

## European Society of Toxicology In Vitro

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## Newsletter

Issue No 28 June 2010

### **Editorial**

Dear ESTIV members.

Here is a new ESTIV Newsletter inviting you all to join the 16<sup>th</sup> International Congress on *In Vitro* Toxicology - ESTIV 2010 in Linz. This is a great opportunity for us to meet and discuss our current research results and plan our future investigations.

**Dr. Richard Clothier** is this year recipient of the Björn Ekwall Memorial Award 2010 for his outstanding contribution in the field of *in vitro* toxicology, in particular with respect to development, implementation and validation of alternative toxicity test methods and for his substantial contribution to the FRAME Research Programme. Congratulations! We are looking forward to awarding also the most innovative work of our young scientists.

I would like to thank all members for their contribution to this Newsletter and if you want to take up a more active role in our society, you are invited to express your interest for being nominated as a member of the Executive Board of ESTIV.

After five years of editing ESTIV Newsletter also my position will now be taken over by a new member. Therefore, I would like to express my gratefulness to all of you for your collaboration. Especially I would like to thank Hasso Seibert who encouraged me to continue his work. It was a great pleasure!

I am looking forward to following the activities of ESTIV in the future and to meeting you again.

Best wishes,

Sonja Jeram

## Message from the president

Dear Colleagues,

While we are waiting for a long and hot summer, we are also preparing for our 16<sup>th</sup> International Congress on *In Vitro* Toxicology - ESTIV 2010. ESTIV2010 is organized together with our colleagues from EUSAAT (the European Society for Alternative to Animal Testing) and the Austrian Centre for Alternative and Complementary Methods to Animal Testing. Our previous ESTIV president, Prof. Horst Spielmann will host the congress.

It is important to take the opportunity of ESTIV2010 to review the actual state of the science of alternative tests. Ahead of us we have 3 important legislative issues which are building on advances in the science of alternative tests. 1) There will be the update of the EU legislation on the protection of animals used for experimental and other scientific purposes (Directive 86/609/EEC.). 2) We approach the deadline of 2013 for further testing ban on cosmetics. 3) The REACH program is now fully active and promotes alternative methods for assessing hazards as "testing on vertebrate animals shall only be undertaken as a last resort". We need to fill gaps in our alternative test strategies. A new vision on toxicology in the U.S., introduced a paradigm shift by which in vitro analytical approaches are seen as the best hope for evaluating the enormous back log of untested chemicals. In Europe, the firmly established basis of in vitro toxicological research is reassembling and with the help of EU sponsored research and coordination programs a European network, is being created to join a new global initiative on toxicity testing. We need ESTIV scientists to be at the fore front of these new developments.

I look forward to welcome you in Linz,

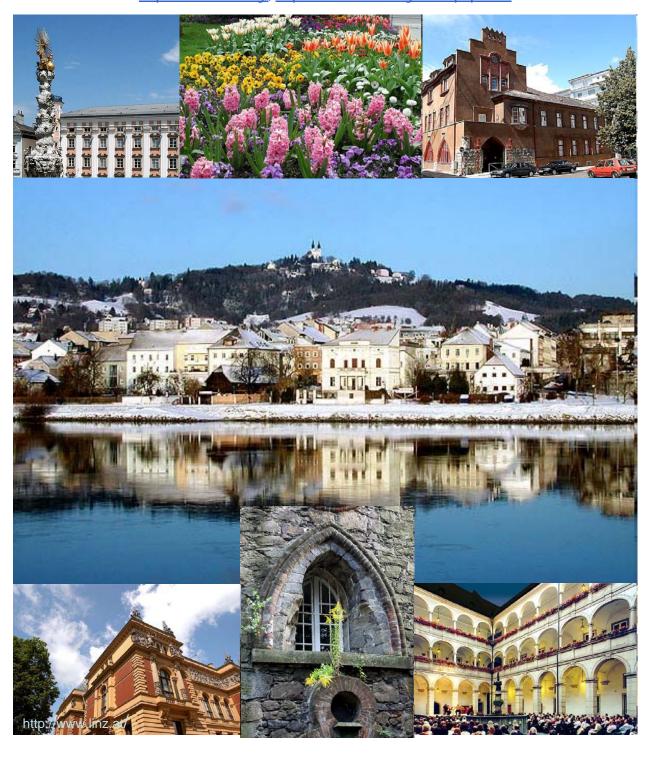
Greet Schoeters President of ESTIV

## **ESTIV 2010**

September 2-4, 2010,

## University of Linz, Austria

http://www.estiv.org/, http://www.eusaat.org/index.php/2010



## Congress Linz 2010 - EUSAAT 2010 - ESTIV 2010

http://www.estiv.org/ http://www.eusaat.org/index.php/2010

## September 2-4, 2010, University of Linz, Austria

16<sup>th</sup> International Congress on *In Vitro* Toxicology - ESTIV 2010 13<sup>th</sup> Annual Congress of EUSAAT - EUSAAT 2010 16<sup>th</sup> European Congress on Alternatives to Animal Testing - Linz 2010

## 1.

## **Toxicological effects**

- Topical toxicity & sensitisation
- Metabolism & toxicokinetics
- Target-organ toxicity including acute, chronic and repeated dose toxicity testing
- Reproductive & developmental toxicity
- Ecotoxicology and bioanalytical techniques in environmental monitoring
- Toxicity testing of biologicals

