

## Italian government promises to double researchers' money

**Rome** The Italian government will double its spending on research over the next five years, education and research minister Letizia Moratti said last week. She did not give details of how this would be achieved.

Moratti, who took up office in May, also announced her intention to "internationalize" Italian universities by attracting more foreign students and staff, and to modify the process for recruiting teaching staff. Under the current system, two or three successful candidates are identified by selection panels. Those not appointed are placed on a list from which other universities can appoint them without holding a competition. The list is to be abolished under the new proposal.

Government funding for Italian science currently stands at 1% of GDP, roughly half the European Union average. This lack of investment, together with the excessively bureaucratic recruitment process, has been blamed for Italy's comparatively poor standing in international science (see *Nature* 412, 264–265; 2001).

## Bioweapons labs 'could unleash forgotten diseases'

**Washington** Diseases such as smallpox could re-emerge as a result of research into defences against biological weapons, researchers cautioned last week (Srinivasan, A. *et al.* *N. Engl. J. Med.* 345, 256–258; 2001).

Their warning comes after a US microbiologist was diagnosed with glanders, a contagious and potentially fatal disease that has not been reported in the United States for more than 50 years, though it is common among animals in developing countries. The researcher at the US Army Medical Research Institute of Infectious Diseases in Fort Detrick, Maryland, became ill after studying *Burkholderia mallei*, the bacterium that causes glanders. The institute works on defence strategies against biological weapons and naturally occurring diseases that require special containment.

The scientists warn that as research into bioweapons defence increases, so does the risk of laboratory exposure. "This case may serve as a harbinger of the resurgence of nearly forgotten diseases," they write.

## Lucent losses arouse fears for Bell Labs

**Washington** The gloom surrounding Bell Laboratories deepened last week as Lucent Technologies, the telecommunications company that operates the labs, announced financial results that exceeded the worst



Ring of confidence? Lucent managers hope to avoid forced redundancies among researchers.

predictions of many industry analysts.

Bell Labs' headquarters in Murray Hill, New Jersey, is regarded by many as the world's premier centre for high-technology research, but recent financial difficulties at Lucent have raised fears that research there may be cut back.

Managers at Murray Hill are optimistic that there will be no forced redundancies among the 3,000 research staff, despite the net losses of \$3.2 billion that Lucent recorded for the second quarter of 2001.

The company is intending to shed 15,000–20,000 jobs from its workforce of 76,000; some 19,000 positions have already been lost since the start of the year.

## Ötzi researchers uncover a stone-age murder mystery

**Munich** Sherlock Holmes might have solved the mystery a little quicker. Numerous scientists have pored over the body of 'Ötzi', a stone-age man who was discovered in the Alps in September 1991. But only now have researchers concluded that he was shot. Previous workers missed a crucial piece of evidence: the arrowhead is still in the body.

Conservators at Ötzi's final resting place, the South Tyrol Museum of Archaeology in Bolzano, Italy, announced that an X-ray analysis had shown the arrowhead — 21 mm long and 17 mm wide — to be lodged under his left shoulder. Computer tomography had also revealed a 2-cm hole in his shoulder



Iced: an arrowhead gives a clue to the reasons why Ötzi's body was found unburied.

blade, which could have been left by the arrow. Museum officials said that the possibility of a shooting had never occurred to other scientists who examined the body.

## Lure of research rights entices workers back

**Paris** Staff at the Lure synchrotron at Orsay near Paris have ended a three-week strike after the French government agreed last week to grant them public-sector status when they move to a new facility in 2005.

The new synchrotron, known as Soleil, is due to open in 2005. The French government had asked CNRS, France's main agency for basic research and the majority shareholder in both Lure and Soleil, to set up a private company to run the new facility. This prompted Lure workers to down tools, claiming that commercial contracts would deny them the rights of researchers in the public sector, such as access to the research review procedures used to evaluate other CNRS research (see *Nature* 412, 263; 2001).

Soleil will still be run by a private company, but the government has agreed to set up a special unit of the CNRS at the facility to employ the researchers.

## Police foil two attempts to smuggle uranium-235

**Paris** Two apparently unrelated attempts to smuggle uranium-235 have been foiled by police in Europe.

The first, uncovered in Paris on 16 July, involved only 5 g of the isotope. But according to initial reports, the uranium was enriched at 80% — suitable quality for a nuclear weapon. Paperwork uncovered at the suspect's home indicates that the uranium came from an eastern European source. In a second incident, 1.7 kg of enriched uranium-235 was seized in a hotel room on 18 July in Batumi, Georgia.

Both uranium samples are now being analysed to determine whether or not they are highly enriched.

It is still rare for highly enriched uranium to find its way onto the black market. The Washington-based Nuclear Control Institute, a non-profit organization that monitors nuclear activities worldwide, says that 12 kg of uranium-235 is enough to make a dangerous nuclear device.

## Correction

The photo legend in "Institutes prepare for pioneering bioinformatics work" (*Nature* 412, 106; 2001) incorrectly stated that Nadia Rosenthal will lead the mouse biology programme at the European Mouse Mutant Archive (EMMA). The programme is in fact at the European Molecular Biology Laboratory (EMBL) in Monterotondo — EMMA is located on the same campus but is not part of the EMBL.

