

FUNDING

Research boost

In a deal announced on 16 April, Germany's ruling political parties agreed to increase funding for science by €5 billion (US\$5.4 billion) between 2018 and 2028. The agreement, which is not yet a government commitment, was welcomed as a strong indication of continuing political support for research. Most of the proposed cash would go towards extending the country's Excellence Initiative, a competitive fund that had been due to expire in 2017. Since its launch in 2006, the initiative has created some 20,000 science jobs. See go.nature.com/ieytqt for more.

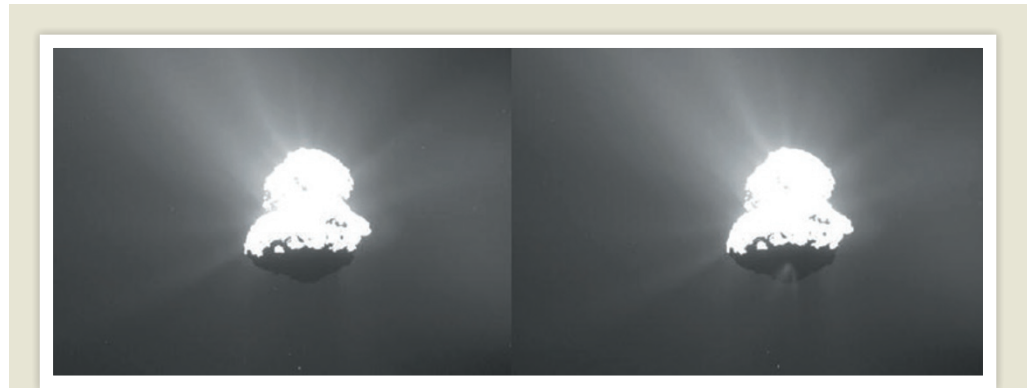
RESEARCH

Stem-cell initiative

The Center for iPS Cell Research and Application (CiRA) of Kyoto University will partner with Japanese pharmaceutical firm Takeda, in Osaka, to develop clinical applications of induced pluripotent stem (iPS) cells. In a statement on 17 April, Takeda said that it will contribute more than ¥32 billion (US\$269 million) to the project over 10 years, as well as to research facilities in Fujisawa. CiRA director Shinya Yamanaka, who shared a Nobel prize in 2012 for his work on iPS cells, will lead the programme. Potential research paths include treatments for heart failure and diabetes.

Ebola-vaccine trial

A late-stage clinical trial of a candidate Ebola vaccine is under way in western Sierra Leone, the US Centers for Disease Control and Prevention announced on 14 April. Conducted in partnership with Sierra Leone's College of Medicine and Allied



ESA/ROSETTA/MPS FOR OSIRIS

Dark side of a comet sprouts jet

Pictures taken on 12 March by the European Space Agency's Rosetta spacecraft show the surprise birth of a dust stream from the dark underbelly of the comet 67P/Churyumov-Gerasimenko. The shots were taken just 2 minutes apart, 75 kilometres from the comet's surface.

Jets of vapour and dust normally form at the Sun-facing side of comets as ice sublimates

beneath the surface, and researchers had not expected any to emerge from the dark region, named Imhotep after an ancient Egyptian god. But as 67P/Churyumov-Gerasimenko is approaching the Sun, some early light may have warmed an as-yet-unobserved outcrop in the region, the mission team says. The images were presented last week at the annual meeting of the European Geosciences Union in Vienna.

Health Sciences and its health and sanitation ministry, the trial will enrol 6,000 health and other front-line workers from five heavily stricken districts. Participants will receive the experimental inactivated-virus vaccine rVSV-ZEBOV either immediately, or six months after enrolment. All will be followed closely from the day of enrolment, and those assigned to the later phase will serve as controls for the first phase.

Smoking trends

Electronic cigarettes are now the tobacco products most commonly used by US high-school students. Data released last week by the Centers for Disease Control and Prevention show that a total of 24.6% of students used tobacco products in 2014; 13.4% used e-cigarettes. Declines in conventional cigarette and cigar smoking have been offset by increases in e-cigarettes and hookah

use. Mitch Zeller, director of the US Food and Drug Administration's Center for Tobacco Products, called the figures "staggering", and said that they justified his agency's attempts to regulate these products.

Nuclear retractions

Citing a conflict of interests, the journal *Meccanica*, published by Springer, has retracted 11 papers by Alberto Carpinteri, an engineer at the Polytechnic University of Turin, Italy, and his collaborators. Carpinteri was the journal's editor-in-chief until 2014. Some of the papers were about a controversial type of nuclear fission that, according to Carpinteri, is induced by compressing solids (see *Nature* <http://doi.org/3wd>; 2012). The retractions were issued in March, according to a Springer spokeswoman, but first emerged when a blogger

at the Italian newspaper *La Repubblica* spotted them on 15 April.

