

SEVEN DAYS

The news in brief

POLITICS

US shutdown

The US government shut down on 20 January, after lawmakers in Congress failed to agree on legislation to fund the government before a stopgap budget measure expired. Many federal employees, including those at science agencies, were ordered to stop working, and major research funders such as the US National Institutes of Health prepared to stop processing grants. The event — which began on Trump's first anniversary in office — ended on 22 January after politicians approved a short-term funding bill that expires on 8 February. See page 389 for more.

EVENTS

CRISPR patent

The European Patent Office has revoked a key patent on CRISPR–Cas9 genome editing held by the Broad Institute in Cambridge, Massachusetts. The decision, announced on 17 January, hinged on a procedural issue: an inventor listed on the Broad's initial patent application was eventually dropped from the application without written permission from that inventor. The ruling could affect some of the other European CRISPR–Cas9 patents held by the institute. The Broad has said that it will appeal against the decision.

Dengue vaccine

Drug maker Sanofi Pasteur will refund the Philippines government for US\$28 million of unused dengue vaccine after the nation suspended its use last year, the two parties announced on 15 January. The Philippines halted its immunization programme against the tropical virus — the world's first — after 14 children who had received the vaccine



LOIC VENANCE/AFP/GETTY

Europe backs bigger clean-energy targets

European lawmakers have moved to raise the European Union's renewable-energy targets. In a vote on 17 January, the European Parliament decided that by 2030, 35% of energy consumed in the EU should be from renewable sources such as wind and solar power — but not from nuclear. The existing goal is 27%. Critics say that raising clean-energy targets might prompt countries to produce more electricity by

burning biomass, which could have adverse environmental effects. The policies are not yet legally binding: the Parliament will now need to negotiate the plan with national governments, which could attempt to lower the targets. The EU accounts for about 10% of global greenhouse-gas emissions. Around 17% of the energy consumed in the region comes from renewable sources (pictured, wind turbine in France).

died, some with severe dengue symptoms. No causal link has been proved, but Sanofi, which is headquartered in Paris, disclosed last November that the vaccine could make dengue infections worse in those who became infected with the virus for the first time after receiving the vaccine. The company said that the refund was unrelated to safety issues.

Harassment data

The US House of Representatives' science committee has asked the Government Accountability Office (GAO) to provide it with data on sexual harassment involving federally funded researchers. The committee notes that sexual harassment

has a significant negative impact on women researchers, driving some out of science altogether. In a letter sent to the GAO on 18 January, the committee asked for information on cases of and policies relating to sexual assault and harassment at the US National Institutes of Health, National Science Foundation, Department of Agriculture, Department of Energy and NASA.

POLICY

Human-subject rule

The US government has postponed updates to its policy governing research on human subjects, known as the Common Rule. The

changes were supposed to go into effect on 19 January, but a mid-January notice from 16 government agencies announced that institutions conducting such research now have until 19 July to comply with the new rules. The changes include alterations to patient consent forms, streamlined ethics reviews of proposed experiments and greater transparency requirements for study methodologies and results. Only institutions with federal grants are required to comply with the Common Rule.

Electric fishing

The European Parliament voted on 16 January to ban a controversial electric fishing

technique in European Union waters. 'Pulse trawling' uses bursts of electric currents to coax flatfish out of the seabed and into nets, and is currently used mainly by Dutch vessels in the North Sea. Some consider it to be less environmentally damaging than the widely used bottom-trawling method. Scientists at the International Council for the Exploration of the Sea have so far found no evidence that the electric fishing methods in use have major negative impacts, but advise that more research is needed. The ban is not yet legally binding because the Parliament's fisheries committee must now work with the European Commission and EU member states to revise legislation.

