POTSDAM DAYS ON BIOANALYSIS 2017
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Welcome

Frequently, the “Potsdam Days on Bioanalysis” provide an excellent platform for researchers, clinicians and entrepreneurs to discuss diagnostics’ hot topics, trends and recent developments as well as new areas of application and future markets. The Forum attracts participants worldwide – amongst them renown scientists and leading companies in the diagnostics market.

Connecting again the International Technology Forum on In vitro-Diagnostics and Bioanalysis with the Potsdam Colloquium on Bioanalysis, the Potsdam Days on Bioanalysis give new insights in the area of diagnostics for the ageing society as well as in new developments of IVD.

Facing the medical and technological needs, this year’s Technology Forum focuses on in vitro-diagnostics in the aging society. International well-known speakers present new developments and recent challenges in this area during the following sessions:

• Role of IVD for innovative patient care of elderly patients
• Challenges of IVD for elderly patients
• Diagnostic biomarkers for age-associated diseases
• New biomarkers indicating the aging process

The Potsdam Colloquium shows how to bring laboratory results to POCT. Non-invasive testing with fast results will transform our healthcare system and can have a positive impact on operational efficiency, patient care, infectious disease outbreaks, diabetes monitoring, to name just a few applications. Technological innovations, including biosensors, lab-on-chip and wearable devices, as well as quality management and new IVD directive will be discussed.

Organized by the Cluster Health Capital in cooperation with this year’s partners Charité – Universitätsmedizin Berlin and Brandenburg Medical School Theodor Fontane, Potsdam Days on Bioanalysis 2017 will again attract national and international specialists.

International Technology Forum on In vitro-Diagnostics and Bioanalysis

New Challenges & Perspectives for IVD in the Aging Society

09.15
Welcome Address
René Mantke, Vice Dean for Research and Science, Brandenburg Medical School Theodor Fontane

09.30
Opening Lecture
Under-, over- and misuse in geriatric medicine
Roland Nau, Evangelisches Krankenhaus Göttingen-Weende

10.10
Coffee Break

Session 1: Innovative care for elderly patients

10.40
KeyNote: The BASE study – Laboratory values in the elderly, are they different?
Elisabeth Steinhagen-Thiessen, Charité – Universitätsmedizin Berlin

11.10
Ultra fast lab-on-chip miRNA extraction system for new diagnostics
Gregory Dame, Brandenburg Medical School Theodor Fontane

11.30
Bridging the digital gap – or how we aim to converge point-of-care diagnostics and laboratory diagnostics
Stefan Rödiger, BTU Cottbus-Senftenberg, Senftenberg

11.50
Biomarkers for assessing kidney funktion in the elderly
Elke Schäffner, Charité – Universitätsmedizin Berlin, Institute of Public Health

12.10
Lunch Break and Poster Session
Session 2: Diagnostic biomarkers for age-associated diseases

13.10
Novel mechanisms and evolving biomarkers in ischemic cardiovascular diseases
Ferdinand le Noble, Karlsruhe Institute of Technology

13.30
Innovations in vascular medicine
Ivo Buschmann, Brandenburg Medical School Theodor Fontane

13.50
Status of dementia research and pathways to new therapies
Hans-Ulrich Demuth, Fraunhofer Institute for Cell Therapy and Immunology IZI, Halle & Fraunhofer Institute of Bioanalytics and Bioprocesses (IZI-BB) Potsdam-Golm

14.10
iPrognosis – an early detection of Parkinson’s disease via a smartphone application
Lisa Klingelhöfer, Department of Neurology, University Hospital Carl Gustav Carus, Technical University Dresden

14.30
Coffee Break

Session 3: New biomarkers indicating the aging process

15.00
KeyNote: Biomarkers of human ageing based on the MARK-AGE study
Alexander Bürkle, University of Konstanz

15.30
Biological age predictors
Michael Walter, Charité – Universitätsmedizin Berlin

15.50
Old and new signatures of immune aging
Andreas Thiel, Berlin-Brandenburg Center for Regenerative Therapies (BCRT) & Charité – Universitätsmedizin Berlin

16.10
IgG glycome as a dynamic biomarker of health and ageing
Gordan Lauc, University of Zagreb & Genos Glycoscience Research Laboratory, Croatia

Session 4: Impulses from Industry

16.30
Microarrays and nanoarrays in the IVD market from R&D till application
Ron Wolbert, M24You GmbH, Berlin

16.40
A novel metabolic biomarker for the diagnosis of the global burden congestive heart failure
Ulrike Rennefahrt, Metanomics Health GmbH, Berlin

16.50
A validated workflow for the automated extraction of cfDNA from 4 ml of body fluids for liquid biopsy
Christian Jurinke, Stratec Molecular GmbH, Berlin

17.00
Impulse Lecture & Get Together
Science and industry - Successful partners for Germany (Fraunhofer study on innovation footprint)
Nicole Stelzner, Novartis Pharma GmbH, Berlin
Potsdam Colloquium on Bioanalysis

Bringing Laboratory Results to POCT – Medical Need, Emerging Technologies and Market Demands

09.00
KeyNote: Point-of-care testing – medical needs, healthcare challenges and emerging technologies
Peter Luppa, Klinikum rechts der Isar der Technischen Universität München, Institute for Clinical Chemistry and Pathobiochemistry

Session 1: New Technologies for Point-of-Care Testing

09.40
Point of care diagnostics of infectious diseases in the third world
Frank Hufert, Brandenburg Medical School Theodor Fontane, Senftenberg

10.00
Point of care diagnostics in veterinary medicine
Ahmed Abd El Wahed, Georg-August-Universität Göttingen

10.20
Coffee Break

10.50
Next generation point-of-care diagnostics: Opportunities and challenges
Jörg Schickedanz, QIAGEN Lake Constance GmbH, Stockach

11.10
A technology platform for digital nucleic acid testing at the point of need
Felix von Stetten, Hahn-Schickard, Freiburg

11.30
circRNAs: Novel potential biomarkers
Henry Memczak, qpa bioanalytics GmbH, Berlin