POLICY

Telescope share

US astronomers could get more science out of their ground-based telescopes by bartering observation time between facilities, the US National Research Council recommends in a 17 April report. A time-exchange scheme could help researchers to recover from funding cutbacks by the US National Science Foundation, and might assist scientists at small institutions in accessing data from the Large Synoptic Survey Telescope, an 8.36-metre telescope under construction in Chile.

Trial transparency

The World Health Organization issued a statement on 14 April calling

for increased reporting of clinical-trial results. The agency requested that investigators submit their main findings to a peer-reviewed journal and to post key results in clinical-trial registries within one year of completing a study. It also urged researchers to disclose results from older, unreported clinical trials. The statement follows several similar efforts by European and US agencies, and an international campaign by medical researchers (see go.nature.com/p7slov and *Nature* **515**, 477; 2014).

Nuclear veto

A local court in Japan has blocked the restart of two nuclear reactors at the Takahama power plant in the Fukui prefecture. The Nuclear Regulation Authority in Tokyo had deemed the reactors safe to recommence operations last year. But in an injunction issued on 14 April, the presiding judge questioned the stringency of the safety standards, even though the agency had tightened them after the 2011 Fukushima disaster. Despite the national government's efforts to rebuild the nuclear industry, all of Japan's reactors remain offline.

Porpoise protection

On 16 April, Mexican President Enrique Peña Nieto officially launched a plan to save the vaquita (pictured), a critically



endangered porpoise that lives only in the Gulf of California. Fewer than 100 vaquitas (*Phocoena sinus*) are estimated to remain. The animals often become ensnared in gillnets — a type of fishing net. The US\$37-million initiative prohibits gillnet fishing in much of the northern gulf, supplies new boats to the Mexican navy to enforce the ban, and compensates fishers for lost income.

Corneal implant

The US Food and Drug Administration approved a first-of-its-kind corneal implant on 17 April. The KAMRA inlay is an opaque, ring-shaped device to improve close-up vision in people with presbyopia, an age-related condition that diminishes the eye's ability to change focus. The implant blocks peripheral light and funnels central light rays through a small opening, sharpening vision of near objects and small print. Made by AcuFocus, a medical-device

company in Irvine, California, the implant is approved for people who have not had cataract surgery.

EVENTS

Telescope kick-off

Construction of the Large Synoptic Survey Telescope officially launched on 14 April with a traditional Chilean ceremony to lay the first stone on Cerro Pachón, a mountain in north-central Chile. The 8.36-metre telescope, equipped with a 3-billion-pixel digital camera, is expected to come online in 2019 and begin full operation in 2022. The construction, projected to cost US\$680-million, is funded by the US National Science Foundation, the US Department of Energy and private donors.

Trachea inquiry

An investigation by the Karolinska Institute in Stockholm has cleared one of its surgeons, Paolo Macchiarini,

COMING UP

26–30 APRIL

The first Triennial Earth–Sun Summit takes place in Indianapolis, Indiana. Heliophysicists discuss topics such as space weather, solar flares and results from NASA's MAVEN mission to explore how Mars's atmosphere interacts with solar wind.

go.nature.com/fc73ho

of charges of scientific misconduct related to a series of synthetic-trachea transplants that were performed starting in 2008. Pierre Delaere, a surgeon at the hospital of the Catholic University of Leuven (KU Leuven) in Belgium, had accused Macchiarini of overstating the success of the operations he had performed, among other allegations (see *Nature* **516**, 16–17; 2014). The investigation report by the Karolinska ethics council, released on 14 April, judged Macchiarini's claims to be plausible. Another Karolinska investigation, which will compare patient medical records with Macchiarini's claims, is ongoing.

Chemical weapons

One hundred years have passed since the first large-scale use of chemical weapons at Ypres, Belgium, on 22 April 1915, during the First World War. The European Association for Chemical and Molecular Sciences is marking the anniversary by calling for the complete elimination of chemical weapons; the society, which has members from 32 countries in Europe, has organized a three-day conference in Ypres to discuss how to improve international laws to prevent the use of such weapons.

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TREND WATCH

Of the 41.8 million tonnes of electronic and electrical waste that was generated in 2014, nearly 60% was a mix of kitchen, bathroom and laundry equipment, according to a report released on 19 April by the United Nations University in Bonn, Germany (see go.nature.com/hznxhn). About 7% consisted of personal computers and other small information-technology products. Globally, an average of 5.9 kilograms of e-waste was generated per capita — a figure that the authors project will rise to 6.7 kg in 2018.

E-WASTE ESTIMATES

By region, Oceania generated the least total amount of e-waste last year, but was the second-highest producer per capita, after Europe.

