

FACILITIES

Megascope member

India announced on 2 December that it will become a full partner in the Thirty Meter Telescope, joining a consortium that includes institutions from China, Japan and the United States. The deal secures Indian scientists time on the next-generation telescope, which will be one of the world's largest when it opens on Mauna Kea in Hawaii — scheduled for the 2020s. Last week, another organization gave the green light to construction of the 39-metre European Extremely Large Telescope on Cerro Armazones in Chile.

Cell institute

On 8 December, billionaire philanthropist Paul Allen announced plans to invest US\$100 million to create the Allen Institute for Cell Science, modelled on the Allen Institute for Brain Science in Seattle, Washington. Cell biologist Rick Horwitz will lead the institute, which will also be located in Seattle. The centre will develop a 'cell observatory' to display how a cell's components work together. See page 157 for more.

Rocket ramp-up

Europe will press ahead with developing a cheaper type of rocket for satellite launches, thanks to a funding agreement reached by the 20 member states of the European Space Agency (ESA) on 2 December. The Ariane 6 will replace the Ariane 5, which faces increasing industry competition from rockets built by start-up companies such as SpaceX of Hawthorne, California. ESA will spend an estimated €3.8 billion (US\$4.7 billion) on the new designs, which include upgrading the smaller Vega C rocket.



BRENT LEWIS/THE DENVER POST/GETTY

NASA's Orion test flight soars

NASA's next-generation vehicle for sending astronauts to deep space made its inaugural flight on 5 December in a spectacular morning launch (pictured) from Cape Canaveral, Florida. In an uncrewed test to see how its systems would fare in high-radiation environments, the Orion capsule made nearly two full orbits of Earth before splashing down in the eastern Pacific Ocean (see go.nature.com/zmwarj).

At its highest, Orion flew 5,800 kilometres from Earth, the farthest that any human-rated space vehicle has been since the final US lunar-landing mission, *Apollo 17*, in 1972. In other launch news, on 3 December the Japan Aerospace Exploration Agency succeeded in sending its Hayabusa-2 probe off on a journey to collect samples from an asteroid and return them to Earth.

EVENTS

Einstein's reams

Thousands of Albert Einstein's letters and writings are freely available online through a website launched 5 December. The site is a partnership involving Princeton University Press in New Jersey, the Rhode Island digital publisher Tizra, the Hebrew University of Jerusalem and the California Institute of Technology in Pasadena. The Digital Einstein Papers (go.nature.com/grg6rh) contain 5,000 documents transcribed and translated

to English that span the first 44 years of Einstein's life. Eventually, the repository will include all of the physicist's archived papers.

Nobel sale

On 4 December, a buyer paid US\$4.1 million for James Watson's Nobel prize medallion. Media reports say that the buyer, Russian billionaire Alisher Usmanov, plans to return the medal to Watson, who shared the 1962 Nobel Prize in Physiology or Medicine for co-discovering the double-helix structure of

DNA and is the first scientist to auction his own Nobel medal. In 2007, he retired from Cold Spring Harbor Laboratory in New York, after generating friction with his suggestions that black people are not as intelligent as white people. See go.nature.com/t4ejud for more.

POLICY

GM crop bans

European Union (EU) politicians have reached an agreement that, if passed into law, could allow the cultivation of new genetically

modified (GM) crops in the EU. Representatives of member states and the European Parliament decided on 3 December to allow individual nations to ban GM crops for cultivation, even if they have been approved by the EU. Approvals had stalled for years as pro-GM governments such as that of the United Kingdom clashed with anti-GM nations such as France. See go.nature.com/5lzdsn for more.

Chimp, not human

A New York appeals court has refused to grant legal personhood to Tommy, a captive chimpanzee. A group called the Nonhuman Rights Project has fought to free Tommy and other chimps, including two research animals, by arguing that the chimps deserve the human right of bodily freedom. Lower courts rejected the Florida-based organization's lawsuits last year; the first appeal was shot down on 4 December. The organization is pushing ahead with other appeals, and says that it will take Tommy's case to New York's highest court.

Critical habitat

The US National Oceanic and Atmospheric Administration (NOAA) Fisheries on 2 December proposed to designate a critical habitat of more than 906,000 square kilometres of the Bering,



Chukchi and Beaufort seas for the Arctic ringed seal (*Phoca hispida hispida*). Shrinking sea ice and declining snowfall are threatening the animals (pictured), which nurture their pups in snow caves and use ice platforms for moulting and other activities. Under the proposed status, federal agencies that fund or authorize activities in the habitat (such as oil drilling) would have to consult NOAA Fisheries first.

UK science budget

The UK Chancellor of the Exchequer George Osborne stressed the importance of science last week. In his autumn budget statement on future government spending, he introduced student loans to fund master's degrees and measures to increase tax credits for companies investing in research. Osborne also warned that there would be more cuts to public spending if his Conservative party maintained power after a 2015 election, suggesting that the core UK science

budget could continue to fall in real terms.

Trials streamlined

Conducting clinical trials at multiple US sites may become easier under a draft policy released by the US National Institutes of Health (NIH) on 3 December. Currently, studies that use human participants must meet the ethical, safety and informed-consent requirements of the institutional review board at each site — but the rules can vary widely. The NIH proposal would allow a single board to oversee all centres involved in a trial, which the agency says would reduce paperwork and expedite research. The draft policy is open for comments until 29 January.

PEOPLE

Energy leader

On 8 December, the US Senate confirmed physicist Ellen Williams as director of the Department of Energy's Advanced Research Projects

COMING UP

15–19 DECEMBER

Scientists meet in San Francisco, California, to discuss the latest research in Earth, ocean and planetary sciences at the American Geophysical Union's Fall Meeting. go.nature.com/ylqer9

Agency — Energy (ARPA-E), where she will oversee a new programme to fund promising energy technologies that are still too young for private-sector investment. Williams is currently on leave from the University of Maryland in College Park, and became the chief scientist for British oil-and-gas company BP in 2010.

BUSINESS

Antibody advance

On 3 December, US regulators approved blinatumomab, the first of a new generation of therapeutic antibodies that bind to multiple targets. The cancer-fighting drug, made by Amgen of Thousand Oaks, California, will be marketed for treating a rare form of acute leukaemia. It works by tethering immune cells called T cells to cancer cells, triggering the T cell to attack.

Antibiotics deal

Pharmaceutical giant Merck of Whitehouse Station, New Jersey, is going into the antibiotics business. On 8 December, the company announced that it was acquiring Cubist Pharmaceuticals, based in Lexington, Massachusetts, for US\$8.4 billion. Cubist, which specializes in antibiotics to treat drug-resistant infections, has received fast-track approval from the US Food and Drug Administration for several drugs currently under development.

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TREND WATCH

The global average temperature is headed for a record high this year, according to measurements averaged from the UK Met Office and the University of East Anglia's Climatic Research Unit, the US National Oceanic and Atmospheric Administration's National Climatic Data Center and NASA's Goddard Institute for Space Studies (see chart). In a 3 December report, the World Meteorological Organization in Switzerland highlighted severe flooding in 2014 in South Africa, northern Pakistan and India.

RISING HEAT

Averaged data from January to October show that 2014 is on track to be the warmest year, or one of the warmest, on record.