# Europe hooks up with China for space first

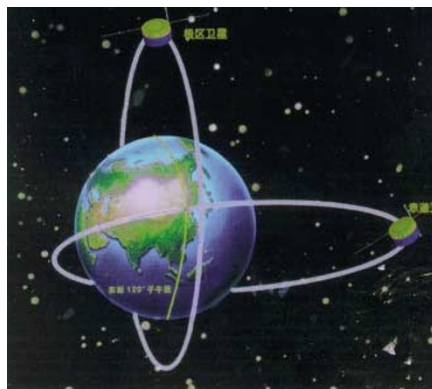
Sally Goodman, Paris

European space experiments will fly on board Chinese satellites for the first time in a joint project to study the magnetosphere — the magnetic shield that surrounds the Earth.

The mission, known as Double Star, was announced on 9 July by the European Space Agency (ESA) and the Chinese National Space Administration. It will involve two small Chinese satellites flying in orthogonal orbits — around the poles and the equator, respectively (see right) — to gather data on how the Sun affects the magnetosphere's behaviour.

In its first substantial collaboration in space science with China, the ESA will contribute 10 of the project's 18 experiments, costing about 8 million euros (US\$6.8 million). ESA officials are confident that the project will lead to more extensive collaborations with China in the future — despite American misgivings about sharing space technology with China.

Double Star is the latest of several projects designed to investigate the relationship between the Sun and the magnetosphere. Interaction between solar winds and the magnetosphere cause spectacular physical effects, including the aurora — or northern lights — seen over the polar skies, and massive magnetic storms that disrupt electricity supplies and radio communications.



Doubleplusgood: the orbits of the two satellites will allow investigation of the magnetosphere.

But many of these projects have suffered from technical glitches. Germany's Equator-S satellite, for example, was launched in 1997 but stopped sending back data after only five months when its batteries failed. And Cluster, a project involving the ESA, NASA and other partners, was lost in 1996 when its Ariane 5 rocket launcher failed.

But Cluster — a flotilla of four identical spacecraft — was relaunched last summer, and Michael Fehringer, an ESA scientist working on the project, says early data indicate that the mission "will revolutionize our understanding of the magnetosphere".

The ESA instruments that will fly on

Double Star are identical to those on Cluster, but they will fly in different orbits. To keep costs down, the equipment will mostly be put together using spare parts left over from Cluster. But because of US restrictions on exports to China, instruments of American origin will be rebuilt in Europe for the new mission. For example, André Balogh of Imperial College, London, says that his Double Star experiment will use a British-built magnetometer to replace the American one he used on Cluster.

The ESA hopes that the Double Star satellites, which are scheduled for launch on Chinese Long March 2C rockets in December 2002 and March 2003, will operate in parallel with the four existing Cluster spacecraft. Cluster is only funded until January 2003, but the Europeans hope to extend its life by at least two years.

Even if this does not happen, Double Star will allow researchers to gather new information, says Andrew Fazakerley of the Mullard Space Science Laboratory at University College London, who is leading one of the experiments. A process called magnetic reconnection — whereby particles are accelerated towards Earth's magnetic poles from its huge magnetic tail — will be observed in unprecedented detail from Double Star's equatorial orbit, he says.

♦ <http://www.esa.int>

# Institutes prepare for pioneering bioinformatics work

Declan Butler, Paris

Two women scientists are to take control of two of Europe's leading bioinformatics initiatives, with a remit to expand intramural research activities.

Janet Thornton, a structural-biology professor at University College London, has been named as research director of the European Bioinformatics Institute (EBI) near Cambridge in Britain. She succeeds Michael Ashburner, who has co-directed the centre with Graham Cameron since it opened five years ago.

And Nadia Rosenthal, an associate molecular-biology professor at Harvard University, will succeed Klaus Rajewsky as head of the mouse biology programme at the European Mouse Mutant Archive near Rome.

Both facilities are affiliated to the European Laboratory of Molecular Biology (EMBL), and have until now acted chiefly as service providers to outside researchers. But Fotis Kafatos, director general of the EMBL, says that the laboratory is now shifting its emphasis to functional genomics, and he expects the facilities to play a more active role



Incoming: Janet Thornton (right) will head the EBI and Nadia Rosenthal will lead Europe's mouse mutant archive.

in pioneering original research of their own.

The EBI recently received a multimillion grant from the European Union (see *Nature* 411, 229; 2001), securing its main database programmes. Thornton says that the next step is to build a research environment around these projects. "To make progress in understanding whole systems we need to integrate these genomic, proteomic and other resources," she says.

Thornton's main research interests are in

the analysis and modelling of protein structures and in rational drug design. She says that she is keen to add 'cheminformatics' to the EBI's traditional bioinformatics role and to strengthen the links between the EBI and the pharmaceutical industry.

Ashburner, who has split his time between the EBI and his faculty position at the University of Cambridge, will now return to full-time research at the university. But he says that he is keen to help Thornton settle in, and will remain involved with the EBI to oversee a large expansion of its gene ontology (GO) consortium, an effort to build controlled vocabularies that will assist in the cross-searching of biological databases (see *Nature* 411, 631–632; 2001).

Approaches such as GO are absolutely critical, says Thornton. "Without being able to describe function in a computer-readable form — without functional ontologies — we will not be able to describe whole systems." ■

♦ <http://www.ebi.ac.uk>

♦ <http://www.emma.rm.cnr.it>

♦ <http://www.geneontology.org>