



## Animal research news archive October - December 2014

**16/12/2014**

Genetically altered mice have shown that it is possible to regulate processes within the body remotely, opening the door to new ways of treating chronic disease.

[http://www.newscientist.com/article/dn26701-radiocontrolled-mouse-hints-at-new-diabetes-treatment.html#.VI\\_3VyusVRo](http://www.newscientist.com/article/dn26701-radiocontrolled-mouse-hints-at-new-diabetes-treatment.html#.VI_3VyusVRo)

Researchers at the University of Southampton will be using fruit flies to study asthma susceptibility genes, in a study funded by the NC3Rs.

[http://www.dailyecho.co.uk/news/11667587.Could\\_fruit\\_flies\\_help\\_the\\_fight\\_against\\_asthma/](http://www.dailyecho.co.uk/news/11667587.Could_fruit_flies_help_the_fight_against_asthma/)

Detailed acoustic analyses of contact calls between cows and their young have identified distinct maternal 'calls', confirming that cows do use individualised calls to communicate with each other.

<http://www.qmul.ac.uk/media/news/items/se/145030.html>

Cancer patients can pay a private company to use mouse avatar to develop specific treatments for their cancers.

<https://news.yahoo.com/cancer-patients-testing-drugs-mouse-avatars-172416007.html>

**15/12/2014**

For the first time a global treaty has recognised that some social mammals have culture, defined as information or behaviour that is learned and shared between individuals.

<http://www.newscientist.com/article/mg22429992.700-to-save-animals-we-must-work-with-their-culture.html#.VI6u4SusVyQ>

Genetic analysis of emperor and Adelie penguins has revealed a suite of genes that give the birds thicker feathers, thicker skin and better metabolism, all adaptations designed to keep them warm in extreme conditions.

<http://www.dailymail.co.uk/sciencetech/article-2870304/How-penguins-survive-world-s-coldest-temperatures-Genetic-study-shows-birds-evolved-feathers-skin-wings-stubby.html>

UCL have launched a fantastic new website about their animal research as part of their commitment to the Concordat on Openness, which has been covered in *Times Higher Education*.

<http://www.timeshighereducation.co.uk/news/ucl-launches-website-on-animal-research/2017510.article>

Link to the UCL site: <http://www.ucl.ac.uk/animal-research>

**12/12/2014**

Humans and birds share dozens of genes involved in vocal learning that underpin human speech and some bird song.

<http://www.newscientist.com/article/dn26694-humans-and-birds-share-the-same-singing-genes.html#.VlrZxTGsVRo>

**11/12/2014**

A report published yesterday in the BMJ examines exaggeration in scientific press releases, identifying three types of 'inflation' in press releases: giving direct advice to readers that was not included in the original study; exaggeration of cause and effect with the link was only association; and suggesting that findings in animals were directly applicable to humans. The report has thrown up some interesting discussions about who is responsible for controlling the hype in press releases – whether press officers are guilty of misleading journalists to get their stories placed or whether this is a wider problem with a mainstream media that requires sensationalism as a condition of publication.

<http://www.independent.co.uk/news/science/bad-science-reporting-blamed-on-exaggerations-in-university-press-releases-9913336.html>

**10/12/2014**

Typical studies of animal behaviour have examined the 'average' behaviour of the individuals within a species, rather than looking at the traits of individuals. Adam Hart, Professor of Science Communication at the University of Gloucester looks at long-term research being conducted at the Wytham Woods site in Oxfordshire into boldness and shyness in great tits, and asks whether personality is unique to humans or not. <http://www.bbc.co.uk/news/science-environment-30395493>

The science website io9 is conducting an anonymous survey of people who work with rodents for science. The survey is being conducted in the wake of a recent io9 article on research in the United States that was initially far less than balanced and drew significant criticism from its readers and the research community. Annalee Newitz, io9's editor-in-chief commented that "I've spoken with a number of researchers about their experiences with animals in the lab. Not surprisingly, there is a lot of variation in what they've done and how they deal with it. But none of their stories (at least so far) fit the horrific tales of cruelty that come out of animal rights organizations." The aim of the survey is to give scientists, researchers and lab workers the chance to tell the public what it is really like to work with lab animals. <http://io9.com/io9-science-survey-tell-us-about-working-with-rodents-1668816879>

**09/12/2014**

Scientists have partially restored the sight of animals suffering from congenital blindness using gene therapy to replace the lost light-sensitive cells of the eye.

