



DECHEMA

Biotechnologie

**PROGRAMME AND
CALL FOR LAST MINUTE POSTERS**

31 January – 1 February 2013
DECHEMA-Haus · Frankfurt am Main

**Functional Genomics
and Proteomics**

**Applications, Molecular Diagnostics &
Personalized Medicine**

(Successor of Status Seminar Chip Technologies)

www.dechema.de/genomics13



IN COOPERATION WITH



Association of German
Biotechnology Companies

INVITATION

The Functional Genomics and Proteomics conference highlights new applications, advances in molecular diagnostics and the prospects and challenges of personalized medicine. Scientific lectures describe new ways of defining diseases, development and application of protein biomarkers and protein microarrays as well as new tools and modelling approaches. The plenary lectures focus on system-based biomedicine, the treatment of individual patients instead of diseases, and on pharmaco-economic and effectiveness studies in the context of genomic tests. Pros and cons of personalized medicine are discussed by a panel of renowned experts. Poster sessions, the traditional poster party and last not least the exhibition complete the picture.

The Call for Last Minute Posters is open and abstract submissions are welcome.

We look forward to meeting you in Frankfurt!

SCIENTIFIC COMMITTEE

Malte Buchholz	Marburg University Hospital
Thomas Gress	Marburg University Hospital
Thomas Herget	Merck KGaA, Darmstadt
Martin Hrabě de Angelis	German Research Center for Environmental Health, Munich and TU München
Jörg D. Hoheisel	German Cancer Research Center, Heidelberg (Coordinator)
Thomas Joos	NMI Natural and Medical Sciences Institute, Reutlingen
Karin Tiemann	DECHEMA e.V., Frankfurt am Main

Thursday, 31 January 2013

10:30 **Welcome address**

DEFINING DISEASES

Chair: T.M. Gress, Marburg University Hospital

10:40 **Detection and characterization of disease genes in pancreatic cancer through serial gene expression profiling and parallelized functional assays**

S. Melchisedech, T. Honstein, R. Kreider, University Marburg; B. Sipos, J. Sperveslage, University of Tübingen; N. Giese, University of Heidelberg; T.M. Gress, M. Buchholz, Marburg University Hospital

11:00 **In vivo RNAi screen identifies tumor suppressors in breast cancer**

J. Wolf, German Cancer Research Center, Heidelberg; F. Zhang, M.G. Shahmorad, MD Anderson Cancer Center, Houston, TX/USA; C. Flechtenmacher, University Hospital Heidelberg; G. Mills, MD Anderson Cancer Center, Houston, TX/USA; K. Müller-Decker, J.D. Hoheisel, M. Böttcher, German Cancer Research Center, Heidelberg

11:20 **Profiling signal transduction pathways in human tumours: hundreds of „Westerns“ from laser capture dissected samples**

F. Treindl, Y. Heubach, NMI Natural and Medical Sciences Institute at University of Tübingen; S. Schultz, T. Fehm, H. Neubauer, Tübingen University Clinic; M.F. Templin, NMI Natural and Medical Sciences Institute at University of Tübingen

11:40 **Coffee break and poster viewing**

PROTEIN BIOMARKERS

Chair: M. Buchholz, Marburg University Hospital

12:00 **Autoantibody signatures of rheumatoid arthritis patients identified with a bead-based assays approach**

H. Goehler, J. Schwermann, M. Gamer, K. Marquardt, A. Telaar, D. Chamrad, C. Theek, A. Lueking, Protagen AG, Dortmund; J. Fischer, M. Schneider, University Hospital Düsseldorf; P. Schulz-Knappe, Protagen AG, Dortmund

12:20 **Identification of autoantibody biomarkers for prostate cancer screening using protein microarrays**

J. Luna Coronell, M. Gamperl, R. Kulovics, AIT Austrian Institute of Technology GmbH, Vienna/A; P. Hofer, A. Gsur, Medical University Vienna/A; J. Hofbauer, F. Längle, Landeskrankenhaus Wiener Neustadt/A; A. Weinhäusel, AIT Austrian Institute of Technology GmbH, Vienna/A

12:30 **Protein biomarker signature for risk classification of ERalpha positive breast cancer patients identified using reverse phase protein arrays**

