



**July 2020**



The inaugural [Summer School on Innovative Approaches in Science](#) was a huge success! Over 600 students and early-career researchers from around the world tuned in for a week-long, comprehensive program that included lectures, interactive sessions, e-poster presentations, laboratory and software demonstrations, and virtual engagement with speakers and attendees on innovative methods to reduce and replace animal tests in toxicology and biomedical science.

Jointly hosted by the Physicians Committee for Responsible Medicine, Johns Hopkins University Center for Alternatives to Animal Testing, and the European Commission Joint Research Centre, the Summer School is a response to a growing need for scientists to be conversant in new approaches in toxicology and biomedical sciences.

A huge thank you to everyone who participated! If you'd like to stay connected with organizers, speakers, and fellow attendees join the ERA21 [Facebook](#) & [LinkedIn](#) groups.

### **Featured Scientific Articles**

*Check out this month's featured articles to learn more about new human-relevant research scientists are currently conducting.*

#### **[Infectability of Human BrainSphere Neurons Suggests Neurotropism of SARS-CoV-2](#)**

Bullen, CK, Hogberg HT, Bahadirli-Talbott A, et al. Infectability of human BrainSphere neurons suggests neurotropism of SARS-CoV-2. *ALTEX*. 2020.

#### **[Modelling Neurodegenerative Diseases with 3D Brain Organoids](#)**

Chang Y, Kim J, Park H, et al. Modelling neurodegenerative diseases with 3D brain organoids. *Biological Reviews*. 2020.

### **[Human iPSC-Derived Cardiomyocytes Are Susceptible to SARS-CoV-2 Infection](#)**

Sharma A, Garcia G, Wang Y, et al. Human iPSC-derived cardiomyocytes are susceptible to SARSCoV-2 infection. *Cell Reports Medicine*. 2020.

### **[The Past, Present and Future of Intestinal In Vitro Cell Systems for Drug Absorption Studies](#)**

Youhanna S, Lauschke VM. The past, present and future of intestinal in vitro cell systems for drug absorption studies. *Journal of Pharmaceutical Sciences*. 2020.

## **Employment Opportunities**

The [National Toxicology Program](#) is seeking a talented and motivated postdoctoral fellow with training and experience in statistics and/or bioinformatics for a position in the newly formed Spatiotemporal Health Analytics Group (PI: Dr. Kyle P. Messier). The group is homed in the Division of the National Toxicology Program at the National Institute of Environmental Health Sciences and affiliated with the National Institute on Minority Health and Health Disparities. Interested applicants should contact [kyle.messier@nih.gov](mailto:kyle.messier@nih.gov) with the subject line "Spatiotemporal Health Analytics Group Postdoc".

The [National Institute of Environmental Health Sciences](#) is seeking an experienced scientist with a specialty in computational chemistry, with a strong background in cheminformatics, best practices in QSAR/QSPR modeling and chemical curation, and with experience in performing and directing computational chemistry research, in particular to support regulatory decision making. Review of applications will begin on **July 22**.

NIEHS is seeking an outstanding leader with expertise in scientific computing and scientific information technology to join the Division of Intramural Research as Scientific Information Officer. [Applications for this position will be accepted through August 1, 2020](#).

[AxoSim](#) is looking for a postdoctoral researcher to assist with their ALS NerveSim™ platform. This platform grows living human cells in a proprietary 3D environment to mimic nerve tissue in both form and function. The candidate should be a dynamic, driven, and motivated team player ready to guide a project while working in a startup environment.

The Wyss Institute for Biologically Inspired Engineering at Harvard University has an opening for a [postdoctoral fellow position in the Brain Targeting Program \(BTP\)](#). The position will focus on the discovery of new targets and engineered transport vehicles to carry therapeutic and diagnostic payloads into the brain.

The [Peter Loskill Laboratory](#) is hiring a postdoc position with a focus on Organ-on-Chip and immune safety assessment. Applicants should have a PhD in biomedical engineering, biophysics or similar fields and extensive experience with at least two of the following topics: microfluidics, tissue engineering, toxicology and/or immunology.

The [Canadian Centre for Alternatives to Animal Models](#) is recruiting postdocs to develop human biology-based in vitro platforms for disease modelling and toxicity testing— areas of interest include human stem cell-based disease modelling, cellular and tissue engineering, synthetic biology, in vitro & computational toxicology, and science policy.

## Upcoming Events

Abstracts are now being accepted for the [9th annual meeting of the American Society for Cellular and Computational Toxicology](#). The meeting will be held virtually **October 20-22**, no registration fee will be charged. There will be opportunities for mentoring, awards, and flash poster presentations for students and early-career scientists working in the in vitro and computational toxicology fields. Deadline to submit an abstract is **August 7**.

The [National Center for Advancing Translational Science](#) is offering a seven-week online course in translational science this fall. The course is open to the public. To receive an invitation to register for the **Fall 2020** course when registration opens in **July**, please [add your name to the course's waitlist](#).