<http://www.independent.co.uk/news/science/procedure-to-restore-sight-in-dogs-gives-hope-for-future-blindness-cure-9911273.html>

Boosting the immune response of the brain could prevent or even cure Alzheimer's disease, according to new research using mice.

<http://www.telegraph.co.uk/news/science/science-news/11280504/Has-Stanford-University-found-a-cure-for-Alzheimers-disease.html>

An anti-obesity drug that rivals the dramatic effects seen in weight-loss surgery has been tested in rats.

<http://news.sciencemag.org/biology/2014/12/three-one-drug-cuts-body-weight-third>

**05/12/2014**

New York State Supreme Court has ruled unanimously that chimpanzees are not people and as such cannot have basic human rights.

<http://www.washingtonpost.com/news/speaking-of-science/wp/2014/12/04/new-york-court-rules-that-tommy-the-chimp-is-not-a-person/>

'Friendly' bacteria in the gut can trigger a natural immune response to malaria infection, according to research in mice.

<http://www.bbc.co.uk/news/health-30337215>

Electric eels can use their electric organs to remotely control their prey.

<http://www.bbc.co.uk/news/science-environment-30335335>

**04/12/2014**

A drug that encourages spinal cord nerves to grow and repair injuries has been developed using rats.

<http://www.bbc.co.uk/news/health-30254698>

Cells that enable bats to navigate through three dimensional space when flying have been identified in the brain.

<http://www.theguardian.com/science/neurophilosophy/2014/dec/03/3d-compass-cells-bat-brain>

**02/12/2014**

Mice have been created whose brains are half human, causing those animals to be smarter than their siblings.

<http://www.newscientist.com/article/dn26639-the-smart-mouse-with-the-halfhuman-brain.html#.VH2MHjGsVRo>

A study from the University of Oxford has shown that the HIV virus is evolving into a 'milder' form, taking longer to trigger AIDS in patients.

<http://www.bbc.co.uk/news/health-30254697>

Researchers have created synthetic enzymes for the first time, using artificial genetic material.

<http://www.independent.co.uk/news/science/major-synthetic-life-breakthrough-as-scientists-make-the-first-artificial-enzymes-9896333.html>

**28/11/2014**

Nobel Laureate Shinya Yamanaka has shown that genetic mutations that cause Duchenne muscular dystrophy can be corrected using genome editing.

<http://www.theguardian.com/science/2014/nov/26/muscular-dystrophy-therapy-breakthrough>

Researchers found that blocking a pathway in rodents counteracts chronic nerve pain.

<http://www.independent.co.uk/news/science/off-switch-for-pain-scientists-find-new-way-of-shutting-down-pain-9888339.html>

Iodide, a common dietary supplement, appears to massively reduce damage to the heart after a heart attack in mice.

<http://www.newscientist.com/article/dn26623-supersafe-iodide-may-save-millions-from-heart-disease.html#.VHhB8YusVRo>

#### **27/11/2014**

Genetically engineered cows that produce large quantities of human antibodies against hantavirus, an often deadly disease transmitted between rodents and humans.

<http://news.sciencemag.org/biology/2014/11/cows-human-chromosomes-enlisted-fight-hantavirus>

An Ebola vaccine that uses a chimpanzee cold virus that carries non-infectious Ebola proteins on its surface has shown promising results in a clinical trial.

<http://www.bbc.co.uk/news/health-30217573>

#### **24/11/2014**

Over the weekend Jonathan Leake from the Sunday Times covered the planned construction of an intensive care research unit at the University of Edinburgh that will house eight pigs.

[http://www.thesundaytimes.co.uk/sto/news/uk\\_news/Science/article1487273.ece?CMP=OTH-gnws-standard-2014\\_11\\_22](http://www.thesundaytimes.co.uk/sto/news/uk_news/Science/article1487273.ece?CMP=OTH-gnws-standard-2014_11_22)

Times Higher Education have an interesting debate between University of London COO Chris Cobb and Director of the Campaign for Freedom of Information Maurice Frankel on whether universities should be exempt from the FOI Act.

