

SEVEN DAYS

The news in brief

EVENTS

Nuclear struggles

Radioactive water flooding turbine buildings at Japan's stricken Fukushima nuclear power plant continued to be the main concern for the plant's operator, the Tokyo Electric Power Company (TEPCO), last week. On 4 April, TEPCO said that it was deliberately pumping contaminated water into the sea, to free storage space for water with higher levels of radioactivity. External experts are growing increasingly mistrustful of information provided by TEPCO; Japan's Nuclear and Industrial Safety Agency criticized the company for providing inaccurate radiation data. See pages 13–14 for more on the state of the reactor and details of the fallout.

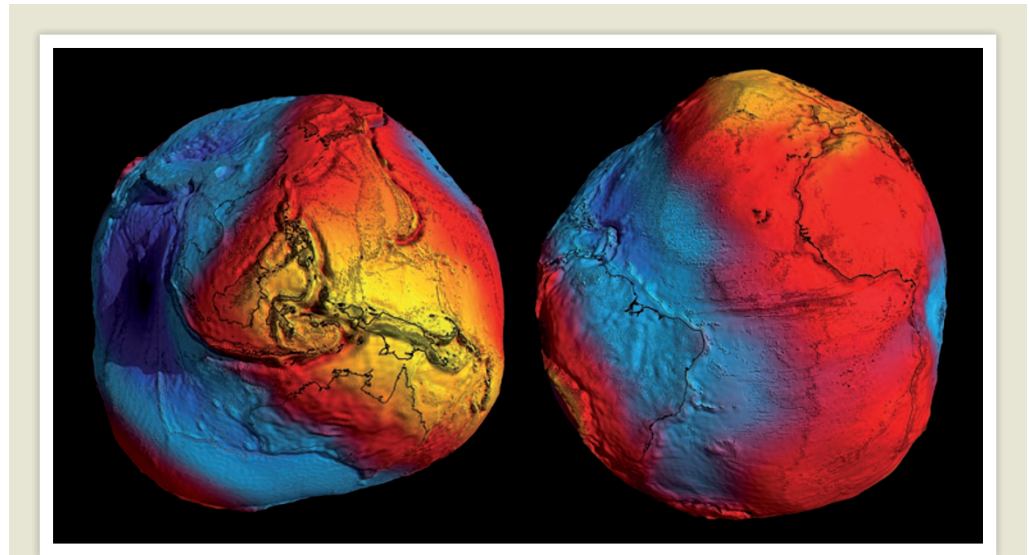
POLICY

Rare diseases

A global collaboration that aims to find new therapies for rare diseases was launched this week by the US National Institutes of Health and the European Commission. The International Rare Disease Research Consortium wants to develop a diagnostic tool for every known rare disease by 2020, and find therapies for 200 of them. The project will involve research agencies from around the world. See page 17 for more details.

French stimulus

France's medical-research landscape has been reshaped by the government's 30 March announcement of six new centres of excellence, designed to promote research bridging the gap from bench to clinic. The centres bring together scientists from universities and hospitals to focus on specific fields such as cardiovascular



ESA/HPF/DLR

The pull of the planet

The most detailed map of Earth's gravity ever made was unveiled last week in Munich, Germany, when researchers presented eight months' worth of data from the European Space Agency's Gravity Field and Steady-State Ocean Circulation Explorer (GOCE), a satellite launched in 2009. GOCE maps subtle variations in Earth's gravitational field that arise

from the planet's uneven distribution of mass. The result is a 'geoid' (pictured — variations exaggerated 10,000 times), showing the world if it were covered by an ocean whose height was influenced only by gravity. This reference allows geoscientists to precisely measure the heights of shifting oceans and continents. GOCE will continue mapping until the end of 2012.

disease, infectious diseases and neuroscience. They will share an €850-million (US\$1.2-billion) fund — much of it in endowments intended to provide support for the next decade. The funding is part of the first wave of a €35-billion economic stimulus package announced in December 2009. See go.nature.com/vydp9 for more.

Gene patents

An appeals court in Washington DC heard pivotal arguments on 4 April in a landmark case with far-reaching implications for gene patenting. Last year, a federal judge in New York ruled that seven patents on the breast-cancer genes *BRCA1* and *BRCA2* held by Myriad Genetics and the

University of Utah Research Foundation, both based in Salt Lake City, were "improperly granted" because they related to a product of nature (and therefore were not patentable). The appeals-court ruling is expected in June, but many think an appeal to the supreme court will follow. See go.nature.com/bxcmmj for details.

the University of Cambridge, UK, has worked on areas such as galaxy formation, black holes and γ -ray bursts. Some researchers and atheists are unhappy with the increasing tendency of the Templeton Foundation — based near Philadelphia, Pennsylvania — to select scientists for its awards and grants (see *Nature* 470, 323–325; 2011). See go.nature.com/ub2ett for more on the prize.