The Laboratory for Stem Cells and Tissue Engineering at Columbia University is hosting "[TISSUE TALKS](#)" every **Wednesday at 3 p.m. ET**. These virtual seminars will feature leaders in the field of tissue engineering from around the globe. To register fill out the [google doc](#).

[Antibodies webinar series](#) beginning **July 23 at 10 a.m. ET**. Learn more about the applications and benefits of animal-free recombinant antibodies (rAbs). This webinar series is co-organized by the US National Toxicology Program Interagency Center for the Evaluation of Alternative Toxicological Methods (NICEATM), the PETA International Science Consortium Ltd., and the European Union Reference Laboratory for alternatives to animal testing (EURL ECVAM).

The National Academies of Sciences, Engineering, and Medicine is hosting a free webinar on **August 12-13** "Translatable and Accessible Biomarkers of Effect: From Model Systems to Humans". [Register here](#).

The University of Maryland School of Pharmacy is hosting a one-day conference on **August 14** "3D Cell Culture Models for Drug PK, Safety, and Efficacy Assessment". [Register here](#).

The 11th World Congress on Alternatives and Animal Use in the Life Science is hosting two webinars on the 3Rs in COVID-19 research. On **August 25-26 at 9 a.m. ET**, presenters will highlight innovative model systems to study COVID-19 and will also

discuss new strategies for the development of vaccines, therapeutics and diagnostics and more. Registration information will be available soon.

E-poster and in-person abstracts are now being accepted for the [Annual Biomedical Research Conference for Minority Students \(ABRCMS\)](#). ABRCMS 2020 is scheduled to take place in San Antonio, Texas from November 11-14. Deadline to submit an abstract is **September 11**.

The Global Summit on Regulatory Science, co-hosted by the Global Coalition for Regulatory Science Research and the National Center for Advancing Translational Sciences, is taking place **September 28-30**. The theme is "Emerging Technologies and Their Application to Regulatory Science". [Register here](#).

Thomas Hartung's Webinar on "The Role of Non-Animal Approaches in COVID-19 Related Research" for the European Parliament, presented by the Intergroup on the Welfare & Conservation of Animals, is now available on the CAAT [YouTube channel](#). The full collection of presentations from the meeting can be found [here](#).

## **Funding Opportunities**

An opportunity for recent life science PhDs. The [Science & SciLifeLab Prize](#) for Young Scientists is a global prize, aimed at rewarding scientists during the early stage of their careers. Winners are published by Science, win up to \$30,000 US and visit Sweden to receive their awards, present their research, and meet leading scientists in their fields. Applications are due **July 15**.

The Johns Hopkins University Center for Alternatives to Animal Testing [Next Generation Humane Science Award](#) is available annually to young scientists to acknowledge and encouraging researchers who focus on replacing the use of animals in experiments. The 2020 award will be a prize of up to \$5,000 to recognize the work of one young scientist; this may be shared among two or more young scientists. Applications are due no later than **August 1**. Completed applications and required information should be emailed to [caat@jhu.edu](mailto:caat@jhu.edu).

The European Partnership for Alternative Approaches to Animal Testing's (EPAA) [2020 3Rs Science Prize](#) is now open for submissions. The EPAA aims to promote the development, validation and acceptance of 3Rs alternative approaches (replacement, reduction and refinement of testing on animals). The 3Rs science prize is granted every two years to a scientist with an outstanding contribution to 3Rs. Deadline to apply is **October 5**.

The [Colgate-Palmolive Award for Student Research Training in Alternative Methods](#) is now accepting applications. The purpose of this award is to enhance graduate student research training using in vitro methods or alternative techniques to replace the use of animals in toxicological research. Deadline to apply is **October 9**.

The [National Science Foundation Graduate Research Fellowship Program](#) is accepting applications for 2021. The purpose of this program is to help ensure the vitality and diversity of the scientific and engineering workforce of the United States. The program recognizes and supports outstanding graduate students who are pursuing full-time research-based master's and doctoral degrees in STEM or STEM education. Deadline to apply is **October 19**.

### **Learn More About Human-Based Research**

The ERA21 team wants to bring human-based research to your institution! We can help organize an educational speaker series or host a symposium on human-based research at your university. Please contact Janine McCarthy at [jmccarthy@pcrm.org](mailto:jmccarthy@pcrm.org) for more information.

#### **[Good Science Digest](#)**

Find out what Physicians Committee scientists have to say about the latest obstacles and advances in replacing animal use with human-relevant methods in research, testing, and education.

#### **[Ethical Science News](#)**

*Ethical Science News provides the latest updates on human-relevant research advances to replace animal use.*

#### **[Explore human-relevant research happening in labs across the United States](#)**

Stay Connected!

*[Join the ERA21 Facebook group](#) for updates on 21st century science and to connect with fellow scientists.*