### II.

## Novel approaches/ methodologies

- Pathway discovery and analysis
  - Toxicology in the 21st century pathway discovery
  - -omics a way to identify markers for toxicity?
  - Systems biology
  - Correlation with human data
  - High throughput screening
- Progress in the use of stem cells (embryonic and adult) for the development of alternative testing methods
- Alternatives to the production of antibodies
  - Limitations of the current legislation in Europe
  - Polyclonal and monoclonal use to identify novel proteins
  - Animal welfare issues

#### III.

## **Cross-cutting issues**

- · Legal and ethical questions
- Nanotoxicology / Nanobiotechnology
- Quality in in vitro toxicology (GCCP & serum free media, Evidence based toxicology, Validation of testing strategies / alternative methods)
- Testing strategies, QSARs, in silico, databases & information sources

#### IV.

## Regulatory application of alternative methods

• Round table discussions on a subject which is up-to-date Cosmetics Directive, REACH or Revision of the Directive 86/609/EEC

#### V

## Free communications

## Travel Bursaries ESTIV2010 and Student Session

To encourage active participation of undergraduate students in scientific fora and to stimulate exchange of information among students, ESTIV will provide 5 travel bursaries of 250 Euros each.

Students who have not yet completed a Ph.D and who submit an abstract for an oral or poster presentation are eligible for a travel bursary and should indicate this when they register at the congress web site. You are also requested to send your abstract, CV and motivation why you think you deserve the travel bursary to the ESTIV Board: <a href="mailto:secretary@estiv.org">secretary@estiv.org</a>

Recipients of the bursaries will be chosen on the basis of the submitted abstracts. Winners will be informed before June 30, 2010. In addition to the bursary, as a recipient you will get the opportunity during the student session of ESTIV2010 to present your current results in a nutshell and to introduce your institute and its *in vitro* toxicology-related activities in a 10 minute presentation. You will acquire experience of presenting the very essence of your results/work orally to an international audience. The student session aims to provide the students with a clear and concise insight into *in vitro* toxicology areas that they are not (yet) familiar with and to obtain information about *in vitro* toxicology in different institutions around Europe.

## Young Scientist Award ESTIV2010

In recognition of excellence and to encourage young researchers for active dissemination of their work, ESTIV and Elsevier present following awards:

- Award of the European Society for Toxicology in Vitro and Elsevier Young Scientist Award for the best oral presentation at the ESTIV2010 congress. The award includes a one year subscription to "Toxicology in Vitro", the official journal of ESTIV, and 500 Euros.
- Award of the European Society for Toxicology in Vitro and Elsevier Young Scientist Award for the best poster presentation at theESTIV2010 congress. The award includes a one year subscription to "Toxicology in Vitro", the official journal of ESTIV, and 500 Euros.

In addition to receiving the specific award, recipients are honored at the Awards Ceremony during the closing session of ESTIV2010 (September 4, 2010). The ESTIV newsletter and the ESTIV web site will report on their work.

Young scientists are students who are working towards a Ph.D. You should indicate whether you are eligible for the young scientist award, when you register for the congress.

Jan van der Valk, PhD ESTIV vice-President <u>j.vanderValk@uu.nl</u>

## The Björn Ekwall Memorial Award 2010 Dr. Richard Clothier

In recognition of his outstanding contribution in the field of *in vitro* toxicology, in particular with respect to development, implementation and validation of alternative toxicity test methods, and for his substantial contribution to the FRAME Research Programme **Dr. Richard Clothier** is the recipient of the Björn Ekwall Memorial Award for the year 2010.



Dr. Richard Clothier

Richard Clothier substantially contributed to the field of *in vitro* toxicology by developing alternative assays for replacing animal toxicity testing, e.g. Neutral Red Uptake (NRU) and Neutral Red Release (NRR) tests for basal cytotoxicity, the Fluorescent Leakage assay, Alamar Blue (Resazurin) metabolism test for toxicity and many others.

Dr. Clothier, as an expert in national and international trials, significantly contributed to the further advancement of the acceptance of alternative assays for toxicity through his commitment to a number of studies including;

- FRAME study in 1983-1986,
- EC/HO and COLIPA international validation study on alternatives to the Draize eye irritation test,
- EU/COLIPA international validation study on the in vitro 3T3 NRU test for phototoxicity,
- ECVAM/ICCVAM assessment of the NRU assay for measuring of basal toxicity and others.

For many years Dr. Clothier collaborated with Björn Ekwall on the Multicenter Evaluation of *In Vitro* Cytotoxicity (MEIC) programme aimed at the evaluation of ability of *in vitro* basal cytotoxicity assays to predict human acute systemic toxicity. R. Clothier is one of the scientific leaders of the integrated EU sponsored ACuteTox project, and is responsible for the generation of basal cytotoxicity component of the *in vitro* database and contributed to its *in vitro - in vivo* evaluation of the data.

R. Clothier was a co-founder (1983) of the FRAME Alternative Laboratory (FAL) at the University of Nottingham, in the Medical School, and was a director of the FAL from 1997 to 2005. He was promoted to Senior Lecturer at the University of Nottingham in 1985, to Reader, in Cellular Toxicology, in 1993 and became Associate Professor in 2005. R. Clothier has been a FRAME Trustee since 1983.

Ada Kolman, PhD, Assoc. Professor President of the Björn Ekwall Memorial Foundation Stockholm, 2010-01-11

Sweden

## Scientific report submitted to EFSA

Applicability of **QSAR** analysis to the evaluation of the toxicological relevance of metabolites and degradates of pesticide active substances for dietary risk assessment

The overall aim of the **PESTISAR** project was to evaluate the potential applicability of computational methods in the evaluation of the toxicological relevance

of metabolites and degradates of pesticide active substances.