Company Presentations

11.50
PolyAn: Molecular surface engineering for high-performance consumables
Fridtjof Lechhart, PolyAn GmbH, Berlin

12.00
Diagnostic tool to improve dose decision during TNFa-inhibiting therapy
Janko Brand, BioTeZ Berlin-Buch GmbH, Berlin

Impulse on the New EU Regulation of IVD

12.10
New EU regulation on in-vitro-diagnostic medical devices – main changes and challenges for companies
Michael Kahnert, BIO Deutschland, Berlin

12.30
Lunch Break and Poster Session

Session 2: New methods for virus detection and characterisation – 2nd Status seminar of the project “FluType”

Moderation: Marc Hovestädt, qpa bioanalytics GmbH

13.30
Targeting the Raf/MEK/ERK signaling pathway for antiviral therapy
Oliver Planz, University of Tübingen

13.50
Development of a peptide-based subtyping platform for influenza viruses (FluType)
Frank Bier, Fraunhofer Institute of Cell Therapy and Immunology – Branch Bioanalytics and Bioprocesses IZI-BB, Potsdam

14.10
Three-dimensional structuring of polymer films
Nenad Gajovic-Eichelmann, Fraunhofer Institute of Cell Therapy and Immunology – Branch Bioanalytics and Bioprocesses IZI-BB, Potsdam

14.30
Optimized target detection in qPCR and ddPCR: Better sensitivity through new probe and primer chemistries
Richelle Spanjers, Integrated DNA Technologies, Leuven, Belgium

14.50
End of Programme
Speakers

Prof. Dr. Frank Bier
Fraunhofer Institute for Cell Therapy and Immunology – Branch Bioanalytics and Bioprocesses IZI-BB
Development of a peptide-based subtyping platform for influenza viruses (FluType), Nov 24th, 13.50

- studied Physics and Mathematics at the Universities of Münster and Heidelberg
- 1989 Promotion
- 1989 – 1993 Postdoc at the „Gesellschaft für Biotechnologische Forschung“ (GBF the national Biotechnology Research Laboratory, now HZI) in Braunschweig
- 1994 – 1998 project leader at Frieder Scheller’s Biosensor group at the Max-Delbrück-Centre for Molecular Medicine in Berlin
- 1998 he founded the “Molecular Bioanalytics” branch at Fraunhofer IBMT in Potsdam-Rehbrücke
- 2003 Chair for „Applied Bioelectronics and Biochiptechnology“ at der University Potsdam
- 2014 Head of Department „Biosystems Integration and Process Automatisation“ oft he newly formed branch of Fraunhofer IZI-BB in Potsdam-Golm
- Main interests are nanobiotechnology, Lab-on-Chip technology and biosensors with a strong view towards production technologies and real world applications

Dr. Janko Brand
BioTeZ Berlin-Buch GmbH
Diagnostic tool to improve dose decision during TNFa-inhibiting therapy, Nov 24th, 12.00

- Currently: Senior Scientist, BioTeZ GmbH
- Project leader, Metabolomic Discoveries GmbH
- Project manager, Epinamics GmbH
- PhD at the Max Delbrück Center for Molecular Medicine
- Study of biology and diploma thesis at the Max Planck Institute for Infection Biology

Prof. Dr. Ivo Buschmann
Brandenburg Medical School Theodor Fontane
Innovations in vascular medicine, Nov 23rd, 13.30

- Full Professor of Internal Medicine, Interventional Angiology
- Director Richard Thoma Institute für Experimental Angiologie MHB
- Chairman Dept. for Angiologie Medical School Brandenburg
- Senior Consultant Charité Berlin
- Founder FirstFlow GmbH
- Founder EFVM European Foundation for Vascular Medicine

Prof. Dr. Alexander Bürkle
Universität Konstanz, Molecular Toxicology Group
Biomarkers of human ageing based on the MARK-AGE study, Nov 23rd, 15.00

Function
- 2016 – 2020 Dean of the mathematic/natural sciences section
- 2016 – 2020 Commission Responsibility in Research

Awards:
- (2011) – GT Toxicology Award of the European Society of Toxicology and the Magazine „Toxicology”
- (2011) – Ursula M. Händel Animal Welfare Prize of the DFG

Dr. Gregory Dame
Brandenburg Medical School Theodor Fontane (MHB)
Ultra fast lab-on-chip miRNA extraction system for new diagnostics, Nov 23rd, 11.10

- 2015 – today Senior scientist at the institute of microbiology and virology, MHB
- 2005 – 2007 Postdoctoral research fellow and project leader of a self-raised funding ZIM-Project „production of antimicrobial surfaces “ at chair of chemistry and physics of interfaces, IMTEK, University of Freiburg
- 2002 – today Freelance worker and founder of different companies as scientific consultant of diverse institutes and biotech-enterprises
- 2000 – 2002 Scientific coworker at the GeneScan Europe AG in Freiburg as a Project
leader in the research- and development division at Biochip Technologies GmbH

  „Knock-out“ of a putative transporters resulting in a light independent gametogenesis in Chlamydomonas reinhardtii

• 1993 – 1993 Diploma thesis at the institute of microbiology, university of Freiburg
  Isolation and characterisation of chaperonin Cpn 60 from Rhodobacter capsulatus

• 1987 – 1993 Studies in biology, specialized in microbiology and molecular biology, University of Freiburg, Germany

Main domain(s) of research

• Developing lab-on-a-chip systems for bacterial detection
• Implementation and development of lab-on-a-chip assays
• Developing technologies for RNA extraction systems esp. for miRNAs and noncoding RNAs in mammalian cells
• Antimicrobial and biocompatible surfaces with plasma nanofilms
• Establishing a chip-based metabolic cell analysis platform

Prof. Dr. Hans-Ulrich Demuth
Fraunhofer Institute for Cell Therapy and Immunology IZI, Halle & Fraunhofer Institute of Bioanalytics and Bioprocesses (IZI-BB)
Potsdam-Golm
Status of dementia research and pathways to new therapies, Nov 23rd, 13.50

• 35 years research published in over 180 posters, >245 papers, >125 patents, presented over 100 times at meetings, universities and companies. Since 1990 teaching protein sciences. Over 100 graduations promoted. h-index

• 1993 establishing DP4 inhibition as diabetes treatment, now with annual turnover of 9b US$

