

SEVEN DAYS

The news in brief

AWARDS

Nobel prizes

Three researchers who developed treatments for parasitic infections won the 2015 Nobel Prize in Physiology or Medicine. William Campbell and Satoshi Ōmura discovered a class of compounds called avermectins, which kill parasitic roundworms that cause infections such as river blindness; Youyou Tu developed the antimalarial drug artemisinin (see page 174). The physics prize was awarded to Takaaki Kajita and Arthur McDonald for their discovery of neutrino oscillations (see page 175). *Nature* went to press before the chemistry prize was awarded, but full details will be made available at go.nature.com/xkfab1.

Carbon XPRIZE

A new US\$20-million prize for technologies that can convert waste carbon dioxide from power plants into useful products was unveiled by the XPRIZE group on 29 September. The non-profit organization, based in Culver City, California, said that it hoped to award two \$7.5-million 'grand prizes' in March 2020. 'Milestone' prizes totalling \$5 million

NUMBER CRUNCH

31%

The percentage of World Heritage Sites — 70 of 229 — that are threatened by extractive industries such as oil and gas drilling, according to the World Wildlife Fund in a report on 1 October.

Source: World Wildl. Fund (2015)



CLOCKWISE FROM TOP LEFT: INSIGHTS/JUG/GETTY; PETER ESSICK/AURORA; TAMARA THOMSEN, WISCONSIN HISTORICAL SOC.; MALCOLM CLARK/NIWA

Marine-protection bonanza

World leaders unveiled plans for new 'marine protected areas' at an oceans conference in Valparaíso, Chile, on 5 October. The Chilean government will establish a 631,368-square-kilometre reserve around Easter Island in the Pacific (top left), and the United States will create its first national marine sanctuaries in 15 years — one off the coast of Maryland

(top right) and another in Lake Michigan (bottom right). On 28 September, New Zealand's President John Key announced the creation of a 620,000-square-kilometre sanctuary around the country's Kermadec Islands, a region that hosts huge populations of seabirds and marine animals, as well as the world's longest chain of underwater volcanos (bottom left).

will be awarded to ten teams in 2017.

PEOPLE

Forgery sentence

A Danish court sentenced neuroscientist Milena Penkowa to 9 months in prison on 30 October after finding her guilty of forgery related to research misconduct, but suspended the sentence. The City Court of Copenhagen said that Penkowa faked documents relating to the number of rodents used in experiments for her doctoral thesis. The University of Copenhagen, where she worked until 2010, and the Danish Committee on Scientific Dishonesty had previously concluded that Penkowa had committed

research misconduct. See go.nature.com/adhblu for more.

NIH appointment

Cardiologist Michael Lauer has been appointed chief of the extramural-research office at the US National Institutes of Health (NIH), which administers funds awarded to non-NIH employees, the agency announced on 28 September. The office disburses more than 80% of the NIH's US\$30-billion budget in grants, and sets policy in areas such as research-misconduct regulation. Lauer has headed the cardiovascular-research unit at the National Heart, Lung, and Blood Institute since 2009, and has worked mainly in epidemiology and biostatistics.

FUNDING

Neuroscience boost

The Kavli Foundation and its university partners announced on 1 October that they will spend more than US\$100 million on neuroscience research, including setting up three new Kavli neuroscience institutes for basic research. The US universities that will host the centres — Johns Hopkins University in Baltimore, Maryland, the Rockefeller University in New York City and the University of California, San Francisco — will co-finance them. Kavli, based in Oxnard, California, will also increase funding at its four existing neuroscience

SIMON DAWSON/BLOOMBERG/GETTY institutes, including that at the Norwegian University of Science and Technology in Trondheim, whose scientists shared last year's Nobel Prize in Physiology or Medicine.

