

# NEWS BRIEFING

## ● POLICY

**Nuclear agreement:** An international conference in New York to review the Nuclear Non-Proliferation Treaty has reaffirmed nations' commitments to disarmament and halting the spread of weapons technology. On 28 May, after almost a month of negotiations, 189 nations, including Iran, endorsed a 28-page consensus document, which also called for a nuclear-weapons-free zone in the Middle East and global ratification of the Comprehensive Nuclear-Test-Ban Treaty. Just three days later, the International Atomic Energy Agency, based in Vienna, reported that Iran now has enough low-enriched uranium to convert into weapons-grade material for two nuclear weapons.

**Forest pledge:** At a climate conference in Oslo on 27 May, some 50 countries agreed to a loose framework for reducing greenhouse-gas emissions caused by deforestation. This builds on commitments made at the United Nations climate talks in Copenhagen last December. Developed countries pledged to boost funds for the framework programme from US\$3.5 billion to \$4 billion between now and 2012, and the deal creates a formal partnership for evaluating future efforts to tackle deforestation.

**Climate controversy:** The Royal Society in London, Britain's national academy of science, is reviewing its public climate-change message after receiving a complaint from 43 of its fellows. They were reportedly angered by a policy document known as 'Climate Change Controversies', which seeks to "help non-experts better understand some of the debates in this complex area of science". The fellows complained that the 2007 document was too dismissive of attacks on the understanding of climate change. The society says that a new guide will be released later this summer.



J. ROSS/NASA; INSET: A. WESLEY

## EYE IN THE SKY

The Stratospheric Observatory for Infrared Astronomy has made its first airborne observations, snapping this image of Jupiter (inset, right, shown next to a visible-light image) on 25 May. The modified Boeing 747SP aircraft sports a hole in its fuselage for a 2.5-metre telescope, and can make infrared observations that would normally be obscured by water vapour in the lower atmosphere. The US\$3.4-billion mission — a collaboration between NASA and the German Aerospace Center — has had its share of turmoil since development first began in 1996, almost being cancelled in 2006 when it was temporarily axed from the NASA budget. Scientific operations should begin in October, with full capacity — about 800 hours of observation time a year — expected by 2014.

## ● EVENTS

**Top kill fails:** BP's latest efforts to staunch the flow of oil from its wellhead in the Gulf of Mexico have failed, prompting White House energy adviser Carol Browner to admit that the leak may not be stopped before August, when drilling for relief wells will be completed. The 'top kill' operation — pumping mud into the gushing well — was followed by a 'junk shot' to block the oil leak with debris. Neither attempt worked. Robot submarines are now being deployed to cap the well. See page 532 for more.

## ● RESEARCH

**Wheat fungus:** Two new forms of a devastating wheat fungus known as Ug99 stem rust have arisen in South Africa. Researchers at the University of

the Free State in Bloemfontein found that the new variants can overcome the effects of two resistance genes in wheat that normally prevent stem rust from taking hold. There is concern that winds will help the fungus to migrate further, threatening crops in areas including the Middle East and south Asia. See [go.nature.com/flSdmx](http://go.nature.com/flSdmx) for more.

## NUMBER CRUNCH

# 2 MILLION-3 MILLION

The number of litres per day of oil flowing from the ruptured Gulf of Mexico well, up to four times the official estimate from a month ago.

Source: US National Incident Command's Flow Rate Technical Group; 27 May

**Bird blues:** As many as 1,240 bird species are threatened with extinction, amounting to 12% of the 10,027 recognized bird species, says the latest update of the International Union for Conservation of Nature (IUCN) Red List of Threatened Species. The bird count was conducted by BirdLife International, a global partnership of conservation organizations. The IUCN list also confirmed the extinction of the Alaotra grebe (*Tachybaptus*

*rufolavatus*), 25 years after the last confirmed sighting. The waterfowl, found mainly in Lake Alaotra in eastern Madagascar, is thought to have been killed off by poaching and the introduction to its habitat of carnivorous fish. See [go.nature.com/tSwuzE](http://go.nature.com/tSwuzE) for more.

P. FETTERS

## ● BUSINESS

**Genzyme fined:** On 24 May, the US Food and Drug Administration (FDA) fined Genzyme US\$175 million for poor oversight at one of its manufacturing plants. Efforts by the biotechnology company, based in Cambridge, Massachusetts, to clean the plant will cause shortages of three drugs, including one used to treat thyroid cancer. But there was also good news for the beleaguered company: on 25 May, after years of struggle, Genzyme won FDA approval to market Lumizyme (alglucosidase- $\alpha$ ) for patients with late-onset Pompe disease, a muscle-weakening illness.

