

## Fees & Registration

The fee covers all coffee breaks, lunch, experimental support and tuition, but does not include accomodation! Additionally each participant gets an issue of „Proteomics in Drug Research“ (Wiley-VCH, 2005. XXII, 350 pages)

HUPO, GBM, NGFN, DGPF-Member: € 700,-  
Non-Member: € 950,-

### Target group

The workshop is addressing all interested colleagues who want to delve into the DIGE technique (e.g. students, Ph.D. students and Postdocs in the field of biochemistry, biology, chemistry).

### Number of participants

12 persons (max.)

### How to register

To register, please send a brief e-mail containing your name and address to Nadine Palacios (Nadine.PalaciosBustamante@rub.de). Each participant will receive an official registration acknowledgment including all relevant bank account details. Please take into account that the processing of your request could require a while!

### Registration deadline

Friday, January 13, 2006!

## General Information

### Venue

The course will be held directly at the MPC.

Medizinisches Proteom-Center (MPC)  
Ruhr-Universität Bochum  
Universitätsstrasse 150 / ZKF E. 142  
44801 Bochum, Germany  
Fon: +49 234 32 29264  
Fax: +49 234 32 14554

### Accommodation

Participants are expected to arrange their own hotel reservations. Some suggestions to stay in Bochum:

#### Art Hotel Tucholsky

Viktoriastrasse 73, 44787 Bochum  
Fon: +49 234-96436-0  
Fax: +49 234-96436-436  
Web: [www.art-hotel-tucholsky.de/start.html](http://www.art-hotel-tucholsky.de/start.html)  
E-Mail: [info@art-hotel-tucholsky.de](mailto:info@art-hotel-tucholsky.de)

#### Hotel Ibis

Universitätsstrasse 3, 44789 Bochum  
Fon: +49 234-33311, Fax: +49 234-3331867  
Web: [www.accorhotels.com](http://www.accorhotels.com)

#### Wald- und Golfhotel im Lottental

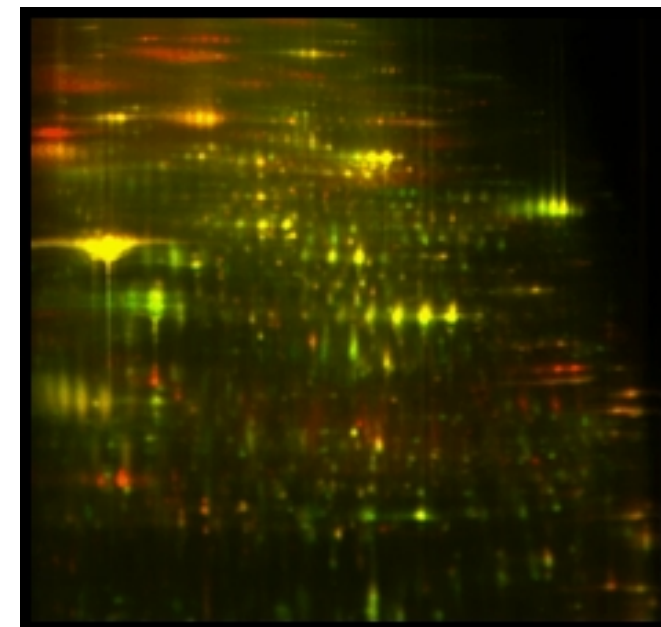
Grimbergstrasse 52a, 44797 Bochum  
E-Mail: [buchung@wald-und-golfhotel.de](mailto:buchung@wald-und-golfhotel.de)  
Fon: +49 234-97960, Fax: +49 234-9796293  
Web: [www.wald-und-golfhotel.de/index.html](http://www.wald-und-golfhotel.de/index.html)



## 2D-DIGE Applications in Proteomics

27.02. - 03.03.2006

- Proteomics
- 2D-PAGE/DIGE
- Image Analysis
- Mass Spectrometry



In the last years the application of two-dimensional electrophoresis (2-DE) often has been declared outdated and the new century of gel-free proteomics was announced.

Nevertheless, 2-DE is still the method of choice when analysing complex protein mixtures. With a separation of 10.000 proteins 2-DE gives access to high resolution proteome analysis. A continuous development has consolidated 2-DE application in proteomics whereof the introduction of Difference Gel Electrophoresis (DIGE) has been the newest improvement.

DIGE circumvents some basic problems of 2-DE like for example gel-to-gel variations and limited accuracy using different fluorophores (Cy2, Cy3 and Cy5) for a multiplexed analysis. In contrast to classical detection methods DIGE relies on covalent derivatization of proteins in each sample with one of the set of matched CyDye™ that do not affect the relative mobility of proteins during electrophoresis.

Thus, DIGE allows rapid identification of protein changes between two samples on the same 2-DE gel without influences of gel-to-gel variations. Additionally, DIGE covers a dynamic detection range of 3-5 orders of magnitude; while silver staining can only detect 30-fold changes.

During the workshop the participants will get an introduction into DIGE technique. In the theoretical part a comprehensive overview of different DIGE applications like e.g. analysis of samples from microdissection in today's proteomics will be given. During the practical part the participants will get an insight into the MPC's DIGE lab analysing different sample types. The identification of differentially expressed spots by mass spectrometry will also be object of the workshop.

### Theory

- Introduction 2D-PAGE / 2D-DIGE
- Sample preparation
- Mass spectrometry
- Data analysis

### Practice

- 1<sup>st</sup> dimension: Isoelectric focussing using CA-IEF or IPG
- 2<sup>nd</sup> dimension: SDS-PAGE
- Image acquisition
- Image analysis using Decyder™
- Spot picking
- Mass spectrometry
- Protein identification

### Speakers

Prof. Dr. Helmut E. Meyer (MPC)  
 Jun.-Prof. Dr. Katrin Marcus (MPC)  
 Jun.-Prof. Dr. Bettina Warscheid (MPC)  
 Dr. Kai Stühler (MPC)  
 Dr. Christian Stephan (MPC)  
 Dr. Burghardt Scheibe (GE Healthcare)

Whether you come by car, plane or train the MPC is very accessible! The institute is located in the "Zentrum für klinische Forschung" (ZKF) directly behind the medicine building (MA).

### By train or plane

The closest airport is „Düsseldorf International Airport“. From the airport please take a regional train to Bochum Hauptbahnhof (Central Station) and then change for local subway number U35 towards Bochum-Querenburg (Hustadt) and get out at the stop named „Ruhr-Universität“.

### By car

Leave the highway A43 at „Kreuz Bochum-Witten“ and take the exit „Bochum-Querenburg/Universität“. Now follow the „Universitätsstrasse“ towards „Universität/Zentrum“. Free parking is sign posted.

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