

PRESS RELEASE

PRESS RELEASENovember 20, 2019 || Page 1 | 2

Start of the trilateral cooperation project inCELLphosTAG

Fraunhofer IME, the University of Hamburg, and PerkinElmer receive funding from new Fraunhofer-DFG cooperation program.

Hamburg, Germany, 20 November 2019: Fraunhofer IME ScreeningPort, the University of Hamburg and PerkinElmer, Inc. announce the start of the trilateral collaboration project, inCELLphosTAG, which is funded by a newly established Fraunhofer-DFG collaboration program and aims to develop an assay technology that enables the investigation of important cellular processes and drug targets in relevant cell systems.

In 2018, Fraunhofer and the German Research Foundation (DFG) initiated a cooperation program to effectively transfer basic research into applications. It is based on results from DFG-funded projects that are to be further developed in cooperation with Fraunhofer working groups and an industrial application partner. It offers scientists in basic research the opportunity to further develop their inventions into marketable products and services, as well as provides companies with the opportunity to participate in technological developments at an early stage.

Successful drug research requires tools and techniques that can be used to investigate basic processes in human cells. Drugs, be they small molecules, peptides or antibodies, have to prove their effectiveness in test systems at the beginning of their development. For many investigations, however, no physiologically relevant test systems are available, which can lead to the failure of drug candidates in later phases of development during clinical trials.

The assay technology expected to be developed within the project inCELLphosTAG enables the establishment of such physiologically relevant test systems. The goal is for such technology to provide sensitive, reproducible and accurate data and insights on the major drug target classes - including G-protein coupled receptors (GPCRs) and protein kinases (PKs), which account for 30% and 6% of marketed drugs, respectively. It does not use radioactively labelled reagents, which pose health and environmental problems and are subject to strict regulation. Furthermore, these reagents are not able to cross intact cell membranes and are therefore not suitable for cell-based high-throughput investigations of the essential enzyme classes.

»We look forward to contributing our extensive experience in the development and optimization of cell-based assays for high-throughput screening campaigns and the application of physiologically relevant human induced pluripotent stem cell models (hiPSC) to our consortium,« said Dr. Ole Pless, Fraunhofer IME ScreeningPort. »The

Redaktion

Dr. Mira Grättinger | Fraunhofer Institute for Molecular Biology and Applied Ecology IME, ScreeningPort |
TPhone + 49 40 303764-0 | Schnackenburgallee 114 | 22525 Hamburg | mira.graettinger@ime.fraunhofer.de | www.ime.fraunhofer.de

FRAUNHOFER INSTITUTE FOR MOLECULAR BIOLOGY AND APPLIED ECOLOGY IME

combination of our existing expertise in the consortium offers the potential to replace existing reagents with reagents that can be used in living, physiologically relevant test systems for the first time without radioactive labelling. In addition, the collaboration with PerkinElmer will bring industry knowledge and experience, as PerkinElmer is a leading global provider of screening-compatible assay technologies«. Further explaining how the organizations are coming together to innovate, Prof. Dr. Chris Meier, University of Hamburg, an expert in the development of cell-permeable nucleotides and creator of a unique technology in this field (funded by the DFG), added »Our method, known as TriPPPPro technology, succeeds in channeling highly polar nucleoside triphosphates, which are naturally retained by cell membranes, through this barrier and releasing them inside the cell. In this way, chemically labelled representatives of this molecule class can also be introduced into intact cells. We are very pleased to be able to apply the findings from our many years of preliminary work and, together with our project collaborators, to develop a product that will advance drug research«.

Dr. Volker Eckelt, Strategy Leader Discovery Solutions at PerkinElmer comments: »Our goal is to help support the consortium in developing this novel technology to market maturity and then ultimately moving it to commercial, ready-to-use kit formats. This will allow the technology to be widely applied and will help advance both basic research and industrial drug discovery«.

ABOUT Fraunhofer IME

The Fraunhofer Institute for Molecular Biology and Applied Ecology IME, with over 530 employees at its six sites in Schmallenberg, Aachen, Gießen, Münster, Frankfurt/Main and Hamburg conducts research in the field of applied life sciences from a molecular level to entire ecosystems. Fraunhofer IME ScreeningPort in Hamburg contributes with its expertise in assay development and drug discovery.

ABOUT Universität Hamburg

As a University of Excellence, Universität Hamburg is one of the strongest research universities in Germany. As a flagship university in the greater Hamburg region, it nurtures innovative, co-operative contacts to partners within and outside academia. It also provides and promotes sustainable education, knowledge, and knowledge exchange locally, nationally, and internationally. The research profile is characterised by five key research areas. The approved project is associated with the key research area 'Infection Research'.

**ABOUT PerkinElmer**

PerkinElmer enables scientists, researchers and clinicians to address their most critical challenges across science and healthcare. With a mission focused on innovating for a healthier world, we deliver unique solutions to serve the diagnostics, life sciences, food and applied markets. We strategically partner with customers to enable earlier and more accurate insights supported by deep market knowledge and technical expertise. Our dedicated team of 12,500 employees worldwide is passionate about helping customers work to create healthier families, improve the quality of life, and sustain the wellbeing and longevity of people globally. The Company reported revenue of approximately \$2.8 billion in 2018, serves customers in more than 150 countries, and is a component of the S&P 500 index. Additional information is available through 1-877-PKI-NYSE, or at www.perkinelmer.com.

The **Fraunhofer-Gesellschaft** is the leading organization for applied research in Europe. Its research activities are conducted by 72 institutes and research units at locations throughout Germany. The Fraunhofer-Gesellschaft employs a staff of more than 26,600, who work with an annual research budget totaling 2.6 billion euros. Of this sum, almost 2.2 billion euros is generated through contract research. Around 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.

PRESS RELEASE

November 20, 2019 || Page 2 | 2