• In 1990ies discovering of glutaminyl cyclase (QC) generation of pyroglutamate Aβ
• Since QCs also modify chemokines, they are now targets in Alzheimer’s and Inflammation
• First drug in clinics 2010. Phase 2a concluded 2017

Dr. Ahmed Abd El Wahed
Georg-August-Universität Göttingen
Point of care diagnostics in veterinary medicine, Nov 24th, 10.00

Dr. Abd El Wahed studied veterinary medicine at Mansoura University, Egypt. He received his PhD in biology from Goettingen University, Germany in 2011. He has participated in the development of 30 point-of-care assays for the detection of infectious agents. In 2013, he was awarded the young investigator award from the ASTMH on the establishment of a mobile laboratory for rapid detection of hemorrhagic fever viruses at low resource settings. Recently, he established a mobile suitcase laboratory for rapid detection of viruses, bacteria and parasites. The mobile setup was in field trials in Guinea, Senegal, Egypt, Sudan, Sri Lanka, Bangladesh and Brazil.

Dr. Nenad Gajovic-Eichelmann
Fraunhofer Institute for Cell Therapy and Immunology – Branch Bioanalytics and Bioprocesses IZI-BB, Potsdam
Three-dimensional structuring of polymer films, Nov 24th, 14.10

Educational background:

• 1999 PhD in analytical biochemistry, University of Potsdam, Germany
• 1994 Engineer of Biotechnology, Technical University of Berlin, Germany

Appointments

• Group Manager, Biomimetic Functional Materials at Fraunhofer IBMT, 2012 – 014
• Junior Research Group Manager, BMBF Junior Research Group “Biohybrid Systems based on Supramolecular Chemistry” c/o Fraunhofer IBMT, 2008 – 2012
• Group Manager, Biosensors Research Group at Fraunhofer IBMT, 2001 – 2008
Dr. Christian Jurinke
STRATEG Molecular GmbH
A validated workflow for the automated extraction of cfDNA from 4 ml of body fluids for liquid biopsy, Nov 23rd, 16.50

Education
• UCSD Product Development
• Uni Hamburg Biochemie, Dr. rer. nat.

Professional experience
• 10/2011 – present CEO Stratec molecular
• 01/2008 – 09/2011 Director Product Management Caprotec
• 1998 – 01/2008 Director Product Management Sequenom

Michael Kahnert
BIO Deutschland
New EU regulation on in-vitro-diagnostic medical devices – Main changes and challenges for companies, Nov 24th, 12:10

• since August 2008 – acting Corporate Counsel at BIO Deutschland (Biotechnologie-Industrie-Organisation Deutschland e.V.) in Berlin
• 2012 – 2014 Managing Director of EABP
• lawyer at the German Federal Labour Market Authority and several law offices for insolvency law and civil law
• degree in law, University of Rostock
• legal clerkship in Berlin and Los Angeles

Dr. Lisa Klingelhöfer
Department of Neurology, University Hospital Carl Gustav Carus, Technical University Dresden, Dresden
iPrognosis – an early detection of Parkinson’s disease via a smartphone application, Nov 23rd, 14.10

Lisa Klingelhöfer MD graduated from the University of Dresden, Germany in 2008. In March 2009 she started her residency at the Department of Neurology at the Technical University of Dresden under Professor Reichmann. Between July 2013 and November 2014 she worked as a clinical research fellow at the Department of Neurology, National Parkinson Foundation Centre of Excellence, King’s College Hospital in London under supervision of Professor K Ray Chaudhuri.

Lisa Klingelhöfer is a member of the Young Neurologists of the European Academy of Neurology (EAN) and the current secretary of the Resident and Research Fellow Section of the EAN. Her major research interests are patients with Parkinson’s disease with special focus on non-motor symptoms, disease monitoring and treatment, furthermore dystonia and deep brain stimulation of patients with movement disorders.

Prof. Dr. Gordan Lauc
University of Zagreb & Genos Glycoscience Research Laboratory, Croatia
IgG glycome as a dynamic biomarker of health and ageing, Nov 23rd, 16.10

• President of the International Glycoscience Organization and member of the Steering Committee of the European Glycoscience Forum
• Professor of Biochemistry and Molecular Biology at the University of Zagreb Faculty of Pharmacy and Biochemistry
• Founder and CEO of Genos Ltd.
• 2012 he was appointed Honorary Professor at the University of Edinburgh and Adjunct Professor at the Edith Cowan University in Perth
• 2009 – 2013 member of the National Science Council and also President of the National Council for Natural Sciences
• 2007 chairman of the committee that prepared Croatian National Action plan for the increased investment in research in development
• 1998 – 2010 founded DNA laboratory for the identification of war victims at the University of Osijek School of Medicine (and also served as Vice-Dean for Science between 2001 and 2005)
• Postdoctoral training at the Institute for Medical Physics and Biophysics in Münster and Johns Hopkins University in Baltimore
• 1995 obtained PhD in Biochemistry and the University of Zagreb
Fridtjof Lechhart  
PolyAn GmbH, Berlin  
Molecular surface engineering for high-performance consumables, Nov 24th, 11.50

- Currently: COO/CFO (Geschäftsführer) PolyAn GmbH  
- Business Development and Sales EMEA at Polypore Inc. (now Asahi) Investment Manager at SHS Venture Capital Diplom-Wirtschaftsingenieur TU-Berlin and CASS Business School, London

Prof. Dr. Ferdinand le Noble  
Karlsruhe Institute of Technology  
Novel mechanisms and evolving biomarkers in ischemic cardiovascular diseases, Nov 23rd, 13.10

- Currently: since 2015, W3 Professor and director of the Department Cell and Developmental Biology  
- 2006 – 2015 Group leader at the MDC and W2 appointment at the Charite, Berlin

Education
- 1986 – 1991 Msc, Faculty of Health, Medicine and Life Sciences, Maastricht University, The Netherlands  
- 1997 Ph.D. in Pharmacology, Maastricht University, The Netherlands

Research direction
Focus lays on the understanding of the basic molecular mechanisms that control angiogenesis, arteriogenesis, and vessel function in normal development and in pathological conditions related to ischemic cardiovascular diseases.

