SEVEN DAYS *The news in brief*

RESEARCH

Higgs hunt

Physicists at the Large Hadron Collider at CERN, near Geneva, Switzerland, announced on 13 December that the collider has seen signals consistent with the possible existence of the Higgs boson with a mass of about 125 gigaelectronvolts. But the evidence isn't strong enough to rule out the particle's absence. See page 301 for more.

Gene-therapy boost

A gene-therapy treatment for patients with the blood-clotting disorder haemophilia B has scored its first unequivocal success, scientists at University College London reported at the American Society of Hematology meeting in San Diego, California, on 11 December (A. C. Nathwani *et al. N. Engl. J. Med.* http://doi.org/g8n; 2011). Haemophilia B is caused by mutations in the gene that codes for the factor IX protein; the treatment uses viruses to deliver a healthy version of the gene to patients' liver cells. In a previous trial, protein production dropped below therapeutic levels after two months (C. S. Manno *et al. Nature Med.* **12,** 342–347; 2006). But in the latest trial, four out of six patients were still making the protein up to 18 months after one treatment, and did not need injections of blood-clotting factors.

MENTOR AWARDS

The annual *Nature* Awards for Mentoring in Science (go.nature.com/qithms), which this year recognized mentors in France, were presented on 12 December in Paris. Two Paris-based researchers shared the €10,000 (US$13,200) lifetime-achievement award: Moshe Yaniv, a geneticist at the Pasteur Institute, and Jean Rossier, a neurobiologist at ESPCI ParisTech. The €10,000 mid-career award went to Barbara Demeneix, a developmental endocrinologist at the National Museum of Natural History in Paris.

NASA/JPL-CALTECH/CORNELL/ASU

Fresh clue to ancient Mars water

NASA's Opportunity rover has discovered veins of hydrothermally deposited minerals at the edge of Endeavour crater on Mars. The bright, stick-like veins (pictured), apparently comprised of gypsum, show that hot, mineral-rich water once pulsed through fractures in the volcanic rock. Gypsum deposits can form in water that is much less acidic than required by the water-altered sulphate minerals previously discovered on Mars — meaning that the site could have been more habitable than others explored by the rover. Principal investigator Steve Squyres, of Cornell University in Ithaca, New York, told a meeting of the American Geophysical Union in San Francisco, California, on 8 December that the discovery is the most "bullet-proof" support yet for ancient water. See go.nature.com/nmsldl for more.

Targeting cancer

Efforts to create cancer therapies tailored to a patient's genetic make-up were boosted by promising clinical-trial results reported on 7 December (J. Baselga *et al. N. Engl. J. Med.* http://doi.org/g8m; 2011). The trial was conducted on women with advanced forms of breast cancer that involved mutations in the *HER2* gene, which drives about 20% of breast-cancer cases. Those given the experimental monoclonal antibody pertuzumab and the widely used drug trastuzumab (Herceptin), together with chemotherapy, gained an extra 6-month lull in disease progression compared with women receiving only chemotherapy and trastuzumab. Both antibodies target the protein affected by *HER2* mutations. See go.nature.com/hwxlbd for more.

POLICY

Durban deal

After negotiations that ran into the early morning, tired politicians at the climate talks in Durban, South Africa, agreed that by 2015, the world would negotiate a new climate treaty, which would require all nations to meet as-yet-unspecified emissions targets and would come into force from 2020. The Kyoto Protocol will be extended by at least 5 years. Emotions were mixed after the deal on 11 December, which brought in previously recalcitrant countries, but also deferred action for a decade. See pages 292 and 299 for more.

Forest threat

Brazil's Senate has approved a new 'forest code', which scientists fear will weaken strict rules on tree-clearing that have reduced deforestation in the Amazon. All landowners there have had to maintain forest on 80% of their land, but the new bill creates exemptions for small landowners and pardons those who deforested illegally before 2008. This could "unleash a wave of impunity", to wipe out forests and woodlands, says

Daniel Nepstad, an ecologist who works with the Amazon Environmental Research Institute in Brasilia. President Dilma Rouseff has pledged to veto the legislation. See go.nature.com/rutitm for more.

Stem-cell appeal

A lawsuit seeking to halt US federal funding for research on human embryonic stem cells is not quite dead — although it was thrown out in July by a District of Columbia judge (see *Nature* **476,** 14–15; 2011). On 7 December, the Court of Appeals for the District of Columbia circuit (one level below the Supreme Court) set a date of 23 April 2012 to hear an appeal from the plaintiffs in the case, James Sherley, of the Boston Biomedical Research Institute in Massachusetts, and Theresa Deisher, who runs AVM Biotechnology in Seattle, Washington. Both work on adult stem cells.