Alternatives to animal testing are needed in the evaluation of pesticide actives, since relatively few metabolites and degradation products are explicitly tested for toxicity, but they may nevertheless have properties of concern for human health which should be considered as part of the residue definition for risk assessment. This project addressed the usefulness of various types of computational estimation methods, with emphasis on Quantitative Structure-Activity Relationships (QSARs), Structure-Activity Relationships (SARs) and expert systems. Some of these models are incorporated into software tools, whereas others are available only in the literature.

We describe the current status of these estimation methods, not only for toxicological endpoints relevant to dietary risk assessment, but also for Absorption, Distribution, Metabolism and Excretion (ADME) properties, which are often important in discriminating between the toxicological profiles of parent compounds and their metabolites/degradation products. We also describe how QSAR models and the predictions they generate should be assessed and documented for regulatory purposes. To gain an overview of how computational methods are used internationally in the regulatory assessment of chemicals in food, we carried out a survey, the results of which are summarised.

Finally, we present the results of a research investigation aimed at exploring the usefulness of selected computational methods in the prediction of genotoxicity and carcinogenicity. Emphasis was placed on these toxicological endpoints because they are considered particularly relevant in the overall toxicological profiling of pesticides, when the results of QSAR analysis are combined with the application of the Threshold of Toxicological Concern concept. With a view to promoting the usefuless of computational methods in dietary risk assessment, recommendations for further work are presented throughout the report.





Prepared by Computational Toxicology Group Institute for Health & Consumer Protection European Commission - JRC Ispra, Italy

### AXLR8 - A new coordination action

**AXLR8 is a new coordination action** funded under the European 7th Framework Program for Health (2009-2013).

AXLR8 will accelerate the transition to a toxicity pathway-based paradigm for chemical safety assessment trough internationally co-ordinated research and technology development <a href="https://www.axlr8.eu">www.axlr8.eu</a>

AXLR8 will monitor progress of European frame work programs committed to alternatives to animal testing and guide them towards an advanced strategy for safety assessment. Progress in molecular and cellular biology in recent years has made available a wide range of new research tools which allow more accurately studying the effects of chemicals on cells, tissues and organisms in a rapid and cost-efficient manner. These advances should maximally be exploited for safety testing.

The ultimate goals are to assess safety:

- In systems that may be more relevant to toxicity in humans, as well as capable of identifying the cellular mechanisms at the root of toxicity and disease;
- Of a much larger number of substances and mixtures than is currently possible;
- More rapidly, efficiently, and cost-effectively than at present;
- Using fewer, and one day potentially no animals.

#### Coordinator:

Horst Spielmann & Monika Schäfer-Korting Freie Universität Berlin, Germany

#### Partners:

Troy Seidle & Emily McIvor Humane Society International (UK) London, United Kingdom

#### **Greet Schoeters**

Flemish Institute for Technological Research (VITO) Centre for Advanced R&D on Alternative Methods (CARDAM), Mol, Belgium



# A new practical guide on avoiding Animal Testing

Helsinki, 2 June 2010

ECHA publishes a new practical guide on avoiding Animal Testing

ECHA's new practical guide helps industry to consider all possible alternative methods for data generation on hazards to make sure that testing on vertebrate animals shall only be undertaken a last resort.

The overall purpose of the REACH Regulation is not only to ensure a high level of protection of human health and the environment but also to promote alternative methods for hazard assessment. Where there is insufficient information on the hazards of a chemical, REACH requires industry to fill the gaps, assess the hazards and risks of their substances and identify any risk management measures that are necessary to protect human health and the environment.

Many of the standard test methods use vertebrate animals to predict the effects of chemicals on humans and the environment. To avoid unnecessary animal testing ECHA promotes alternative methods for assessing hazards.

### Practical guide:

http://echa.europa.eu/doc/publications/practical\_guides/ pg\_10\_avoid\_animal\_testing\_en.pdf

# Short guidance on the threshold approach for acute fish toxicity

Series on Testing and Assessment / Adopted Guidance and Review Documents

The No. 126 Short guidance on the threshold approach for acute fish toxicity is now published.



http://www.oecd.org/document/30/0,3343,en\_2649\_34377\_1 916638\_1\_1\_1\_1,00.html

## Report from the 27th SSCT Workshop

The 27th Workshop of the Scandinavian Society for Cell Toxicology 16-22 September, 2009 Lazne Sedmihorky, Czech Republic



Participants at the 27th Workshop

The 27th Annual Workshop of the Scandinavian Society for Cell Toxicology (SSCT) was held, maybe as a little surprise, in the Czech Republic. The SSCT was established in 1983 primarily as a discussion platform for cell toxicologists from Nordic countries. Nevertheless, very soon the activities crossed the boarder of Scandinavia and annual workshops already took place in Germany, United Kingdom, and Estonia. During the meeting of the SSCT Board in Grinda, Sweden, in 2006 it was decided to organise the 27th Workshop in the Czech Republic and Prof. Zuzana Cervinkova and Prof. Miroslav Cervinka from the Charles University Faculty of Medicine in Hradec Kralove were appointed as the local organisers.

The local organisers adopted traditional characteristics of the SSCT workshops: close to the nature far from huge centres. The workshop venue was in the Bohemian Paradise in the National natural protected park, roughly 100 kilometres form Prague, in the quiet resort Lazne Sedmihorky. But not only natural beauties supported the success of the meeting. In the first line, the scientific program and the participants themselves created a constructive and friendly atmosphere. Together, there were 41 participants from 11 European countries, participants from the Czech Republic represented less than 45 % of all participants.