Prof. Dr. Peter Luppa  
Klinikum rechts der Technischen Universität München, Institute for Clinical Chemistry and Pathobiocchemistry  
Point-of-care testing – medical needs, healthcare challenges and emerging technologies, Nov 24th, 9.00

Peter B. Luppa is apl. Professor of Clinical Chemistry at the TU München. He is head of the central laboratory and the blood bank in the Institute of Clinical Chemistry and Pathobiocchemistry at the Klinikum rechts der Isar, the academic hospital of the TU.

He acts also as POCT coordinator for the entire hospital and is the head of the working group POCT within the German Society for Clinical Chemistry and Laboratory Medicine (DGKL).

Dr. Luppa published 126 original peer-reviewed articles (listed in Pubmed, as of September 2017). He is also editor of the first German textbook on POCT, the third edition (German and English) published in July 2017.

Dr. Henry Memczak  
Henry Memczak, qpa bioanalytics GmbH  
circRNAs: Novel potential biomarkers, Nov 24th, 11.30

- 2010 finished study of nanotechnology at University of Kassel  
- 2014 PhD in Biochemistry at University of Potsdam/Fraunhofer IZI-BB, Potsdam  
- 2015 foundation of qpa bioanalytics GmbH (spin-off of University of Potsdam)  
- currently scientific director at qpa and research assistant at University of Potsdam  
- focus on applied and translational research in the field of bioanalytics

Prof. Dr. med. Roland Nau  
Evangelisches Krankenhaus Göttingen-Weende  
Under-, over- and misuse in geriatric medicine, Nov 23th, 09.30

Roland Nau, MD MSc, studied Medicine, Sociology and Philosophy, and then specialized in Neurology. He was trained in basic sciences under the supervision of Otto Creutzfeldt and Michael Conlon, Max-Planck-Institutes for Biophysical Chemistry and Experimental Medicine, Göttingen, and Martin Täuber, University of California, San Francisco. For over 20 years, he has been studying the entry of antinfectives and other drugs into the cerebrospinal fluid (CSF) in patients and experimental animals. Research interests are focussed on various aspects of infections of the central nervous system, in particular pharmacodynamics of antinfectives and neuroprotective agents, microglial activation, neuronal and axonal injury and neuroregeneration. He has broad experience in CSF analysis and physiology. RN is member of the Editorial board of “Chemotherapy”.
Prof. Dr. Oliver Planz
University of Tübingen, Department of Immunology
Targeting the Raf/MEK/ERK signaling pathway for antiviral therapy, Nov 24th, 13.30

Scientific Career History
• Since 2017 also in the function CSO at ATRIVA Therapeutics GmbH
• Present Professor and head of the group “Translational Immunology of Infection” in the Department of Immunology at the University of Tübingen
• 1996 – 2011 Head of research group “Immunology and Cell Biology” at the Institute of Immunology Friedrich-Loeffler-Institute, Tübingen
• 1994 – 1996 Research assistant at the Institute of Experimental Immunology, Department Pathology (Prof R.M. Zinkernagel) at the University of Zurich
• 1991 – 1994 PhD-thesis at the Institute of Virology, Giessen “The role of CD8+ T cells in the immunopathogenesis after Borna disease virus infection”

Research Interests:
My research interest is the treatment of influenza with compounds inhibiting cellular targets that are a prerequisite for viral replication. These compounds can either used as single drugs or in combination with existing antiviral drugs like oseltamivir.

Dr. Ulrike Rennefahrt
Metanomics Health GmbH
A novel metabolic biomarker for the diagnosis of the global burden congestive heart failure, Nov 23rd, 16.40

• Since 2008: Scientist; promotion to Senior Scientist in 01/2013, metanomics GmbH / Metanomics Health GmbH; BASF group company (Berlin, Germany)
  - Project manager: Lung cancer treatment monitoring and congestive heart failure
  - Biomarker development and fee-for-service metabolomics analysis
• 2006 – 2008: Postdoctoral Associate, Fox Chase Cancer Center, Philadelphia (USA)
• 2002 – 2006: Postdoctoral Associate (in 02/2003 promotion to Research Scientist, C1), Institute for Medical Radiation and Cell Research, Würzburg (Germany)
• 1998 – 2002: Graduate student, University of Würzburg (Germany)
• 1997 – 1998: Diploma student, University of Würzburg (Germany)

Dr. Stefan Rödiger
BTU Cottbus-Senftenberg, Institute of Biotechnology
Bridging the digital gap – or how we aim to converge point-of-care diagnostics and laboratory diagnostics, Nov 23rd, 11.30

I studied Pharmabiotechnology and Forensic Sciences. I worked at the University of Jena, Technical University of Dresden and Max Planck institute Dresden and performed my doctoral thesis in a joint project at Lausitz University of Applied Sciences and Charité. There, I focused upon studying cardiomyocyte gene expression and developed novel assay platforms and software for the detection and quantification of proteins and nucleic acids. Subsequent, I took up a position as group leader at Brandenburg University of Technology Cottbus - Senftenberg where I intensified my interest in the development of diagnostic tools for human diseases and applied statistical bioinformatics. My research deals with PCR based methods (qPCR, dPCR), microfluidics and methodologies based on proteins in the field of autoimmune diagnostics. My research interest in applied statistical bioinformatics mainly encompass exploiting non-linear and multivariate data sets for personalized medicine and reproducible research.

