

SEVEN DAYS

The news in brief

POLICY

Home genetics test

The US Food and Drug Administration (FDA) has for the first time approved a home genetics test that determines a person's risk of certain diseases. On 6 April, the agency gave consumer-genetics firm 23andMe of Mountain View, California, permission to market a saliva-testing kit that can test for genetic mutations strongly associated with ten conditions, including Parkinson's, Alzheimer's and coeliac disease. 23andMe previously offered DNA testing that it said described a person's risk of developing 240 conditions, but the FDA halted the service in 2013 because of concerns about the test's accuracy.

Pesticide lawsuit

Two environmental groups announced on 5 April that they had filed a lawsuit challenging a decision by the US Environmental Protection Agency (EPA) not to ban a common pesticide, chlorpyrifos. The agency had proposed banning the pesticide in 2015, arguing that it can harm human cognition. EPA administrator Scott Pruitt rejected that conclusion and reversed direction last month. The Natural Resources Defense Council and the Pesticide Action Network, which originally petitioned to ban the pesticide in 2007, cited the EPA's own science indicating that children, in particular, are vulnerable to high exposures from contaminated drinking water.

Animal research

The Free University of Brussels (VUB) resumed research using animals on 4 April, following a



ATTILA KISBENEDEK/AFP/GETTY

Hungarian university bill sparks protests

An estimated 70,000 people took to the streets of Budapest on 9 April, to protest against an amendment to Hungary's higher-education law that could force closure of the capital's prestigious Central European University (CEU). The legislation, passed by parliament last week and signed into law by the president on 10 April, drastically restricts the autonomy of

higher-learning institutions accredited overseas. The CEU, founded with a US charter in 1991 by Hungarian-born billionaire George Soros, is the only institution affected. The amendment would require it to establish a US campus to continue its activities in Hungary. The move drew global outrage and has been widely criticized as a government attack on academic freedoms.

three-month suspension while its animal facilities and procedures were audited. The review followed the release of videos filmed by an animal-rights activist who had briefly worked undercover at the facilities. The university has now banned the use of undercooling, or freezing, as a means to kill animals. It is also upgrading its animal unit.

EVENTS

New EMBL site

The European Molecular Biology Laboratory (EMBL) is to open its sixth site, in Barcelona, Spain. On 10 April, the Spanish government and EMBL signed an agreement

to create the new labs, which will investigate how tissues and organs develop and function, and what goes wrong in disease. The labs will begin operating later this year and will eventually host around 100 scientists. EMBL, which is based in Heidelberg, has other stations in Germany, as well as in France, Italy and the United Kingdom. The site will also house a state-of-the-art imaging facility.

Martian moon plan

The Japanese and French space agencies agreed on 10 April to collaborate on a mission to bring back samples from the Martian moons Phobos and Deimos. The Japan Aerospace Exploration

Agency plans to launch the spacecraft in 2024, for a return to Earth in 2029. Samples brought back could provide clues to the moons' origins. France's space agency, the CNES, will provide mission support, including a near-infrared spectrometer that will search for water-rich minerals on the moons' surfaces.

PUBLISHING

Open citation data

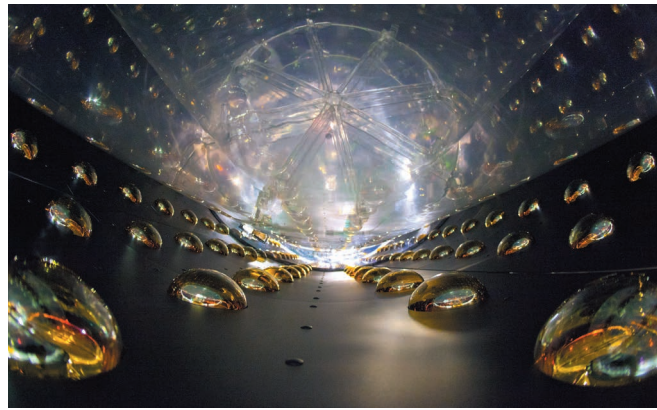
Citation data from millions of scientific papers will soon be free to view, thanks to an initiative launched on 6 April. Until now, records of papers' authors and reference lists have been held in two subscription databases, the

Web of Science and Scopus. The Initiative for Open Citations aims to make reference lists open access and to build analytical services on top of raw data. The venture, started last year by the Wikimedia Foundation in San Francisco, California, and five partners, announced that 29 organizations, including some of the world's largest scientific publishers, have now agreed to openly release citation data.