The workshop started with the invited lecture of Prof. Ada Kolman "Björn Ekwall, an outstanding Swedish cell toxicologist". Next morning, the scientific programme started with the Björn Ekwall Memorial Award Lecture. In 2009 the award was given to Prof. Annalaura Stammati, a research director of the Instituto Supeiore

di Sanita, Rome, Italy. Prof. Stammati presented her invited lecture about "The evolution of *in vitro* toxicology research at ISS from 1979 to 2009".

The workshop had the following main topics: mechanisms of toxicity, toxicity testing in vitro, application of in vitro assays in regulatory toxicology. There was also a series of special sessions under the heading "Methods of Cell Toxicology" this time focused on "Quantitative cytometry as a tool for toxicity Peter O'Brien from the University assessment". College in Dublin (Ireland) presented a very educative presentation about "High Content Analysis". The programme continued with a presentation about "The use of time-lapse microscope-assisted cytometry for characterisation of toxic effects on cell cultures". In subsequent sessions many interesting presentations highlighted the importance of *in vitro* models for toxicity assessment. The poster session was organised as quided presentation and discussion.

On Friday afternoon, the natural beauty of surrounding Rocky Towers and pleasant Indian summer sun shine attracted many participants to a nice walking trip in the beautiful surroundings.



Ada Kolman, Annalaura Stammati, Hasso Siebert and Hanna Tähti

At the end of the meeting another essential part of the SSCT workshops took place – SSCT Young Scientists Awards for the best oral and poster presentations were given. This year winners were Tomas Rousar (University Pardubice, Czech Republic) and Sibylle Brenner (Institute of Toxicology, Kiel, Germany).

Finally, it is a pleasure for us to mention that the General Assembly held during the Workshop appointed Ada Kolman as a honorary member of the Scandinavian Society for Cell Toxicology.



Miroslav Cervinka and Hasso Seibert

## The TRISK project



The TRISK project, i.e. the European Toxicology Risk Assessment **Training** course (http://www.triskproject.eu/), is a project co-financed by the European Commission under the Second Programme of Community Action in the field of Health (2008-2013). It is coordinated by the University of Milan (Italy), with the University of Düsseldorf (Germany), Utrecht University (The Netherlands), The University of Surrey (United Kingdom), Tecnoalimenti (Italy) and the Karolinska Institute (Sweden) as project partners. TRISK addresses the existing gap of training schemes and provides opportunities for practical risk assessment training of young scientists interested in pursuing this expertise as well as trained toxicologists who wish to act as a member of various scientific committees of regulatory, industrial and governmental bodies engaged in risk assessment. As such, the TRISK course spans over 2 years (2010-2011) and consists of 8 one-week modules that are organized at different European universities and research institutions, and 3 months of practical training followed by a final examination. A selection of 25 European TRISK participants, with academical, governmental or industrial backgrounds, was performed in November 2009.

#### Module I

"Introduction to risk assessment and management with special attention to chemical risk assessment"



Module I was organized from 1st to 5th February 2010 at the Karolinska Institute in Stockholm (Sweden) and included fundamental concepts in toxicology, epidemiology, exposure and risk assessment.

Standardized test guidelines and GLP were also Specific attention was paid to interpretation possibilities and evaluation of data from different test systems, handling of uncertainties and data gaps, and other critical issues in health risk assessment. Focus was hereby put on the identification of critical effects, extrapolation to humans and sensitive groups, application of assessment factors and allocation of health-based guidance values. In the afternoon sessions, a group work was foreseen which allowed to practically apply all the topics that were lectured. This group work was presented on the last day of the course and served as examination.

Module II "Role of ADME in risk assessment"



Module II was held at the University of Surrey in Guildford (United Kingdom) from 8th to 12th March 2010 and was dealing with general principles of xenobiotic metabolism and toxicokinetics with evident emphasis on risk assessment. In particular, it covered an overview of lung, oral, intestinal and skin absorption, distribution and excretion, biotransformation, bioavailability, enzymology and molecular biology. It also included toxicodynamic effects, dose-response curves, techniques for measuring xenobiotics, plasma monitoring, and intra- and interspecies comparison in drug metabolism and toxicokinetics. Besides a large number of state-of-the-art lectures in this field, a syndicate and group work were organized which enabled practising the acquired theoretical knowledge. This course was closed with an open book examination.

> Mathieu Vinken Department of Toxicology Vrije Universiteit Brussel e-mail: mvinken@vub.ac.be

# ASCCT - The America Society for Cellular and Computational Toxicology

Inspired by the long and collegial history of European societies such as ESTIV and MEGAT, the Institute for *In Vitro* Sciences and the Physicians Committee for Responsible Medicine, two North American organizations, have collaboratively created a new scientific society, the American Society for Cellular and Computational Toxicology (ASCCT). The ASCCT aims to build on the success of European and Asian societies and the growing interest in advancing toxicology for practical, scientific, and ethical reasons.

The practical challenges of assessing a very large and growing inventory of substances in the industrial chemicals market is being felt already by the EU under REACH. The U.S. will likely soon face new legislation compelling producers to gather more information on neat substances and mixtures. The effects of the REACH, the Cosmetics Directive, and stirrings of restrictions on the testing of household products also promise to affect U.S. companies. Now is the time to capitalize on this opportunity to bring interested professionals together to accomplish the advances in toxicology that are needed to meet these challenges.