Prof. Dr. Elke Schäffner
Charité - Universitätsmedizin Berlin, Institute of Public Health
Biomarkers for assessing kidney function in the elderly, Nov 23rd, 11.50

• 2017 deputy director, Institute of Public Health, Charité – Universitätsmedizin Berlin
• 2015 Professor for Public Health/Epidemiology at the Institute of Public Health, Charité – Universitätsmedizin Berlin
• 2013 co-director Centre Virchow-Villermé for Public Health Paris-Berlin
• 2009 Principal Investigator of the “Berliner Initiative Studie (BIS)”, a cohort that investigates the epidemiology of chronic kidney disease in older adults
• 2008 Habilitation Internal Medicine
• 2007 Subspeciality in Nephrology
• 2005 Specialty in Internal Medicine
• 2002 „Graduation“ Master of Science in Epidemiology (MSc), Harvard School of Public Health, Boston
Dr. Jörg Schickedanz
QIAGEN Lake Constance GmbH
Next generation point-of-care diagnostics: Opportunities and challenges, Nov 24th, 10.50

- 2013 – present General Manager Managing Director QIAGEN Lake Constance GmbH
- 2013 – 2013 Marketing Manager Germany Blanco Pharma GmbH
- 2009 – 2010 Head of Business Development IP Bewertungs AG
- 2000 – 2003 Vice President Research & Development Eppendorf 5Prime, Boulder, CO, USA
- 1996 – 1996 Senior-Project Manager Eppendorf AG, Hamburg
- 1991 – 1993 Project Manager Marketing Molecular Biology Eppendorf AG, Hamburg
- 1981 – 1985 PhD Biology Albert-Ludwigs-Universität Freiburg i. Br., Doctor Rerum Naturalium (Dr. rer. nat.) Molecular Biology, Proteinbiochemistry

Prof. Dr. Elisabeth Steinhagen-Thiessen
Charité - Universitätsmedizin Berlin
The BASE study – Laboratory values in the elderly, are they different? Nov 23rd, 10.40

- Chair holder Department of geriatric medicine
- Head of research group geriatric medicine at the EGZB, of the interdisciplinary Metabolism-Centre, as well as nutrition counseling and dietetics of the Charité – Universitätsmedizin Berlin, Campus Virchow-Klinikum
- until 2015 medical head of Evangelisches Geriatriezentrum Berlin gGmbH

Nicole Stelzner
Berlin Office Novartis Pharma GmbH
Science and industry – successful partners for Germany (Fraunhofer study on innovation footprint), Nov 23th, 17.00

- Since 06/2017 Director Government Relations, Novartis Pharma, Berlin Office
- 01/2017 – 05/2017 Network Media GmbH, Berlin
- 10/2015 – 12/2016 Managing Director, Network Media GmbH, Berlin
- 01/2011 – 10/2015 Head of the Strategic Corporate Development/Sales Department at the Vorwärts Publishing Company mbH Berlin
- 01/2008 – 12/2010 Head of Press Communications and Public Relations/Marketing, PROGRESS Film-Verleih GmbH, Berlin
- 12/2005 – 12/2007 Senior Project Manager, Head of Public Affairs, WE DO communication GmbH, Berlin

Dr. Richelle Spanjers
Integrated DNA Technologies, Leuven, Belgium
Optimized target detection in qPCR and ddPCR: Better sensitivity through new probe and primer chemistries, Nov 24th, 14.30

After graduating with a master in Medical Biology at the Radboud University in Nijmegen, Ms Spanjers has been working as a research scientist in a pharmaceutical and a Research & Development company in Molecular Diagnostics. In the latest company she was involved in the design, development and validation of robust and sensitive multiplex qPCR assays. Ms Spanjers joined IDT as Field Application Manager qPCR & Genotyping this year. Her role is to support the Sales Team in providing highest scientific support within the qPCR & genotyping portfolio for IDT customers in Europe.
Dr. Felix von Stetten
Hahn-Schickard, Freiburg
A technology platform for digital nucleic acid testing at the point of need, Nov 24th, 11.10

• 1999 PhD in Microbiology, Technical University of Munich, Germany
• involved in the development of methods for sample preparation, real-time PCR and DNA-arrays
• Laboratory for MEMS Applications at IMTEK, University of Freiburg
• 2008 – head of the Hahn-Schickard Lab-on-a-Chip division
• 2016 – associate director of Hahn-Schickard-Institute for microanalysis systems

Ron Wolbert
M24You GmbH, Berlin
Microarrays and nanoarrays in the IVD market from R&D till application, Nov 23rd, 16.30

• Studied Biochemistry at Wagening University, Netherlands
• More than 20 years of experience in Pharma, Lifesciences, Biotech and Food industry
• Some main companies are: Amersham-Pharmacia/ BLAcore/ RnAssays/ Scienion and M24You
• Presently CEO/ Sales Director of M24You GmbH, the Dispensing Technology provider

Poster Exhibition

A highly specific, cost-effective solution utilizing a unique 2-enzyme system for SNP genotyping in pharmacogenetics studies
D. Tsang1, J. Graham2, K. Datta1, K. Beltz1, S. Rose1, Y. Wang1, M. Fiddler1, Y. Bao2
1 Integrated DNA Technologies, Redwood City, CA
2 Insight Medical Genetics, Chicago, IL

Binding affinity data of DNA aptamers for therapeutic anthracyclines from microscale thermophoresis and surface plasmon resonance spectroscopy
S. Sass1, W. F. Stöcklein2, A. Klevesath3, J. Hurpin1, M. Menger2, C. Hille1
1 Physical Chemistry / ALS ComBi, Institute of Chemistry, University of Potsdam
2 Fraunhofer Institute for Cell Therapy and Immunology, Branch Bioanalysis and Bioprocesses

Comparison of lab and point of care (POC) technologies – case study for CHI3 L1
C. Deutschmann1, F. Dinter1, S. Rödiger1, D. Roggenbuck1,2, P. Schierack1
1 Brandenburg University of Technology Cottbus-Senftenberg, Institute for Biotechnology, Department Multiparameterdiagnostics
2 Medipan / GA Generic Assays GmbH

Development of a multiparametric microparticle assay for the antibody-based detection of circulating microRNAs suffering from viral-inflammatory cardiomyopathy
Weichelt1, V. Pitzen1, C. Geithe1, S. Rödiger1, D. Roggenbuck1, D. Lassner2, J. Hollidt3, K. Hanack1
1 Universität Potsdam, Department of Biochemistry and Biology, Chair Immunotechnology
2 BTU Cottbus-Senftenberg, Campus Senftenberg, Institute of Biotechnology
3 GA Generic Assays GmbH
4 IKDT GmbH
5 in.vent Diagnostik GmbH

Development of a nanobead based agglutination assay for E. coli serotyping
C. Schmidt1, H. Borcherding1, U. Schedler1, T. Thiele1, S. Rödiger1, P. Schierack1
1 Brandenburg University of Technology Cottbus-Senftenberg
2 PolyAN GmbH
Diagnostic tool to improve dose decision during TNFa-inhibiting therapy

