Corners

There's still time to submit your abstract for the 5th Annual Meeting of the American Society for Cellular and Computational Toxicology, which will be held September 29-30, 2016, again in Research Triangle Park, NC. This time, it will be held in conjunction with the ICCVAM SACATM meeting September 27-28. Each day of the meeting will have a different topic focus.

The first day will feature a plenary by Dr Thomas Hartung of Johns Hopkins University Center for Alternatives to Animal Testing on read-across, and the second day will focus on pluripotent stem cells for toxicology applications, with a plenary talk given by Dr Mahendra Rao, founder of Mahendra Rao LLC and former director of the NIH Center for Regenerative Medicine, as well as a panel discussion featuring regulatory representation. Both days will also include presentations selected from submitted abstracts relevant to the days' main topics as well as free communications.

A main focus of the ASCCT has always been to provide opportunities for interaction among its members and other scientists. This year's meeting will be no different. A long lunch and poster session, an evening reception and awards ceremony, a mentoring activity, and a business meeting will be a part of the meeting agenda. Visit the ASCCT web site for more information and a link to register or submit your abstract – *the deadline is JULY 22, 2016*!

ASCCT members recently held two webinars. May 31 we heard from Dr Ellen Berg from Bioseek/DiscoverX, who presented "Human Primary In Vitro Systems for Translational Drug Safety and Mechanisms of Toxicity." Then, on June 17, a presentation on "Rapid 3D Bioprinting: an Enabling Technology for Creating Functional Tissue Models" was presented by Dr Shaochen Chen from the University of California, San Diego. All ASCCT webinars are free for the general public, but members have priority registration and can view recordings of all past webinars via a password-protected portal. If you would like to give a webinar please contact us!

Join now at http://www.ascctox.org to stay on top of news, events, and opportunities in *in vitro* and *in silico* toxicology.

CAAT*feed*

Pan-American Conference on Alternatives Brings Nearly 150 Attendees to Baltimore from the Americas and Around the Globe

On April 12-14, 2016 the Pan-American Conference for Alternative Methods was held at the Johns Hopkins Homewood campus in Baltimore, Maryland. Close to 150 people attended from the Americas and Europe.

The conference sessions covered all areas of the "6Rs", including:
Replacement (3 sessions): *in vitro* and *in silico* including organo-typic cultures and mechanistic toxicology (Tox-21c)
Refinement: best practices including non-invasive methods
Reduction: approaches including assay integration, minimal change formulations, and green toxicology
Read-across: read-across and related *in silico* approaches – advances and challenges
Relevance: ethical and economical views, quality aspects such as good cell culture practice, evidence-based toxicology, *in vitro/in silico* reporting standards
Roadmaps: how to continue progress in the field (communication, conferences, policy programs, stakeholder engagement)

This is the first conference of what will be an ongoing series. The next Pan-American Conference is being planned for Brazil in 2018 or 2019.

CAAT Academy

CAAT Academy is a new initiative of CAAT-Europe at the University of Konstanz. CAAT Academy employs experts from Europe and the U.S. to provide hands-on-training in human-relevant alternative methods and technologies for toxicologists of all levels of experience, from operational to PhD. CAAT Academy's 2016 program began with two sessions during the first semester on the subjects of *In Silico* Modeling and Tools Under REACH (May 20, hosted by ROCAM in Cluj, Romania), and Hepatotoxicity Testing Based on AOP (June 24, hosted by Biopredic International in Rennes, France).

