

Leipzig | Germany
April 17–18, 2024

POCT MEETING

PROGRAM

organized by



General information

Venue

Fraunhofer Institute for Cell Therapy and Immunology
Perlickstraße 1, 04103 Leipzig

Registration counter – Opening hours

Wednesday, April 17, 2024: 12:15–6:30 pm
Thursday, April 18, 2024: 9:15 am – 2:30 pm

Useful contacts

Leipzig taxis: +49 341 4884 | www.taxi4884.de
City Taxi Leipzig: +49 341 2222 4444

WLAN

WLAN is available throughout the building. Look out for the access code.

Media check

Please bring your presentation with you on a USB stick and hand it over at the check-in desk when you arrive. Your presentation should be created and presented in Microsoft PowerPoint. Please note that the presentations can only be played via the permanently installed presentation technology on site.

Poster session

Don't miss our poster session on Thursday, April 18, 2024, 12:15–1:15 pm.

Please hand in your poster at the check-in desk on April 17, 2024 between 12:15 and 12:45 pm (or when you arrive). The colleagues at check-in will place the poster for you and will remove it after the poster session. Your poster will be available for you to collect from the check-in desk until the end of the event. All poster authors are required to stay with their poster during the poster session and to be available for questions and discussions with the participants.

Get-together

We are happy to welcome you to the get-together and enjoying a great evening with all participants. You will then also have time to have good talks with the supporters. Delicious food and drinks will await you as well.

Date: Wednesday, April 17, 2024

Time: From 6:45 pm

Program – Wednesday, April 17, 2024

12:15–12:45 pm


Check-in

12:45–2:00 pm

INNOVATIONS FOR CLINICAL TESTING



Chairs: Biemann, Ronald (University Hospital Leipzig, Germany) | Kuhlmeier, Dirk (Fraunhofer IZI, Leipzig, Germany)

Innovative POCT technologies – Preparing for the era of change

 **KEYNOTE** Luppa, Peter (Klinikum rechts der Isar Munich, Germany)

POCT – Expectations and needs from clinical practice
Biemann, Ronald (University Hospital Leipzig)

Modern molecular pathogen diagnostics in the hospital

 **KEYNOTE** Hunfeld, Klaus-Peter (Northwest Hospital Frankfurt, Germany)
 Virtual

2:00–2:15 pm

Break

2:15–3:30 pm



INNOVATIONS IN HOME CARE TESTING – FROM INFECTIOUS TO CHRONIC DISEASE MONITORING

Chairs: Pöhlmann, Christopher (SensLab GmbH, Leipzig, Germany) | Wenzel, Elisabeth (Fraunhofer IZI, Leipzig, Germany)

Point-of-no-return to central laboratory

 **KEYNOTE** Hayden, Oliver (Technical University of Munich, Germany)

Unveiling Rapid Pandemic Response: Conserved Regions in the SARS-CoV-2 Genome through Comparative Bioinformatic Analysis

 **KEYNOTE** Karpuj, Marcela Viviana (Weizmann Institute of Science & Braude, Karmiel, Israel)
 Virtual

Self-powered biosensor towards glucose diagnostic in point-of-care

Moreira, Felismina (Center for Innovation in Engineering and Industrial Technology, Porto, Portugal)

3:30–3:45 pm

Break

3:45–4:30 pm

INDUSTRY SESSION: THE NEXT GENERATION OF LATERAL FLOW ASSAY – MULTIPLEXING ON UNISART STRUCTURE MEMBRANES

sponsored by Sartorius Stedim Biotech GmbH & Scienion GmbH

Jarling, Talena (SCIENION GmbH, Berlin Germany),
Witte, Judith (Sartorius Stedim Biotech GmbH, Göttingen, Germany)

4:30–4:45 pm


Break

4:45–5:45 pm

POCT FOR GLOBAL HEALTH APPLICATIONS

Chairs: von Braun, Amrei (University Hospital Leipzig, Germany) | Sandetskaya, Natalia (Fraunhofer IZI, Leipzig, Germany)

POCT for global health applications

 **KEYNOTE** Land, Kevin (Global Access Diagnostics, Thurleigh, United Kingdom)

Point-of-care ultra-portable single-molecule bioassays for one-health

Macchia, Eleonora (University of Bari Aldo Moro, Bari, Italy)

Enhanced detection with prussian blue-based nanocubes: A novel electrochemical biosensor for bovine serum albumin analysis

Martins, Gabriela (Center for Innovation in Engineering and Industrial Technology, Porto, Portugal)

5:45–6:00 pm


Break

6:00–6:45 pm

DNA TECHNOLOGIES FOR POCT

Chairs: Smith, David (Fraunhofer IZI, Leipzig, Germany) | Kuhlmeier, Dirk (Fraunhofer IZI, Leipzig, Germany)

Biosensing enhanced by DNA nanotechnology

 **KEYNOTE** Tinnefeld, Philipp (Ludwig-Maximilians-University Munich, Germany)

Aptamers as specific recognition elements in PoC diagnostics

Menger, Marcus (Fraunhofer Institute for Cell Therapy and Immunology, Branch Bioanalytics and Bioprocesses IZI-BB, Potsdam-Golm, Germany)

