



European Animal  
Research Association

## EARA News Digest 2019 - Week 38

Welcome to your Monday morning update, [from EARA](#), on the latest developments in biomedical science, policy and openness in animal research in Europe and around the world.

### Policy

## Debate rages on US EPA plan to end testing on mammals by 2035

The [announcement](#) of the [US Environmental Protection Agency](#) (EPA) to stop funding toxicity tests on mammals by 2035 is in the news, fostering the discussion on how this step was taken.

An [article](#) in *Speaking of Research* analyses the situation, exploring EPA's policies and decisions and raising questions about the significance of the deadline for phasing out animal testing in safety tests and why EPA have decided to team up with PETA.

[Quoted](#) in *The New York Times*, Tracey Woodruff of [UCSF School of Medicine](#), who worked at the EPA, said: "I definitely think we should be investing more in this research," referring to alternative testing. "But it's really not ready for making decisions yet - at least the way that EPA is making decisions."



An [article](#) in *Science*, examines the reactions from groups opposing and supporting the use of animals in research.

While groups against animal research welcome this move, scientists are concerned that EPA's plan to limit the use of animals in safety tests will complicate chemical research and regulations.

Jennifer Sass, a senior scientist of [Natural Resources Defense Council](#) said: "EPA is eliminating tools that lay the groundwork for protecting the public from dangers.

"Phasing out foundational scientific testing methods can make it much harder to identify toxic chemicals—and protect human health."

In its [official](#) response, US advocacy organisation [Foundation for Biomedical Research](#) said: "We urge extreme caution when considering testing any new substances on humans – including airborne, water, and ground contaminants – before testing them with animal models."

## Policy



## Call for greater transparency on animal research in Australia and New Zealand

A survey of Australian and New Zealand vets and technicians who care for animals, used in research, has shown that most believe scientific

institutions should be [more open about animal use](#).

They are also supportive of a public pledge, similar to those found in European countries, to commit Australian and New Zealand institutions to greater openness.

Speaking at last week's [Australian and New Zealand Laboratory Animal Association](#) conference in Perth, Australia, vets Dr Malcolm France and Dr Jodi Salinsky said that 87% of survey respondents wanted research organisations to be more open and would support the development of an 'openness agreement' similar to the UK's successful [Concordat on Openness on Animal Research](#).

"Although several other countries have their own version based on the UK model or are actively working on it, we are lagging well behind in Australia and New Zealand," said Dr France.

## Research



## Swiss studies on optic nerve degeneration in mice and zebrafish

Researchers in Switzerland and the US have made steps towards finding treatments for optic nerve degeneration.

Swiss [researchers](#) at the [University of Geneva](#), in collaboration with [EPFL](#), Lausanne, have used lab mice, to mapped cells in the early stages of

development in the retina - the area of the eye where neurons receive and deliver visual information.

The study represents a further step towards the possibility of regenerative medicine for optic nerve degeneration.

"If the optic nerve is cut or damaged, for example by glaucoma, we could imagine reactivating those genes that are usually only active during the embryonic development phase," said [Pierre J. Fabre](#), co-author of the [study](#).

Regeneration of optic nerves can only be achieved artificially in mammals, however zebrafish, can do this naturally.

[James Patton, and colleagues](#), at [Vanderbilt University](#), USA, have identified a molecule, a microRNA called miR-216a, which regulates the regeneration of neurons in zebrafish retina.

This microRNA is also present in mammals, and could help in research towards a treatment for optic nerve degeneration.

## Media

### Animal research scoops US awards

Basic research using crabs, frogs and rabbits have been recognised for their contribution to the development of live-saving medicines and treatments.



The [Golden Gosse Awards](#) - a prize to honour federally funded research derived from unusual ideas - went to three teams of US scientists (see [video](#)).

Back in 1966 and using frog skin, David Sachar of [Icahn School of Medicine at Mount Sinai](#), revealed the mechanism of cholera eventually resulting in treatments that have saved millions of lives.

Frederick Bang and Jack Levin, from the [Marine Biological Laboratory](#), discovered that the blood of horseshoe crabs clots when exposed to endotoxins - toxic molecules present inside a bacterial cell.

This finding led to the creation of the LAL test (Limulus amoebocyte lysate) used to examine drugs, injections and pharmaceutical devices for endotoxins before they are given to patients.

In the 1950s, Noel Rose and Ernest Witebsky of the [University of Buffalo](#) found that rabbits could respond immunologically to their own proteins, leading the way for discoveries on autoimmune diseases.

“I think that my work is an excellent example of the importance of conducting and supporting basic biological research even when there’s no obvious practical benefit at the time studies are started,” said the awardee Jack Levin.

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