J. Sonntag, C. Bender, German Cancer Research Center, Heidelberg; S. Aulmann, University of Heidelberg; S. von der Heyde, M. Nietert, University Medical Center Göttingen; A. Lier, German Cancer Research Center, Heidelberg; B. Burwinkel, University of Heidelberg; S. Wiemann, German Cancer Research Center, Heidelberg; T. Beissbarth, University Medical Center Göttingen; H.P. Sinn, A. Schneeweiss, University of Heidelberg; U. Korf, German Cancer Research Center, Heidelberg

12:50 **Lunch**

LECTURE PROGRAMME

Thursday, 31 January 2013

PLENARY LECTURE I

Chair: T. Herget, Merck KGaA, Darmstadt

- 14:15 **Diagnostic reaches pharmacy – treating patients instead of treating diseases**
T. Dingermann, Goethe University Frankfurt am Main

MODELLING

Chair: T. Herget, Merck KGaA, Darmstadt

- 15:00 **A Boolean model of the cardiac gene regulatory network determining first and second heart field identity**
A. Groß, F. Herrmann, D. Zhou, H.A. Kestler, M. Kühl, Ulm University
- 15:10 **Dynamic multi-scale modeling for individualized spatiotemporal prediction of drug effects**
J. Diaz Ochoa, J. Bucher, J. Niklas, K. Mauch, Insilico Biotechnology AG, Stuttgart
- 15:30 **A model of the DNA damage response (DDR) regulatory network in aging**
A. Scheffold, C. Müssel, F. Herrmann, K.L. Rudolph, H.A. Kestler, Ulm University
- 15:40 **Coffee break and poster viewing**

PLENARY LECTURE II

Chair: M. Hrabě de Angelis, German Research Center for Environmental Health, Munich, and TU München

- 16:10 **System-based biomedicine**
R. Balling, Luxembourg Centre for Systems Biomedicine/L

PANEL DISCUSSION

- 16:55 **Personalized medicine – pros and cons**

The objective of personalized medicine is to make the treatment as individualized as the disease, to analyze a person's susceptibility of developing a certain disease and its response to a certain treatment. First drugs are on the market and the expectations are high. However, the costs of such individualized treatments also present a challenge for the public health sector. The pros and cons will be discussed by the following renowned experts:

Rudi Balling	Luxembourg Centre for Systems Biomedicine/L
Theo Dingermann	Goethe University Frankfurt am Main
Thomas Gress	Marburg University Hospital
Martin Hrabě de Angelis	German Research Center for Environmental Health, Munich, and TU München (moderation)
Bruce Quinn	Foley Hoag LLP, Boston, MA/USA

- 18:00 **Poster party**

- 20:30 **End of the first day**

LECTURE PROGRAMME

Friday, 1 February 2013

TOOLS

Chair: T. Joos, NMI Natural and Medical Sciences Institute, Reutlingen

- 9:30 **Improving the biomarker validation by a cross-platform comparison**
K. Köhler, H. Seitz, Fraunhofer Institute for Biomedical Engineering, Potsdam
- 9:40 **Impedance sensing in trans-well chambers shows metastasis promoting potential of mesenchymal stem cells**
F. Graf, German Cancer Research Center & Mannheim University of Applied Sciences, Heidelberg; M. Boutros, German Cancer Research Center & Heidelberg University; C. Maercker, Mannheim University of Applied Sciences & German Cancer Research Center, Heidelberg
- 9:50 **Technical realization of a new synthetic bio production system generating human tumor specific targeted cytokines in personalized medicine**
N. Klehr, L. Bauer, H. Focke, B. Brüderl, J. Setter, Dr. Klehr Institut für Immunologie und Zellbiologie, Munich
- 10:00 **High throughput in vitro antibody generation for gene function analysis**
S. Dübel, TU Braunschweig
- 10:20 **Coffee break and poster viewing**

PROTEIN MICROARRAYS

Chair: J.D. Hoheisel, German Cancer Research Center, Heidelberg

- 10:50 **On demand protein arrays for personalised proteomics – a progress report**
R. Schmidt, D. Kastelic, E. Cook, M.J. Taussig, O. Stoevesandt, Babraham Institute, Cambridge/UK
- 11:00 **Creating protein patterns with light by maskless projection lithography**
B. Waterkotte, A. Waldbaur, B.E. Rapp, Karlsruhe Institute of Technology, Eggenstein-Leopoldshafen; K. Schmitz, TU Darmstadt
- 11:10 **Pitfalls and payoffs in relative protein quantification using protein microarrays**
R. Wellhausen, H. Seitz, Fraunhofer Institute for Biomedical Engineering IBMT, Potsdam-Golm
- 11:20 **Antibody microarray proteomics of pancreatic cancer cells under the effect of stromal secretory mediators**
A. Yildirim, A. Marzoq, M.S.S. Alhamdani, J.D. Hoheisel, German Cancer Research Center, Heidelberg

