Swiss 3R Competence Centre

News - August 2018

Surveys & Awards

3RCC survey on current gaps and opportunities in using 3R / alternative methods to animal experimentation. The Swiss 3R Competence Centre (3RCC) has launched a survey intended to research groups interested in the application of the 3R principles that are situated in Switzerland and working on different sectors such as academia, regulatory bodies, industry and welfare organizations. The survey is designed to capture opinions on selected topics surrounding the furthering of 3R principles in Switzerland. It will be open until 19.09.2018. The answers of this survey are anonymous and confidential. We are interested in the responses of the group, as a whole, and not the individual. The results of the survey will be made available to all at the end of the collection period. More info: https://docs.google.com/forms/d/e/1FAIpQLSf3CD4wrM156o8iQVQIV8oJjgTwCAFjII3n0m_V3zriWa58Bw/formResponse.

Results of the survey on 3R principles in biological and biomedical research laboratories. The Zurich-based "Forschungs für Leben" <Research for Life>, conducted a Swiss national survey on the attitude of researchers in the life sciences on the 3R principles. Conducted in early 2016, the survey was completed by more than 500 individuals. While diverse opinions were expressed, some interesting finding and patterns emerged which directly relate the aims of the swiss 3RCC.

- In respondents over 40 years of age, only 10% indicated that the 3R principles were taught in their undergraduate courses. Optimistically however, in those under 30, 44% already knew about the 3Rs at this stage.
- With regards to both initial reduction of animals used in experimentation, and refinement of analysis techniques, only 26% of respondents indicated they often or always took advantage of a biostatistician in their department.
- While only a quarter of respondents indicated that they made use of pilot studies, 55% said that those results had led to major revisions of the main experiment.
- Only a fifth of participants were able to completely replace the use of animals using *in vitro* or alternative technology.

The survey presents an excellent snapshot of research attitudes and practices from early 2016; ones that hopefully have continued to improve, and others to be encouraged to move forward. The full results of the survey, with commentary, are available in German at: www.forschung-leben.ch/publikationen/3r-bericht-umfrage.

2019 Science-based refinement awards. The Johns Hopkins Center for Alternatives to Animal Testing (CAAT) is now accepting proposals for the 2019 Science-Based Refinement Awards. These awards focus on research projects to enhance the housing, handling, and/or experimental procedures for laboratory animals or that can reduce animal use by (for example) identifying areas of research and testing where animal models lack reproducibility and translational value. Hence, the small grants are intended for those who work hands-on with animals, such as animal welfare scientists, veterinarians, and animal care technicians, as well as for researchers who conduct systematic reviews and meta-analyses of animal studies. For 2019, two awards of $5,000 each will be offered. There are no Facilities and Administrative Costs allowed on these awards. Studies with animals must be non-invasive, with the possible exception of obtaining blood for biochemical measurements (and, in this case, animals should be trained to cooperate during venepuncture). Preference will be given to studies that have broad applicability. More info: caat.jhsph.edu/programs/awards/AWE/2019/index.html.

Regulatory news

Skilled and animal welfare compliant killing of laboratory animals. The Federal Food Safety and Veterinary Office has published on the 22 August 2018 Technical information on animal experimentation regarding the skilled and animal welfare compliant killing of laboratory animals. The document provides information for the attention of the cantonal authorities responsible for animal experiments, their advisory committees and all persons concerned with animal experiments. The gentle, skilled killing of laboratory animals continues the careful handling of each animal used for experiments right through until its death. It represents an effective contribution to animal welfare and helps to minimise the constraint inflicted on the animals. The continuous improvement of killing methods is a key requirement in the implementation of the 3R principles. More info: https://www.blv.admin.ch/blv/en/home/tiere/tierversuche/forschende.html under 'More information' - 'In detail'.

Severity degrees. The Federal Food Safety and Veterinary Office has published on the 30 August 2018 Technical information on animal experimentation regarding severity degrees. The document provides information for the attention of the cantonal authorities responsible for animal experiments, their advisory committees and all persons concerned with animal experiments. It is intended to serve as a guideline for careful assessment of the severity of animal experiments and the genetic constraints on the animals, in order to allow correct classification of animal experiments in severity categories. It is also intended to promote efforts to find less constraining animal models and experimental procedures and thus to support the implementation of the 3R principles in the longer term. More info: https://www.blv.admin.ch/blv/en/home/tiere/tierversuche/forschende.html under 'More information' - 'In detail'.