ECHA Video: New Approaches to Predict the Effects of Chemicals – Reportage from ECHA's Scientific Workshop

ECHA organized a workshop on new approach methodologies in regulatory science from April 19-20, 2016. The workshop brought together scientists, researchers and regulators from across the globe to discuss how these new methods could be used to reduce cost, get more accurate testing results and help reduce animal testing. Thomas Hartung is interviewed in the full video. https://www.youtube.com/watch?v=gsAJwu2Cwr8

Johns Hopkins School of Medicine Ends Use of Live Pigs in Surgical Training

CAAT was pleased to learn that the Johns Hopkins School of Medicine has agreed to stop the use of live pigs for surgical training of medical students. CAAT initiated talks with the Department of Surgery several years ago regarding the pig surgery training. We held a series of meetings with members of the Department of Surgery faculty and staff, provided information on alternatives, and brought in experts for moderated discussion. While at that time the faculty were not prepared to completely dispense with the pig surgery training, our discussions resulted in a 50% reduction in the number of pigs used and increased training of students prior to the instructional laboratories. We are pleased that the School of Medicine has now decided to eliminate the practice completely.

CAAT Courses on Tox21c and Evidence-based Toxicology included in Master of Science in Public Health 2016 (MSPH) Track in Toxicity Testing and Human Health Risk Assessment of Environmental Agents

CAAT courses on Tox21c and evidence-based toxicology are now included in the Johns Hopkins Bloomberg School's Master of Science in Public Health track. The Master of Science in Public Health (MSPH) Track in Toxicity Testing and Human Health Risk Assessment of Environmental Agents is a professional degree program that provides individuals with the knowledge and tools needed to be at the forefront of this transition in human health risk assessment. http://bit.ly/291RdJH

Both courses of each 13 lectures of 90 min are currently recorded including as lecturers some opinion leaders in the field. In 2017, they will be made freely available via AltWeb.

Keynote Lecture: Warren Casey on Developing a Strategy and a Roadmap to Replace the Use of Animals for Toxicity Testing in the United States

At the CAAT Board meeting on May 24, 2016, Warren Casey delivered the keynote lecture titled "Developing a Strategy and a Roadmap to Replace the Use of Animals for Toxicity Testing in the United States". Warren Casey, PhD, is Director of the U.S. National Toxicology Program's Interagency Center for the Evaluation of Alternative Toxicological Methods (NICEATM), National Institutes of Environmental Health Sciences (NIEHS).

CAAT in the Press

- Thomas Hartung discusses concerns about e-cigarettes in an article in *Chemistry World*, Can we wait for e-cigarette trials?: http://rsc.li/1VzhjXG
- *Laboratorio 2000* (Italian) interviewed Thomas Hartung on the future of alternatives: Test alternativi all'uso animale: quale futuro?: http://bit.ly/293Xhm0
- Thomas Hartung is interviewed about CAAT's mini-brain research in L'Atelier (French): http://bit.ly/1YW5I2C
- Des mini-organes au service de la recherche (Le Monde): http://bit.ly/292VlMn
- Des mini-organes au service de la recherche (Le Temps): http://bit.ly/28Yz38i

Recent publications

Stephens, M. L., Betts, K., Beck, N. B. et al. (2016). The emergence of systematic review in toxicology. *Toxicol Sci 152*, 10-16. http://dx.doi.org/10.1093/toxsci/kfw059

da Silva, C. C., Presgrave, O. A. F., Hartung, T. et al. (2016). Applicability of the Monocyte Activation Test (MAT) for hyperimmune sera in the routine of the quality control laboratory: Comparison with the Rabbit Pyrogen Test (RPT). *Toxicol In Vitro 32*, 70-75.

Fasani, R. A., Livi, C. B., Choudhury, D. R. et al. (2016). The Human Toxome Collaboratorium: A shared environment for multi-omic computational collaboration within a consortium. *Frontiers in Pharmacology 6,* 322. http://dx.doi.org/10.3389/fphar.2015.00322

Samuel, G. O., Hoffmann, S., Wright, R. et al. (2016). Guidance on assessing the methodological and reporting quality of toxicologically relevant studies: A scoping review. *Environment International 92-93*, 630-646.

Recent Meetings

Science Without Animals in Europe?

June 28, 2016
European Parliament

Under MEP Isabella De Monte's (S&D) sponsorship, representatives of the Italian Ministry of Health, experts from the

University La Sapienza in Rome, CAAT-Europe, and Research4Life discussed the legal support in Italy for a roadmap embracing new non-animal technologies such as *in silico* and *in vitro* tools and mini-brains in order to create a new economy for human-based models.

