Paulová	Institute of Chemical Technology, Prague CZ
Adrian Sigrist	Unitectra, Zurich/Bern CH
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Adrian Stettler	Economic Development Canton of Zurich CH
Radka Strnadová	ZHAW, Institute of Biotechnology, Wädenswil CH

**sponsors listed on [www.biotech2008.ch](http://www.biotech2008.ch)**

## Registration Fees

		<b>before</b> 31 March 2008*	<b>after</b> 31 March 2008
22 <b>and</b> 23 May 2008	(2 days)	CHF 250.–	CHF 300.–
22 <b>or</b> 23 May 2008	(1 day)	CHF 150.–	CHF 200.–

\* The early registration fee applies to all students (international student ID number to be given). Students presenting a poster may apply to [radka.strnadova@zhaw.ch](mailto:radka.strnadova@zhaw.ch) for free admission to the conference (meals, conference proceedings and accommodation not included).

## Exhibition & Sponsoring

Companies from the biotechnological and related industries are invited to present their latest advances at the exhibition. Details of and conditions for company presentations (i.e. stands, printed and online advertisements) are listed on [www.biotech2008.ch/registration](http://www.biotech2008.ch/registration)

## Registration & Submission

[www.biotech2008.ch/registration](http://www.biotech2008.ch/registration)

[www.biotech2008.ch/submission](http://www.biotech2008.ch/submission)

NB Unlike previous years, registration and submission of papers are only possible online.

### 29 February 2008 **Submission deadline**

- abstracts
- short biographies
- print-ready versions of advertisements
- exhibitors' descriptions (optional)

31 March 2008 Early registration deadline

18 April 2008 Notification of acceptance

### 02 May 2008 **Registration (and payment) deadline**

## Pre-Conference Events

On **21 May 2008** the following pre-conference events will take place:

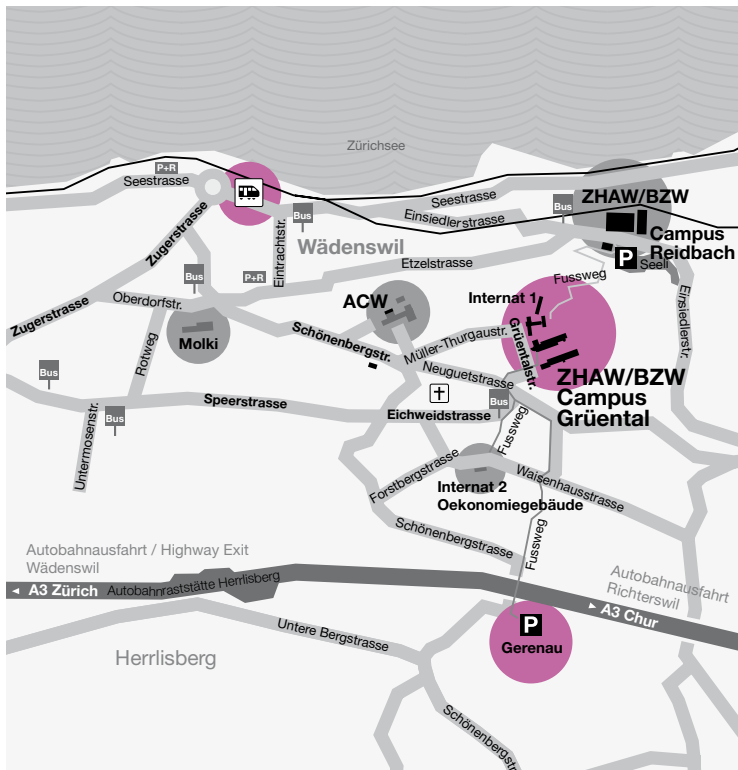
- a special workshop given for the AIBY network (Advances in Industrial Biotechnology of Yeasts)
  - an industry get-together including presentations/discussions and dinner.
- These events are by invitation or by request to [radka.strnadova@zhaw.ch](mailto:radka.strnadova@zhaw.ch)

## Contact

Irène Tinguely (for participants), Tel. +41 58 934 59 80

Marianne Ernst (for exhibitors and sponsors), Tel. +41 58 934 57 50

Postal addresses are given on [www.biotech2008.ch/contact](http://www.biotech2008.ch/contact)



[www.sbb.ch](http://www.sbb.ch) (Swiss Railways)

[www.zvv.ch](http://www.zvv.ch) (local buses & trains)

### from Zurich main station ('Hauptbahnhof') to Wädenswil

- trains four times an hour (S2, S8, IR), journey time 20–30 minutes

### from Zurich airport to Wädenswil

- direct trains twice an hour (S2), journey time 35 minutes

### from Wädenswil railway station to ZHAW Campus Grüental

- by bus 123 or 124 (bus stop 'Hochschule'), 5-minute journey
- on foot 20 minutes
- by taxi from Wädenswil railway station (approx. 10 CHF one way)  
Wädi Taxi, Tel. +41 44 780 52 52  
City Taxi, Tel. +41 44 780 77 77
- by private transport, leaving the A3 motorway (Zurich–Chur) at the Wädenswil exit (parking in Gerenau recommended due to only limited parking space on the Campus Grüental)

