

The European Citizens' Initiative petition "Stop Vivisection" and the response from the European Commission to it on 3 June has put the development of alternative (animal free) human safety testing of chemical substances in the spotlight of public debate. Whereas the European Commission says it shares the Citizens' Initiative conviction to phase out animal studies, it considers that in the absence of scientifically-solid and validated alternative approaches, animal studies remain important for protecting human and animal health, and for maintaining an intact environment

Questions raised in the public debate include: Why are we not already using alternative test methods today? What is the current progress of research in the area? What are the missing steps to be achieved to completely replace animal testing for human safety assessment of chemical substances? Is enough effort invested in research and development of alternative solutions?

Major public and private efforts representing hundreds of millions of EURO have been invested over the last decades to develop the knowledge and technologies needed to replace animal based human safety testing by alternative methods.

One of the largest current research initiatives on alternative testing is the European 50 million EURO research cluster "SEURAT-1" (Safety Evaluation Ultimately Replacing Animal Testing) that started on 1 January 2011. SEURAT-1 is a five-year public-private research partnership supported financially by the European Commission (public sector) and the Cosmetics Europe trade association (private sector) in equal parts. SEURAT-1 involves most eminent scientists and experts in the fields of toxicology and alternative methods from over 70 universities, public research institutes and companies. Their research work is structured in six projects, each of them focusing on a specific field of knowledge and technology that need to be combined to build the targeted alternative test methods.

SEURAT-1 has achieved an important milestone in the development of alternative test methods based on the use of human cells, highly miniaturised devices mimicking human organs in three dimensions (in this case the liver), and computer technology. Before the in-vitro methods developed within SEURAT-1 can be brought into industrial use some additional steps are needed. First, the reliability and robustness of these methods need to be demonstrated on a larger scale. Then, they need to be validated for their reliability and relevance on a regulatory level. This is the job of EURL ECVAM, the European Union Reference Laboratory for Alternatives to Animal Testing. Finally, it is necessary to fit in vitro and computational methods together in integrated approaches and testing strategies to predict safe use of chemicals. This is already tackled in the SEURAT-1 proof-of-concept case studies.

Although it will still take many more years before industry will be able to use the developed alternative methods in their standard test programmes, SEURAT-1 and other research initiatives in Europe and worldwide have made considerable progress towards this objective.

At the end of its 5 year programme, SEURAT-1 will present its results in a public Symposium on 4 December 2015 in Brussels. A press conference will be held in connection to the event. This would also be the opportunity to announce the next 30 million EURO research project supported by the new European research programme Horizon 2020, and which will run for the next 6 years capitalizing on the major achievements of SEURAT-1.

To contact officials of SEURAT-1, COACH Office (Sara Skogsater), +33 1 53 94 54 79, coach-office@eurtd.com

A press corner is available at the SEURAT-1 website:
<http://www.seurat-1.eu/pages/press-corner.php>

Each SEURAT-1 project has its own website and coordinator:

- HeMiBio: Catherine Verfaillie, catherine.verfaillie@med.kuleuven.be

15 June 2015



- SCR&Tox: Marc Pechanski, mpeschanski@istem.fr
- NOTOX: Elmar Heinzle, e.heinzle@mx.uni-saarland.de
- DETECTIVE: Jürgen Hescheler, j.hescheler@uni-koeln.de
- COSMOS: Mark Cronin, M.T.Cronin@ljmu.ac.uk
- ToxBank: Barry Hardy, barry.hardy@douglasconnect.com