Promoting Dialogue Between *In Vivo*, *In Vitro*, and *In Silico*
May 18, 2016
IRCCS Institute for Pharmacological Research
Milan, Italy
Co-Organized by CAAT-Europe

Upcoming Meetings

New Frontiers in 3D Cell Culture-based Screening Technologies
October 13, 2016
JHU Charles Commons, Baltimore, MD, USA

10th World Congress on Alternatives and Animal Use in the Life Sciences
August 20-24, 2017
Seattle, Washington, USA

The 17th General Assembly of ecopa will be held on August 18 in Copenhagen, Denmark during the European Environmental Mutagenesis and Genomics Society (EEMGS) Annual Meeting.

Norecopa

Norecopa is pleased to announce the launch of its brand-new website: http://norecopa.no

Norecopa's website is designed to cater for all stakeholders involved in animal research: scientists planning research which may involve animals, caretakers and technicians, those evaluating projects, and those with a more general interest in laboratory animal use and welfare.

The website combines resources that were previously located in four different domains. Considerable efforts have been taken to ensure automatic redirecting from old addresses to the relevant page on the new website. An intelligent search engine has been specially built and installed in the site. This engine searches all content simultaneously. A large number of filters can be used to adjust the number of hits, as required.

The website includes all Norecopa's databases, among them 3R Guide (a global collection of information on databases, guidelines, information centers, journals and discussion forums), NORINA (alternatives and supplements to the use of animals in education and training) and TextBase (literature within laboratory animal science and related fields). The site is largely text-based, but includes video films and slide series demonstrating common procedures on a range of laboratory animals.

The new website is the result of 25 years of work collecting and evaluating resources within laboratory animal science and welfare. Norecopa has collaborated with the Norwegian University of Life Sciences and the US Department of Agriculture in this work and acknowledges the financial support of a large number of sponsors, who are listed on the website. Norecopa's website is however, like the organisation itself, totally independent.

All the webpages (in total approx. 6,300) contain feedback forms, which we encourage interested parties to use, so that we may develop the site further.

A poster about the website can be downloaded at http://norecopa.no/website-poster

3Rs foundation Switzerland

The foundation is being discontinued. The government foresees to establish a 3R competence center in 2017.

FRANCOPA

The workshop between the management committee of FRANCOPA and its board of experts took place on June 10. The main subject of the meeting was the reduction of *in vivo* experiments according to the 3R principles. Several subjects involving reduction were discussed and analyzed by the participants: human vaccines, *in vivo* imaging, alternative methods in teaching, alternative methods for the infection of ticks (winner of the Alfred Kastler 2015 biology prize of "La Fondation Droit Animal, Ethique et Sciences"), statistics, genetic toxicology, alternative methods and veterinary drugs, functional and physiological exploration.

EUSAAT

European Society for Alternatives to Animal Testing

Rodger Curren IIVS & ASCCT, Gaitersburg (USA),
Robert Landsiedel BASF & EUSAAT, Ludwigshafen (DE),
Stefan Scholz, UFZ Helmholtz Centre for Environmental Research, Leipzig (DE)

EUSAAT 2016 3Rs congress and 25th Anniversary Congress on Alternatives in Linz on August 24-27, 2016

http://eusaat-congress.eu/

EUSAAT 2016 – submission closed

The online submission system was closed on June 20, 2016. We are happy that we have received more than 230 submissions! When they have been reviewed, the first DRAFT program will be published on the congress website during the first week of July.

Thus, in the year 2016 the "EUSAAT 2016 3Rs Congress Linz" will again be the largest international 3Rs congress. We are particularly happy that our international partner societies from Japan, JSAAE, the Japanese Society for Alternatives to Animal Experiments, and from the USA, ASCCT, the American Society for Cellular and Computational Toxicology, are actively participating in our session on "Global Cooperation on Implementation of the 3Rs concept."

