

Grants, Awards & Surveys

Swiss 3RCC launches first call for 3R research projects

The Swiss 3R Competence Centre launches its first open call for projects addressing applied and basic research projects that support the development, optimization, application and implementation of new or modified 3R approaches, methods and technologies. The projects should have a high impact on the implementation of the 3Rs, improve the reliability, relevance and animal welfare as compared to existing methodologies, and propose a clear dissemination plan to the scientific community and lay audience. The funding programme will subsidize at least one project for each of the 3Rs in Switzerland with an indicative overall budget of CHF 1,200,000. The application deadline is 21 January 2019. More info: <https://swiss3rcc.org/category/research-funding>

Swiss 3RCC poster prize at Life Sciences Switzerland - LS² Meeting, Zurich 14 - 15 Feb. 2019

The Swiss 3R Competence Centre will award a prize for a poster presenting innovative contributions for the Replacement, Reduction or Refinement of animal experimentation (the principles of 3R). The LS² Annual Meeting brings together scientists from a variety of backgrounds to explore the spectrum united under the umbrella of Life Sciences. In 2019, with the topic "Cell Biology from Tissue to Nucleus", the meeting will count with international plenary speakers from the cell biology field and will host symposia organized by the LS² sections, as well as by guest societies and EMBO. Abstract submission is open until 9 December 2018. More info: www.annual-meeting.ls2.ch

Lush Prize award winners announced

The Lush Prize, a collaboration between Lush Cosmetics and the Ethical Consumer Research Association, selected 17 winning projects, organisations and scientists from nine countries for this year's award. The winners share a prize fund of GBP 330,000 across the five award categories lobbying, training, public awareness, science and young researchers. They include a large range of projects including educational proposals to end animal experimentation in classrooms, the enactment of a new chemicals law requiring prioritisation of replacement, as well as scientific advances on new models, methods and technologies. Find more info on the award winners: <https://lushprize.org/2018-prize/2018-prize-winners>

Freie Universität Berlin conducts survey on simulator

We encourage you to take part in a survey by Freie Universität Berlin on simulation tools. The Freie Universität's veterinary medicine institutes for anatomy, animal welfare, epidemiology and biometrics are developing a new simulator that will be used in courses teaching the humane treatment of animals in experimentation. In order to better implement the 3R principle and as much as possible reduce the use of animals, the university wants to use a simulator that is produced with a 3D printer. The university is currently evaluating available rat and mouse simulators. All results will be included in the analysis that provides the basis for the new simulator. More information in German: <http://www.vetmed.fu-berlin.de/einrichtungen/institute/we11/forschung/simulrator>

Newcastle University conducts survey on handling of laboratory mice

Another survey among animal care professionals and researchers is conducted by NC3Rs researchers at Newcastle University in the U.K. They want to assess the use of tunnel handling for lab mice, and the obstacles that are preventing the method from being more broadly adopted by researchers. Recent findings suggest that using plastic tunnels to handle laboratory mice is a more refined method than capturing them by the tail because it results in lower anxiety. By enabling mice to have improved physiological coping capacity, it may ultimately lead to increased precision in scientific findings, which is something all scientists ultimately strive for. However, the method is not used as widely as had been anticipated by the developer of the tunnel handling method. If you work with laboratory mice, please consider completing this survey, which will take no more than 15 minutes. <https://newcastle.onlinesurveys.ac.uk/laboratory-mouse-handling-2>

News from Switzerland and abroad

OECD publishes AOPs on Parkinson's, Alzheimer's, Reproductive Dysfunction

The Organisation for Economic Co-operation and Development recently released three new working papers on Adverse Outcome Pathways (AOPs). AOPs describe a sequential chain of causally linked events at different levels of biological organisation that lead to an adverse health or ecotoxicological effect. They are the central element of a toxicological knowledge framework that supports chemical risk assessment based on mechanistic reasoning. The first AOP details the linkage between binding and activation of androgen receptors in females and reproductive dysfunction in repeat-spawning fish. A second describes the association between the inhibition of complex I of the mitochondrial respiratory chain and motor deficit symptoms typical for parkinsonian disorders. A third AOP suggests chronic binding of antagonist to N-methyl-D-aspartate receptors during brain development may lead to neurodegeneration with impairment in learning and memory in aging. More info: www.oecd-ilibrary.org/environment/oecd-series-on-adverse-outcome-pathways_2415170x

History of Alternative Test Methods in Toxicology published

The History of Alternative Test Methods in Toxicology book shows how the use of alternative methods has evolved from their conception as adjuncts to traditional animal toxicity tests to replacements for them. This volume in the History of Toxicology and Environmental Health series explores the history of alternative test development, validation, and use, with an emphasis on humanity and good science, in line with the Three Rs (Replacement, Reduction, Refinement) concept. The book describes the historical development of technologies that have influenced the application of alternatives in toxicology and safety testing. These range from single cell monocultures to sophisticated, miniaturised and microfluidic organism-on-a-chip devices, and include molecular modelling, chemoinformatics and QSAR analysis, and the use of stem cells, tissue engineering and hollow fibre bioreactors. This progress was possible thanks to a wider availability of human tissues, advances in tissue culture, analytical and diagnostic methods, increases in computational processing, capabilities, and a greater understanding of cell biology and molecular mechanisms of toxicity. More info: www.elsevier.com/books/the-history-of-alternative-test-methods-in-toxicology/balls/978-0-12-813697-3