6:45 pm

GET-TOGETHER


Program – Thursday, April 18, 2024

9:30–11:00 am

NOVEL TECHNOLOGIES FOR POCT – FROM ASSAYS TO MICROFLUIDICS

Chairs: Luppa, Peter (Klinikum rechts der Isar Munich, Germany) | Oswald, Nina (Fraunhofer IZI, Leipzig, Germany)

Nucleic acid-based biosensors for point-of-care diagnostics and continuous monitoring

 **KEYNOTE** Soleymani, Leyla (McMaster University, Hamilton, Canada)

Development of devices for collection of large volumes of exhaled breath condensate and their application in clinical research

Kuban, Petr (Czech Academy of Sciences, Prague, Czech Republic)

Signal amplification for highly sensitive point-of-care immunoassays

Nickels, Philipp (Ludwig-Maximilians-University Munich, Germany)

Neighborhood Diagnostic – Digital ecosystem for patient-oriented diagnostics and treatment support in rural areas

Wenzel, Elisabeth (Fraunhofer Institute for Cell Therapy and Immunology, Leipzig, Germany)

Paper disc interfaced Prussian blue nanocube modified immunodevice for electrochemical detection of diverse biomarker at point of care

Verma, Nidhi (Institute of Advanced Research, Gandhinagar, Gujarat, India)

11:00–11:15 am

Break

11:15 am – 12:15 pm

INDUSTRY SESSION – COMPANY PITCHES

supported by Saxony Trade & Invest Corp. (Wirtschaftsförderung Sachsen GmbH)

Chairs: Oswald, Nina (Fraunhofer IZI, Leipzig, Germany) | Menge, Alina (Fraunhofer IZI, Leipzig, Germany)

Sciospec Scientific Instruments GmbH (Wegner, Sebastian)

MicroAcoustix (Hartmann, Stefanie)

Voxdale GmbH (Dieryckx, Tim)

Leonhard Kurz Stiftung & Co. KG (Pfeifle, Dieter)

diaxxo AG (Gregorini, Michele)

OPERON S.A. (Toribio, Tomas)

EKF Diagnostics GmbH (Pöhlmann, Christopher)

Dx365 UG (Mitrofanov, Filipp)

WIR! sind DIANA (Oswald, Nina)

12:15–1:15 pm

POSTER SESSION

Chairs: Kuhlmeier, Dirk (Fraunhofer IZI, Leipzig, Germany) | Sandetskaya, Natalia (Fraunhofer IZI, Leipzig, Germany)

1:15–2:00 pm


Break

2:00–3:15 pm


PRODUCTION TECHNOLOGIES FOR POC DEVICES – FROM HOT EMBOSsing TO INJECTION MOLDING

Chairs: Eckert, Udo (Fraunhofer IWU, Chemnitz, Germany) | Gärtner, Eric (Fraunhofer IWU, Chemnitz, Germany)

High precision molding in combination with high precision R2R embossing

 **KEYNOTE** Bauer, Maria (STRATEC Consumables GmbH, Anif, Austria)

Production technologies – Transfer from design to production

 **KEYNOTE** Sanders, Merijn (Voxdale GmbH, Berlin, Germany)

UV-imprinting of microstructured polymer foils for biomedical disposables

Hackl, Claudia (Leibniz Institute of Surface Engineering, Leipzig, Germany)

Posters

Paper based lateral flow assay biosensor for reverse transcriptase- LAMP amplified nucleic acid detection using biotin and FITC labels

Agarwal, Saloni (University of Potsdam, Germany)

Advancements in miRNA detection: Harnessing the potential of a silicon nitride photonic biosensing platform

Costache, Florenta (Fraunhofer Institute for Photonic Microsystems IPMS, Dresden, Germany)

Rapid analyses using a PCR-POCT device in an automated environment: The pandemic as an example of application

Freese, Christian (Fraunhofer Institute for Micro-engineering and Microsystems IMM, Mainz, Germany)

Integration of capillary-driven microfluidic blood plasma separation techniques into point-of-care testing sensor disposables

Gärtner, Eric (Fraunhofer Institute for Machine Tools and Forming Technology IWU, Chemnitz, Germany)

Colorimetric cellulose-based test strip for the rapid assessment of pathogens exposure

Guerreiro, Joana (University of Minho, Braga, Portugal)

Identification of mAB's unknown antigen and epitope fingerprints in a single experiment

Kern, Karolin (Fraunhofer Institute for Cell Therapy and Immunology IZI, Leipzig, Germany)

Design of a capillary controlled POCT device using multiscale simulation methods

Loebel, Sascha (Chemnitz University of Technology, Chemnitz, Germany)

Successful implementation of novel point-of-care tests: The importance of the systematic involvement of research, development, end user, health authorities and patients

Markwart, Robby (University Hospital / Friedrich Schiller University Jena, Germany)

Angle resolved light scattering as a highly sensitive characterization tool for microbiological cells in microfluidic applications

Munser, Anne-Sophie (Fraunhofer Institute for Applied Optics and Precision Engineering IOF, Jena, Germany)

Molecularly imprinted polymer for CA 15-3 protein detection: A promising biosensor for advanced point-of-care applications

Oliveira, Daniela (Center for Innovation in Engineering and Industrial Technology, Porto, Portugal)

Integration of chemiluminescence-based SPARCL assay on microfluidic platform with SPAD-based CMOS line sensor IC for rapid cytokine detection

Schäfer, Eric (Institute for Microelectronics and Mechatronics Systems, Ilmenau, Germany)

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