Young Scientists Travel Award (YSTA) program

We are particularly happy that the "Young Scientists Travel Award" (YSTA) program, which we launched last year at the EUSAAT 2015 congress and which was a big success, has attracted several sponsors. We are, therefore, able to continue the YSTA program in 2016 and we want to thank all sponsors for their support. We can, therefore, continue the YSTA program and enable young scientists to share their ideas on how to reduce the suffering as well as the numbers of animals in research, product development and regulation with international colleagues.

EUSAAT 2016 – Practical Training Course on Alternative Methods: Application of commercially available human tissue models

Satellite meeting on August 27-28, 2016, Johannes Kepler University Linz, Austria

Following the success of the "EUSAAT2015 Practical Training Course on Alternative Methods" last year, we received several requests to hold a similar training course to introduce young colleagues to novel *in vitro* methods.

The EUSAAT Board has, therefore, decided to offer an "EUSAAT2016 Practical Training Course" focusing on the "Application of commercially available human tissue models." We have invited colleagues from companies that have a track record of producing high quality human 2D and 3D tissue models covering, e.g., skin, liver, lung and also tumors. We are thrilled that all of the colleagues whom we invited accepted our invitation.

Participation is free of charge on a first-come-first-serve basis. More information: http://eusaat-congress.eu/

Round Table Discussion: Implementing the concept of "Integrated Approaches to Testing and Assessment IATA" into international regulatory testing

Moderator: Horst Spielmann FU Berlin & EUSAAT, Berlin (DE)
Participants: Magda Sachana OECD, Paris (FR),
Derek Knight, ECHA, Helsinki (FIN),
Eric Stilgenbauer ECHA, Helsinki (FIN),
Stefanie Bopp EURL ECVAM, Ispra (IT),
Hajime Kojima JaCVAM &JSAAE, Tokyo (JPN),

Joint EU & FELASA Information Workshop: Severity Classification & Reporting according to Directive 2010/63/EU

This half-day workshop will be held on each day of the EUSAAT2016 congress

Directive 2010/63/EU introduced the requirement for the classification of procedures (Article 15) during the application for project authorisation to use animals in scientific procedures. It also introduced the requirement to report the actual severity experienced by each animal used in a procedure. Both these processes provide opportunity to refine the adverse effects of procedures.

Consistency of assignment of severity categories across Member States is a key requirement. The examples given in Annex IX are limited in number and have little descriptive power to aid assignment. Additionally, the examples given relate to the procedure and do not attempt to assess the outcome, such as adverse effects that may occur.

The session will commence with an introduction to the severity framework. Using models developed within the EU guidance document and the FELASA/ECLAM/ESLAV Working Group on severity, each group of participants will identify the components within the procedures which may cause pain, suffering, distress or lasting harm, define the adverse effects associated with these, identify actions to mitigate the adverse effects, identify appropriate end points and finally assign a prospective severity classification.

Each group will define what clinical welfare assessment criteria should be used. This will be followed by a session using an audience response system (Turning Point) to consider examples of actual severity assessment.

Participation is free of charge on a first come-first-serve basis. More information: http://eusaat-congress.eu/

We are indebted to an extremely supportive international group of experts, who are serving on the Scientific Committee (SC) and who have drafted an attractive program. The highlights of the EUSAAT2016 congress are shown in the DRAFT program below.

We are looking forward to welcoming you in Linz in August at EUSAAT 2016!

Invitation to AGA 2016 on August 25, 2016 in Linz

The Annual General Assembly of the EUSAAT Society will be held as usual in the evening of the second day of the EUSAAT congress. In addition to the approval of the budget, this year important amendments of the statutes will have to be approved by the AGA, e.g., corporate membership, update of the subscription to the ALTEX journal and cooperation with international 3Rs societies.