### Accommodation

Hotels in and around Wädenswil are listed on [www.biotech2008.ch/venue](http://www.biotech2008.ch/venue)

# High-Level Protein Expression

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08:30–09:00 Registration (Campus Grüental)

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Chairperson: Anton Glieder  
Co-chairperson: Verena Looser

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09:00–09:30 Opening session

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09:30–10:00 **A comparative view on yeast expression hosts *S. cerevisiae* and *P. pastoris***

Christine Lang, TU Berlin D

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10:00–10:10 Discussion

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10:10–10:40 Coffee break & poster session and exhibition

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10:40–11:10 **Fungal cell factories: production and screening of antibody (-fragments)**

Peter J. Punt, TNO, AJ Zeist NL

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11:10–11:20 Discussion

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11:20–11:50 **Intracellular expression of heterologous gene encoding bacterial penicillin acylase in *Pichia pastoris***

Pavel Kyslík, Institute of Microbiology ASCR, Prague CZ

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11:50–12:00 Discussion

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12:00–12:40 **Genomics comes to the recombinant protein production yeast *Pichia pastoris***

James M. Cregg, Keck Graduate Institute of Applied Life Sciences, Claremont USA

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12:40–12:50 Discussion

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12:50–14:00 Lunch & poster session and exhibition

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# Process Engineering vs. Strain Design

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Chairperson: Leona Paulová  
Co-chairperson: Christian Meier

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14:00–14:30 **Alternative cultivation strategies with *Pichia pastoris* for the production of therapeutic recombinant proteins**

Carmen Jungo, Lonza Ltd, Visp CH

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14:30–14:40 Discussion

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14:40–15:10 **Production of cytochrome P450-metabolites using recombinant fission yeast *Schizosaccharomyces pombe***

Matthias Bureik, PomBioTech GmbH, Saarbrücken D

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15:10–15:20 Discussion

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15:20–15:50 Coffee break & poster session and exhibition

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15:50–16:20 **Methanol free protein expression by *Pichia pastoris* using methanol inducible promoter variants**

Claudia Ruth, Institute of Molecular Biotechnology, TU Graz A

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16:20–16:30 Discussion

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16:30–17:00 **Strain design and its impact on process development in *H. polymorpha* and other yeasts**

Gerd Gellissen, PharmedArtis GmbH, Aachen D

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17:00–17:10 Discussion

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17:10–17:40 **Poster awards**

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17:40–19:00 Aperitif & poster session and exhibition

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19:00– Gala dinner (Campus Reidbach)

open end

Addresses by:  
Václav Paces, President of ASCR  
H.E. Boris Lazar, Czech Ambassador to Switzerland  
Ernst Stocker, Mayor of Wädenswil

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# Postranslational Modifications

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08:30–09:00 Registration (Campus Grüental)

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Chairperson: Nico Callewaert  
Co-chairperson: Sandra Núñez

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09:00–09:30 **N-linked protein glycosylation in yeast**

Markus Aebi, Swiss Federal Institute of Technology (ETH),  
Zurich CH

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09:30–09:40 Discussion

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09:40–10:10 **Secretory system engineered yeast expression systems: taking the prototypes further**

Nico Callewaert, Flanders Institute for Biotechnology  
vzw, Ghent B

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10:10–10:20 Discussion

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10:20–10:50 Coffee break & poster session and exhibition

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10:50–11:20 ***Yarrowia lipolytica*: a versatile expression system for the production of biopharmaceuticals**

Adriana Botes, Oxyrane UK Ltd, Manchester UK

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11:20–11:30 Discussion

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11:30–12:00 **Modified substrates in enzymatic glycosylations: a simple route to complex saccharides**

Pavla Bojarová, Institute of Microbiology ASCR, Prague CZ

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12:00–12:10 Discussion

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12:10–12:50 **Panel discussion**

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12:50–14:00 Lunch & poster session and exhibition

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[www.swiss-czech.net](http://www.swiss-czech.net)

## Further Opportunities

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Chairperson: Hans-Peter Meyer  
Co-chairperson: Radka Strnadová

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14:00–14:30 **Physiological characterisation and strain engineering of *Pichia pastoris* by transcriptomics and proteomics**

Brigitte Gasser, BOKU-University of Natural Resources and Applied Life Sciences, Vienna A

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14:30–14:40 Discussion

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14:40–15:10 ***Pichia pastoris*: a powerful expression system to support drug discovery projects in pharmaceutical industry**

Ralf Thoma, F. Hoffmann-La Roche AG, Basel CH

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15:10–15:20 Discussion

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15:20–15:50 Coffee break & poster session and exhibition

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15:50–16:20 **Enzymatic synthesis of glycoconjugates**

Oreste Ghisalba, Novartis Pharma AG, Basel CH

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16:20–16:30 Discussion

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16:30–17:00 **Co-expression of homologous and heterologous genes as tools for advancement of established and new yeast expression systems**

Michael Piontek, Artes Biotechnology GmbH, Langenfeld D

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17:00–17:10 Discussion

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17:10–17:40 **Test for carbohydrate specific internalisation of biosimilars**

Jack Rohrer, University of Zurich, CH

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17:40–17:50 Discussion

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19:00–  
open end Alumni get-together

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