The ASCCT will provide an organized forum for discussion of cellular and computational toxicology approaches especially as replacements for animal based toxicology methods. Through regular meetings and activities, the Society will facilitate the development, acceptance and routine use of *in vitro*, in silico, and other "alternative" toxicological test methods.

Achieving the paradigm shift called for by the National Academy of Sciences (NAS) in its 2007 report Toxicity Testing in the 21st Century: A Vision and Strategy will require cooperation and coordination among scientists from cellular, molecular, and computational disciplines and the regular participation of regulators and public interest groups. Topics from green products development, to an interest in increasing the success of pharmaceutical candidates in the clinic. nanomaterials call for more cross-sector collaboration than ever before. The ASCCT wishes to help foster this coordination by bringing together scientists and professionals from regulatory, industry, and advocacy backgrounds and pharmaceutical, chemical, and cosmetic sectors. In doing so we hope to create opportunities for discussion and collaboration that will foster innovative research into and development of new toxicology testing methods.

The development and validation of new toxicology methods is only the starting point for those wishing to replace animals in toxicity testing. Consequently, a key

mission of the ASCCT will be to increase the routine application and use of computational and cellular methods for prioritization, classification, and risk assessment purposes.

The Society will host regular meetings and offer an enewsletter as a starting point for member collaboration. We envision the development of other initiatives as the Society grows, such as fostering support for young scientists in cellular and computational toxicology. While the Society is North America-driven and focused, we naturally wish to invite the participation of our European colleagues and hope to learn from your experience. The ASCCT is now accepting Founding Member inquiries, and also invites individuals scientists to sign up for more information on the web at <a href="https://www.ascctox.org">www.ascctox.org</a>. Individual memberships will be offered shortly. We hope you will join us in making "alternative" mainstream!



Kristie Sullivan, MPH Scientific and Policy Advisor e-mail: <a href="mailto:ksullivan@pcrm.org">ksullivan@pcrm.org</a> www.reformtoxicitytesting.org

### **iSUP2010**

In the medieval Belgian city of Bruges, VITO (The Flemish Institute for technological research) organized the 2nd International Conference on Innovation for Sustainable Production, I-SUP2010, 18-21 April.

Six parallel conferences focused on progress towards sustainable production. Introductory talks raised mutual interests from all conference participants. One of the highlights was the videoconference from Nobel price winner Prof. R. K. Pachauri on "Challenges and Solutions for Sustainable production: a Contribution to Climate Change Mitigation". This conference can be still followed on

http://www.i-sup2010.org/webcast/webcast.htm.

The conference took place just after the first ash clouds of the Icelandic volcano Eyjafjallajoekull caused the closure of most European airports. This was an ultimate test for decreasing the ecological footprint of conferences and for testing new sustainable solutions such as videoconferences.

CARDAM, the Centre for Advanced Research and Development of Alternative Methods, organized a conference on new promising methods for the reduction and replacement of animal tests in toxicity testing. Although the volcano had a notable influence on the participation rate, the scientific program remained almost intact. The conference illustrated clear commitment of different industrial stakeholders to obtain progress in the field of alternative tests as a high priority to guarantee safe use of chemicals.

Professor Alan Goldberg (CAAT, US) highlighted that only for 22% of the chemicals enough information on the safety are available. Only about 5000 chemicals underwent thorough testing over the last 30 years, while it is expected that more than 100 000 chemicals are still waiting for complete evaluation. Novel approaches for safety testing are introduced by scientists and industry, a milestone has been the report of the US national academy of sciences which has proposed a new strategy for toxicity testing in the 21st century. Introducing *in vitro* systems with human cells combined with molecular and computational tools in high throughput setting, should allow making better predictions for human safety with less animals being used.

This message is taken up in the US but definitely also in Europe where a lot of experience and emphasis to use appropriate test models is present. Irritation of skin and eyes is already tested with three dimensional (3D) skin and cornea models as was reported by COVANCE, TNO and Straticell. Effects of chronic low dose exposure to organs in the body are more difficult to tackle but new 3D models for liver, intestinal (Fraunhofer, De) and blood brain barrier (University of Lille) are underway.

Different speakers highlighted the use of invertebrates: University of Ghent presented the flatworm test model which is useful to evaluate genetic damage, and the SMI test model based on mucus production by slugs allowing classification of compounds and formulations which cause stinging, itching and burning. Lower vertebrates such as zebrafish are used in test methods to evaluate complex endpoints such as liver toxicity (investigated at TNO) and neurodevelopmental toxicity (investigated at CARDAM).

Joachim Kreysa, head of ECVAM, the European Centre of Alternative Methods, invited test developers to submit their test systems to ECVAM for further validation. He emphasized the need for a new approach to validate tests for complex endpoints. Integrated test strategies should incorporate reliable building blocks which reflect processes which are relevant for the complex toxic endpoints.

New tests for respiratory and skin sensitisation (presented by CARDAM) and genotoxicity (presented by the University of Maastricht) are such promising building blocks which make full use of new molecular, computational tools and the identification of relevant biological pathways.

The conference concluded that alternative testing remains a big challenge both in research, validation and acceptance. We heard many positive sounds and the new vision. Enhanced networking among scientists and regulators as supported by the new EU AXLR8 coordination action will certainly pave the way forward.