DRAFT Program EUSAAT 2016 – Topics

http://eusaat-congress.eu/index.php/congress/2016/topics

► 25th Anniversary of 3Rs Congresses on Alternatives in Linz: MEGAT & EUSAAT
Coordinators: Helmut Appl, Horst Spielmann

► Global Cooperation on Implementing the 3Rs
Coordinators: Rodger Curren, Jarlath Hynes, Hajime Kojima, Mardash Daneshian

► Ethical and Legal Issues
Coordinators: Roman Kolar, Katy Taylor

► EU Directive 63/2010
Coordinators: Susanna Louhimies, Gilbert Schönfelder

► New Technologies: 3D Models & Multi-Organ-Chips
Coordinators: Samuel Constant, Ellen Fritsche, Jems Kelm, Mark Rosowski

► Stem Cells & Reproductive Toxicology (mEST & hEST)
Coordinators: Jürgen Hescheler, Horst Spielmann

► Refinement & Welfare: Culture of Care, Best Practice Approaches, Avoidance of Severe Suffering
Coordinators: Robert Landsiedel, Susanna Louhimies, Katy Taylor, Christa Thöne-Reineke

► Replacement: New Approaches
Coordinators: Mardas Daneshian, Candida Nastrucci, Stefanie Schindler

► Predictive Toxicology: QSAR & Read Across
Coordinators: Yeyejide Adeleye, Stephanie Bopp, Eric Stilgenbauer, Tzutzuy Ramirez

► Specific Endpoints of Toxicity I: Oral & Repeated-dose Toxicity, Inhalation Toxicity
Coordinators: Stephanie Bopp, Rodger Curren, Julia Hoeng, Erwin L Roggen

► Specific Endpoints of Toxicity II: Sensitization, Nano-toxicology & Bio-barriers
Coordinators: Claus-Michael Lehr, Helena Kandarova, Klausrudolf Schroeder

► Efficacy and Safety Testing of Drugs, Biologicals and Vaccines
Coordinators: Tuula Heinonen, Conraad Hendricksen, Marcel Leist

► Disease Models *in vitro* and *in vivo*
Coordinators: Claus-Michael Lehr, Marcel Leist, Horst Spielmann

► CRISPR/cas – Advanced GMO models *in vivo* and *in vitro*
Coordinator: Malte Spielmann

► 3Rs in Education and Academia
Coordinators: Christa Thöne-Reineke, Monika Schaefer-Korting, Candida Nastrucci

► Free communications
Coordinators: Ellen Fritsche, Erwin Roggen Horst Spielmann, Manfred Liebsch

► "Young Scientists" session
Coordinators: Lucia Li, Manfred Liebsch, Joachim Wiest

NTP
National Toxicology Program
U.S. Department of Health and Human Services

New EPA Guidance for Testing Pesticides Will Reduce Animal Testing

In a March 17 press release, the U.S. Environmental Protection Agency (EPA) announced the publication of two guidance documents and initiation of a pilot program, all of which will support its goal to significantly reduce animal use for acute effects testing.

"Process for Establishing & Implementing Alternative Approaches to Traditional In Vivo Acute Toxicity Studies for FIFRA Regulatory Use" describes a transparent, stepwise process for evaluating and implementing alternative methods for the "six pack studies," which test for acute oral, dermal, and inhalation toxicity; skin and eye irritation; and skin sensitization. The document includes discussion of three major phases of the evaluation and implementation process, as well as the implications for reporting information required by the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA). Establishment of this process and the clear articulation of the related reporting requirements address challenges associated with adopting alternative methods.

EPA also requested comment on draft guidance titled "Retrospective Analysis & Guidance for Waiving Acute Dermal Toxicity Tests for Pesticide Formulations." This guidance document provides a rationale for waiving all acute dermal toxicity studies for pesticide formulations, and includes a data analysis conducted by the EPA Office of Pesticide Products (OPP) and NICEATM in support of this rationale. The comment period on the draft guidance document closed May 16.

