

Improving the welfare of animals:

Researchers develop computer-aided models to replace animal testing

Saarbrücken, 4 October 2013 – Every year, October 4 is all about the protection of animals. On World Animal Day, animal welfare organisations around the globe advocate the respectful treatment and welfare of animals. One of the central demands of the animal activists is to abolish animal testing and to use alternative testing methods instead. In this context, the European Union has taken a huge step forward at the beginning of this year: On March 11 a full ban on the marketing of cosmetics and hygiene products tested on animals entered into force in the EU.

The search for alternative testing methods for safety assessment is thus more pressing than ever. The development of such non-animal testing methods, especially when it comes to reliably predicting long-term toxic effects, represents a major scientific challenge. The NOTOX project, which is co-funded by the European Commission and Cosmetics Europe, the European trade association of the cosmetics industry, significantly contributes to this endeavor by developing and validating predictive bioinformatics models characterizing long-term toxicity responses. These computer-aided models will help predict possible long-term toxic effects on the human body. In consequence, the use of living organisms to test the safety of substances to be found in daily-life products such as make-up, soap or toothpaste is no longer needed.

Computer-aided models as an alternative to animal testing

The liver is the central organ for the elimination of toxic substances in the human body. Therefore NOTOX scientists closely examine in test-tube experiments how such substances affect human liver cells in the long run. The processes and reactions they observe in the cells are being translated into highly complex computer models. The overall goal is to develop algorithms that closely mimic the processes which actually take place in human tissues when exposed to toxic substances. These computational models will allow for reliable long-term predictions and thus help to replace animal testing in the long run.

In order to achieve this ambitious goal, NOTOX brings together eleven internationally renowned and interdisciplinary research teams from all over Europe, including academic research laboratories and four small and medium sized enterprises (SMEs). Project coordinator is Prof. Elmar Heinzle of Saarland University, Department of Biochemical Engineering.

NOTOX in motion: Scientists open their labs for camera crew

Over several months a film team captured statements and pictures of NOTOX scientists in various settings and on different occasions: during project meetings and at work in their

laboratories. The result is a vivid glance behind the scenes of the project, with exciting insights into the challenges of developing validated alternative testing methods. Moreover, the film shows how cutting-edge research on alternative testing methods contributes to improving the overall welfare of animals.

The NOTOX film is available on the project website: <http://www.notox-sb.eu/film>

About NOTOX: On the way to alternative testing methods

To advance research in the field of alternative testing methods for long-term systemic toxicity, the Research Initiative SEURAT-1 was established in 2011. It stands for “Safety Evaluation Ultimately Replacing Animal Testing”. This initiative, comprising six research projects as building blocks, pursues a common strategy “towards the replacement of current repeated dose systemic toxicity testing in human safety assessment”. One of the SEURAT-1 research projects is NOTOX, which started in 2011 and will run for five years. The 50 million € SEURAT-1 Initiative is co-funded by the European Commission and Cosmetics Europe, the European industry trade association. The research results achieved by SEURAT-1 projects will not only be relevant for the cosmetics industry, but are expected to also have an impact on the chemical and pharmaceutical industry.

Internet: www.notox-sb.eu

Further information on the project, please contact:

Project Coordination:

Prof. Elmar Heinzle
Universität des Saarlandes
Technische Biochemie
Gebäude A 1.5
66123 Saarbrücken
Tel: +49 681 302 2905
e.heinzle@mx.uni-saarland.de

Footage Material

The film as well as cleanfeed and additional footage material is available from the project management partner Eurice on request. Please contact:

Project Management

Dr. Verena Peuser
Eurice – European Research and Project Office GmbH
Science Park 1
66123 Saarbrücken
Tel. +49 681 9592 3396
v.peuser@eurice.eu

The content of this press release reflects only the author's views. The European Union and Cosmetics Europe are not liable for any use that may be made of the information contained therein.