

## EVENTS

### Bird flu in Europe

A highly pathogenic strain of avian influenza virus called H5N8 has been identified in several European countries, threatening the region's poultry industry, worth €30 billion (US\$32 billion) a year. On 12 November, authorities ordered the slaughter of 30,000 chickens on a farm in northern Germany as a containment measure. Scientists believe that the strain was imported from Asia by migrating birds. The last epidemic of H5N8 in Europe was in November 2014; more than 336,000 birds were culled. H5N8 is not known to infect humans.

### Computing cancer

A genomics powerhouse will team up with a supercomputer to unpick the tangled cellular networks that can cause resistance to cancer drugs. On 10 November, the Broad Institute of MIT and Harvard in Cambridge, Massachusetts, and IBM Watson Health announced a five-year, US\$50-million study that uses IBM's Watson artificial-intelligence system to analyse the genomes of thousands of drug-resistant tumours. The goal is to find patterns that could allow clinicians to predict drug sensitivity and resistance. The data are to be shared with the scientific community.

### Stem cells on offer

Public prosecutors in Italy are investigating whether disgraced entrepreneur Davide Vannoni — who was convicted on criminal charges last year for administering unproven stem-cell therapies — is offering his procedures again. The terms of his conviction required him to refrain from performing procedures in Italy, and possibly from doing



PATRICK PLEUL/AFP/GETTY

## Carbon dioxide emissions stay stable

The world's carbon dioxide emissions have remained almost stable for the third year in a row, despite continuing economic growth. Global CO<sub>2</sub> emissions from fossil-fuel burning (pictured is a coal power station) are set to total 36.4 billion tonnes this year, only marginally more than in 2015 and 2014, according to the annual Global Carbon Budget analysis released

on 14 November. The flattening is largely the result of a drop in coal consumption in the United States and China, the world's largest greenhouse-gas emitters. If warming is to be kept below 2 °C, global CO<sub>2</sub> emissions must soon start to decline by around 3% per year, scientists reminded the United Nations climate meeting now under way in Marrakesh, Morocco.

so abroad. However, patient groups on social media posted comments suggesting that the procedure is available in Georgia. The technique involves modifying stem cells from the bone marrow of a patient or relative and injecting them back into the patient. In October, a patient came forward with a detailed account of his treatment, prompting prosecutors to take action. See page 340 for more.

## PUBLISHING

### Open peer review

A trial by *Nature Communications* shows that many scientists are willing to try open peer review. Around 60% of the journal's authors

so far this year have agreed to have their reviews published, so the journal will continue to offer the option — but will not make it mandatory, it said on 10 November. See page 343 for more.

### Wellcome boost

The Wellcome Trust in London, one of the world's largest medical charities, launched its open-access publishing platform on 15 November. *Wellcome Open Research* allows Wellcome grant recipients to publish a variety of findings — including conventional articles, software, study protocols and living data sets — within days of submission. Publication is followed by transparent peer

review in which authors choose their referees. The funder hopes that its initiative will change the way research is assessed, and that other grant-givers will follow its model.

## RESEARCH

### LIGO restart

After a ten-month shutdown for upgrades, the Laser Interferometer Gravitational-wave Observatory (LIGO) is ready to make discoveries again. In February, researchers stunned the world when they announced the detection of gravitational waves from a collision between distant black holes, and a second detection was confirmed in June. LIGO's two 8-kilometre-long

interferometers, one in Louisiana and the other in Washington state, began a new 'engineering run' on 14 November and expect to start science runs in December. Upgrades to the detectors should enable the observatory to scan a significantly larger volume of the Universe than before.