J. Brand 1, M. Zänker 2, A. Schäfer 1, G. Becher 3, B. Stuhlmüller 4, M. Maurer 4

1 BioTeZ Berlin-Buch GmbH
2 Immanuel Klinikum Bernau Herzzentrum Brandenburg
3 BeckerConsult GmbH
4 Dermatology and Allergy Director of Research Dpt. of Dermatology and Allergy Allergie-Centrum-Charité/ECARF Charité – Universitätsmedizin Berlin

Determination of Diclofenac by fluorescence polarization immunoassay (FPIA)

A. Raysyan 1, 2, 3, Carsten Schmidt 1, Stefan Rödiger 1, Ilko Bald 1, 2, 3

1 Universität Potsdam
2 Bundesanstalt für Materialforschung und -prüfung (BAM)
3 School of Analytical Sciences Adlershof
4 Brandenburgische Technische Universität Cottbus-Senftenberg

DNA origami nanostructures for miRNA sensing; a method to enhance signal generated in microbead-based assay

Choi 1, 2, 3, Carsten Schmidt 1, Stefan Rödiger 1, Ilko Bald 1, 2, 3

1 Universität Potsdam
2 Bundesanstalt für Materialforschung und -prüfung (BAM)
3 School of Analytical Sciences Adlershof
4 Brandenburgische Technische Universität Cottbus-Senftenberg

Generation of patient specific cartilage microtissues using cells of elderly people: Influence of individual properties on the differentiation capacity of chondrocytes

Fröhling 1, F. Martin 1, A.-H. Lutter 1, J. Scholka 1, H. Richter 1, U. Anderer 1

1 Brandenburg University of Technology Cottbus-Senftenberg, Institute of Biotechnology, Department of Cell Biology and Tissue Engineering
2 Klinikum Niederlausitz GmbH, Department Trauma Surgery and Orthopedics

Generation of patient specific cartilage microtissues using cells of elderly people: Influence of individual properties on the differentiation capacity of chondrocytes

M. Fröhling 1, F. Martin 1, A.-H. Lutter 1, J. Scholka 1, H. Richter 1, U. Anderer 1

1 Brandenburg University of Technology Cottbus-Senftenberg, Institute of Biotechnology, Department of Cell Biology and Tissue Engineering
2 Klinikum Niederlausitz GmbH, Department Trauma Surgery and Orthopedics

Hinge-initiated primer-dependent amplification of nucleic acids (HIP): A new versatile isothermal amplification method

J. Fischbach, M. Frohme, J. Giessler

Technische Hochschule Wildau

Integration of cardiovascular disease biomarkers in a microfluidic microbead chip

F. Dinter 1, C. Deutschmann 1, S. Rödiger 1, P. Schierack 1, G. Dame 2

1 BTU Cottbus-Senftenberg
2 Medizinische Hochschule Brandenburg

Isothermal nucleic acid amplification: Novel technologies for diagnostics and point-of-care testing

S. Kersting, E. Ehrentreich-Förster, M. von Nickisch-Rosenegk

Fraunhofer Institute of Cell Therapy and Immunology – Branch Bioanalytics and Bioprocesses IZI-BB, Potsdam

Low Q whispering gallery modes - A simple method of label free analysis of protein interactions

M. Olszyna, G. Dähne, C. Üzüm, K. Zimmermann, M. Himmelhaus, L. Dähne

Surflay Nanotec GmbH

Label-free detection of protein interactions via automated measurement of Whispering Gallery Modes in multiplex format

G. Dähne 1, C. Marschner 2, M. Kirschbaum 2, M. Himmelhaus 1, C. Duschl 2, L. Dähne 1

1 Surflay Nanotec GmbH
2 Fraunhofer Institute of Cell Therapy and Immunology – Branch Bioanalytics and Bioprocesses IZI-BB, Potsdam

Optical biosensing by using femtosecond-written and etched fiber Bragg gratings

Schulze 1, 2, C. Hille 1

1 Physical Chemistry / ALS ComBi, Institute of Chemistry, University of Potsdam
2 School of Analytical Sciences Adlershof

Point of care diagnostics for rapid detection of infectious diseases

Dame 1, 3, D. Kartsev 2, A. A. El Wahed 1, M. Hügel 1, G. Urban 2 and F. T. Hufert 1

1 Institute for Microbiology and Virology, Brandenburg Medical School
2 Helmholtz Centre for Environmental Research (UFZ)
3 Institute of Microsystems Technology (IMTEK), Freiburg University
4 Virology Department, University Medical Center
Rapid detection of IDH1/IDH2 mutations using RNase H2-dependent, multiplex quantitative PCR assays
Y. Bao 1, V. Nard 1, Y. Wang 1, A. Baig 2, A. T. Fathi 2, A. M. Brunner 2, A. J. lafrate 2, C. Chen 2, D. R. Borger 2
1 Integrated DNA Technologies, Redwood City, CA
2 Massachusetts General Hospital, Boston, MA

rhAmp™ SNP genotyping assays for accurate and cost-effective analysis of bi-and tri-allelic SNPs-
Y. Bao
Integrated DNA Technologies

Screening of FISH probes for the detection of mutations and integrated viral DNA
Jurischka 1, M. Sowa 1,2, J. Schiebel 1, S. Rödiger 1, D. Roggenbuck 2, P. Schierack 1
1 BTU Cottbus-Senftenberg
2 Medipan GmbH

The DFG research unit TraceAge – Interactions of essential trace elements in healthy and diseased elderly
Universität Potsdam

Ultra-fast miRNA extraction from cancer cells by a lab-on-a-chip
Behrmann 1,2, M. Hügle 1,2, P. Bronsert 3,4, B. Herde 3,4, J. Heni 1, F. Hufert 1, G. Urban 1, G. Dame 2
1 Laboratory for Sensors, Department of Microsystems Engineering (IMTEK), Albert-Ludwigs-Universität Freiburg
2 Department of Microbiology and Virology, Brandenburg Medical School Fontane, Neuruppin
3 Institute for Surgical Pathology, Medical Center – University of Freiburg
4 Faculty of Medicine, University of Freiburg

yH2 AX and related biomarkers in elderly people with emphasis on diffuse large B-cell lymphoma
Ruhe 1, P. Schierack 1, W. Dammernann 2, M. M. Deckert 1, S. Rödiger 1
1 BTU Cottbus-Senftenberg
2 Brandenburg Medical School Theodor Fontane

