The Collaborative Research Centre SFB 578 “From Gene to Product“

The joined collaborative research centre SFB 578 “*Development of biotechnological processes by integrating genetic and engineering methods - From gene to product*“, aims at combining and integrating methods available both from the basic sciences and from the engineering sciences, notably genetics and biochemical engineering, to obtain high value-added products. The work primarily concerns processes for the microbial production of new heterologous recombinant proteins. The products focused on are either pharmaceutically active (antibodies) or serve as biocatalysts to synthesize new oligosaccharides. The bacterium *Bacillus megaterium* (Gram-positive) as well as the mycelium-forming fungus *Aspergillus niger* are used as host organisms.The basical aim of the collaborative research centre is to investigate and understand the interaction of biological, biochemical, and engineering factors, aspects, and processes, taking the mentioned products and organisms as examples. The central aspects concern integrated systems biotechnological modeling of the biological system, product formation in the reactor, product isolation and purification up to application technology.

Sign up to June 1, 2012

SFB 578 "From Gene to Product", TU Braunschweig
Office, Prof. Rainer Krull
Gaußstraße 17, 38106 Braunschweig
Phone: 0531/391-7653; Fax: 0531/391-7652
Email: r.krull@tu-braunschweig.de

Colloquium fee

External participants have to pay a symposium fee of 50 € (including conference proceedings, lunch and refreshments, "Come together" and dinner). Costs are paid directly at the registration desk.

Accommodation

Städtischer Verkehrsverein Braunschweig
Phone: ++49 (0)531 / 4702040 and
http://www.braunschweig.de/english/touristservice/hotels/index.html

Venue

Chamber of Industry and Commerce Braunschweig
Congress Hall (Entrance staircase “Altstadtmarkt”)
Brabandtstraße 11, 38100 Braunschweig

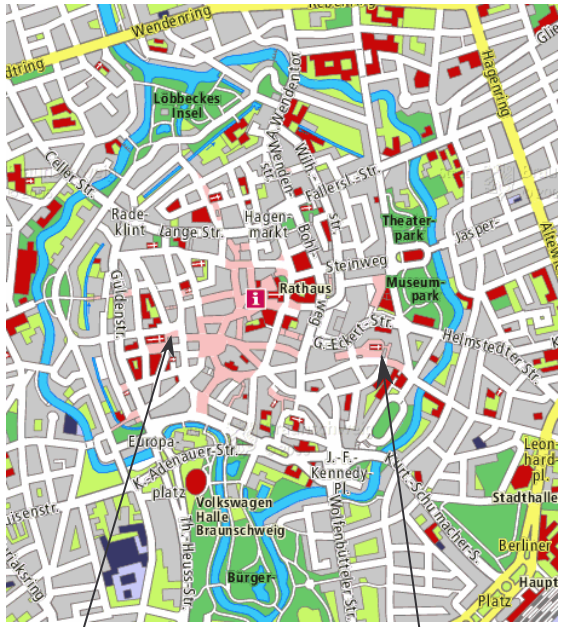
Travelling by car

1. A2 from Hanover and A2 from Berlin to BS AK-Nord towards A391 to Salzgitter *see 3*
2. A 39 from Kassel / Salzgitter *see 3*
3. Exit "BS-Western City"
   - Direction "City Center"
   - Further guidance "Center", left lane
   - Turn left "Ring City West" (from high-rise Nord / LB)
   - Parking Garage “Eiermarkt” or
   - Parking garage exit "Martini Church" (back side of the Chamber of Industry and Commerce Braunschweig, vis-à-vis, historic gable)

Arriving by train

The Chamber of Industry and Commerce Braunschweig is located in the Braunschweig Altstadtmarkt. If arriving by train you will find the Central Station direct public transport connection:

1. With tram line 5 to the Friedrich-Wilhelm-Platz (about 5 min walk to the Chamber of Industry and Commerce Braunschweig
2. With bus M 411 to Altstadtmarkt (entrance staircase Chamber of Industry and Commerce Braunschweig)



Venue:
IHK Braunschweig
Congress Hall
Entrance staircase
“Altstadtmarkt”
Brabandtstraße 11

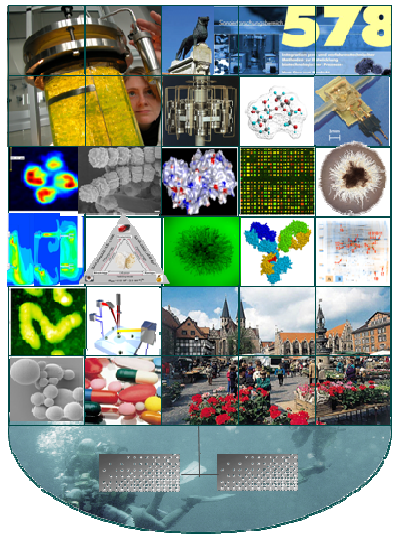
Come together:
“Stadthotel Magnitor“
Am Magnitor 1, Phone: 0531/47 13-

Technische Universität Braunschweig

Collaborative Research Centre 578

Development of Biotechnological Processes by Integrating Genetic and Engineering Methods