Fracking worry

The US Environmental Protection Agency (EPA) has said that chemicals associated with fracking, a controversial technique that involves pumping high-pressure fluids into shale to force out natural gas, probably polluted water supplies in central Wyoming. Shale-gas companies have maintained that complaints of methane and other

F. ROBERTS/ALAMY

chemicals in groundwater can't definitely be linked to fracking, despite the many public protests against the practice (**pictured**). The EPA's draft report was released on 8 December and has yet to be peer-reviewed; the agency is also working on a national study on fracking's impacts, to be released in 2012.

Pill politics

In a surprise move, the US Secretary of Health and Human Services, Kathleen Sebelius, has overruled the Food and Drug Administration (FDA) and denied girls under 17 access to the emergency contraceptive levonorgestrel — known as the morning-after pill, or Plan B — unless it is prescribed by a physician. Drug-makers Teva had asked that the pill be made available over the counter to girls, and FDA research had found it to be safe and effective. But Sebelius said on 7 December that she did not believe the pill could be used safely by the youngest girls of reproductive age. See go.nature.com/w3343o for more.

Fisheries push

The United Nations has stepped up a push to encourage sustainable fisheries. Its general assembly on 6 December adopted a draft resolution that urges nations to reduce or eliminate by-catch and to increase efforts to deal with the impact of climate change on stocks. With many fish stocks being harvested at unsustainable levels — and many suffering from a lack of data on actual catch levels — the resolution also encouraged states to "increase their reliance on scientific advice" to manage fisheries.

Name and shame

Funding agencies in Canada will no longer keep secret the identities of researchers they support who commit misconduct. The change — called for in a *Nature* Editorial in September (see *Nature* **477,** 509–510; 2011) — came as part of a new policy on responsible conduct of research, released on 5 December. See go.nature.com/aj2zq6 for more.

NOAA integrity

It was more than 2 years in the making, but the US National Oceanic and Atmospheric Administration (NOAA) finally released its scientific integrity policy on 7 December. The policy, which applies to thousands of NOAA employees conducting research on climate, oil spills, marine mammals and other sometimes controversial topics, prohibits agency employees from distorting science and protects the rights of NOAA scientists to speak openly about their work and to report wrongdoing. See go.nature.com/ihfjbv for more.

COMING UP

16 DECEMBER
The Japanese government is expected to announce that the Fukushima Daiichi nuclear plant has reached cold shutdown — a declaration that the stricken reactors have reached stable, low temperatures and the immediate crisis is over.

17 DECEMBER
The deadline for US science agencies to send final policies on scientific integrity to the White House.

PEOPLE

US integrity head

After a 22-month search, the US Department of Health and Human Services' Office of Research Integrity (ORI) named David Wright as its permanent director on 5 December. Wright is a historian of US science and technology who previously served as a research-integrity administrator at Michigan State University in East Lansing. He has also worked as a consultant to the ORI. He replaces Don Wright, who has served as acting director since the retirement of Chris Pascal in 2009.

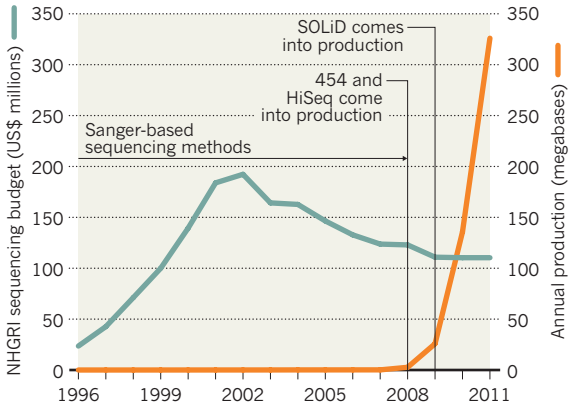
TREND WATCH

The US National Human Genome Research Institute (NHGRI) announced a four-year plan on 6 December that focuses heavily on the use of genome sequences in the clinic. The institute's funding of programmes for large-scale sequencing has actually shrunk in recent years (see chart), but because the per-base cost of sequencing has dropped so much, the hope is that patients will routinely undergo sequencing for medical purposes. See go.nature.com/jhjz2l for more details of the NHGRI programme.

SOURCE: NHGRI

MEGABASE BOOM

Despite falling funds, US agencies can support more DNA base sequencing — thanks to next-generation technologies.



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