<http://www.timeshighereducation.co.uk/comment/opinion/should-universities-be-exempt-from-the-foi-act/2016992.article>

The Northern Ireland statistics for research animal use in 2013 have been published, showing an increase in the number of animals used from 17,445 to 18,638.

[http://www.dhsspsni.gov.uk/statistics\\_of\\_scientific\\_procedures\\_on\\_living\\_animals\\_northern\\_ireland\\_2013.pdf](http://www.dhsspsni.gov.uk/statistics_of_scientific_procedures_on_living_animals_northern_ireland_2013.pdf)

#### **21/11/2014**

Four papers have been published in *Nature* that examined gene expression and regulation across the entire mouse genome.

<http://www.washingtonpost.com/news/speaking-of-science/wp/2014/11/19/scientists-substitute-mice-for-humans-but-new-research-shows-just-how-similar-we-are/>

Damaged areas in the brains of mice have been regenerated by converting structural cells into functioning neurons.

<http://www.theguardian.com/science/2014/nov/20/brain-damage-nerve-cells-neurons>

Talk Radio News Service in Washington has reported on the 44<sup>th</sup> annual Society for Neuroscience conference, during which “scientists and activists urged their colleagues to be more open about animal testing in research.”

<http://www.talkradionews.com/politics-2/2014/11/20/scientists-encourage-peers-transparent-animal-research.html#.VG8DwPmsVRo>  
19/11/2014

The neurons that fire in a mouse's brain in response to fear or addiction have been revealed by a technique that makes brain tissue completely transparent.

<http://www.nature.com/news/transparent-brains-reveal-effects-of-cocaine-and-fear-1.16365>  
18/11/2014

A key ingredient in cosmetics, soaps, shampoos and detergents, Triclosan, causes liver cancer in mice.

<http://www.independent.co.uk/news/science/triclosan-soap-ingredient-can-trigger-liver-cancer-in-mice-warn-scientists-9866176.html>

Marina Klaric of Cosmetics Europe tells the NC3Rs how the cosmetics industry is moving forwards following changes to EU cosmetics testing regulations using animals.

<http://www.nc3rs.org.uk/news/science-cosmetic-testing-without-use-animals>

'Sea star wasting disease', a condition that turns healthy sea stars into piles of goo in a matter of days and has devastated populations along the Pacific coast of North America, may be caused by a virus.

<http://www.nature.com/news/first-clues-found-in-mysterious-sea-star-die-off-1.16359>

Genetic analysis of 409 pairs of gay twins has provided the strongest evidence yet that there is a genetic component to homosexuality.

<http://www.newscientist.com/article/dn26572-huge-twin-study-homes-in-on-gay-genes.html#.VGsqHvmsVRo>  
12/11/2014

Brainwaves could be used to activate specific genes in order to treat disease, according to new research in both mice and humans.

<http://www.bbc.co.uk/news/health-30008745>

Giving older mice a substance called spermidine alongside inoculations against flu hugely improved their immune response, and could be used to improve the effectiveness of flu jabs in elderly human patients.

<http://www.thetimes.co.uk/tto/health/news/article4264888.ece>  
11/11/2014

A comparison of wild and domestic cat genomes has shown that a love of treats and stroking was the key to successful domestication.

<http://www.theguardian.com/science/2014/nov/10/wild-cats-tamed-strokes-treats-genetic-analysis>  
Switching off the blood supply to prostate cancer tumours stops their growth in mice.

<http://www.thetimes.co.uk/tto/health/news/article4263912.ece>

A chemical that make the smell of blood irresistible to carnivores has been identified.

<http://www.newscientist.com/article/dn26532-blood-odour-chemical-gets-carnivores-drooling.html#.VGHmYfmsVRp>  
10/11/2014

A study using genetically modified mice has shown that the brain has specialist neurons for each of the five major taste categories.

<http://www.bbc.co.uk/news/health-29912877>

Robert Young, Professor of Wildlife Conservation at the University of Salford asks whether scientists should name their animal test subjects.

<http://theconversation.com/should-scientists-name-their-animal-test-subjects-33957>

Strains of malaria that normally only affect monkeys is showing signs of spreading to humans.

