

Surveys & Grants

Thank you to the participants in our Swiss 3R survey

The Swiss 3R Competence Centre conducted a survey on current gaps and opportunities in using 3R/alternative methods to animal experimentation. As many as 177 respondents participated to the survey coming from academia (69%), industry (10%), non-profit institutions (13%), regulatory bodies (4%) and hospital/clinics (5%). The results will be shared in the near future within our website (www.swiss3rcc.org). We thank all of those who have contributed to the survey.

Reviews on non-animal methods in use for biomedical research on 5 human disease areas

The JRC's EU Reference Laboratory for alternative to animal testing (EURL ECVAM) has launched a call for tender to perform reviews of non-animal methods used in the following human disease areas: cardiovascular diseases, breast cancer, immunogenicity testing for advanced therapy medicinal products, autoimmune diseases and immune oncology models. Deadline: 19 October 2018. More info: <https://etendering.ted.europa.eu/cft/cft-display.html?cftId=4024>

Regulatory news

International Guidance Document N. 286 on Good *In Vitro* Method Practices (GIVIMP)

The Organisation for Economic Cooperation and Development (OECD) has published a new Guidance Document (n. 286) on Good *In Vitro* Method Practices to promote the reliability and integrity of *in vitro* data used for the safety assessment of chemicals. The document aims at providing technical guidance in order to advance the development of robust and reliable *in vitro* methods suitable for regulatory purposes. The guidance is targeted primarily at users that implement *in vitro* methods, but also provides guidance for *in vitro* method developers. The document contains among others:

- Detailed updated information on good practices for *in vitro* methods;
- Description of the key aspects that may impact the reliability and relevance of *in vitro* data;
- Guidance to help ensure that Standard Operating Procedures (SOPs) are well designed, robust, well defined and described.
- Description of the importance of reporting criteria, applying good experimental design, establishing acceptance criteria, and performance standards based on scientific evidence from the generated *in vitro* datasets.

More info: [www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=ENV/JM/MONO\(2018\)19&doclanguage=en](http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=ENV/JM/MONO(2018)19&doclanguage=en)

SCHEER - Memorandum on weight of evidence and uncertainties - Revision 2018

The European Commission and its Scientific Committee on Health, Environmental and Emerging Risks (SCHEER) published the Memorandum on weight of evidence and uncertainties. The Memorandum explains how the SCHEER applies the weight of evidence

approach (WoE) and how it deals with analysis and description of uncertainties when conducting risk assessments of stressors to which humans and/or the environment might be exposed. More info: https://ec.europa.eu/health/sites/health/files/scientific_committees/scheer/docs/scheer_o_014.pdf

EFSA – ECHA Guidance on identifying endocrine disruptors

A guidance document for the identification of substances with endocrine disrupting properties in pesticides and biocides has been published. The Guidance document has been developed by the European Food Safety Authority (EFSA) and the European Chemicals Agency (ECHA) with the support of the European Commission's Joint Research Centre. More info: <https://efsa.onlinelibrary.wiley.com/doi/epdf/10.2903/j.efsa.2018.5311>

News from Switzerland and abroad

Report on legitimate animal testing alternatives in cosmetics

The European Commission has published its Report to the European Parliament and to the Council on the development, validation and legal acceptance of methods alternative to animal testing in the field of cosmetics (2015-2017). The report informs the Parliament and the Council about the compliance with this ban by economic operators in the EU and the impacts of the animal testing and marketing bans. More info: <https://ec.europa.eu/transparency/regdoc/rep/1/2018/EN/COM-2018-531-F1-EN-MAIN-PART-1.PDF>

Promoting animal well-being –report on animal welfare in the pharmaceutical industry

The research-based pharmaceutical industry in Switzerland established the Animal Welfare Charter in 2010 with a view to further improving and advancing conditions in animal experiments and the protection of laboratory animals. In the annual report just published, the member companies of Interpharma report on concrete research projects in the field of the 3Rs and alternative methods as well as advances for the well-being of animals. The Interpharma Animal Welfare Report 2018 is available in English, French and German. More info: www.interpharma.ch/1553-animal-welfare-report-2018

NC3Rs study on how to increase use of human tissue modelling in safety assessment

The study shows that supporting biobanking, the development of new human tissue modelling technology, and raising awareness in the scientific and regulatory communities are key ways in which the barriers to greater uptake of human tissue models can be overcome. Recent technological advances have accelerated the development of human tissue and cell based models applicable for safety assessment across a broad variety of organs and tissue systems, and the use of these models has increased over the past four years. To take full advantage of the opportunities human tissue models offer, scientists and regulators internationally need to come to a consensus opinion on how these technologies can be supported to produce fit-for-purpose pharmaceutical safety tests. Through this dialogue, and continued research investment into these models, the use of animals in some safety experiments could be replaced with *in vitro* or *ex vivo* human tissue alternatives with the potential to improve predictive value to humans. More info: www.sciencedirect.com/science/article/pii/S1056871918305690