PLENARY LECTURE III

Chair: T. Joos, NMI Natural and Medical Sciences Institute, Reutlingen

- 11:30 **Genomic tests: the impact of pharmaco-economic and comparative effectiveness studies on adoption**
B. Quinn, Foley Hoag LLP, Boston, MA/USA
- 12:15 **Poster Prizes** (see page 7)
- 12:30 **Closing remarks**
- 12:35 **Lunch and end of the conference**

POSTER PROGRAMME

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Posters are presented during the poster party on Thursday, 31 January 2013, 18:00 – 20:30 hrs, and lunch and coffee breaks. The authors are expected to be present during the poster party. The three best posters will receive a Poster Prize (see page 7).

- P01 **Point-of-care diagnostics: first steps towards a new platform for drug screening**
S. Schumacher, Fraunhofer Institute for Biomedical Engineering, Potsdam
- P02 **3D-hydrogel matrix for improved bioanalytical applications**
A. Beyer, S. Pollok, K. Weber, J. Popp, Institute of Photonic Technology, Jena
- P03 **Rank aggregation for candidate gene selection**
A. Burkovski, L. Lausser, H.A. Kestler, Ulm University
- P04 **A fast solution to NGS library preparation with low nanogram DNA input**
P. Liu, G.J.S. Lohman, E. Cantor, B.W. Langhorst, E. Yigit, New England Biolabs Inc., Ipswich, MA/USA; B. Textor, New England Biolabs GmbH, Frankfurt am Main; L.M. Apone, D.B. Munafò, C. Sumner, F.J. Stewart, T.C. Evans Jr., E.T. Dimalanta, T.B. Davis, New England Biolabs Inc., Ipswich, MA/USA
- P05 **Development of living cell microarrays as analytical test systems for biomarker detections**
R. Bongartz, F. Stahl, T. Scheper, Leibniz University Hanover
- P06 **A mathematical model of Wnt response: switch behavior as a result of asymmetric mutual concentration dependent inhibition**
E. Sträng, M. Kühl, H.A. Kestler, Ulm University
- P07 **The critical noise level for learning Boolean functions**
M. Maucher, H.A. Kestler, Ulm University
- P08 **Development of a device platform for predictive and prognostic point-of-care testing using the example of pathogen identification**
F. Scherag, University of Freiburg; R. Götzen, microTEC Gesellschaft für Mikrotechnologie mbH, Duisburg; G. Sulz, Fraunhofer Institute for Physical Measurement Technique (IPM), Freiburg; M. Schmidt, Micropelt GmbH, Freiburg; M. Panning, University of Freiburg; H. Attig, Qiagen GmbH, Hilden; T. Brandstetter, J. Rühle, University of Freiburg
- P09 **Serum auto-antibody testing of breast cancer patients**
I. Gyurjan, S. Roskopf, R. Kulovics, AIT Austrian Institute of Technology, Vienna/A; C.F. Singer, C. Rappaport-Fürhauser, Medical University of Vienna/A; A. Weinhäusel, AIT Austrian Institute of Technology, Vienna/A
- P10 **Simultaneous amplification and detection of multiple miRNAs and mRNAs**
A. Mader, U. Riehle, T. Brandstetter, J. Rühle, University of Freiburg
- P11 **A polymer-based protein microarray technology for multiparametric cytokine analysis**
A. Evers, T. Brandstetter, University of Freiburg; T. Neß, T. Reinhard, University Eye Hospital of Freiburg; J. Rühle, University of Freiburg