<http://www.newscientist.com/article/mg22429943.300-monkey-malaria-jumping-to-humans-and-on-the-rise.html#.VGCF1PmsVRo>

07/11/2014

Stem cells have been used to repair damage caused to the brain by Parkinson's disease in rats.

<http://www.bbc.co.uk/news/health-29935449>

Mexican bats can interfere with the echolocation of their rivals in order to 'steal' their food.

<http://www.bbc.co.uk/news/science-environment-29931995>

A technique to create 'see through' mice could be used to show how cancer develops.

<http://www.dailymail.co.uk/sciencetech/article-2824324/Japan-scientists-make-mice.html>

06/11/2014

A protein in sugar beet that could be used as a blood substitute is destined for trials in guinea pig and human tissue.

<http://www.bbc.co.uk/news/health-29913983>

The key to the origin of genitalia lies in the limbs, at least in snakes and lizards.

<http://www.bbc.co.uk/news/science-environment-29899756>

Human testicles are home to three times more unique proteins than the brain, according to the most in depth analysis of the human proteome conducted to date.

<http://www.newscientist.com/article/dn26506-amaze-balls-testicles-site-of-most-diverse-proteins.html#.VFtETfmsVRo>

A new form of Alzheimer's drug as managed to sneak through the blood-brain barrier in monkeys and reduce the levels of harmful amyloid beta protein present.

<http://www.nature.com/news/alzheimer-s-drug-sneaks-through-blood-brain-barrier-1.16291>

05/11/2014

Researchers in Japan have observed symptoms of a premature ageing disorder in a monkey for the first time.

[http://ajw.asahi.com/article/sci\\_tech/science/AJ201411040032](http://ajw.asahi.com/article/sci_tech/science/AJ201411040032)

It turns out that as human beings diverged evolutionarily from chimpanzees, so did the bugs that live in our guts.

[http://www.newscientist.com/article/dn26501-our-gut-bugs-evolved-with-us-as-we-split-from-chimps.html#.VFm0b\\_msVRo](http://www.newscientist.com/article/dn26501-our-gut-bugs-evolved-with-us-as-we-split-from-chimps.html#.VFm0b_msVRo)

There is much debate around whether carbon dioxide inhalation is in fact a humane method of killing laboratory animals, and *The Scientist* looks into how some American research institutions are starting to change their protocols as more evidence emerges and more humane methods become available.

<http://www.the-scientist.com/?articles.view/articleNo/41378/title/To-Kill-a-Lab-Rat/>

An article in *The Cambodia Daily* examines the role of Cambodian breeding facilities in supplying macaques for medical research, primarily in the US.

<http://www.cambodiadaily.com/news/cambodia-feeds-booming-global-monkey-trade-71685/>

04/11/2014

Mouse studies suggest that two drugs widely used to treat type-2 diabetes could be used against Alzheimer's disease.

<http://www.independent.co.uk/news/science/common-diabetes-medicine-could-help-treat-alzheimers-sufferers-9836753.html>

Stem cells in the mother's milk appear to have important effects upon the developing offspring in mice, suggesting that humans might be the same.

<http://www.newscientist.com/article/dn26492-breast-milk-stem-cells-may-be-incorporated-into-baby.html#.VFifMfmsVRo>

03/11/2014

A tiny surgical device that could be used to treat a heart defect in children has been successfully trialled in pigs.

<http://www.newscientist.com/article/mg22429935.100-heart-ops-shrink-thanks-to-surgeon-in-your-vein.html#.VFdiEfmsVRp>

Eribulin, a potential breast cancer drug derived from sea sponges, has been found to extend the life of woman with a particularly aggressive form of cancer.

<http://www.telegraph.co.uk/health/healthnews/11203823/Sea-sponge-drug-could-boost-breast-cancer-survival.html>

The hubbub of urban life could be hindering the captive breeding of endangered rhinos.

<http://www.bbc.co.uk/news/science-environment-29846902>

31/10/2014

A new mouse model for Ebola virus has revealed that genetic differences between individuals affect whether the infection is deadly or not.

