

PRESS RELEASE

PRESS RELEASE

August 30, 2017 || page 1 | 2

Research cooperation with India for better wound management

Fraunhofer ENAS shows the project MIDARDI together with BiFlow Systems GmbH at COMPAMED 2017 from November 13 until 16 in Duesseldorf, Germany. Within the project a point-of-care test to determine pathogens and their antibiotic resistances was developed.

Europe and India face a steady increase in type 2 diabetes. Besides the actual symptoms several associated diseases like diabetic foot ulcer (DFU) may occur. The damage of nerve cells leads to the reduction of pain sensation and thus to an increased number of ulcers and delayed wound healing at the feet. The wounds are often rapidly colonized by bacteria and the severe infection delays the wound healing even further. For a proper wound management the fast determination of pathogens and their antibiotic resistances in the wound is needed.

In the project MIDARDI (support code: 01DQ15017A), funded by BMBF (Federal Ministry of Education and Research) and IGSTC (Indo-German Science & Technology Centre), experts from India and Germany develop a new tool for rapid Point-of-Care diagnostics within a project term from December 1, 2015, until November 30, 2018. Using molecular diagnostic procedure the determination of pathogen species and antibiotic resistances is much faster (<1 hour) than the established microbiological testing by cell culture. In order to use the complex procedures of molecular biology for the Point-of-Care testing the procedures need to be automated and miniaturized.

IN COOPERATION WITH

bi.FLOW
systems GmbH

biofluidic integration

Editors

Dr. Martina Vogel | Fraunhofer Institute for Electronic Nano Systems ENAS | Phone +49 371 45001-203 |
Technologie-Campus 3 | 09126 Chemnitz | Germany | www.enas.fraunhofer.de | martina.vogel@enas.fraunhofer.de

Person in charge

Andreas Morschhauser | Fraunhofer Institute for Electronic Nano Systems ENAS | Phone +49 371 45001-241 |
Technologie-Campus 3 | 09126 Chemnitz | Germany | www.enas.fraunhofer.de | andreas.morschhauser@enas.fraunhofer.de

Dr. Jörg Nestler | BiFlow Systems GmbH | Phone +49 371 5347-940 |
Technologie-Campus 1 | 09126 Chemnitz | www.biflow-systems.com | info@biflow-systems.com

FRAUNHOFER INSTITUTE FOR ELECTRONIC NANO SYSTEMS ENAS

The Fraunhofer Institute for Electronic Nanosystems ENAS is developing microfluidic systems which are capable to transfer macroscopic liquid handling steps into small integrated systems. By simplifying the handling of these systems and eliminating work intensive manual handling steps the tests can be even run by less qualified personnel. In cooperation with experts in biochemistry (Fraunhofer IZI-BB in Potsdam-Golm, Germany, and Manipal University in Manipal, India), medical product developers (BiFlow Systems GmbH in Chemnitz, Germany, and Achira Labs, Ltd. in Bangalore, India) and surgeons from the Manipal University Hospital (India) a robust diagnostic device is being developed for the clinical routine.

PRESS RELEASE

August 30, 2017 || page 2 | 2



© BiFlow Systems GmbH

Microfluidic cartridge for the automated and miniaturized liquid handling with integrated micro pumps and heating elements.

Photo © BiFlow Systems GmbH

The **Fraunhofer-Gesellschaft** is the leading organization for applied research in Europe. Its research activities are conducted by 69 institutes and research units at locations throughout Germany. The Fraunhofer-Gesellschaft employs a staff of 24,500, who work with an annual research budget totaling 2.1 billion euros. Of this sum, 1.9 billion euros is generated through contract research. More than 70 percent of the Fraunhofer-Gesellschaft's contract research revenue is derived from contracts with industry and from publicly financed research projects. International collaborations with excellent research partners and innovative companies around the world ensure direct access to regions of the greatest importance to present and future scientific progress and economic development.