Schoeters Greet, CARDAM

# Invitation for nominations for organisation of ESTIV2012 congress

If you or your organisation is interested for organizing ESTIV2012 in your country, please contact before July 1, 2010: Dr. Greet Schoeters greet.schoeters@vito.be

#### Organisation of ESTIV2012 in your country means:

- More visibility to in vitro related activities for your research group and your organization
- Enhanced networking with major international players from academia and industry in the area of in vitro testing
- Enhance networking within your country among scientists committed to *in vitro* science
- Collaborate intensively with the ESTIV executive board for selecting topics and invited speakers
- Acquiring organisational and managing experience at the international level

#### Assets:

- be a member of ESTIV
- shown record of active research in toxicology in vitro
- managing experience
- commit time to the organization of an international event
- being able to raise funds for the organization of the event

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# Invitation for nominations for membership of the ESTIV Executive Board

The ESTIV Executive Board will be partly renewed at the next General Assembly meeting at ESTIV2010 (2-4 September 2010, Linz, Austria).

- If you are committed to the principal objective of ESTIV which is to improve the knowledge and mechanistic understanding of adverse effects of chemical compounds at the cellular and subcellular level,
- if you want to take up an active role in this European scientific forum,
- if you are prepared to commit time to your society,
- if you are active in toxicology in vitro research,
- if you want to strengthen the links between European initiatives and in vitro toxicology in your own country,

you were invited to express your interest for being nominated as a member of the Executive Board of ESTIV and send a brief statement of your qualifications and experience before May 15, 2010 to:

Dr. Greet Schoeters at: greet.schoeters@vito.be

Ideally the Board should represent a balance of youth and experience, gender, industrial and academic viewpoints. During the ESTIV2010 congress the ESTIV General Assembly will elect the new members of the Executive Board. If the number of nominations exceeds the number of vacancies a postal ballot of the ESTIV Membership will be held during the General Assembly at ESTIV2010.

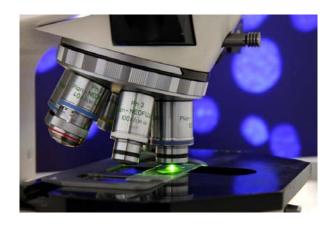
Jan van der Valk, PhD ESTIV vice-President j.vanderValk@uu.nl

## **XCellR8 Cell Culture Training Courses**

XCellR8 offers training in diverse aspects of cell culture, from introductory techniques to complex systems. We include free follow-up technical support.

Introductory Cell Culture Techniques:

- 15-16 June, 2010
- 14-15 September, 2010
- 23-24 November, 2010



Introduction to Bioreactors:

12-13 October, 2010

Further details and registration forms available at www.x-cellr8.com

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## The serum free culture media: Present and future

10 May, 2010
The Centre of Molecular Biotechnology
University of Turin

Maria Laura Scarino reported on the recent workshop in Copenhagen on use of serum free culture media: the results and recommendations at the workshop at the University of Turin. 40-50 participants atended the meeting and most of them were students.

Reporters Michela Kuan, LAV, Bologna Yula Sambuy, INRAN, Rome Maria Laura Scarino, INRAN, Roi

Maria Laura Scarino, INRAN, Rome Corrado Tarella, University of Turin



Scientific and organizing Committee

Isabella De Angelis, Istituto Superiore Sanità, Rome Franca Fassio, Merck Serono, Ivrea (TO) Lucia Golzio, Merck Serono, Ivrea (TO) Lorenzo Silengo, University of Turin



The Centre of Molecular Biotechnology



Italian Platform on Alternative Methods



## Meeting calendar

The INVITROM symposium How to build and apply (Q)SARS 29 June, 2010 Utrecht, The Netherlands www.invitrom.org

International course on laboratory animal science 5–16 July. 2010
Utrecht, The Netherlands
<a href="https://www.uu.nl/vet/aiss">www.uu.nl/vet/aiss</a>

IUTOX 2010: XII International Congress of Toxicology 19 – 23 July, 2010 Barcelona, Spain <a href="http://gestion.pacifico-meetings.com/www/iutox2010/">http://gestion.pacifico-meetings.com/www/iutox2010/</a>

Reduced Animal Testing 29-30 July, 2010 Zurich, Switzerland <a href="http://www.mondialresearchgroup.com/index.php?">http://www.mondialresearchgroup.com/index.php?</a> whereTo=ratest Predictive ADME & Toxicology Workshop 2-6 August, 2010 Oxford, UK http://echeminfo.com/comty\_oxfordadmet10

2nd Annual Predictive Toxicology
2-3 September, 2010
Berlin, Germany
<a href="http://www.marcusevans.com/marcusevans-conferences-event-details.asp?EventID=16728&ad=PreTox&SectorID=31">http://www.marcusevans.com/marcusevans-conferences-event-details.asp?EventID=16728&ad=PreTox&SectorID=31</a>

Linz 2010: 16th European Congress on Alternatives to Animal Testing/ 13th Annual Congress of EUSAAT/ 16th International Congress on *In Vitro* Toxicology 2-4 September, 2010 Linz, Austria <a href="http://www.eusaat.org/">http://www.eusaat.org/</a>

International Workshop on Alternative Methods to Reduce, Refine and Replace the Use of Animals in Vaccine Potency and Safety Testing 14-16 September, 2010 Bethesda, Maryland, USA

XCellR8 Cell Culture Training Courses Introductory Cell Culture Technique 14-15 September 2010 Manchester, UK www.x-cellr8.com

2nd International Lhasa Symposium: New Horizons in Toxicity Prediction 15–16 September, 2010 Leeds, UK http://www.lhasasymposium.com/

The 28th SSCT Workshop 16 - 19 September, 2010 Røros, Norway The workshop is CANCELED!