Updating of technical information on animal experimentation. The Federal Food Safety and Veterinary Office has published on the 6 September 2018 a form for proposing updates to technical information on animal experimentation. Technical information on animal experimentation is periodically adapted to the current state of knowledge in order to incorporate improvements for experimental animals rapidly and effectively. Proposals for modification of the technical information may be submitted to the Federal Food Safety and Veterinary Office (FSVO) at any time (oberaufsicht-tv@blv.admin.ch). The form can be downloaded in German, French or English. Editorial changes and updates to the translations are made on an ongoing basis. Updates to contents are adopted annually by the Standing Committee for Animal Welfare, usually at the last meeting of the year. More info: https://www.blv.admin.ch/blv/en/home/tiere/tierversuche/forschende.html under 'More information' - 'In detail'.

News from Switzerland and abroad

A science-driven approach is key for the implementation of alternative methods: a multi-sector report states

A science-driven identification of most appropriate methods is reported to be key for furthering a multi-sectorial decrease in animal testing. The article published this month states that overall, the main constraints to the application of non-animal alternatives are the still existing gaps in scientific knowledge and technological limitations. The article reports the outcome of a joint meeting involving representatives from various industry sectors (agrochemicals, chemicals, cosmetics, detergents,

fragrances, pharmaceuticals veterinary immunological and pharmaceutical products) and from different European Commission directorates. Despite of the clear progress in the number of alternative approaches being adopted and the availability of new 3Rs-relevant technologies and mechanistic approaches, a number of challenges that different industry sectors may face in the implementation of alternative methods were reported. These include for example: i) the further characterization of mechanistic pathways of toxicity; ii) the development of assays covering current scientific gaps, iii) the better characterization of links between *in vitro* readouts and outcome in the target species; iv) the better definition of alternative method applicability domains, and v) the appropriate implementation of the available approaches. More info: https://www.sciencedirect.com/science/article/pii/S0273230018302137?via%3Dihub

Don't believe the mice

Experiments using mice are often heavily publicised but very, very few of them translate into humans. A recent article published in Cosmos: The Science of Everything reports on why animal models are of questionable value. More info: https://cosmosmagazine.com/biology/don-t-believe-the-mice.

Researchers' attitudes to the 3Rs – an upturned hierarchy

A recent publication, based on a survey of participants in Laboratory Animal Science (LAS) courses, showed that Refinement was considered more feasible than Replacement, as well as more urgent, and was also favoured over Reduction. The level of an animal's welfare, and especially the prevention of pain, was regarded as the most pressing ethical issue, and as more important than the number of animals used or the use of animals as such. Furthermore, if LAS courses appear to raise awareness of the 3Rs, they had no measurable effect on the existing low level of belief that animal experimentation can be fully replaced by non-animal methods. Respondents of the survey therefore reversed the `hierarchy' of the 3Rs proposed by their architects, Russell and Burch, prioritizing Refinement over Reduction, and Reduction over Replacement. The study published in PLOSone was based on an online survey of participants in Laboratory Animal Science (LAS) courses held in eight venues in four European countries: Portugal (Porto, Braga), Germany (Munich, Heidelberg), Switzerland (Basel, Lausanne, Zurich), and Denmark (Copenhagen). More info: https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0200895

Center for Reproducible Science opened at the University of Zurich

The Center for Reproducible Science (CRS) at the University of Zurich opened in August 2018. The objective of CRS is to improve the overall reproducibility of empirical scientific research and to promote original research in reproducibility studies and methodology related to reproducibility. The CRS is a joint centre of the Faculties of Medicine, of Science, of Business, Economics and Informatics and of Arts and Social Sciences. It is housed at the Faculty of Medicine (Epidemiology, Biostatistics and Prevention Institute). More info: https://www.cirs-las.de/?page_id=258

Workshops, Symposiums & Congresses

18 - 19 Sept. 2018. Workshop: using the monocyte activation test as a standalone release test for medical devices. PETA-NICEATM, National Institutes of Health, Bethesda, Maryland, USA. The workshop is free and open to the public. Info: https://www.piscltd.org.uk/medical-device-pyrogen

23 - 26 Sept. 2018. 21st European Congress on Alternatives to Animal Testing. EUSAAT, Linz, Austria. Info: http://www.eusaat-congress.eu/index.php/congress/2018/topics.