<http://www.washingtonpost.com/news/speaking-of-science/wp/2014/10/30/can-your-genes-affect-your-response-to-ebola-thats-the-case-in-these-mice/>

Wild salamanders and newts across Europe are under threat from a skin-eating fungus that probably arrived on pet amphibians imported from Asia.

<http://www.bbc.co.uk/news/science-environment-29831384>

The BBSRC National Virology Centre at the Pirbright Institute, a laboratory set to house the world's most contagious livestock diseases, has opened its doors to journalists ahead of undergoing full containment.

<http://www.bbc.co.uk/news/science-environment-29837545>

30/10/2014

A vaccine for koala chlamydia, a disease that can lead to blindness, infertility and death, has been successfully trialled using 60 wild animals.

<http://www.bbc.co.uk/news/world-australia-29828269>

Miniature human stomachs, grown in vitro using human stem cells, appear to respond to infection in the same way as ordinary stomachs creating a new model in which to study human stomach disease.

<http://www.theguardian.com/science/2014/oct/29/scientists-grow-miniature-stomachs-stem-cells>  
29/10/2014

Foetuses of the superb fairy-wren, a beautiful Australian songbird, are capable of distinguishing between the calls of different adult individuals.

<http://news.sciencemag.org/brain-behavior/2014/10/fairy-wrens-humans-learn-embryos>

A potential anti-ageing drug that has been shown to extend mouse lifespans by up to 13% (in females) could be set for a test in pet dogs.

<http://www.nature.com/news/pet-dogs-set-to-test-anti-ageing-drug-1.16237>

Sequenced human genomes have revealed mutations that 'knockout' single genes, with the potential to identify new treatments for disease.

<http://www.nature.com/news/geneticists-tap-human-knockouts-1.16239>

Once there were only 15 giant tortoises on the Galapagos island of Espanola, but now thanks to a 40 year captive breeding programme there are more than 1,000.

<http://www.bbc.co.uk/news/science-environment-29801967>

28/10/2014

Studies of DNA function in mice suggest that body tissues show large shifts in activity just before dawn and dusk, information that could be used to help time medication to hit "sweet-spots" in the body clock.

<http://www.bbc.co.uk/news/health-29747358>

27/10/2014

Space may make astronauts infertile according to animal experiments, prompting NASA to invest in further mouse studies aboard the ISS and to offer egg and sperm freezing services for its astronauts.

<http://www.telegraph.co.uk/science/space/11188562/Space-may-make-astronauts-infertile-scientists-fear.html>

Stem cells that secrete cancer-killing toxins could be used to treat brain cancer according to new studies in mice.

<http://www.bbc.co.uk/news/health-29756238>

Should scientists have to gain advanced consent to track migratory sea animals through territorial waters?

<http://phys.org/news/2014-10-law-sea-authorizes-animal-tagging.html>

24/10/2014

Shining sunlight on overfed mice caused them to eat less, according to new research from the University of Edinburgh.

<http://www.bbc.co.uk/news/health-29743011>

Cancer cells can 'infect' their normal neighbours by shedding thousands of tiny membrane-bound vesicles containing waste products, or exosomes, according to new research using mice.

<http://www.nature.com/news/cancer-cells-can-infect-normal-neighbours-1.16212>

Lambs are being used for research into respiratory syncytial virus, a disease that can cause life-threatening symptoms in new born humans.

<http://medicalxpress.com/news/2014-10-veterinary-lambs-advances-treatments-respiratory.html>

Australian surgeons have successfully transplanted “dead” hearts into patients for the first time.

<http://www.theguardian.com/science/2014/oct/24/dead-hearts-transplanted-into-living-patients>  
23/10/2014

Scientists have managed to successfully open and close the protective cover around the brain – the blood-brain barrier – in a human patient as a means for drug delivery, following work in a range of animals including mice and monkeys.

<http://www.newscientist.com/article/dn26432-brain-barrier-opened-for-first-time-to-treat-cancer.html#.VEjHBPI4r9U>

Male bustard birds intentionally consume poison during courtship in order to attract females.

<http://news.sciencemag.org/plants-animals/2014/10/male-birds-eat-poison-attract-females>

A normal, benign resident of the mouse gut seems to help curtail infections of *Clostridium difficile*, a bacterium that can prove life-threatening to hospital patients whose intestinal microbes have been decimated by antibiotics.