**Biotech boost:** Amgen has secured regulatory approval from the European Commission for denosumab (Prolia), the California-based drug company's treatment for osteoporosis. The monoclonal antibody will be used to treat postmenopausal women who have an increased risk of fractures, and men experiencing the side effects of prostate-cancer treatment. Last year, a US Food and Drug Administration committee recommended that the drug be approved for certain

## NEWS MAKER



William Bishai

**The tuberculosis expert will head South Africa's KwaZulu-Natal Research Institute for Tuberculosis and HIV, the first Howard Hughes Medical Institute research lab outside the United States. See [go.nature.com/UhiFTr](http://go.nature.com/UhiFTr) for more.**

patients, although it awaits full US approval. Analysts predict multibillion-dollar annual sales for the drug.

**Pharma R&D shuffle:** AstraZeneca has hired Pfizer's research and development (R&D) chief, Martin Mackay, to take the helm of its own R&D programme. Pfizer and AstraZeneca are both

restructuring their R&D programmes to replenish pipelines and cut costs. Mackay became head of R&D at Pfizer, the world's biggest drug maker, in 2007, but has shared the job with Mikael Dolsten since October 2009, when Pfizer completed its acquisition of rival Wyeth. Dolsten will now lead Pfizer's R&D team alone.

## ● FUNDING

**Mental health call:** The UK Medical Research Council has called for greater investment to address the "huge mismatch" between the social and economic burden of mental illness and the relatively slow progress in research in the field. Following a six-month review, a report published last week (*Lancet* 375, 1854–1855; 2010) sets out a strategic plan for the next 5–10 years that would accelerate mental-health research for both prevention and treatment.

## ● AWARDS

**Winning millions:** Five US-based researchers will share three Shaw prizes worth US\$1 million apiece. The astronomy prizewinners, announced on 27 May, are Charles Bennett of Johns Hopkins University in Baltimore, Maryland, and Lyman Page and David Spergel of Princeton University in New Jersey. The award recognizes their leadership on the Wilkinson Microwave Anisotropy Probe, which maps fluctuations in the microwave background radiation left over from the Big Bang. David Julius,

## THE WEEK AHEAD

### 3 JUNE

**The 2010 Kavli prizes are announced in Oslo. First awarded in 2008, the biennial prizes consist of US\$1 million each for nanoscience, neuroscience and astrophysics.**

► <http://www.kavliprize.no/>

### 7-11 JUNE

**Governments meet in Busan, South Korea, to decide whether to establish an Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services.**

► <http://ipbes.net/>

### 8-12 JUNE

**Oslo boasts the 'largest polar science gathering ever' at a conference on the 2007-08 International Polar Year.**

► <http://www.ipy-osc.no/>

### 9 JUNE

**The 2010 Millennium Technology Prize will be awarded in Helsinki.**

► [go.nature.com/Eknzdu](http://go.nature.com/Eknzdu)

a physiologist at the University of California, San Francisco, won the prize for life science and medicine for his work on molecular mechanisms of pain. The mathematics prize went to Jean Bourgain of Princeton University for his work in mathematical analysis. The prizes, first awarded in 2004, were set up by businessman Run Run Shaw.

## BUSINESS WATCH

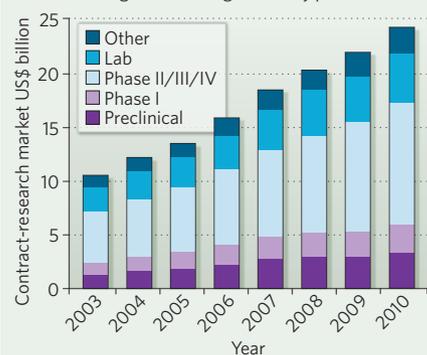
A growing need to cut pharmaceutical and biotechnology research costs is fuelling a boom in the contract research organization (CRO) industry. More than 1,000 CROs around the world provide outsourced research and clinical-trial services. According to an August 2009 report by London-based market analysts Business Insights, CROs accounted for 20% of the global pharmaceutical and biotechnology research and development budget in 2008. Revenues are expected to reach US\$24 billion in 2010, doubling 2004 earnings (see chart).

Much of that growth will be in emerging markets, as companies take advantage of the low costs and deep talent pools in countries

such as India and China. The 300 US-based CROs still generate about half of the industry's revenue, and are predicted to grow each year by 14%. But in China, where drug development is about 20% of the cost in the United States and western Europe, the industry is expected to swell by 33% each year, reaching \$791 million by 2012. Meanwhile, the proportion of global clinical trials conducted in India will grow from 2% in 2007 to 5% in 2012. These trends have been highlighted by leading US CROs such as Quintiles in Durham, North Carolina, and Charles River Laboratories in Wilmington, Massachusetts, shifting more of their operations to emerging markets.

### CONTRACT RESEARCH BOOM

Pharmaceutical and biotech companies are outsourcing ever more stages of the drug-discovery process.



SOURCE: BUSINESS INSIGHTS