

PRESS RELEASE

ProBioGen and TEVA Sign License Agreement on Human Artificial Lymph Node Technology

Research License Agreement on Unique Technology to Assess Drug Effects on the Immune System in Vitro

Berlin, Germany, February 7th, 2018: ProBioGen, a leading specialist for contract development and manufacturing of complex glycoproteins today announced the signature of a non-exclusive license agreement on its proprietary human Artificial Lymph Node (HuALN) platform technology with TEVA. The unique human Artificial Lymph Node model was developed by ProBioGen as superior 3D-micro-organoid model for analyzing substance effects on the human immune system in vitro.

Under the terms of the agreement the technology platform will be transferred to TEVA as a predictive tool to assist in the assessment of TEVA's biopharmaceutical drug candidates.

ProBioGen's Chief Scientific Officer, Dr Volker Sandig, commented: "With the complex, in vivo-like human Artificial Lymph Node model we have demonstrated effects which were impossible to see in conventional models, bridging the existing gap between animal models and first-in-man applications. We look much forward to this collaboration and the combined expertise on either side to develop the HuALN platform even further".

About the Human Artificial Lymph Node (HuALN) Model

www.probiogen.de/innovative-technologies/human-immunogenicity-immunofunction.html

The proprietary human Artificial Lymph Node Model (HuALN) was developed by ProBioGen as superior 3D-micro-organoid model for analyzing substance effects on the human immune system in vitro. It is based on a patented, miniaturized and perfused bioreactor for long-term cultivation of immune cells. Human blood-derived dendritic cells, T & B lymphocytes and Mesenchymal Stem Cells (MSC)-derived stromal cells are inoculated into the bioreactors' 3-dimensional hydrogel matrix which is perfused with cell culture medium and aerated, just as in a real human lymph node. Upon antigen-stimulation the cells' self-organize into immune-competent micro-organoid structures within the 3D matrix. The perfused bioreactor is typically operated for 4 weeks and thus allows multiple and repeated expositions of the immune cells to the test compounds.

This innovative technology predicts drug-related effects -wanted or unwanted- on the human immune system. Specifically, the HuALN Model allows investigating immunofunction, such as immunomodulation, immunogenicity and immunotoxicity in vitro. Tested can be a broad range of substance classes, from small molecules, proteins, peptides, to nucleic acids, be it biopharmaceuticals, vaccines, or cosmetics.

The read-outs are on T-cell and B-cell levels, specifically looking at cytokine profiles, cell surface makers, cell-proliferation, IgM and IgG-secretion, anti-drug antibodies (ADA formation) and functional cell tests.

The HuALN technology is offered by ProBioGen as service and can be licensed to 3rd parties.

About ProBioGen AG - www.probiogen.de

ProBioGen is a specialist for developing and manufacturing complex therapeutic glycoproteins and viral vaccines. Combining both state-of-the-art development platforms together with intelligent product-specific technologies yields biologics with optimized properties. Rapid and integrated cell line and process development, comprehensive analytical development and following reliable GMP manufacturing is performed by a highly skilled and experienced team. All services and technologies are embedded in a total quality management system to assure compliance with international ISO and GMP standards (EMA/FDA). ProBioGen was founded 1994, is privately owned and located in Berlin, Germany.

Contact ProBioGen AG:

Dr. Gabriele Schneider
Chief Business Officer
ProBioGen AG
Goethestr. 54
13086 Berlin, Germany
Phone: +49 30 924 006-0
Email: cmo@probiogen.de