

RESEARCH

Reproducibility

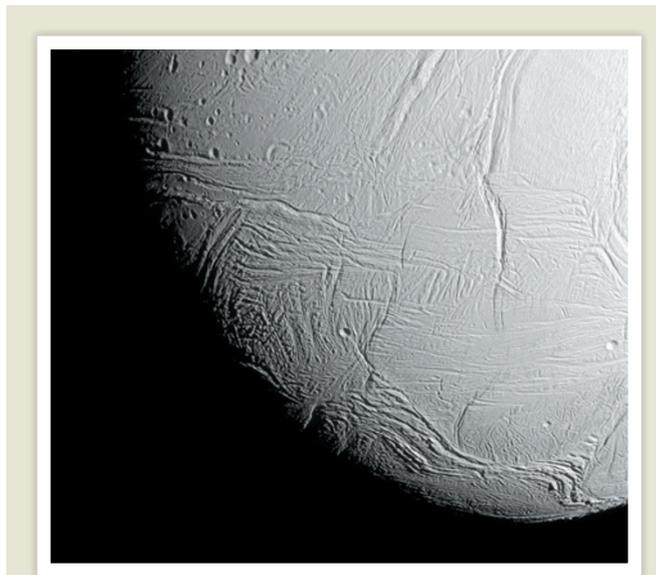
A suite of measures should be adopted to improve the reproducibility of biomedical research, according to a report released on 29 October by the London-based Academy of Medical Sciences. The report — produced with the backing of government funders and biomedical-research charity the Wellcome Trust — says that greater openness, preregistration of research protocols and better use of standards should all be considered, although there is no single cause of the problem of many studies being irreproducible. See go.nature.com/cwynyx for more.

Ozone-hole latest

This year's hole in the Antarctic ozone layer is the third largest ever observed, the World Meteorological Organization announced on 29 October. The hole's average size over 30 consecutive days spanning September and October was 26.9 million square kilometres, the largest on record after 2000 and 2006. The agency ascribes the increased size to colder-than-usual temperatures in the polar stratosphere. That drove the formation of more clouds on whose surfaces chlorine can readily convert to a form that destroys ozone. In the long term, the ozone layer is still expected to recover, because the 1987 Montreal Protocol phased out many chemicals that contribute to its destruction.

Chronic fatigue

The US National Institutes of Health is stepping up efforts to tackle chronic fatigue syndrome, also known as myalgic encephalomyelitis (CFS/ME). In an announcement on 29 October, the agency said that it would be



Cassini dips into geysers

NASA's Cassini spacecraft took its deepest dive through the geysers spurting from Saturn's moon Enceladus on 28 October. The mission whizzed 50 kilometres above Enceladus's south pole (pictured, bottom), directly through the icy spray coming from an ocean of liquid water trapped beneath a thick layer of fractured ice. It was the most direct taste of the water that Cassini's chemical-analysis sensors will ever get; in the final fly-by in December, the spacecraft will bypass the geysers.

centring its CFS/ME research programme in the National Institute of Neurological Disorders and Stroke. Its plans include a clinical study on its campus in Bethesda, Maryland, that will enrol patients with sudden-onset CFS/ME apparently caused by an infection.

AWARDS

Maddox prize

The 2015 John Maddox Prize was awarded to Edzard Ernst and Susan Jebb on 3 November. Ernst, emeritus researcher at the University of Exeter, UK, was given the prize for his work on the truth, or lack thereof, in claims about complementary and alternative medicine. Jebb, a researcher at the University

of Oxford, UK, received the prize for her work in furthering public understanding of nutrition. The prize for promoting science in the face of adversity is awarded jointly by *Nature* and the London-based charities the Kohn Foundation and Sense About Science. It is named after the late John Maddox, a former editor of *Nature*.

POLICY

One-child rule ends

All couples in China will in future be allowed to have two children, rather than one, the Communist Party announced on 29 October. But demographers predict little effect on population growth in China, where many

women are more focused on a career than on having large families. The one-child rule was introduced in 1979 and is thought to have prevented almost half a billion births in a nation whose population now numbers 1.4 billion. In recent years the rule had been relaxed. See go.nature.com/skdr1n for more.

Pathogen rules

In the wake of a series of high-profile laboratory accidents in 2014, the White House issued a 187-page set of recommendations on 29 October for government agencies that work with dangerous pathogens. They include improvements to rules for reporting lab accidents and maintaining records.