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Industrial Exhibition

2bind GmbH

From Stability to Affinity: The 2bind GmbH is a service provider in the field of biophysical analyses. Our customers and collaborators mainly work in the fields of drug development, aptamer generation, and antibody discovery. We offer various analytical services (based on nanoDSF, BLI, MST, ITC) to understand molecular interactions:

- Our innovative screening assays (nanoDSF and MST) help to identify hits from libraries (small molecules, fragments, Antibodies, Aptamers ...).
- We also help to characterize molecular interaction in terms of basic binding partners such as Affinity, Kinetics and Thermodynamics using different technologies (MicroScale Thermophoresis, Biolayer Interferometry, Isothermal Titration Calorimetry).
- Specialized binding assays in bioliquids (Sera, Lysates, Saliva, Urine) help to get information on the interaction of interest under close to native conditions (MST).
- HSA binding assays help to understand the influence of HSA on compounds (MST, BLI).
- Our competition assays offer information if a ligand interferes with binding of two interaction partners (MST, BLI).

In addition we offer biophysical analytical services to characterize protein stability and aggregation tendency using nanoDSF™

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BioTeZ Berlin-Buch GmbH

BioTeZ Berlin-Buch GmbH is partner for biotechnology and pharmaceutical industry with focus on Therapeutic Drug Monitoring (TDM) solutions: The patented recoveryELISA technology allows multi-parameter measurements supporting dose finding, for personalized medicine; Individual biochemistry services: customized ELISA development, manufacturing of rapid tests/affinity columns; Human proteases; Biotin-Streptavidin systems with increased binding capacities for microplates; DNA/RNA synthesis customized modifications
**Fraunhofer IZI-BB**

The Bioanalytics and Bioprocesses Branch of the Fraunhofer Institute for Cell Therapy and Immunology IZI-BB focusses on the development of platform technologies and biotechnological applications in agriculture, food safety and environmental testing as well as drug development and diagnostics. To provide flexible and easy-to use devices or solutions the key aspects of activities encompass complex sample preparations, data collection, miniaturization and automation. Moreover, the Institute also addresses functional protein production using innovative cell-free biosynthesis techniques and develops method for single cell manipulation.

**Hahn-Schickard – Gesellschaft für angewandte Forschung e.V.**

Hahn-Schickard develops intelligent products with microsystems engineering – from the design stage to serial production, across all industries. The R+D service provider focuses on the areas of microsystems engineering, micro assembly technology, microanalytical systems, and information technology. At its site in Freiburg, Hahn-Schickard develops miniaturized test systems for point-of-care diagnostics. At a pilot line, Hahn-Schickard is able to support the product visions of its customers even more effectively – from the original idea to small production runs.

**IDT – Integrated DNA Technologies, Inc.**

IDT is the largest manufacturer of custom oligo products today. IDT became the industry leader in this competitive field by maintaining the highest standards of quality, service, and technical know-how.

IDT manufactures the oligos using chemical DNA synthesis machines designed and built in-house. IDT’s customers range from small university labs of only a few scientists to global pharmaceutical companies, and everything in between.

IDT’s GMP Manufacturing services include dedicated ordering, production, final-fill, and shipping systems that meet the elevated quality standards required for products used in clinical or molecular diagnostic applications. IDT is a contract GMP manufacturer of oligonucleotide reagent components for in vitro diagnostic devices (IVDs) and analyte-specific reagents (ASRs) for laboratory-developed tests (LDTs).

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M24You GmbH provides you with the best solutions for your applications. Our Dispensing technology enable different volume ranges at highest accuracy from pico-litre up to millilitre, suitable for various viscosities and multiple target structures. The new iONE, iTWO, iSIX or iTEN systems are able to handle your requests from R&D till millions of microarrays and nanoarrays at Production level. Our vision is bringing technical advantage solutions to every scientist and producer in the world.

**MITTELSTAND.INTERNTIONAL.REGIONAL**

MIR’s role is to be a “crossroad, i.e. a hub” connecting science, medium-sized companies and the society. We support the development of new R&D projects in the fields of BioTech, MedTech, Pharma and GreenTech/CleanTech in the international context. Furthermore, MIR is a club of like-minded people who consider moral values not to be outdated in the private life as well as in business, and therefore to be the basis of their actions.

We focus on interdisciplinary partnerships. By including and supporting new technologies, value chains will be closed. Such measures are intended to strengthen location advantages, and to provide a substantial and responsible contribution to the development of the society.

The values for each member is to get access to our „Expert Circles“ related to the focused industries, to find like-minded people, who live our CODEX of the „Honorable Businessmen“ and to get access to our „Mentor Program“. The key aspects of our values are the automatically guaranteed NDA by the codex and a mentor who accompanies, who shows responsibility for the task and supports each member to bring their projects to success.

www.mittelstand-mir.org
Nikon

Nikon is a Japanese manufacturer of precision optics, known for its photo equipments, lenses, binoculars and for its excellent microscopes. This year, Nikon looks back on its 100-year history: www.nikon.com/100th/

Nikon Germany is represented by Nikon GmbH in Düsseldorf (founded 1971) and is a sales and service office for microscopes and cameras. Our product range in the “Microscope Solutions” area covers a wide range of modern light microscopes, stereomicroscopes and digital cameras for the laboratory and practice. We also offer you complex optical systems for medical research. The combination of robust mechanics, high level precision optics and modern electronics for control and image analysis leads to powerful and ergonomic microscopes. Researchers around the world benefit from our know-how in the field of super-resolution microscopes.

NutriAct

“NutriAct” means: Nutritional Intervention for Healthy Aging: Food Patterns, Behavior, and Products.