Availability of the two documents was announced in an open letter to stakeholders from OPP Director Jack Housenger, who also announced a pilot program to evaluate alternative approaches to classify the toxicity of mixtures. Under the "GHS Dose Additive Mixtures Equation Pilot," OPP will accept submission of oral and inhalation toxicity data paired with calculations done in accordance with the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) to support the evaluation of pesticide product formulations.

Links to the two documents and Housenger's letter to stakeholders are available on the EPA website at https://www.epa.gov/pesticides/new-epa-guidance-testing-pesticides-will-reduce-animal-testing. More information about activities referred to in the press release is at https://www.epa.gov/pesticide-science-and-assessing-pesticide-risks/strategic-vision-adopting-21st-century-science.

Plan for U.S. Roadmap Outlined at ICCVAM Public Forum

NICEATM Director Warren Casey, PhD, described initial efforts to develop a U.S. roadmap for replacement of animal use at the May 25 ICCVAM Public Forum. The roadmap would support provisions in a recently approved update to the U.S. Toxic Substances Control Act that require the EPA to reduce and replace animal use for testing of potentially hazardous chemicals.

Casey described the proposed roadmap as critical to ensuring that efforts to develop testing systems such as organs-on-a-chip result in meaningful reductions in animal use. He invited public input on the roadmap and noted that its development will be the main focus of the September meeting of ICCVAM's advisory group, the Scientific Advisory Committee on Alternative Toxicological Methods (SACATM).

An EPA update presented at the Public Forum by ICCVAM Co-chair Anna Lowit, PhD described activities in progress that address the goals outlined in the new law (see article above). In another Public Forum presentation, Elijah Petersen, PhD, of the Materials Measurement Laboratory of the National Institute of Standards and Technology (NIST), described activities at NIST relevant to the ICCVAM mission. NIST is in the process of joining ICCVAM as the committee's 16th member agency.

The Public Forum included updates on ICCVAM activities and presentations from five ICCVAM member agencies. Public comments from stakeholder groups praised recent progress made by ICCVAM and its member agencies towards replacing required animal tests with non-animal alternatives, and suggested future activities and areas that should receive increased focus.

Slides from the Public Forum and a recording of the meeting are available on the NTP website at http://ntp.niehs.nih.gov/go/iccvamforum-2016. The SACATM meeting will be held September 27-28 at the National Institute of Environmental Health Sciences (NIEHS) in Research Triangle Park, North Carolina. The meeting is open to the public and will be webcast. Information about the meeting is available at http://ntp.niehs.nih.gov/about/org/sacatm/meetings/index.html.

Webinar Series Focuses on Alternatives for Inhalation Toxicity

NICEATM and the PETA International Science Consortium (PISC) are co-hosting a webinar series on Alternative Approaches for Acute Inhalation Toxicity to Address Global Regulatory and Non-regulatory Data Requirements. Webinar topics include current testing practices; the state-of-the-science and practical applications for *in vitro*, *ex vivo*, and *in silico* methods; the GHS additivity approach for classification of mixtures; adverse outcome pathways; and 21st century testing approaches. The series runs through September. A link to register for future webinars and recordings of past webinars is available on the PISC website at http://www.piscltd.org.uk/acute-inhalation-toxicity/.

Recent NICEATM Publications and Impact

– A recent article in the ASCO (American Society of Clinical Oncology) Post, a newsletter reporting on oncology research, summarized an NIEHS-supported project

to study the effects of exposure to mixtures of environmental chemicals. The article includes a summary of research conducted by NICEATM Deputy Director Nicole Kleinstreuer, PhD, which examined the ability of high throughput screening data to identify potential carcinogens.
The ASCO Post article is available at http://www.ascopost.com/issues/june-10-2016/low-dose-chemical-exposure-and-cancer/.