– From Gene to Product –



Concluding Colloquium 2012

Congress Hall
Chamber of Industry and Commerce Braunschweig
June 21 and 22, 2012

Program

Thursday, June 21, 2012

8:30 am **Registration**

9:15 am **Welcome addresses**
Prof. Dr. Dieter Jahn
Speaker SFB 578

Prof. Dr. Dirk Heinz
Scientific Director
Helmholtz Centre for Infection Research (HZI),
Braunschweig

Prof. Dr.-Ing. Dr. h. c. Jürgen Hesselbach
President
Technische Universität Braunschweig

Molecular biology of value-added products

Chair: *Prof. Dr. Jürgen Seibel*
Institute of Organic Chemistry
Julius-Maximilians-Universität Würzburg

9:40 am **SFB 578 – From gene to product**
Prof. Dr. Dieter Jahn
Speaker SFB 578

10:00 am ***Keynote Lecture I***
Persistant polymers from renewable resources by biotechnology: from genes to products?
Prof. Dr. Alexander Steinbüchel
Institute of Molecular Microbiology and Biotechnology
Westfälische Wilhelms-Universität Münster

10:30 am ***Keynote Lecture II***
Metabolic engineering of *Bacillus subtilis* for production of vitamins B_2 and B_5
Dr. Zoltan Pragai
DSM Nutritional Products, Basel
Switzerland

11:00 am **A short story about a big amazing bug**
Dr. Rebekka Biedendieck
Institute of Microbiology
Technische Universität Braunschweig

11:20 am **Coffee break**

11:40 am **Holistic bioprocess engineering of antibody secreting *Bacillus megaterium***
Dr.-Ing. Florian David
Institute of Biochemical Engineering
Technische Universität Braunschweig

12:00 pm **Recombinant production of pharma proteins: chances and challenges for alternative host systems**
Dr. Simon Stammen
Process Science, Microbial Fermentation
Boehringer Ingelheim, Vienna, Austria

12:30 pm **Poster discussion I and Lunch**

Systems biotechnology for next level strain and processes

Chair: *Prof. Dr. Rainer Krull*
Institute of Biochemical Engineering
Technische Universität Braunschweig

2:00 pm ***Keynote Lecture III***
Systems biology in *Penicillium chrysogenum*: the Delft approach
Prof. Dr. ir. J. J. (Sef) Heijnen
Department Biotechnology
Delft University of Technology
The Netherlands

2:30 pm ***Keynote Lecture IV***
Lifelines of single cells and populations in large bioreactors - interplay between extracellular environment and cell machinery
Prof. Dr.-Ing. Dr. h.c. Matthias Reuss
Director Center of Systems Biology
Universität Stuttgart

3:00 pm **Poster discussion II and Coffee break**

4:30 pm **Tailor made biotechnology of *Aspergillus niger* - linking metabolism, morphology and process environment**
Prof. Dr. Christoph Wittmann
Institute of Biochemical Engineering
Technische Universität Braunschweig

5:00 pm **Catalytic migration - a way to dream catalysts?**
Prof. Dr. Jürgen Seibel
Institute of Organic Chemistry
Julius-Maximilians-Universität Würzburg

7:00 pm ***Come together* and Conference Dinner**
"Stadthotel Magnitor"
Am Magnitor 1, 38100 Braunschweig
Phone: 0531/47 13-0, Fax: 0531/47 13-499

Friday, June 22, 2012

From lab to industrial application

Chair: *Prof. Dr. Christoph Wittmann*
Institute of Biochemical Engineering
Technische Universität Braunschweig

9:00 am ***Keynote Lecture V***
Catalytic biofilms for continuous chemical syntheses
Prof. Dr. Andreas Schmid
Laboratory of Chemical Biotechnology
Technische Universität Dortmund

9:30 am ***Keynote Lecture VI***
Development of microbial cell factories for bio-refinery through synthetic bioengineering
Prof. Akihiko Kondo
Department of Chemical Science and Engineering
Kobe University, Japan

10:00 am **Coffee break**

Chair: *Prof. Dr. Meinhard Schilling*
Institute of Electrical Measurement Technique and Fundamentals of Electrical Engineering
Technische Universität Braunschweig

10:30 am **Process technology and analytics from bioreactor to protein**
Prof. Dr. Georg Garnweitner
Institute for Particle Technology
Technische Universität Braunschweig

11:00 am **From science to product(ion) - chromatographic development in academia and industry**
Dr.-Ing. Christian Keßler
Process Technology and Engineering
Evonik Industries, Hanau

11:20 am **Magnetic separation as new tool for downstream processing**
Prof. Dr. Sonja Berensmeier
Selective Separation Technology
Technische Universität München

11:40 am **Hydrogel carrier systems for the controlled delivery of therapeutic proteins**
Prof. Dr. Heike Bunjes
Institute of Pharmaceutical Technology
Technische Universität Braunschweig

12:10 pm **Concluding remarks**
Prof. Dr. Dieter Jahn
Speaker SFB 578

12:30 pm **End of the Colloquium**