RESEARCH

Neutrino anomaly

An anomaly that hints at the existence of a dark-matter candidate known as sterile neutrinos could be explained by an error in theoretical calculations, according to a preprint paper posted on 4 April (F. P. An *et al.* Preprint at <https://arxiv.org/abs/1704.01082>; 2017). In 2011, physicists noticed that neutrino experiments near nuclear reactors detected significantly fewer antineutrinos — antimatter versions of neutrinos — than theory predicts, suggesting that the particles could be morphing into as-yet-undetected sterile neutrinos during flight. Now, physicists at the Daya Bay neutrino experiment in China (pictured) have compared the flow of antineutrinos from reactors with the



proportions of different isotopes in the nuclear fuel during fission. Reactions of plutonium-239 produced antineutrinos at the predicted rate, but uranium-235 reactions created fewer than expected. Overestimates of antineutrino flow for this isotope could account for the anomaly, say the authors.

AWARDS

Turing prize

World Wide Web inventor Tim Berners-Lee won the US\$1-million Turing Award on 4 April. The Association for Computing Machinery, which gives out the annual prize, cited Berners-Lee's invention of the web and the first web browser. Released in 1991, the browser's pioneering use of hyperlinks unleashed the power of the Internet and

led to a huge growth in the number of people getting online. Berners-Lee went on to found the World Wide Web Consortium (W3C), which develops standards that enable browsers and servers to communicate across the planet.

BUSINESS

AI brain boost

The Chinese Academy of Sciences (CAS) announced on 9 April that it will invest 10 million yuan (US\$1.4 million) in developing microprocessors that simulate the human brain and advance the study of artificial intelligence (AI). AI systems increasingly use brain-inspired architectures known as neural networks to learn from data how to solve complex problems. But many AI systems run on conventional

COMING UP

18–21 APRIL

Scientists, engineers, lawyers and policymakers gather to discuss the growing problem of space junk at the 7th European Conference on Space Debris in Darmstadt, Germany.
go.nature.com/2p2u4nj

19–22 APRIL

A summit on neglected tropical diseases takes place in Geneva, Switzerland.
go.nature.com/2oqnjff

microprocessors, with instruction sets that were not created with neural networks in mind and thus make the networks inefficiently. CAS researchers say that their Cambricon processor will be tailored specifically to neural networks, allowing AI programs to run more efficiently, without the large server and power needs of other systems.

FACILITIES

Earthquake system

The northwestern states of Washington and Oregon have joined California in the first earthquake early-warning system in the United States. Power companies, transport networks, manufacturers and others are now testing earthquake alerts along the west coast, the US Geological Survey said on 10 April. The system relies on detecting earthquakes that have already begun, and sends warnings that seismic waves are within seconds or minutes of hitting. The system, which will cost US\$16 million a year to run when it enters full-scale operations, has secured only half of that funding so far.

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TREND WATCH

Huge sections of Australia's Great Barrier Reef have been severely bleached for the second year in a row — the first time such back-to-back bleaching has been observed — according to aerial surveys of nearly 800 reefs covering 8,000 kilometres. Abnormally high water temperatures can drive corals to expel their symbiotic algae and turn white; some might recover but others die. The survey found scores of severely bleached reefs in which 60% or more of the visible corals were affected.

BACK-TO-BACK BLEACHING

Bleaching has hit the Great Barrier Reef for the second year in a row. The hardest hit areas in 2017 are farther south than last year.