XCellR8 Cell Culture Training Courses Introduction to Bioreactors 12-13 October 2010 Manchester, UK www.x-cellr8.com

2010 *In Vitro* Alternatives Forum 18-19 October, 2010

Alexandria, Virginia, USA <a href="http://www.iivs.org/conferences/forum/index.php">http://www.iivs.org/conferences/forum/index.php</a>

XCellR8 Cell Culture Training Courses Introductory Cell Culture Technique 23-24 November 2010 Manchester, UK www.x-cellr8.com

IPAM Workshop: Toxicity Testing in the 21st Century and Alternative Methods November 26, 2010 Milan, Italy

Third International Conference on Alternatives for Developmental Neurotoxicity Testing (DNT) 11-13 May, 2011 Ispra, Italy <a href="http://ihcp.jrc.ec.europa.eu/docs/flyer/dn3\_first\_brochure.pdf">http://ihcp.jrc.ec.europa.eu/docs/flyer/dn3\_first\_brochure.pdf</a>

8th World Congress on Alternatives & Animal Use in the Life Sciences 21-25 August, 2011 Montréal, Quebec, Canada http://www.ccac.ca/en/CCAC\_Main.htm

## Recent publications of ESTIV members

Bessems J.G.M. (2009). Opinion on the usefulness of *in vitro* data for human risk assessment. Suggestions for better use of non-testing approaches. RIVM report 320016002/2009, p. 1-28. http://www.rivm.nl/bibliotheek/rapporten/320016002.html

Decrock, E.\*, Vinken, M.\*, De Vuyst, E., Vanhaecke, T., Rogiers, V., Leybaert, L. (2009). Connexin-related signalling in cell death: to live or let die? Cell Death and Differentiation 16: 524-536. \* Equal contribution.

Lambrechts N, Vanheel H, Hooyberghs J, De Boever P, Witters H, Van Den Heuvel R, Van Tendeloo V, Nelissen I, Schoeters G. (2010). Gene markers in dendritic cells unravel pieces of the skin sensitization puzzle. Toxicol Lett. 2010 Apr 10.

Lambrechts N, Vanheel H, Nelissen I, Witters H, Van Den Heuvel R, Van Tendeloo V, Schoeters G, Hooyberghs J.(2010). Assessment of chemical

skin sensitizing potency by an *in vitro* assay based on human dendritic cells. Toxicol Sci. 2010 Apr 7.

van der Valk, J., Brunner, D., De Smet, K., Fex Svenningsen, A., Honegger, P., Knudsen, L.E., Lindl, T., Noraberg, J., Price, A., Scarino, M.L., Gstraunthaler, G. (2010). Optimization of chemically defined cell culture media - Replacing fetal bovine serum in mammalian *in vitro* methods. Toxicol *In Vitro*. 24:1053–1063.

Vinken, M.\*, Snykers, S.\*, Fraczek, J., Decrock, E., Leybaert, L., Rogiers, V., Vanhaecke, T. (2010) DNA methyltransferase 3a expression decreases during apoptosis in primary cultures of hepatocytes. Toxicology *in Vitro* 24: 445-451. \*Equal contribution.

Vinken, M., De Rop, E., Decrock, E., De Vuyst, E., Leybaert, L., Vanhaecke, T., Rogiers, V. (2009). Epigenetic regulation of gap junctional intercellular communication: more than a way to keep cells quiet? Biochimica et Biophysica Acta Reviews on Cancer 1795: 53-61.

Vinken, M., Decrock, E., De Vuyst, E., De Bock, M., Vandenbroucke, R.E., De Geest, B.G., Demeester, J., Sanders, N.N., Vanhaecke, T., Leybaert, L., Rogiers, V. (2010). Connexin32 hemichannels contribute to the apoptotic-to-necrotic transition during Fas-mediated hepatocyte cell death. Cellular and Molecular Life Sciences 67: 907-918.

Vinken, M., Decrock, E., De Vuyst, E., Leybaert, L., Vanhaecke, T., Rogiers, V. (2009). Biochemical characterization of an *in vitro* model of hepatocellular apoptotic cell death. Alternatives to Laboratory Animals 37: 209-218.

Vinken, M., Doktorova, T., Decrock, E., Leybaert, L., Vanhaecke, T., Rogiers, V. (2009). Gap junctional intercellular communication as a target for liver toxicity and carcinogenicity. Critical Reviews in Biochemistry and Molecular Biology 44: 201-222.

Centre for Substances and Integrated Risk assessment (SIR), National Institute for Public Health and the Environment (RIVM), Bilthoven, The Netherlands.

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#### **ESTIV STUDENTS**

Student: Nathalie Lambrechts
Supervisor: Prof. Dr. Greet Schoeters

Institute: VITO, Unit of Environmental Risk and Health, Toxicology and

University of Antwerp, department of Biomedical Sciences

The thesis: Investigating the mechanism and usage of an *in vitro* assay for skin sensitization

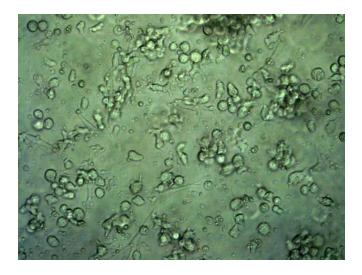


Photo: Primary dendritic cells derived from human cord

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Student: Margit Heinlaan

Supervisor: Prof. Henri-Charles Dubourguier and Dr. Anne Kahru

Institute: Estonian University of Life Sciences and National Institute of Chemical Physics and Biophysics,

Tallinn, Estonia.