PEOPLE

AIDS activist dies

Prominent AIDS researcher and activist Mathilde Krim died on 15 January at the age of 91. Krim (pictured) studied cancer and viral infections, focusing on the proteins the body makes to combat viruses. In 1983, she founded the AIDS Medical Foundation in New York City, a research and advocacy charity now called the Foundation for AIDS Research. Krim helped to raise public awareness of the AIDS epidemic in its early years, and campaigned for increased



funding for research into the condition, as well as for public-health programmes to reduce HIV transmission.

PUBLISHING

Preprint servers

Researchers can now share research articles written in Arabic and French, respectively, on two new preprint servers. The sites, Arabixiv and Frenxiv, will host manuscripts in many scientific disciplines. They were founded by Khaled Moustafa of the Paris-based National Conservatory of Arts and Crafts to address the scarcity of online scientific content in Arabic and French. The servers were built in partnership with the non-profit Center for Open Science in Charlottesville, Virginia.

Elsevier deals

After long negotiations, a Finnish university consortium has reached a deal with scientific publisher Elsevier

over access to paid journal content. The FinELib consortium had sought a nationwide journal-access agreement with the Dutch publisher after a row over increasing subscription prices. On 17 January, Elsevier said it had struck a three-year deal with FinELib that will allow 35 Finnish institutions access to about 1,850 journals on Elsevier's online database ScienceDirect. FinELib says the deal is valued at around €27 million (US\$33 million). In the previous week, Elsevier reached a similar deal with a consortium of 300 South Korean universities and libraries that had complained about price hikes. German institutions are still engaged in long-running negotiations over a nationwide licence.

RESEARCH

Shining remnants

The remains of the neutron-star merger that mesmerized astronomers last year continued to brighten until the end of the year, researchers reported last week (J. J. Ruan *et al. Astrophys. J. Lett.* **853**, 1; 2018; and R. Margutti *et al. Preprint at* <https://arxiv.org/abs/1801.03531>; 2018). Data from the Hubble Space Telescope, the Chandra X-ray Observatory and other telescopes suggest that a shockwave of matter

ejected in the collision — which took place 130 million years ago and was detected on 17 August through gravitational waves — is radiating with increasing intensity across the electromagnetic spectrum as it expands in the interstellar medium. Other observations from a European X-ray probe suggest that the brightness has peaked (P. D'Avanzo *et al. Preprint at* <https://arxiv.org/abs/1801.06164>; 2018). Researchers are awaiting Chandra's latest data to test those findings.

Monkeys cloned

Biologists in China have created the first primates cloned with a technique similar to that used to create Dolly the sheep (Z. Liu *et al. Cell* <http://dx.doi.org/10.1016/j.cell.2018.01.020>; 2018). Researchers hope to use the revised method to develop genetically identical primate populations to provide improved animal models of human diseases such as cancer. See page 387 for more.

Climate report

Last year was the third-warmest year on record, behind 2015 and 2016, according to an analysis released on 18 January by the US National Oceanic and Atmospheric Administration (NOAA). However, NASA, which used a different analysis, ranked 2017 as the second-warmest year on record, behind 2016. Both reports agree that record high temperatures around the world confirmed a long-term warming trend. According to NOAA, the average global temperature was 0.84°C above the twentieth-century mean. The NASA analysis used the reference period 1951–80 and found average temperatures to be 0.9°C higher than the global mean. Both analyses showed that the five warmest years on record have all taken place since 2010.

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TREND WATCH

Global investment in clean energies totalled US\$333.5 billion last year, up by 3% from 2016. Solar energy attracted 48% of the total, notes a 16 January report. The growth was driven, in part, by a boom in installations of solar photovoltaic cells in China, which had a record year for clean-energy investment, spending \$132.6 billion. Spending in Britain dropped by 56% owing to policy changes, and by 26% in Germany. Global cumulative investment in clean energies amounts to \$2.5 trillion since 2010.

CASH FOR CLEAN ENERGY

Global investment in clean energy totalled US\$333.5 billion last year, the second-highest annual figure ever.

