

## PEOPLE

### Breeders convicted

An Italian court found three employees of a lab-animal breeding company guilty of animal cruelty on 23 January, sentencing them to prison terms of between 12 and 18 months. The court said that the three had mistreated beagle dogs and had put some animals down without good reason. Marshall BioResources, the US company that operates the Green Hill facility near Brescia, Italy, had previously been cleared of wrongdoing, but prosecutors pressed charges against Green Hill director Roberto Bravi and three other workers, one of whom was later found innocent. Even if the verdict is upheld by higher courts, the sentences could still be converted to fines or probation. See [go.nature.com/sbcdvz](http://go.nature.com/sbcdvz) for more.

### Israel frees scientist

A Palestinian physicist who had been detained by the Israeli military was released on 22 January. Imad Ahmad Barghouthi of Al-Quds University in Jerusalem was on his way to a scientific conference on 6 December when he was arrested while attempting to cross from the West Bank to Jordan. Israel's reasons for administrative detention are normally kept secret, but Barghouthi claims that he had been jailed because his profile picture on Facebook showed him wearing a green scarf, the colour of the Hamas movement. See [go.nature.com/qbgliy](http://go.nature.com/qbgliy) for more.

## POLICY

### US medicine effort

US President Barack Obama announced a Precision Medicine Initiative during the annual State of the Union



## New island born from volcanic eruption

A volcanic eruption in the Pacific archipelago of Tonga has created a new island. Steam and ash began rising last month between the islands of Hunga Tonga and Hunga Ha'apai, about 60 kilometres north of the kingdom's main island of Tongatapu. The newborn isle

breached the surface around 20 December. In mid-January volcanologists measured it at about 1.8 kilometres long and 100 metres high. A similar island formed during the volcano's last eruption in 2009, but was washed away by ocean waves within weeks.

address on 20 January. "I want the country that eliminated polio and mapped the human genome to lead a new era of medicine — one that delivers the right treatment at the right time," he said. The effort will aim to match genomic and other data with patient health records to discover new treatments and tailor existing ones. Obama is expected to request hundreds of millions of dollars to fund research for the initiative at the US National Institutes of Health, which will have a key role. See page 540 for more.

### Vaccine price jump

The medical charity Médecins Sans Frontières in Geneva, Switzerland, called on drug companies to cut the price of vaccines in a 20 January

report. A full programme of childhood vaccines now costs 68 times more than it did in 2001, on the basis of the best prices available to low-income countries. Much of the price jump is due to expensive vaccines that protect against bacterial pneumococcal diseases, which have been rolled out in many low- and middle-income countries in recent years.

### Sea-science report

The US National Science Foundation (NSF) should immediately slash spending on marine hardware, says a report released by the National Research Council on 23 January. The report, which is intended to guide US oceanography for the next decade, says that basic ocean research at the NSF

is losing out to the rising costs of infrastructure. It calls for a 20% cut to the operating budget of the Ocean Observatories Initiative, a marine monitoring effort due for completion in May. The initiative is currently expected to cost up to US\$59 million per year. See page 538 for more.

### India energy deal

US President Barack Obama and Indian Prime Minister Narendra Modi pledged on 25 January to expand cooperation on clean energy and tackling climate change. During Obama's visit to New Delhi, the two leaders agreed to work towards an international climate agreement as well as a separate plan to reduce emissions of

hydrofluorocarbons, a class of powerful greenhouse gases that are often used as refrigerants. India has committed to installing 100 gigawatts of solar energy by 2022, but has made no concrete promises about curbing greenhouse-gas emissions.

## Marijuana research

A leading medical academy has called for the US government to loosen restrictions on marijuana, so that researchers can study its potential medical benefits for sick children. In a 26 January policy statement, the American Academy of Pediatrics said that marijuana should no longer be classed alongside heroin and ecstasy as a schedule 1 drug with no accepted medical use. It argues that the drug should be relabelled as schedule 2, placing marijuana in the same category as potentially addictive painkillers such as morphine and codeine. Several federal agencies are already considering such a change.

### RESEARCH

## Tiger boom

Tigers are mounting a comeback in India. Last week, the country's government announced a 30% increase in the population of Bengal



tigers (*Panthera tigris tigris*; pictured), from 1,706 individuals counted in a 2010 census using thousands of camera traps, to 2,226 recorded last year. A 2004 survey documented just 1,411 tigers. The Indian government attributed the increase to efforts to limit poaching and minimize human encroachment on the feline's habitat. An estimated 70% of the world's tigers now reside in India.

## Fish from the cold

A marine ecosystem has been discovered beneath the Ross Ice Shelf, which extends hundreds of kilometres off the coastline of Antarctica. After drilling through 740 metres of ice, researchers sent a remotely operated vehicle to explore the area around the borehole on 16 January. The vehicle photographed fish and marine crustaceans known as amphipods thriving in the pitch dark,  $-2^{\circ}\text{C}$  waters — the nearest to the South Pole that

such an ecosystem has been found. See [go.nature.com/jomocy](http://go.nature.com/jomocy) for more.

### EVENTS

## No climate hoax

The US Senate resoundingly affirmed the existence of global warming during a 21 January debate over legislation that would authorize construction of the Keystone XL oil pipeline. Lawmakers voted 98–1 to adopt a 16-word, non-binding amendment: “It is the sense of the Senate that climate change is real and not a hoax.” Another amendment, to pin some of the blame for climate change on human activities, failed by 50–49. See [go.nature.com/tqjdn](http://go.nature.com/tqjdn) for more.

## Doomsday clock

The *Bulletin of the Atomic Scientists* pushed the hands of its Doomsday Clock two minutes closer to midnight on 22 January — symbolizing that the planet is closer to

global disaster. The physicist-founded magazine, based in Chicago, Illinois, cited unchecked climate change and the threat of outsized nuclear-weapons arsenals as the reasons for the shift. The clock now stands at three minutes to midnight: the closest it has been since 1984, but further away than in 1953 after the hydrogen bomb was first tested, when the clock stood at two minutes to midnight.

### PUBLISHING

## Open journals

The University of California Press plans to establish two open-access journals, it announced on 20 January. A ‘mega journal’ called *Collabra* will publish research articles in the biomedical, life, environmental and social sciences — and it will be unusual in paying reviewers and editors for their time. They will have the option of donating the money to fund other papers published by *Collabra* or giving it to their own institution to pay for open access. The second journal, *Luminos*, will publish research monographs.

### BUSINESS

## Space investments

SpaceX added US\$1 billion to its coffers with financing from Google and the investment firm Fidelity, it announced on 20 January. The company, of Hawthorne, California, is one of several aerospace firms currently carrying cargo to the International Space Station for NASA, and it is working towards flying US astronauts there in the future. Company founder Elon Musk wants to send astronauts to Mars one day. For now, however, the investments will support SpaceX's plans to develop reusable rockets and manufacture fleets of small satellites, which are likely to provide Internet access.

► NATURE.COM

For daily news updates see:  
[www.nature.com/news](http://www.nature.com/news)

## TREND WATCH

Venture capitalists invested more in the life sciences last year than they have since 2008, according to data released on 16 January by PriceWaterhouseCoopers and the US National Venture Capital Association. Investment in biotechnology and medical-devices companies rose by 29% on 2013, driven by deals in fields such as cancer immunotherapy. Public investors also embraced health care, with 102 companies launching an initial public offering in 2014, compared with 54 in 2013.

## BOOM TIME FOR BIOTECH

Venture capitalists, who have showered money on software start-ups in recent years, gave life sciences a shot in the arm in 2014.