– ICCVAM members and collaborators from a number of international government and nongovernmental organizations contributed to a project exploring whether advanced biological data and methods can better inform understanding of public health risks posed by environmental exposures.
Cote, I. et al. (2016). The Next Generation of Risk Assessment multiyear study – Highlights of findings, applications to risk assessment and future directions. *Environ Health Perspect*, Epub ahead of print 19 Apr 2016. http://dx.doi.org/10.1289/ehp233
– Two recent articles describe outcomes of a 2015 workshop on inhalation toxicity of inhaled nanomaterials co-organized by NICEATM and PISC.
Clippinger, A. J. et al. (2016). Expert consensus on an in vitro approach to assess pulmonary fibrogenic potential of aerosolized nanomaterials. *Arch Toxicol*, Epub ahead of print 26 April 2016. http://dx.doi.org/10.1007/s00204-016-1717-8.
Polk, W. W. et al. (2016). Aerosol generation and characterization of multi-walled carbon nanotubes exposed to cells cultured at the air-liquid interface. *Part Fibre Toxicol 13*, 20.
– EPA and National Toxicology Program scientists examined testing results of 1060 chemicals across a battery of 815 in vitro assays to help distinguish between chemicals with activity against targets such as receptors or enzymes and chemicals acting through generalized cell stress mechanisms.
Judson, R. et al. (2016). Analysis of the effects of cell stress and cytotoxicity on in vitro assay activity across a diverse chemical and assay space. *Toxicol Sci*, Epub ahead of print 20 May 2016. http://www.ncbi.nlm.nih.gov/pubmed/27208079.

IIVS
Institute for In Vitro Sciences
Advancing Science & Animal Welfare Together

IIVS Holds Webinar: Regulatory Initiatives for New Approaches to Traditional Toxicity Testing

IIVS recently held a one-hour webinar to provide industry with more details about EPA OPP efforts to reduce the use of animals and IIVS' efforts to address the 6-pack endpoint of skin irritation. Presenters included Jennifer McLain, Deputy Director, Antimicrobials Division of the EPA OPP, and Rodger Curren, IIVS CEO.

View slides and a recording of the webinar at http://www.iivs.org.

Just Published: Workshop Proceedings from our December 2014 Respiratory Toxicology Workshop

Find the proceedings in the May 2016 issue of *ALTA: Alternatives to Laboratory Animals*: "Assessment of In Vitro COPD Models for Tobacco Regulatory Science."

Registration and Abstract Submission Open for ASCCT Annual Meeting

The ASCCT 5th Annual Meeting will be held September 29-30, 2016 at the EPA in Durham, NC. The meeting will feature two themed sessions: Read Across and Pluripotent Stem Cells. Abstracts are currently being accepted; the deadline is July 22, 2016. Learn more at http://www.iivs.org.

New Collaboration with M.A.C. Cosmetics

We are thrilled to welcome M.A.C. Cosmetics as a new partner in our efforts to eliminate the use of animal testing worldwide by increasing the use and acceptance of non-animal test methods. Through the generous support of M.A.C. and other companies we are able to promote the use of alternative methods and provide educational and training opportunities, such as lectures, workshops, and hands-on training sessions to scientists from countries that still rely on animal testing.

To learn more about our International Outreach Program, please contact Erin Hill at ehill@iivs.org.

IIVS Study Director Emilia Costin to Present at the Institute of Biochemistry of the Romanian Academy

IIVS Study Director, Dr Gertrude-Emilia Costin, will present a lecture entitled "*In Vitro Testing Systems and Strategies Used in Toxicology. Current Status and Emerging Trends*" as part of the Institute of Biochemistry of the Romanian Academy Seminar Series on July 1, 2016. More info can be found at http://www.biochim.ro/.

View our Latest Research

View our posters presented at recent meetings, including SOT (March 2016), the Pan American Conference for Alternative Methods (April 2016), and our recent workshop, In Vitro Exposure Systems and Dosimetry Assessment Tools for Inhaled Tobacco Products (April 2016). Visit our website at http://www.iivs.org.

Keep Current with the Latest IIVS News and Information

Visit the IIVS website at http://www.iivs.org. Questions? Contact us at info@iivs.org.