POSTER PROGRAMME

- P12 **Identification of autoantibody biomarkers for colon cancer screening using protein microarrays**
J. Luna Coronell, K. Sergelen, R. Kulovics, AIT Austrian Institute of Technology GmbH, Vienna/A; P. Hofer, A. Gsur, Medical University Vienna/A; J. Hofbauer, F. Längle, Landeskrankenhaus Wiener Neustadt/A; A. Weinhäusel, AIT Austrian Institute of Technology GmbH, Vienna/A
- P13 **Chip-based molecular diagnostic for detection of a cancer related single nucleotide polymorphism**
C. Steinbach, C. Steinbrücker, K. Weber, J. Popp, Institute of Photonic Technology (IPHT), Jena
- P14 **High throughput profiling of the human immune repertoire using a high density peptide array platform**
K. Stengele, J. Bühler, Nimblegen Systems GmbH, Waldkraiburg
- P15 **Fraunhofer ivD-platform: assessment of cardiac risk using a creditcard-sized system for patient-near testing**
D. Sartorius, E. Rümpel, D. Michel, S. Schumacher, E. Ehrentreich-Förster, Fraunhofer Institute for Biochemical Engineering IBMT, Potsdam
- P16 **Cell free bioengineering of human growth factors followed by their identification via intracellular transformation by nPS in vitro**
N. Klehr, L. Bauer, H. Focke, B. Brüderl, J. Setter, Dr. Klehr Institut für Immunologie und Zellbiologie, Munich
- P17 **Antibody microarray-based proteomics of pancreatic stellate cells under various pro-inflammatory stimuli**
A. Marzocq, J.D. Hoheisel, M.S.S. Alhamedani, German Cancer Research Center, Heidelberg
- P18 **Proteomics of blood cellular components by means of antibody microarrays**
R. Uhler, A. Marzocq, J.D. Hoheisel, M.S.S. Alhamedani, German Cancer Research Center, Heidelberg

SUBMISSION OF LAST MINUTE POSTERS

The submission of abstracts for last minute posters is still possible until **11 January 2013**. For detailed information and submission please see

www.dechema.de/genomics13

The selection of the posters will be based on the review of the one-page abstracts by the Scientific Committee. Authors will be informed about the acceptance in January 2013. These posters will be announced online and in the book of abstracts being available at the conference.

POSTER PRIZE

The Poster Prize is awarded in recognition of outstanding poster presentations. The Scientific Committee will select the three best posters and the prizes, each endowed with EUR 300, will be awarded on Friday, 1 February 2013 at 12:15 hrs. All poster authors are expected to be present.

EXHIBITION

EXHIBITION

The conference offers a unique opportunity to promote your products and services for all aspects of functional genomics, proteomics, molecular diagnostics, and advanced tools like next generation sequencing and chip technologies.

EXHIBITORS:

(as of 25 November 2012)

- » **BioSpring GmbH**, Frankfurt am Main
- » **European Biotech Network**, Dolembreux/B
- » **Miltenyi Biotec GmbH**, Bergisch-Gladbach
- » **New England Biolabs GmbH**, Frankfurt am Main
- » **Tecan Sales Switzerland AG**, Männedorf/CH
- » **VBU – Association of German Biotechnology Companies**, Frankfurt am Main

The exhibition will be located in the foyers of DECHEMA-Haus with direct access to the lecture hall, together with the poster exhibition and in the area where coffee breaks and poster party take place.

Few exhibition stands are still available. The charge for a stand of 6 sqm is EUR 1,200 plus 19 % VAT (see online registration form). The distribution of the stand space is based on the principle „First come, first served“.

For further information please contact the congress secretariat,

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E-mail: wu@dechema.de

or

Dr. Karin Tiemann

Phone: +49 69 7564-349

E-mail: tiemann@dechema.de

GENERAL INFORMATION

CONFERENCE LANGUAGE

The conference language is English.

REGISTRATION

Registration should be made online

@ www.dechema.de/genomics13.

Registration will be open as long as free capacity is available. Confirmation of registration and the invoice will be sent on receipt of the registration form.

Please note: Publication deadline of the list of participants is **10 January 2013**. There is no guarantee that registrations received thereafter will appear in the list.

REGISTRATION FEE¹⁾

	Member ²⁾	Non-Member
Academia	170 €	185 €
Industry	335 €	350 €
Student ³⁾	60 €	75 €

1) No VAT requested acc. to § 4.22 UStG

2) Personal DECHEMA members, EFC/EFCE passport holders

3) Proof of status required

The conference ticket includes the book of abstracts, the list of participants, meals and beverages during the breaks.

PAYMENT

Due to organisational reasons we can only accept online registration and payment by credit card and EC card. We ask you for your understanding.

CANCELLATION AND REFUNDS

€ 30 administrative costs will be charged for cancellations made before **10 January 2013**. Thereafter 80% of the registration fee will be invoiced, however, the book of abstracts will be sent. Cancellation must be made in writing (letter, fax or e-mail).

If the event is cancelled by DECHEMA, the full fee will be refunded. Further claims for compensation are excluded.

