

Technology Offer

Research group offers in-vitro tests for the detection of organotoxicity

Summary

A research and development (R&D) group from the Northeast of Germany offers cell based in-vitro test systems for pharmaceutical and chemical industry. In vitro-tests systems are established for investigation of hepatotoxicity, neurotoxicity and leucocyte immunoparalysis. The research group is mainly seeking for partners for joint research and innovation projects and for technical cooperation. Furthermore licensing of technologies is possible.

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Reference TODE20181113001

Details

Description

Organ damage caused by medication is the most common reason for withdrawing drugs that have already been approved for the market. There is no reliable test system available at present to detect organ failure at an early stage. Organ failure is associated with a high mortality and can be caused by acute diseases or medication.

This gave rise to the development of a microtiter plate assay based on human cell-based biosensors that can be used to detect organ failure at an early stage in a clinical setting and to evaluate the toxicity of drugs and medical devices. By optimizing and standardizing the procedure, reliable statements can be made with regard to exogenous and endogenous toxicity.

The research group from the Northeast of Germany has successfully developed in vitro-tests for an early detection of organ failure and assessment of prognosis in critically ill patients regarding liver, nervous system and immune system. The in-vitro test systems are implemented to replace, reduce and refine (3R principle) animal trials. The assays are useable for pharmaceutical (toxicology, drug development, efficacy testing, bioactivity assays, quality control) and chemical industry (toxicity testing) as well as basic research. The following in-vitro test systems are established for investigation of hepatotoxicity, neurotoxicity and leukocyte immunoparalysis. All tests are performed according to DIN EN ISO/IEC 17025:2005-08 to ensure a high accuracy of results.

The research group is highly interested in common research and innovation projects. Companies and also research institutions that want to cooperate within Horizon 2020 or other research projects are welcome in order to further develop and apply the test systems and to look for a wider spectrum of application fields.

Partners could test (in-vitro) their products with regard to hepatotoxicity, neurotoxicity and leukocyte immunoparalysis.

Besides that, a technical cooperation with focus on using the existing equipment is also possible.

Outside of joint project activities the testing technologies can be made available by licensing agreements.

Advantages and Innovations

The cell-based test systems can be used to replace, reduce and refine (3R principle) animal trials. The assays are useable for pharmaceutical (toxicology, drug development, efficacy testing, bioactivity assays, quality control) and chemical industry (toxicity testing) as well as basic research.

The project group is fully equipped for the work with cell lines:

Cell culture facilities, Fluorescent microscopy, analysis, Live cell Imaging, Photometer, chemiluminescence- and fluorescence measurement.

Due to close connection to University and to a close network of scientific cooperation partners, the group also has access to additional state-of-the-art technologies.

Stage of Development

Already on the market

Comments Regarding Stage of Development

The in-vitro test systems are completely implemented in the lab routines. The tests were all performed according to DIN EN ISO/IEC 17025:2005-08 to ensure a high accuracy of results.

IPR Status

Patents granted

Comment Regarding IPR status

Patented use of human hepatocytes for determining liver function and liver regeneration.

Network Contact

Issuing Partner

AGENCIA ANDALUZA DEL CONOCIMIENTO

Contact Person

María Fernández Santa Cruz Campos

Email

maria.fernandezsantacruz@juntadeandalucia.es

Open for EOI : **Yes**

Dissemination

Relevant Sector Groups

Healthcare

Client

Type and Size of Organisation Behind the Profile

R&D Institution

Year Established

2011

Turnover

<1M

Already Engaged in Trans-National Cooperation

No.

Experience Comments

All tests performed acc. to DIN EN ISO/IEC 17025:2005-08

Languages Spoken

English
German

Client Country

Germany

Partner Sought

Type and Role of Partner Sought

The preferred partnership is with companies that want to test (in-vitro) their products with regard to hepatotoxicity, neurotoxicity and leukocyt immunoparalysis.

A partnership in the frame of a research project is envisaged.
A cooperation with research institutions is also possible. EU programmes such as Horizon 2020, EUREKA or other (bi-lateral) programmes are suggestable.

Type and Size of Partner Sought

SME 11-50, University, Inventor, R&D Institution, SME <10, 251-500, SME 51-250

Type of Partnership Considered

License agreement
Technical cooperation agreement
Research cooperation agreement