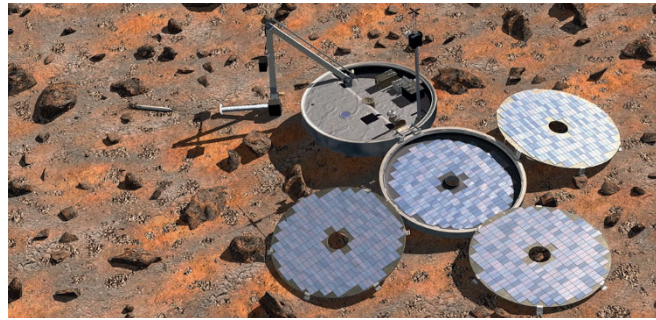
## SPACE

## Space debris

A rocket stage from a Chinese launch apparently crashed near a jade mine in northern Myanmar on 10 November. That morning, a Long March 11 rocket lifted off from the Jiuquan launch centre in Inner Mongolia; minutes later, it would have passed over northern Myanmar. Local media reported the sound of an explosion and a stench in the air when the object fell. The rocket successfully put five satellites into orbit, including one meant to test celestial navigation using X-rays emitted by pulsars.

## Beagle 2 worked

Beagle 2 (pictured, artist's impression), which lost touch with Earth as it landed on Mars on Christmas Day 2003, came extremely close to success, mission scientists announced on 11 November. By comparing images of the lander taken by NASA's Mars



Reconnaissance Orbiter with simulations of how sunlight would reflect off the probe in various configurations, they found that Beagle 2 probably opened at least three of its four solar panels. The British-built lander, operated by the European Space Agency, may even have collected data, but the last panel's failure to fully open would have blocked transmission from the craft's antenna, says the UK team behind the analysis, which is not yet published.

## POLITICS

## President Trump

The election of Republican businessman and reality-television star Donald Trump as the next president of the United States on 8 November sent shock waves around the world. Trump's views on women and minority groups, his stance on climate change and nuclear weapons, and his contradictory approach to evidence have worried many

— including scientists. During his successful campaign to defeat the Democratic candidate Hillary Clinton, Trump pledged to remove the United States from the 2015 Paris climate-change agreement and to dismantle the deal between six world powers and Iran to limit that country's nuclear capabilities. See pages 329, 331 and 337 for more.

## State initiatives

Americans voted on a host of state-level initiatives on 8 November, some science-related. Voters in Washington state rejected a carbon tax, with its backers saying they will bring a reworked proposal to the Washington legislature next year. The people of Montana rejected a plan that would have awarded up to US\$200 million in grants to biomedical scientists over 10 years. And voters in southern Florida were split on whether to back a plan to release genetically modified mosquitoes to fight diseases such as the Zika virus. It was

## COMING UP

### 17 NOVEMBER

Europe's next four Galileo navigation satellites are scheduled to launch on an Ariane 5 rocket from French Guiana, bringing the number of satellites in the constellation to 18. [go.nature.com/2fmfxfs](http://go.nature.com/2fmfxfs)

### 19 NOVEMBER

The United States launches GOES-R, its first next-generation geostationary weather satellite, from Cape Canaveral, Florida. [www.goes-r.gov](http://www.goes-r.gov)

### 23 NOVEMBER

The UK government makes its first major financial statement since the vote to leave the European Union in June.

rejected by the town of Key Haven, where the field trial would take place, but voters in surrounding Monroe County approved it. Ultimate approval rests with the Florida Keys Mosquito Control District, which has yet to decide on the matter.

## POLITICS

## Science adviser

Canada will issue an open call for nominations for the position of national science adviser, its science minister announced on 10 November. The Canadian public, researchers and institutions will be asked to suggest candidates for the post, which Liberal Prime Minister Justin Trudeau promised to bring back after being elected in 2015. The post had been scrapped in 2008 by his Conservative predecessor, Stephen Harper. Trudeau has also vowed to usher in an era of evidence-based policymaking.

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## TREND WATCH

Europe's research commissioner, Carlos Moedas, has launched an effort to boost venture capital (VC). Last year, investors put €5.3 billion (then US\$5.9 billion) into firms in Europe; US investment was \$60.1 billion. To help close the gap, Moedas said on 8 November that the European Commission would offer €400 million for new independently managed VC funds, provided they raised triple that amount from private investors. The funds would go to other VC funds, rather than company stocks.

## EUROPE'S VENTURE-FUNDING GAP

Europe's venture-capital investment severely lags behind that in the United States.