GENERAL INFORMATION

ACCOMMODATION

Hotel Tryp Frankfurt

Katharinenkreisel (Opelrondell)

60486 Frankfurt am Main

Phone: +49 69 707 30-500

Fax: +49 69 707 30-333

E-mail: reservierung.frankfurt@tryp-deutschland.de

Single room: 87 € per night incl. breakfast and taxes

(3 min by bus line 50, departure directly in front of the hotel every 15 min)

Mercure Hotel & Residenz

Voltastr. 29

60486 Frankfurt am Main

Phone: +49 69 7926-2706

Fax: +49 69 7926-2707

E-mail: h1204-re5@accor.com

Single room: 92 € per night incl. breakfast and taxes

(10 to 15 min walk. Rates for 2012 might be slightly higher.)

Accommodation has been reserved for conference participants at a special rate in the abovementioned hotels (Rates for 2013 might be slightly higher). The keyword is "genomics2013". Reservations should be made by **5 January 2013**.

HOW TO GET TO DECHEMA

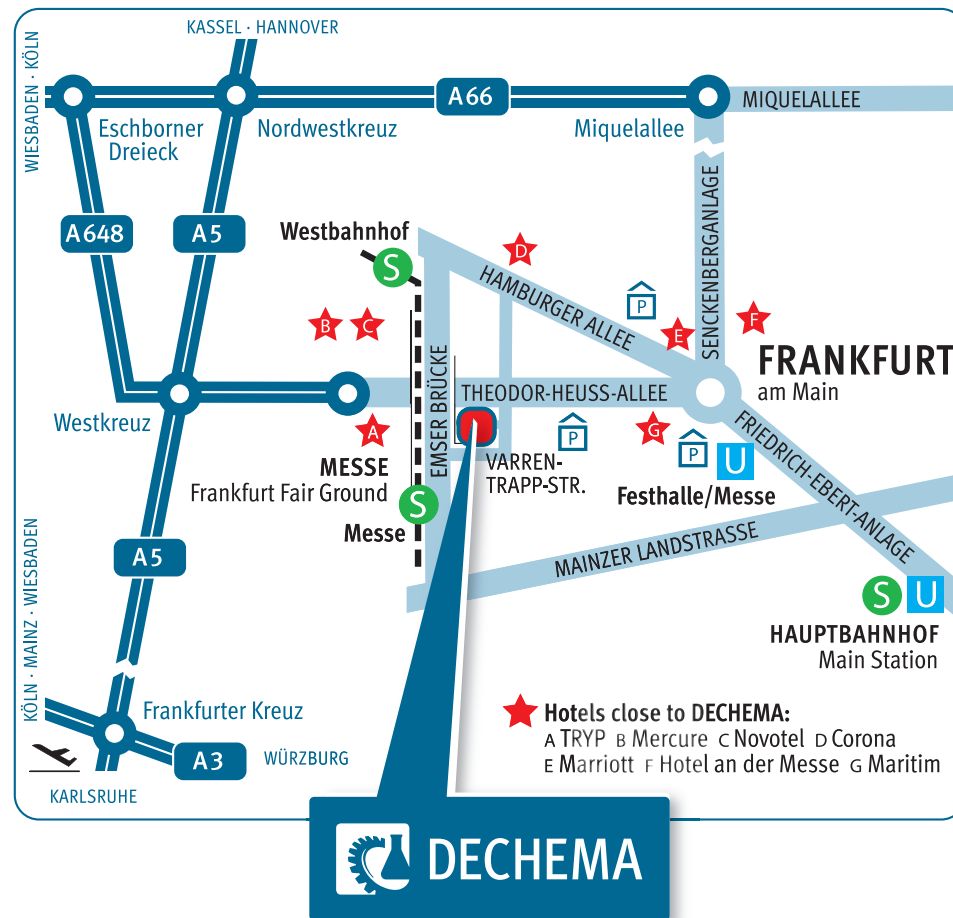
For detailed route description please check

@ www.dechema.de/location

Parking spaces on DECHEMA site are limited. Please use the multistorey car parks along Theodor-Heuss-Allee, e.g. Congress-Center-Messe (CMF) or Messturm. Both are located in the direction of the city.

PLEASE NOTE: The area of DECHEMA is part of the low emission zone in Frankfurt. Only vehicles displaying an appropriate badge on their windscreen will be allowed to enter the low emission zone (www.umweltzone.frankfurt.de).

GENERAL INFORMATION



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