PEOPLE

Templeton prize

Astrophysicist Martin Rees has won this year's £1-million (US\$1.6-million) Templeton Prize. The award is granted for those who have made an exceptional contribution to "affirming life's spiritual dimension". Rees, former head of the Royal Society in London and an emeritus professor at

Relics boss returns

Archaeologist Zahi Hawass has been reinstated as Egypt's antiquities minister, less than a month after quitting the position. Hawass, a flamboyant figure who is often in the media, had stepped down on 3 March, claiming that security services couldn't adequately

protect the archaeological sites and museums under his jurisdiction. Essam Sharaf, prime minister of Egypt's interim government, reappointed him on 30 March. See go.nature.com/1emirz for more.

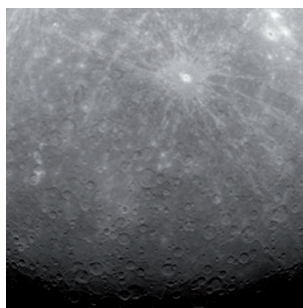
RESEARCH

Arctic ozone

Stratospheric ozone loss in the Arctic has this year reached a level never before recorded in the Northern Hemisphere. Observations made since the beginning of the Arctic winter show that 40% of ozone molecules have been destroyed over the Arctic. The highest ozone loss previously measured was 30%, in 2005. Scientists with the World Meteorological Organization and the Alfred Wegener Institute for Polar and Marine Research released the figures on 5 April at the general assembly of the European Geosciences Union in Vienna. See go.nature.com/dxmamu for more.

Mercury mapping

NASA's MESSENGER spacecraft has sent back the first images ever taken from orbit around Mercury. The very first image (pictured) shows a bright, rayed crater named Debussy near the planet's south pole. Mission scientists think that the shadowed craters south of



Debussy might harbour permanent water ice. MESSENGER — which entered into orbit around Mercury on 18 March — has now started a planet-wide mapping survey. See go.nature.com/rdqsni for more.

BUSINESS

Drug discovery

Yale University's school of medicine is to collaborate with biotechnology firm Gilead Sciences to discover cancer therapies. Gilead, based in Foster City, California, will provide US\$40 million for a four-year research effort, and may extend that to \$100 million over ten years. The company is best known for selling HIV drugs, but has made three cancer-related acquisitions in the past year. The partnership with Yale, of New Haven, Connecticut, was announced on 30 March, and continues a trend of drug-discovery collaborations between

industry and academia. The University of California, San Francisco, has announced partnerships with both Sanofi-aventis of Paris and Pfizer of New York in the past six months, for instance.

Pfizer divesting

Pharmaceutical giant Pfizer may be preparing to shed some of its business units after its US\$68-billion 2009 mega-merger with Wyeth. On 4 April, the company, headquartered in New York, said that it had agreed to sell its capsule-manufacturing division, Capsugel, to Kohlberg Kravis Roberts, a private-equity firm also in New York, for \$2.4 billion. Pfizer has already said that it is reviewing its portfolio; analysts speculated that this could herald a series of sales of units not directly related to pharmaceuticals, such as nutrition or consumer-health divisions.

Hostile bid

On 29 March, Valeant Pharmaceuticals issued a US\$5.7-billion hostile takeover bid to acquire Cephalon, the maker of the wakefulness drug modafinil. Cephalon, based in Frazer, Pennsylvania, is best known for its pain and sleep drugs, but has recently diversified its business, acquiring companies that fortified its

COMING UP

9–13 APRIL

Around 13,000 scientists are expected at the Experimental Biology 2011 conference in Washington DC. The meeting covers research from fields such as anatomy, biochemistry and pharmacology. www.experimentalbiology.org

12 APRIL

More than 300 events are planned across the world to celebrate the 50th anniversary of the first human spaceflight by Soviet cosmonaut Yuri Gagarin. It is also the 30th anniversary of the first NASA shuttle flight. <http://yurisnight.net>

11 APRIL

A landmark assessment of nitrogen flows across Europe, and how the element affects soil, water and biodiversity, is presented at a workshop on nitrogen and global change running until 14 April in Edinburgh, UK. www.nitrogen2011.org

portfolio in cancer and generic pharmaceuticals. Valeant Pharmaceuticals is based in Mississauga, Canada.

Chemical deals

In the latest in a flurry of chemical deals, the Belgian chemicals group Solvay has agreed to buy its smaller French rival Rhodia for €3.4 billion (US\$4.8 billion), the two firms said on 4 April. Solvay sold its pharmaceutical business to US drug firm Abbott Laboratories last year for €4.5 billion, and had been looking to reinvest. Well over \$20 billion has been bid in acquisition offers in the chemicals sector so far this year.

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TREND WATCH

China last year produced almost half of the world's wind turbines and solar modules, and attracted a record US\$54.4-billion investment in clean energy (excluding nuclear power), says a report released last week by the Pew Environment Group in Washington DC. The country-by-country breakdown (see chart) excludes government stimulus funding and global research investments of around US\$35 billion. Germany invested most relative to its economy, at 1.4% of gross domestic product.

CHINA LEADS CLEAN ENERGY PACK

China alone attracted a quarter of non-governmental investment in clean energy in 2010.