The thesis: Daphnia magna and Vibrio fischeri - model organisms in (nano)ecotoxicological research



Photo: Margit Heinlaan during transmission electron microscopy (TEM) work at the University of

Francois Rabelais in Tours, France

Student: Sofia Margarida Batista Leite

Supervisor: Dr Paula Alves and Professor Manuel Carrondo

Institute: Animal Cell Technology Unit from IBET/ITQB-UNL, Portugal and IVMU (ECVAM) JRC Ispra, Italy -

trainingship

The thesis: New Strategies for Culturing Hepatocytes for Drug Testing Applications:

Culturing hepatocytes as 3D spheroid using stirred vessels in order to improve hepatocyte functionalities; use of a strirred culture Bioreactor system with environmental control

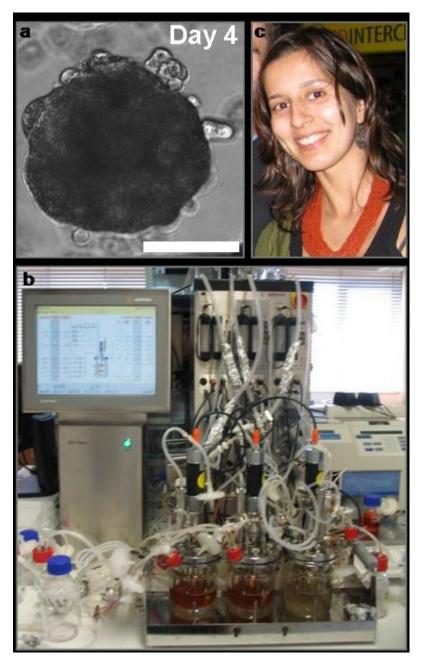


Photo:

- a) Spheroid of primary rat hepatocytes in in stirred system culture, at day 4 (white bar corresponds to 100um)
- b) Stirred Bioreactor system with environment control (3 vessles of 500mL)
- c) Sofia Margarida Batista Leite

## ESTIV membership fee

#### Membership fee

The membership for an individual member for 2010 is € 30,00. If you are also a member of one of the affiliated (CellTOX, SSCT. INVITROM). membership amounts to € 18.00.

#### Method of Payment

Bank Transfer

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Polderkade 1, NL-5345 RR Oss, The Netherlands Due to the high costs of applying for and cashing EuroCheques, please do not use this means of payment.

It is also possible to pay the membership fees by our convenient and secure online credit card payment services (2CO), Due to processing costs an additional charge of € 2,00 is included, To use these services, please visit the ESTIV website at <a href="https://www.estiv.org">www.estiv.org</a>

Sjeng Horbach

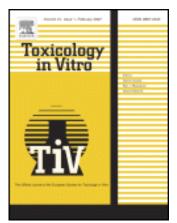
### **ESTIV** e-mail list

ESTIV has an e-mail list, which has the potential to be a very valuable resource but so far has not been taken advantage of. There are many types of question that you could pose via the list, whether you are a junior researcher, or a senior scientist. In order to send a message to all ESTIV members on the list (at present more than 150 colleagues), simply address your e-mail to ESTIV-L@NIC.SURFNET.NL

Please do not be concerned about security. This is a "closed" list, which means the "list-owner" (Jan van der Valk) is able to select who is allowed to join. The ESTIV secretary advises the "list-owner" of eligible members. If you have never received a message from the ESTIV list, it is because you have not informed us of your email address. Please correct this immediately by sending a message to me at j.b.f.vandervalk@uu.nl, and I will arrange for your name to be added.

Jan van der Valk

## Toxicology in Vitro



Official Journal of the European Society of Toxicology in Vitro

Editors: Daniel Acosta, Bas J. Blaauboer, Daniel Dietrich

## **ESTIV** Corporate member



ZF BioLabs. Ronda de Valdecarrizo 41º B. 28760. Tres Cantos (Madrid). Spain. Website:

www.zfbiolabs.com



Centre for Advanced Research & Development on Alternative Methods, p.a. VITO NV, Retieseweg zn B-2440 GEEL, Belgium.

http://www.cardam.eu/CARDAM



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Jan van der Valk	Vice president	0031 30 253 7997	j.b.f.vandervalk@uu.nl
Horst Spielmann	Past President	0049 30 8412 2958	horst.spielmann@bfr.bund.de
Alison Gray	Secretary	0033 437 289 416	secretary@estiv.org
Sjeng Horbach	Treasurer	0031 412 669 394	treasurer@estiv.org
Sonja Jeram	Newsletter	0038 61 244 1471	newsletter@estiv.org
Margit Heinlaan	Students	0037 26 398 382	margith@kbfi.ee
Maria Laura Scarino	Members liaison	0039 06 51494497	scarino@inran.it
Chantra Eskes	Sponsor coordinator	0039 0332 789592	chantra.eskes@jrc.it
Francesca Caloni	Affiliations	0039 02 50317890	francesca.caloni@unimi.it

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Novozymes <u>http://www.novozymes.com/en</u>

### **ESTIV Honorary Members**

Monique Adolphem, Michael Balls, Diane Benford, Bas Blaauboer, Flavia Zucco

## For more information on ESTIV and membership application contact

Alison Gray (ESTIV Secretary) E-mail: secretary@estiv.org

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