The interdisciplinary structure of the cluster connects experimental, epidemiological and clinical nutrition research with behavioral science and social medicine and both, subsequently, with food technology and food production. Its ambitious aim is to transform research results on consumer’s food choices and its consequences into a substantial improvement of dietary intake of the adult population through both, a behavioral strategy and new products.

OSPIN GmbH

Ospin is a Berlin based company, with the mission to digitize and scale up cell based bioprocesses. With our modular, automated bioprocess platform we’re creating the ‘operating system’ of future biotechnology on which a great variety of applications can be realized. For instance, customers grow artificial biological tissues and organs in our bioreactor systems used in research and as replacement for animal tests. Most cell based bioprocesses are still carried out manually. This approach allows for great flexibility but is laborious and expensive and provides limited reproducibility. Our solution to this challenge is a modular, scalable bioprocess platform that evolves with the project. Due to open interfaces the platform can easily be extended. Automated processes are programmable through an intuitive user interface. Cloud based process monitoring and data management also allow to correlate and analyze data as well as to connect them to other cloud based services (e.g. electronic lab book). Based on the platform we’re also developing together with strategic partners highly scalable systems for various specific applications like in vitro drug testing or stem cell processing.

University of Potsdam

The University of Potsdam supports scientific ideas relevant for practical application. For this area, Potsdam Transfer, the center for start-ups and technology transfer, acts as the main point of contact. Potsdam Transfer’s accelerator-program provides module-based assistance for start-ups. The technology transfer service of Potsdam Transfer identifies practicable research results and connects scientists with potential economic partners. The center also provides advice regarding the development of new university-level education courses.

TRIGA-S Scientific Solutions

TRIGA-S is specialised German CROs, focusing on in-vitro-diagnostics and medical devices. We offer the full range of clinical and technical studies for IVD and MD as well as our contract laboratory services; from preparing and conducting tailor-made studies, including sample management, sample measurement, sample storage and logistics. With our own S-2 laboratory we are prepared to handle all tasks on our site. In addition, we offer biological sample storage at RT, 4-8 °C, -20 °C, -80°C under controlled conditions. Biological specimens for your studies can be ordered through our network. We have an experienced study-management, monitoring and laboratory team that has handled more than 1 million human samples from more than 500 sites worldwide – always tailored to individual needs.

We create scientific solutions for your clinical studies.
HealthCapital – Healthcare Industries Cluster Berlin-Brandenburg

Berlin-Brandenburg is one of the leading life sciences and healthcare industries centers in the world. The unique research and clinic landscape, which is the region’s major strength, is supported by a close network of key players from industry, start-ups, finance, clinics and politics. Here, numerous technology parks and networks in different fields, above all biotechnology and medical technology, create an excellent infrastructure for transforming the latest scientific findings into innovative products for the healthcare sector. For medical care and rehabilitation or nursing care – in the capital region, patients of all ages will benefit from capable, highly networked medical care at the highest level.

The HealthCapital cluster management drives networking and the technology transfer in the region and supports international companies interested in relocating to the German capital region. Berlin Partner for Business and Technology and the Brandenburg Economic Development Corporation are responsible for managing the cluster. Stefan Oelrich, Executive Vice President Diabetes & Cardiovascular and Member of the Executive Committee, Sanofi-Aventis Deutschland GmbH, is the cluster spokesperson.

Medizinische Hochschule Brandenburg

The Brandenburg Medical School Theodor Fontane (MHB) is a state-recognized university, a non-profit institution under municipal sponsorship. It stands for innovative teaching concepts and the integration of research, student education and patient care. With three university hospitals – Ruppiner Kliniken, Städtisches Klinikum Brandenburg, and Immanual Klinikum Bernau / Herzzentrum Brandenburg – and currently more than 28 cooperating clinics and 106 teaching practices we pool science-based expertise and practice-oriented know-how to educate a new generation of physicians and psychologists.

Charité – Universitätsmedizin Berlin

Charité is one of the largest university hospitals in Europe. All of our clinical care, research and teaching is delivered by physicians and researchers of the highest international standard. Charité proudly lays claim to more than half of all German Nobel Prize winners in Physiology or Medicine, including Emil von Behring, Robert Koch, and Paul Ehrlich. Charité is internationally renowned for its excellence in teaching and training. Charité-Universitätsmedizin Berlin represents a single medical faculty, which serves both Humboldt Universität zu Berlin and Freie Universität Berlin. Charité extends over four campuses, and has close to 100 different Departments and Institutes, which make up a total of 17 different CharitéCenters. Having marked its 300-year anniversary in 2010, Charité is now one of the largest employers in Berlin, employing 13,200 staff (or 17,100 if including its subsidiaries), and with a total annual turnover of €1.6 billion.

Enterprise Europe Network

– Helping ambitious SMEs innovate and grow internationally.

With 600 partner organisations in more than 60 countries, the Enterprise Europe Network is the world’s largest support network for SMEs with European and international ambitions. We combine international business expertise with local knowledge to help you take your innovation into European and international markets. The Enterprise Europe Network Berlin-Brandenburg helps businesses from the German capital region forge new innovation, technical and commercial partnerships through tailored support, and grow faster through information about EU access to finance and funding schemes. We organize fast and effective SME matchmaking events at international conferences and trade fairs in the Berlin-Brandenburg region to save you time and money. Through direct access to Europe’s largest database of business opportunities, our experts help SMEs forge new international partnerships with excellent growth potential. We advise SMEs with regard to transnational projects, especially with our neighbour Poland, as well as on technical issues, standards and regulations in the EU single market. As your regional contact point we provide support through 20 EU experts in three host organisations. They are closely connected with specialists all over Europe.
Overview

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presenting the latest trends in the development of diagnostics

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Potsdam Days on Bioanalysis 2017

INTERNATIONAL TECHNOLOGY FORUM 2017
IN VITRO-DIAGNOSTICS AND BIOANALYSIS
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NEW CHALLENGES & PERSPECTIVES
FOR IVD IN THE AGING SOCIETY
BRINGING LABORATORY RESULTS TO POINT-OF-CARE TESTING AND MARKET DEMANDS
2nd status seminar of the project “Flu type”
New methods for virus detection and characterisation – implications for the future of POC
New biomarkers indicating the aging process
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More information
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