<http://news.sciencemag.org/biology/2014/10/bile-making-microbe-fights-germ-behind-chronic-diarrhea>  
22/10/2014

Mice susceptible to Alzheimer’s disease show significant improvement in memory and learning when fed walnuts as part of their diet.

[http://www.washingtonpost.com/national/health-science/walnuts-appear-to-delay-onset-of-alzheimers-disease-new-study-finds/2014/10/20/d357bc7e-58a6-11e4-b812-38518ae74c67\\_story.html](http://www.washingtonpost.com/national/health-science/walnuts-appear-to-delay-onset-of-alzheimers-disease-new-study-finds/2014/10/20/d357bc7e-58a6-11e4-b812-38518ae74c67_story.html)

Tiny satellite transmitters have been used to track hatchling sea turtles for the first time, in an effort to protect the endangered animals by understanding this previously unknown part of their migratory behaviour.

<http://news.sciencemag.org/plants-animals/2014/10/acoustic-tags-track-frenzy-swimming-baby-sea-turtles>

Climate change is causing Chamois goats to shrink, with today’s goats weighing on average 25% less than animals of the same age in the 1980s.

<http://www.dailymail.co.uk/sciencetech/article-2802123/goats-shrinking-climate-change-researchers-find.html>

21/10/2014

A paralysed man is able to walk again following a transplant of cells from his nose, a treatment that has been pioneered in rats and dogs.

<http://www.bbc.co.uk/news/health-29645760>

Passive Prozac-taking appears to reduce both feeding and mating behaviour in starlings.

<http://www.theguardian.com/environment/2014/oct/21/prozac-may-be-harming-bird-populations-study-suggests>

20/10/2014

A segment of human intestine has been grown inside laboratory mice for the first time.

<http://www.independent.co.uk/news/science/hope-for-spare-human-parts-as-intestine-is-grown-in-mouse-9805001.html>

A systematic review of animal studies, and new research using 1,622 people has suggested that a daily dose of Viagra could become a safe treatment for heart disease.

<http://www.telegraph.co.uk/health/healthnews/11172344/Viagra-could-soon-be-used-for-heart-disease-patients-researchers.html>

Poisonous frogs have evolved louder, more flamboyant mating calls than their non-toxic counterparts.

<http://www.newscientist.com/article/dn26402-poisonous-frogs-evolve-to-sing-longer-and-louder.html#.VETv1fldVRo>

15/10/2014

Embryonic stem cell therapy for macular degeneration has successfully restored sight to more than half of the participating patients.

<http://www.theguardian.com/science/2014/oct/15/stem-cell-success-in-treating-macular-degeneration>

A potential stem cell breakthrough in the treatment of type I diabetes now faces a new challenge in the route from bench to bedside.

<http://www.nature.com/news/stem-cell-success-poses-immunity-challenge-for-diabetes-1.16141>

Veterinary use of the vulture-killing drug diclofenac is at an all-time low in India according to a new study, which also shows increased use of safe alternatives.

<http://www.the-scientist.com/?articles.view/articleNo/41202/title/Illegal-Animal-Meds-Persist-in-India/>

14/10/2014

Muscle loss is increasingly recognised as an important component of ageing, and according to research in mice muscle ageing and mitochondrial activity are closely linked.

<http://www.newscientist.com/article/mg22429905.300-exercise-may-be-the-best-antiageing-pill.html>

Sequencing an entire genome is a much more rapid affair than it used to be, and the most recent animal to be fully mapped is everyone's favourite pathogen-harboring insect, the common house fly.

<http://www.bbc.co.uk/news/health-29596438>

The eye of the mantis shrimp, which is capable of detecting polarised light invisible to humans, has inspired a form of cancer detecting camera.

<http://www.sciencealert.com.au/news/20142609-26244.html>

13/10/2014

Neurons that respond to the 'love' hormone oxytocin appear to have a role in regulating mouse sexual behaviour.

<http://www.bbc.co.uk/news/science-environment-29545469>

An in vitro model of Alzheimer's disease development could help to reduce the numbers of animals used to screen potential treatments.

<http://www.express.co.uk/life-style/health/521942/Alzheimer-has-been-grown-petri-dish-science-breakthrough>