



Press release | February 6, 2018

Second proof of concept grant for Dresden researcher Prof. Dr. Jochen Guck

Prof. Dr. Jochen Guck, research group leader at the Biotechnology Center of TU Dresden (BIOTEC), was awarded a Proof of Concept Grant by the European Research Council (ERC) for the second time. The €150,000 research grant is available for ERC-funded researchers and intended to help exploring the economic potential or innovation potential of EU-funded frontier research. Intellectual property rights are to be established, business opportunities identified or technical reviews of research results carried out.

The European Research Council has awarded Prof. Dr. Jochen Guck for his pioneering research at the BIOTEC of TU Dresden for the second time. Prof. Guck's research group has developed a test for the state of the immune system that could significantly improve therapy management in severe infections such as sepsis (blood poisoning). For this purpose, thousands of white blood cells, which are an important part of the immune system, are literally scanned. In just a few minutes, the newly developed technology, called "real-time deformability cytometry", provides a so-called mechanical blood count. This enables the course of the inflammatory reaction and the therapy to be monitored. The advantage over current methods is that the test allows statements about body reactions and the course of therapy to be made potentially much earlier. The likelihood of dying in case of a severe sepsis increases by 7 percent per hour. Thus, especially the time factor is crucial in therapy management.

In the next 18 months, Prof. Guck and the TU Dresden Spin-off ZELLMECHANIK DRESDEN GmbH will use the funds to carry out intensive economic and technical research in order to develop a medical device from the technology. This includes analysis of work processes in the daily hospital routine, approval regulations, reimbursement by health insurance companies and planning of clinical studies.

Prerequisite for a Proof of Concept grant (PoC) is an ERC Starting, Consolidator or Advanced Grant (research grant). In terms of content, the PoC will examine whether

ideas from the ERC research foundation have a chance on the market. This is the first stage of technology transfer. The 51 awardees come from Belgium, Estonia, Finland, France, Greece, Germany, Ireland, Israel, Italy, the Netherlands, Portugal, Spain, Sweden, Switzerland and the UK. The total budget for all Proof of Concept Grants in 2017 was 20 million Euros.

This project being introduced here has received funding from the European Research Council under the European Union's Horizon 2020 research and innovation programme (Grant Agreement No 780669).



Prof. Jochen Guck © BIOTEC

Website of Prof. Dr. Jochen Guck

<http://www.biotec.tu-dresden.de/research/guck.html>

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The **Biotechnology Center (BIOTEC)** was founded in 2000 as a central scientific unit of the TU Dresden with the goal of combining modern approaches in molecular and cell biology with the traditionally strong engineering in Dresden. Since 2016 the BIOTEC is part of the central scientific unit "Center for Molecular and Cellular Bioengineering" (CMCB) of the TU Dresden. The BIOTEC plays a central role in the "Molecular Bioengineering and Regenerative Medicine" profile of the TU Dresden, fostering developments in the new field of Biotechnology/Biomedicine. The BIOTEC focuses on cell biology, biological physics, and bioinformatics. www.tu-dresden.de/biotec