Antarctic veto

The body that governs Antarctica's waters again failed to agree on plans for a protected area in the Ross Sea. The Commission for the Conservation of Marine Living Resources, meeting in Hobart, Australia, last week, has repeatedly considered the proposals but failed to reach the unanimous agreement among nations needed to create the area. The Antarctic Ocean Alliance, a coalition of non-governmental organizations, criticized the failure to protect the Ross Sea and another proposed area in East Antarctica.

GM opt-out block

The European Parliament has rejected a proposal that would allow European Union member states to restrict the importation of genetically modified (GM) feeds and foods that have been approved at EU level. In the 28 October vote, members argued that opting out of EU-wide agreements to allow the sale of GM food was incompatible with the EU's

single market. The European Commission tabled the proposal in April after it was agreed that EU member states could opt out of cultivating GM crops, which 19 of the 28 states have done so far.

FUNDING

Brain project

The European Commission signed a partnership agreement with the ambitious but controversial Human Brain Project (HBP) on 30 October. The agreement will take the project into its fully operational phase that begins next April, when the HBP will become an international organization intended to be a permanent infrastructure resource for neuroscientists. The management of the project has been modified following serious criticism by some neuroscientists during its start-up phase. See go.nature.com/qybrng for more.

Arecibo future

The US National Science Foundation (NSF) is seeking new management or new ownership for the Arecibo Observatory (pictured), it said in a 26 October notice. The future of the facility, the largest single-dish radio telescope on Earth, in Puerto Rico, has been in doubt for years. But the NSF, which provides roughly 75% of Arecibo's roughly



US\$12-million budget, says that it is interested in options "that involve a substantially reduced funding commitment from NSF". Astronomers use the facility to study pulsars and the upper atmosphere and to help measure the risk posed by near-Earth asteroids.

POLITICS

Indian protest

Researchers in India have issued a warning over religious intolerance in the country. On 27 October, the Inter-Academy Panel on Ethics in Science, a body set up by the Indian National Science Academy in New Delhi, the Indian Academy of Sciences in Bangalore and the National Academy of Sciences in Allahabad, warned that recent events run counter to the country's constitutional

requirement to "uphold reason and scientific temper". The statement follows the killing of three advocates of rational thinking, as well as other cases of violence linked to religious motives. An online petition voicing similar concerns was launched on 22 October. See page 20 for more.

PEOPLE

Digitized lives

Lauded bioinformatician Jun Wang, who stepped down in July from his post as chief executive of the world's largest genome-sequencing organization, BGI, in Shenzhen, has now launched his own company. Wang held an opening ceremony for the firm, called iCarbonX, in Shenzhen on 27 October. He says that the artificial-intelligence company will

become a "Google for biotech" by collecting and analysing genomic, proteomic and other data from 1 million people. He plans to start recruiting within six months and to have a prototype platform in 3–5 years that will connect individual consumers, pharmaceutical companies, hospitals and other organizations.

Scientist sacked

Tsinghua University in Beijing confirmed to *Nature* on 2 November that it dismissed neuroscientist Zhang Sheng-jia following a controversy over a protein that senses magnetism. In September, Zhang reported manipulating neurons in worms by applying a magnetic field to the protein. A researcher at neighbouring Peking University who claims to have discovered the protein's magnetic-sensing capability and was in the middle of publishing his own results complained that Zhang had published his paper first. Tsinghua University has not yet specified a reason for Zhang's dismissal. Zhang denies that there is anything wrong with his paper, questions the procedure that led to his dismissal and says that he will file a rebuttal.

EVENTS

EPA versus VW

The US Environmental Protection Agency (EPA) has issued a second notice of violation against car manufacturer Volkswagen (VW) over allegations that the company installed a device to circumvent emission standards in some of its vehicles. The 2 November notice adds further car models to those listed on the notice from 18 September. VW previously admitted using 'defeat devices' to lower emissions during laboratory tests in some vehicles (see *Nature* <http://doi.org/723>; 2015).

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TREND WATCH

Women in developing nations are challenging the gender bias often found in engineering. A survey in 10 countries, commissioned by the Queen Elizabeth Prize for Engineering Foundation, asked 10,000 people about their interest in engineering (see go.nature.com/khqpst). Overall, more men expressed interest than did women, but the gap was narrowest in emerging economies. In Britain, 28% of women and 58% of men showed interest, whereas the results for India were 79% for women and 85% for men.

GENDER BALANCE AND ENGINEERING

In developed nations, many more men than women are interested in engineering, in stark contrast to the situation in emerging economies.