The Federal Office publishes animal protection report 2018

The Federal Food Safety and Veterinary Office (FSVO) and the cantonal and national veterinary services are jointly responsible for an efficient animal welfare in line with the Swiss Animal Protection Act. The Swiss animal protection report 2018, which the FSVO just published in

German, French and Italian, gives an overview of the recently completed and still running projects, including a section about the Swiss 3RCC. More info: www.blv-tierschutzbericht.ch

Highlights of the European Society of Toxicology *In Vitro* (ESTIV) 2018 Congress

The ESTIV 2018 Congresses focused on “New approach methodologies for *in vitro* toxicology applications”. The meeting, attended by more than 450 participants from all over the world, consisted of scientific sessions addressing bio-engineering and stem cell models, toxicokinetics and *in vitro-in vivo* extrapolation, systemic toxicity, disease models, local toxicity and skin sensitization, *in silico* modelling and read-across approaches, regulatory toxicology and inhalation toxicity. In addition, it offered two pre-congress workshops on Adverse Outcome Pathways (AOPs) and on Good *In Vitro* Method Practices (GIVIMP), and one post-conference training course on skin irritation, organ-on-a-chip models, *in silico* physiologically based kinetic modelling and quantitative *in vitro-in vivo* extrapolation. The congress featured also a students and career session, sessions on the research programmes Innovative Systems Toxicology (InnoSysTox), EU-ToxRisk and In-3. Finally, presenters gave an update from the Japanese Society on Alternatives to Animal Experimentation. More info: <https://www.estiv2018.com/index.php?id=22231>

Highlights of the Animalfree Research forum on empathy in animals

Animalfree Research organised a forum on altruism and prosocial behaviours in rodents on 1 November 2018 in Zurich. During the event, accredited as continuing education for experimenters and study directors, experts discussed how scientists can test empathy in animals and what implications the findings can have for research. Ana Perez-Manrique from the University of the Balearic Islands in Spain showed that several non-human species are sensitive to emotions of others and that they for example react to distress of other animals. Michael Taborsky from the University of Bern and Barbara König from the University of Zurich elaborated on reciprocity in rats and cooperation in wild mice respectively. During a panel debate led by Animalfree Research Co-CEOs Stefan Kunz and Stefanie Schindler the presenters discussed the observations and concluded that although animals display helping behaviours, more evidence is needed to be sure that their altruistic and pro-social behaviour is indeed a result of empathy. More info: www.animalfree-research.org/de/bildung/forum/8-forum-2018.html

Highlights from ECOPA symposium on how new tools challenge 3R vision

The European Consensus Platform for Alternatives (ECOPA), which is dedicated to the promotion of the 3R principles, teamed up with its national peer FRANCOPA to organise a symposium discussing the challenges of new 3R tools, which took place from 5 - 6 November 2018 in Paris. The symposium showed that a better understanding of biological mechanisms, chemistry, physics, bioengineering, and the potential of big data analysis resulted in the development of new tools and technologies for experimental approaches in life sciences. 3R research *in vivo*, *in vitro* and *in silico* benefits from advances such as OMICs, organoids, bio-artificial organs, use of *ex vivo* material, telemetry and non-invasive measurements, imaging *in vivo* and on cellular material. Advances also make it possible to use both human and animal data, with clinical or epidemiological approaches, in pathological or healthy situations. Some technologies are so innovative that they not only offer novel approaches for the 3Rs but also promise to provide new information on how to restructure the ethical debate on experiments, which may help different life science disciplines to cooperate in a more effective way. More info: www.alphavisa.com/ecopa/2018/index.php

Highlights from the SGV meeting, Lausanne 20-21 November 2018

The SGV meeting offered a session, which addressed the use of single housing and whether it is possible to avoid it. This was followed by an interactive round-table session between presenters and attendants. The meeting also addressed tickling, handling and training of animals as well as news in rodent euthanasia. Finally, the Swiss 3RCC was introduced, and a presenter addressed the challenges in the communication of animal experimentation. More info: <https://naturwissenschaften.ch/organisations/sgv/meetings>

Highlights from the Swiss Society of Toxicology Annual Meeting, Basel, 29-30 Nov. 2018

The meeting addressed nanomaterials, environmental toxicology, microphysiological systems, emerging advances in 3Rs and systemic toxicology, the safety assessment of advance therapies and short presentations selected from the poster session. Very interesting discussions took place around the use of advanced human models and organs on a chip to support large molecule drug development. More info: www.swisstox.ch/swisstox-en/aktuelles/meldungen/62_sst_annual_meeting_2018.php

Symposiums & Congresses

14-15 February 2019. Life Sciences Switzerland LS2 Annual Meeting. Zürich, Switzerland. Info: <https://annual-meeting.ls2.ch/information>

10-13 June 2019. FELASA in association with CLASA, 14th Congress. Prague, Czech Republic. Info: www.felasa2019.eu

23 -27 Aug. 2020. The 11th World Congress on Alternatives and Animal Use in the Life Sciences. Maastricht, The Netherlands. Info: <http://wc11maastricht.org>

Training & Education

14 - 19 April 2019. Applied In Vitro Toxicology Course, ESTIV& ASCCT. University of Bucharest-Romania. Info: <https://estiv2019.com>

21 - 24 May 2019. JRC Summer School on Non-Animal Approaches in Science: Challenges and Future Directions. European Commission Joint Research Centre (JRC), Ispra, Varese, Italy. Applications are now open until 15 January 2019. Info: <https://ec.europa.eu/jrc/en/event/conference/jrc-summer-school-non-animal-approaches-science>