4 - 5 Oct. 2018. Seminar *The Digital Revolution? Technologies to power animal facilities and science*. FGB Conference Centre, Varese, Italy. Info:http://www.fondazioneguidobernardini.

org/en/training_initiatives/event_detail.aspx?IDEvent=112&IDEventType=5&IDEventSection=1&year=2018

15 - 18 Oct. 2018. ESTIV 2018 - 20th International Congress on *In Vitro* Toxicology. ESTIV-CAAT-GT, Berlin, Germany. Deadline for abstract submissions: 17 June 2018. Info: http://www.estiv2018.com

1st Nov. 2018, Forum Free Research Animals. *Altruism and prosocial behaviours in rodents: Is it empathy?* Zurich, Wirtschaft Neumarkt, Zürich. Info: http://www.animalfree-research.org/de/bildung/forum/8-forum-2018.html

6 - 7 Nov. 2018. R2N Symposium on Alternative Methods to replace or reduce animal models in biomedical research. Hannover Medical School, Germany. Registrations open until 15 October 2018. Info: www.r2n.eu/symposium2018

6 - 11 Nov. 2018. The International Symposium on Persistent Toxic Substances (ISPTS). FHNW Campus Muttenz, Basel (Muttenz), Switzerland. Info: www.ispts2018.ch

7 Nov. 2018. Federal Food Safety and Veterinary, Workshop *Weighing of interests*. Office Campus Liebefeld, Berne, Switzerland. The workshop is addressed to cantonal authorities, animal experimentation committees and animal welfare officers. Registration before Sep 30 2018 at: Ingrid.kohler@blv.admin.ch.

20 Nov. 2018. EPAA Annual Conference, Pooling Resources to promote the use of alternative methods for advancing safety assessment. Brussels, Belgium. Info: http://ec.europa.eu/growth/sectors/chemicals/epaa/annual-conference_en

20 – 21 Nov. 2018. SGV 2018 meeting CHUV, Single housing: can we avoid this? Lausanne, CHUV. https://naturwissenschaften.ch/organisations/sgv/meetings

29-30 Nov. 2018. Swiss Society of Toxicology Annual Meeting 2018. Basel, Switzerland. Info: http://www.swisstox.ch/swisstox-en/aktuelles/meldungen/62_sst_annual_meeting_2018.php

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

4 - 5 Oct. 2018. Hands-on training on PBPK modelling for quantitative *in vitro-in vivo* extrapolation. KU Leuven & Altertox Academy, Leuven, Belgium. More info: https://altertox2018-kuleuven.eventbrite.com

18 Oct – 6 Dec. 2018. Webinars on Alternatives to animal use in research and education – Refine, Reduce & Replace. Freie Universität Berlin. For registration mail to: katharina.hohlbaum@fu-berlin.de.

30 - 31 Oct. 2018. Hands-on training on culture of human highly relevant cells according to Good Cell Culture Practice (GCCP). Evercyte & Altertox Academy, Vienna, Austria. More info: https://altertox2018-evercyte.eventbrite.com

8 - 9 Nov. 2018. 3DTissue Engineering Quality Control – From the Bench to the Bedside. IRBM & Altertox Academy, Montpellier, France. More info: https://www.eventbrite.com/e/3dtissue-engineering-quality-control-from-the-bench-to-the-bedside-tickets-42424353383

15 - 16 Nov. 2018. Hands-on training on in vitro lung models. Epithelix & Altertox Academy, Geneva, Switzerland. More info: https://altertox2018-epithelix.eventbrite.com

22 - 23 Nov. 2018. Hands-on training on skin sensitization. BASF & Altertox Academy Ludwigshafen, Germany. More info: https://altertox2018-basf.eventbrite.com

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