Fraunhofer ITMP

FRAUNHOFER INSTITUTE FOR TRANSLATIONAL MEDICINE AND PHARMACOLOGY ITMP

PRESS RELEASE

FROM CELL SIGNALING DEREGULATION TO INFECTION THERAPIES - STATE OF HESSE FUNDS NEW TRANSLATIONAL PROJECT

Addressing intracellular signal transduction disorders caused by viral or bacterial infections, and the therapy of inflammatory diseases are the main goals of the Frankfurt biomedicine cluster ENABLE, in which Fraunhofer ITMP is also involved. The Hessian state government will fund this project for four years with a total of eight million euros in order to prepare it successfully for the next round of the federal and state excellence strategy.

FRANKFURT. Under the leadership of Goethe University, the partners of the ENABLE consortium will investigate how deregulated signaling pathways upset cellular homeostasis, triggers diseases and influences their course. In particular, they want to understand how bacterial and viral pathogens interact with their host cells, which immune responses they trigger and how this results in tissue damage and disease severity. Based on this knowledge, therapeutic strategies against emerging viruses such as SARS-CoV-2 and antibiotic-resistant bacteria will be developed. Furthermore, the focus of interest is on inflammatory reactions, which determine the course and success of therapy not only in infections, but also in many other complex illnesses such as immune diseases or cancer.

The strength of ENABLE is based on close interdisciplinary cooperation between five departments of Goethe University and four partners, including the Fraunhofer ITMP, the Frankfurt Institute for Advanced Studies, the Max Planck Institute for Biophysics and the Georg-Speyer-Haus. With their own contributions of 9.1 million euros, Goethe University and its partners are more than doubling the state's funding. To achieve its goals, the ENABLE consortium is relying on cutting-edge technology. "The generous financial support from the state enables us to use state-of-the-art precision molecular tools, such as chemical probes and biologics," says Prof. Dr. Ivan Đikić, spokesman of the cluster.

"For the effective treatment of infectious diseases such as COVID-19, it is extremely important to know the interactions between the pathogen and the host organism as precisely as possible and to quickly bring these findings into clinical practice," explains Prof. Dr. Dr. Gerd Geißlinger, institute director of Fraunhofer ITMP, which became an independent Fraunhofer Institute in 2021 with the help of the Hessian State Offensive for the Development of Scientific and Economic Excellence (LOEWE). "We can contribute to this to a considerable extent within the framework of ENABLE, among

Contact
Dr. Alena Grebe | Fraunhofer Institute for Translational Medicine and Pharmacology ITMP | Phone +49 69 6301-7819 |
Theodor-Stern-Kai 7 | 60596 Frankfurt | alena.grebe@itmp.fraunhofer.de | www.itmp.fraunhofer.de

other things through access to clinical data and biobanks in the Fraunhofer 4D Inflammation Clinic."

In its "Cluster Projects" funding line, the state of Hesse will support a total of six clusters from April 2021 in areas it considers to be particularly prominent: Energy Research, Cognitive Neuroscience, Conflict Research, Artificial Intelligence, Molecular Biomedicine and Particle Physics.

Clusterproject ENABLE - Unraveling mechanisms driving cellular homeostasis, inflammation and infection to enable new approaches in translational medicine

Applicant: Goethe University Frankfurt a.M.

Co-Applicants:
Frankfurt Institute for Advanced Studies (FIAS), Frankfurt a. M.
Fraunhofer Institute for Translational Medicine and Pharmacology ITMP, Frankfurt a. M.
Georg-Speyer-Haus (GSH), Institute for Tumor Biology and Experimental Therapy, Frankfurt a. M.
Max Planck Institute of Biophysics (MPI-BP), Frankfurt a. M.

Institutions involved:
Max Delbrück Center for Molecular Medicine, Berlin
Max Planck Institute for Heart and Lung Research, Bad Nauheim
Max Planck Institute of Molecular Cell Biology and Genetics, Dresden