US budget passes

The US Congress approved a temporary budget that continues funding for federal science agencies until 11 December, avoiding a forced shutdown of work at the US National Institutes of Health, National Science Foundation and NASA. Had US politicians failed to reach an agreement, funding for federal scientists and other employees would have ended on 1 October — the start of the country's 2016 fiscal year. But the 30 September decision just "kicks the can down the road", says Michael Lubell, director of public affairs at the American Physical Society in Washington DC. See go.nature.com/rlihoeg for more.

POLICY

Climate costs

The governor of the Bank of England has warned that climate change could lead to economic "tragedy". Mark Carney (pictured) told an insurance-industry meeting in London on 29 September that climate change "will threaten financial resilience and longer-term prosperity" by increasing



damage from storms and other natural disasters, and could upset financial markets. Carney is one of the most senior financiers to have taken such a strong stance on climate issues, and his speech has attracted some negative comment in the financial press.

Refugee scientists

The European Commission launched 'Science4Refugees', an initiative to help link refugee scientists with job openings, on 5 October. The service allows refugees to submit CV information to a web portal containing postings for jobs and fellowships at European institutions. Places that are open to employing refugees and asylum seekers will be marked with a Science4Refugees label, says the commission. Candidates compete for positions on the same basis as other applicants, and they need to have already obtained visas and work permits. In the long term, the commission intends to add

mentoring, language and other training opportunities. See go.nature.com/kzth45 for more.

RESEARCH

NASA eyes Venus

NASA's next Discovery-class planetary-exploration missions are targeting Venus and asteroids, the US space agency announced on 30 September. After whittling down 27 proposals for its US\$500-million venture, the agency has chosen 5 potential missions. Each one will receive \$3 million to develop its plans before one or two are selected to fly. Among those vying for lift-off are an orbiter to map Venus's surface, a probe to investigate its atmosphere, a telescope to hunt for near-Earth objects, a visit to the asteroid Psyche and a trip to four asteroids near Jupiter. See go.nature.com/pw723q for more.

HEALTH

Hit HIV early

Treatment for HIV should be provided immediately for anyone who is infected with the virus, advises the World Health Organization (WHO) in guidelines released on 30 September. These replace previous recommendations to start taking drugs only when immune-cell levels drop below a certain value, and it

COMING UP

8–9 OCTOBER

Science ministers from the G7 nations meet in Berlin.

go.nature.com/ss9idk

12–16 OCTOBER

Jerusalem hosts the 66th International Astronautical Congress.

go.nature.com/gv243k

11–14 OCTOBER

The International Cytokine & Interferon Society holds its annual meeting in Bamberg, Germany.

www.cytokines2015.com

expands the number of people who are eligible for treatment from roughly 28 million to 37 million worldwide. The WHO also calls for preventive drugs to be given to all people who are at substantial risk of HIV, rather than just to men who have sex with men. The guidance is based on evidence reported in July that earlier treatment helps both patients and public health (see *Nature* <http://doi.org/73w>; 2015).

BP settlement

The British oil giant BP will pay US\$20.8 billion to resolve civil lawsuits related to the Deepwater Horizon oil spill in 2010, the US Department of Justice announced on 5 October. Under the final settlement, reached with the US government and five states along the Gulf of Mexico, BP will pay \$5.5 billion in fines under the Clean Water Act and \$8.1 billion for natural-resource damages. Much of the money will be spent on coastal restoration projects. The company will also pay \$4.9 billion for economic impacts on the states and around \$2 billion in other payments.

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TREND WATCH

"Predatory" open-access journals with "highly questionable" marketing and peer review are publishing more and more papers, finds a 1 October study (C. Shen and B.-C. Björk *BMC Med.* **13**, 230; 2015). These journals charge a fee for articles that undergo little or no editing or review; in 2010, they published 53,000 papers, rising to 420,000 in 2014. Authors paid an average of US\$178 per article. The team used titles from 'Beall's list' — which some claim includes legitimate publications (see *Nature* **495**, 433–435; 2013).

PREDATORS ON THE RISE

Dubious journals produce thousands of articles per year, with many publishers running more than one money-generating publication.

