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Joint Information Day on Organotypic 3D Cell Culture Models and Engineered Tissues

October 25th 2012
09:00 – 16:30

Festsaal-Steigenberger Inselhotel
Auf der Insel 1, 78462 Konstanz, Germany

The first 3D cultures have been established to better mimic *in vivo* with respect to functional and physiological parameters than classical 2D *in vitro* models. Now, engineered tissues and 3D cell cultures modeling the liver or aspects of the nervous system, the skin, the respiratory system, the intestine, the heart, and other organs are employed more frequently in research. Their use in toxicological research, however, is still relatively limited, and few of these systems have found regulatory acceptance.

3D models pose technical challenges in addition to those of 2D cultures, as they are based on a more complex experimental setup, necessitating the use of modified or different endpoints.

This information day will focus on the applicability of 3D systems to model human physiology and pathophysiology with a particular focus on toxicological risk assessment. The systems presented will include hepatic, neuronal, lung, and skin models. Along with an in-depth discussion of available systems, the way forward and hurdles to regulatory acceptance will also be highlighted.

Agenda: Joint Information Day on Organotypic 3D Cell Culture Models and Engineered Tissues

- 09:00 - 09:30** *Welcome Address*
Prof. Thomas Hartung, CAAT, Johns Hopkins University, USA
Dr. Bart De Wever, The ALEXANDRA Association, Monaco
- 09:30-10:00** Prof. Magnus Ingelman-Sundberg, Karolinska Institute, Sweden
“Drug toxicity analysis using long-term 3D liver cell cultures”
- 10:00-10:30** Prof. Heike Walles, University Medical Center Würzburg, Germany
“Engineering of vascularized human tissues for toxicological applications”
- 10:30 - 11:00 coffee break*
- 11:00-11:30** Prof. Catherine Verfaillie, University of Leuven, Belgium
“Can we use induced pluripotent stem cells to create liver analogues suitable for toxicity testing? A view from the SEURAT-1 and HeMiBio consortia”
- 11:30-12:00** Prof. Monika Schäfer-Korting, Free University of Berlin, Germany
“3D cultures of normal and diseased skin”
- 12:00 - 13:00 lunch and coffee*
- 13:00-13:30** Prof. John Heycock, University of Sheffield, UK
“Current approaches and techniques in 3D cell culture and new platforms for peripheral nerves”
- 13:30-14:00** Prof. Ellen Fritsche, Heinrich Heine University Düsseldorf, Germany
“Human neurospheres as three-dimensional cellular systems for developmental neurotoxicity testing”
- 14:00-14:30** Dr. Tony Bahinski, Wyss Institute at the Harvard University, USA
“Organs-on-Chips as Potential Alternatives to Animal Models for Safety and Efficacy Testing”
- 14:30 - 15:00 coffee break*
- 15:00-15:30** Dr. Natalie Alepee, The L'Oréal Group, France
“An industry view on skin irritation and corrosion safety evaluation using reconstructed human epidermis, EpiSkin and SkinEthic RHE”
- 15:30-16:00** Dr. Tzutzy Ramirez, BASF SE, Germany
“*In vitro* methods for the prediction of skin sensitizers”
- 16:00-16:30** Dr. Uwe Pfannenbecker, Beiersdorf AG, Germany
“Use of 3D models for phototoxicity testing in the cosmetic industry”
- 16:30** *Closing remarks*
Prof. Marcel Leist, CAAT-Europe, University of Konstanz, Germany

Presentations will be followed by a discussion to address questions from the audience.

Registration (including lunch):

- CAAT sponsors and associates and students as well as representatives of federal agencies or NGOs: free if registered before October 14th 2012, €100 after October 14th
- Regular participants: €300 early registration, €500 after October 14th

To register, please contact Mardas Daneshian at CAAT-Europe: caat-eu@uni-konstanz.de