Review on progress and potential in organoid research

Advances in stem cell culture have made it possible to derive *in vitro* 3D organoids, which capture some of the key multicellular, anatomical and functional hallmarks of real organs. The organoids allow researchers to study organ development and disease. Some recent studies demonstrate the potential of organoids in basic research, drug discovery and regenerative medicine, suggesting that more widespread adoption of organoids in these fields will become a reality in the coming decades. Still, although the use of organoids addresses some ethical issues, the prospect of generating *in vitro* human embryo-like structures is not free from ethical concerns. In addition, the translation of organoid technology into real-life preclinical and clinical applications is complex. Challenges include regulating self-organization to generate organoids that develop deterministically, robustly and to physiologically relevant shapes and sizes; prolonging organoid lifespan to create mature, functional tissues that reach homeostasis; and recapitulating multi-factorial pathologies by incorporating additional key tissue compartments of native organs (such as the vasculature or immune system). Overcoming these challenges will require a multidisciplinary approach, and lessons from the field of bioengineering are likely to be particularly impactful, researchers from the École Polytechnique Fédérale de Lausanne state. Info: www.nature.com/articles/s41576-018-0051-9

Launch of Biomedical Research for the 21st Century (BioMed21) hub

An international collaboration hub, BioMed21, has been launched to inform stakeholders representing animal protection, research funding, academic, regulatory, corporate and other communities about human-specific approaches in health research. The hub offers information related to innovative animal-free research approaches including relevant publications, funding opportunities, workshops, training opportunities, and other events. Developed by the Humane Society International, the platform aims at bringing together scientists and institutions from across Europe, Asia and the Americas who share a vision of human-focused paradigm in health research. More info: www.biomed21.org

Web portal publishes overview on animal-free alternatives in reproductive toxicology

InVitro+Jobs, a German web portal promoting animal-free research methods, published an overview on where we stand regarding alternatives to animal experiments in reproduction and developmental toxicology. The portal reviewed progress and regulations in that particular field of research. It discusses the EU project ReProTect, where researchers developed and evaluated methods combining *in vitro* methods with tissue and sensor technologies for testing reproduction and development toxicology. It also addresses new chip systems with human tissue or imitated organs in reproductive toxicology. Another challenge reviewed are animal-free methods for developmental neurotoxicity, to test if environmental chemicals and drugs can cause adverse neurological effects. More info: www.invitrojobs.com/index.php/en/research-and-methods/working-group-a-portrait/item/3720-in-a-portrait-reproduction-and-developmental-toxicology-without-animal-experiments-where-do-we-stand-with-science

Highlights from European Congress on Alternatives to Animal Testing

The 21st European Congress on Alternatives to Animal Testing organised by the European society EUSAAT took place from 23 – 26 September 2018 in Linz, Austria. With over past two decades the congress counts, in addition to the European society for alternatives to animal testing, with the participation of international societies such as the Chinese Society for Alternatives to Animal Experiments (CCARE) and the American Society for Cellular and

Computational Toxicology (ASCCT). The sessions covered newly established 3R centres across Europe, animal welfare and education, disease models, non-animal tools for basic biomedical research, toxicity studies, -omics techniques, advanced 3D models including recent progress in developing human-organ-chips. A presentation on the 3RCC and round-table discussions between the 3RCC and other European 3R centres took place to address the differences and similarities as well as possible synergies between 3R centres across Europe. More info: www.eusaat-congress.eu/index.php/congress/2018/program-per-day

Symposiums & Congresses

4 - 5 Oct. 2018. Seminar *The Digital Revolution? Technologies to power animal facilities and science*. FGB Conference Centre, Varese, Italy. Info: 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: www.estiv2018.com

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

5 - 6 Nov. 2018. ECOPA Symposium: How new experimental tools in life sciences challenge the 3Rs vision. Paris Diderot University, France. Registrations open until 25 October 2018. Info: www.alphavisa.com/ecopa/2018/index.php

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 Muttentz, Basel (Muttentz), Switzerland. Info: www.ispts2018.ch

7 Nov. 2018. Federal Food Safety and Veterinary, Workshop *Weighing of interests*. Office Campus Liebefeld, Bern, 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. Registration deadline is 11 November. 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: 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 & Alvertox Academy, Leuven, Belgium. Info: <https://alvertox2018-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

24 Oct. 2018. Eawag/ETH: PEAK Advanced course on alternatives to animal experiments in aquatic ecotoxicology (in German). Eawag, Dübendorf, Switzerland. Info: www.eawag.ch/de/news-agenda/agenda/detail/?tx_sfpevents_sfpevents%5Bevent%5D=1161&tx_sfpevents_sfpevents%5Bcontroller%5D=Events&cHash=5802a63a4285970b08efbc4a3459f3d9

30 - 31 Oct. 2018. Hands-on training on culture of human highly relevant cells according to Good Cell Culture Practice (GCCP). Evercyte & Alvertox Academy, Vienna, Austria. Info: <https://alvertox2018-evercyte.eventbrite.com>

8 - 9 Nov. 2018. 3DTissue Engineering Quality Control – From the Bench to the Bedside. IRBM & Alvertox Academy, Montpellier, France. Info: 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 & Alvertox Academy, Geneva, Switzerland. Info: <https://alvertox2018-epithelix.eventbrite.com>

22 - 23 Nov. 2018. Hands-on training on skin sensitization. BASF & Alvertox Academy Ludwigschafen, Germany. Info: <https://alvertox2018-basf.eventbrite.com>

29 - 30 Nov. 2018. 4th Theoretical and training course: Give a meaning to substitutive methods to animal testing. Laboratorio Analisi e Ricerca di Fisiopatologia (LARF), Genoa. Registration deadline: 22 Nov. 2018. Info: <https://swiss3rcc.org/wp-content/uploads/2018/10/Brochure-Advanced-Course-NAM-2018.pdf>

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