



Calling all students and early-career researchers interested in toxicology and biomedical sciences!

Applications are now being accepted for the [Summer School on Innovative Approaches in Science](#).

Join other students and early-career scientists this summer at Johns Hopkins University School of Public Health for FREE lectures, laboratory visits, hands-on demonstrations, networking, and interactive sessions on cutting-edge methods to reduce and replace animal tests in toxicology and biomedical science.

Learn from experts in the field from Harvard University, Johns Hopkins University, the National Institutes of Health, the Environmental Protection Agency, the Physicians Committee for Responsible Medicine, and more.

The school will take place **June 22-25 at Johns Hopkins University** in Baltimore, Maryland. Registration is free and open to undergraduates through early-career researchers. Applications are being

Hosted by the Physicians Committee for Responsible Medicine, the Center for Alternatives to Animal Testing at Johns Hopkins University, and the European Commission Joint Research Centre.



Featured Scientific Articles

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

[Robotic Fluidic Coupling and Interrogation of Multiple Vascularized Organ Chips](#)

Novak R, Ingram M, Marquez S, Das D, Delahanty A, Herland A, et al. Robotic fluidic coupling and interrogation of multiple vascularized organ chips. Nature Biomedical Engineering. 2020.

[Quantitative Prediction of Human Pharmacokinetic Responses to Drugs via Fluidically Coupled Vascularized Organ Chips](#)

Herland A, Maoz BM, Das D, Somayaji MR, Prantil-Baun R, Novak R, et al. Quantitative prediction of human pharmacokinetic responses to drugs via fluidically coupled vascularized organ chips. Nature Biomedical Engineering. 2020.

Employment Opportunities

The [Physicians Committee for Responsible Medicine](#) is hiring a regulatory testing analyst with at least two years of work experience in toxicology, pharmacology, environmental health, risk assessment, industrial hygiene, chemistry, or a related field to implement human-relevant test methods and minimize the use of animals in domestic and international chemical and pharmaceutical testing policies and guidelines.

The International Foundation for Ethical Research (IFER) is now accepting applications for [Graduate Fellowships for Alternatives to the Use of Animals](#) in Science. IFER Graduate Fellowships are one-year grants of typically \$12,500 for projects that support the development, acceptance and implementation of innovative scientific methodologies that advance science and refine, reduce or replace the use of animals in research, testing or education. Applications are due **April 30**.

The [Canadian Centre for Alternatives to Animal Methods](#) 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.

A [postdoctoral position](#) is available immediately within the [NIH TissueChip consortium](#) to study antigen sampling across gastrointestinal barriers in the Department of Microbiology and Immunology at Montana State University. Project leaders are seeking a PhD graduate with a background in mucosal immunology or developmental biology.

The [Wyss Institute for Biologically Inspired Engineering at Harvard University](#) is hiring a postdoctoral fellow with expertise and knowledge of bone marrow function, the hemapoietic niche, immunology and stem cell biology to join an interdisciplinary team of biologists and engineers.

[Center for Alternatives to Animal Testing](#) (CAAT) at Johns Hopkins University is looking for a postdoctoral fellow to work in the areas of developmental neurotoxicology (autism), 3D organoid models, high-content imaging, and CRISPR/Cas9 gene editing. All interested in the position should send a CV and motivation letter to Dr. Lena Smirnova, lena.smirnova@jhu.edu.

[PETA International Science Consortium](#) is hiring a research associate for PETA US and PETA

India. Applicants should have a passion for replacing animal tests with efficient and effective in vitro and in silico models.

The Collins lab at Swarthmore College is looking for a highly motivated postdoctoral researcher with excellent communication skills and a PhD in toxicology, pharmacology, computational biology, neurobiology, biomedical engineering, molecular biology, or closely related field. To read the full job posting and to apply, candidates should submit their application materials through the [Swarthmore College Job Portal](#).

The McCullough Lab at the US Environmental Protection Agency's Human Studies Facility is seeking a new postdoctoral fellow to develop and utilize organotypic in vitro models for cellular and molecular toxicology. Contact Shaun McCullough, PhD, mccullough.shaun@epa.gov, for more information.

Upcoming Events

[Physicians Committee for Responsible Medicine's ERA21 team](#) and Shamar Advisors are co-hosting a free four-part speaker series at Arizona State University Biodesign Institute during the spring 2020 semester. We will hear from top researchers and industry professionals regarding current capabilities of nonanimal models and how we can work together to replace research using animals with human biology-based science. Join us for this exciting new series on **February 28, March 27, and April 24**. Food and drinks will be provided. These events are open to ALL audiences – both ASU and external audiences welcome. [Early registration](#) is encouraged as seating is limited.

Abstract submission is open for the [11th World Congress on Alternatives and Animal Use in the Life Sciences](#). The deadline for submissions is **March 15**.

The ERA21 team will be exhibiting at [Experimental Biology 2020](#) in San Diego, California **April 4-7**. Stop by booth 717 to learn more human-relevant approaches and connect with our team.

Funding Opportunities

The NC3Rs [International 3Rs prize](#) is now accepting submissions. If you have published a paper in the last three years that impacts the replacement, reduction or refinement of the use of animals in research you may be eligible for this award of a £28k prize grant and a £2k personal award. Applications are due **March 6**.

Physicians Committee for Responsible Medicine is offering the [ERA21 Student Travel Award](#) to attend the [Summer School on Innovative Approaches in Science](#). Applications are due **March 20**, candidates must apply to the Summer School separately.

There are a number of travel grants available for the [11th World Congress on Alternatives and Animal Use in the Life Sciences](#). Check out the [website](#) for information on eligibility and deadlines.

The Humane Society of the United States is now accepting nominations for the [2020 Russell and Burch Award](#). The award will be presented to a scientist who has made outstanding contributions to the advancement of alternative methods in the areas of research, testing or higher education. Nominations are due **April 10**.

The [European Partnership for Alternative Approaches to Animal Testing](#) is sponsoring the 3Rs student grants to facilitate the participation of students and young scientists who work

in the field of alternative approaches to attend high-profile scientific events. The first application deadline is **May 4**.

[Berlin Institute of Health QUEST Initiative](#) offers various awards for researchers working to increase the value and impact of biomedical research by maximizing the quality, reproducibility, generalizability, and validity of research.

[Animal Free Research UK](#) has open grant calls for Early Career Researcher Conference Grants and PhD and Postdoc Grants. These funding opportunities award research funding to cutting-edge scientists that develop human methods and non-animal technologies to study human disease.

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 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.

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