**Happier times.** Physicist Xiaomei Jiang, second from left, with her parents before their deaths took her back to China.

create a special visa for researchers with solid credentials and invitations from U.S. scientists, and consult with U.S. scientists on which fields should raise red flags.

Consular officials have a strong incentive to err on the side of extreme caution, the statement notes, as they face criminal penalties for granting visas to terrorists. The academy presidents urge the State Department to create some type of counterweight that would also encourage the officials to smooth the way for "scholars who benefit our nation." A State Department official familiar with the problem says the suggestions are "helpful and on target; we're already working to make them happen." But he and White House officials warn that progress could be slow. Congressional action might be needed to address the consular liability issue, which is enshrined in law, or to carve out special visas for visiting scientists.

Recent enrollment statistics suggest that the delays are so far having a limited impact on U.S. academic life. The number of foreign students at 20 major research universities rose by 4% this fall, to 36,656, according to a survey released last month by the Association of American Universities. But there has been a 10% drop in the number of foreign faculty members and researchers on campus, the survey found, and more students and scholars reported visa delays or denials than in the previous year. Those numbers could climb in the short run, as the government struggles to beef up security reviews and begin monitoring foreign students studying in "sensitive" fields. On 12 December, the State Department unveiled one monitoring program, and more plans are expected shortly.

In the meantime, Jiang's colleagues say they miss her and her talent in running key experiments. They also worry that her visa troubles could sour the promising physicist, who co-authored a paper in *Science* on plastic lasers (4 February 2000, p. 839), on her long-term career prospects in a country that once welcomed her for training.

–DAVID MALAKOFF

STEM CELL MEDICINE

## Stanford Gets Gift for New Institute

Stanford University last week announced the formation of a new, privately funded institute to marry research on stem cells and cancer in a search for new therapies. The announcement precipitated a brief media flurry over the issue of cloning, leaving university officials scrambling to beat down press accounts that suggested the school might become a baby factory.

A $12 million gift from an anonymous donor has kicked off the Institute for Cancer/Stem Cell Biology and Medicine, to be headed by hematopoietic stem cell researcher Irving Weissman. The university will build on existing faculty research but also hopes to recruit more scientists. Stanford medicine Nobelist Paul Berg says the goal is to raise $100 million to support research on genetically based treatments for cancer, Parkinson's disease, heart disease, and other illnesses.

Stanford got in hot water after the institute stated an intention to develop new human embryonic stem (ES) cell lines to study particular diseases. During an interview with the Associated Press (AP), Weissman acknowledged that scientists might someday try to create human stem cell lines for this type of research through nuclear transfer—otherwise known as therapeutic cloning. The resulting AP story, declaring that "Stanford University has announced its intention to clone human embryos," forced Stanford officials to hold a press conference immediately to deflate the brouhaha. They followed it with a statement emphasizing that "creating human stem cell

**Stem cell flap.** Press reports muddied the focus of Irving Weissman's new center at Stanford.

## ScienceScope

**Neutrinos, Take Two** It's not wasted effort to build two different laboratories to look for neutrinos, a National Academy of Sciences panel concluded last week. The verdict is welcome news to proponents of converting South Dakota's Homestake gold mine into the world's deepest underground laboratory.

Earlier this year, a budget-conscious White House asked the academy to assess U.S. neutrino detectors, with an eye toward avoiding duplication (*Science*, 5 July, p. 31). The panel, chaired by physicist Barry Barish of the California Institute of Technology in Pasadena, focused on the Antarctic IceCube project and an underground lab, concluding that both projects are important. Whereas IceCube looks at astrophysical objects by using neutrinos, an underground lab would directly study the nearly massless particles, which are produced by the sun and other cosmic objects.

The report won't assure Homestake's creation, however. The mine's owners haven't resolved legal issues with the government, and the National Science Foundation hasn't said if it will seek an estimated $300 million in start-up funds. Congress, meanwhile, has started funding the $240 million IceCube project.

**Journal Goes Public** With a $9 million, 5-year grant from the Gordon and Betty Moore Foundation, Nobel laureate Harold Varmus and other biologists are setting out to publish a model "open-access journal" in biology. Varmus, president of the Memorial Sloan-Kettering Cancer Center in New York City, teamed up with Patrick Brown of Stanford University and Michael Eisen of Lawrence Berkeley National Laboratory in California to secure funds and staff for the venture, with Varmus serving as chair. Their aim is nothing less than to "create a new economic model in scientific publishing"—a low-cost operation that will not charge for articles but would pay its way with authors' fees (estimated at $1500 per article initially).

In 2000, these scientists organized a movement called the Public Library of Science (PLOS) to advance open-access publishing. Their international appeal garnered 30,000 pledges of support, including a threat to boycott journals that do not make their content available for free. That threat was not carried out because authors didn't have a good alternative journal to turn to. But now they do, Varmus says: *PLOS Biology*'s first issue will appear "in the latter part of 2003."

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lines is not equivalent to reproductive cloning." Berg, who appeared at the press conference, calls the episode "bizarre. … You have an audience [that] seems not to have been on this planet for the last 2 years."

Stanford's plans are consistent with a state law passed in September that endorses both stem cell and therapeutic cloning research (*Science*, 27 September, p. 2185), although Berg says that the new center "was in the works long before that." The University of California, San Francisco (UCSF), sponsored such work before researcher Roger Pedersen moved from there to the U.K.'s Cambridge University last year, and UCSF may revive it as part of another privately funded stem cell initiative launched earlier this year (*Science*, 16 August, p. 1107). Another boost may come from Massachusetts: Legislators there introduced a bill this month that would create a state fund for ES cell research.

Researchers applaud the Stanford initiative, which they see as necessary in light of the current prohibition on federal funding for research with human ES cells derived after 9 August 2001. MIT stem cell researcher George Daley says he hopes it is "just one of the first of what should be many privately funded institutes to take up the slack." The biggest one to date is the Institute for Cell Engineering at Johns Hopkins University, formed last year with an anonymous donation of $58.5 million. UCSF is currently focused on distributing its two lines of presidentially approved stem cells to the 40 groups that have requested them.

–CONSTANCE HOLDEN

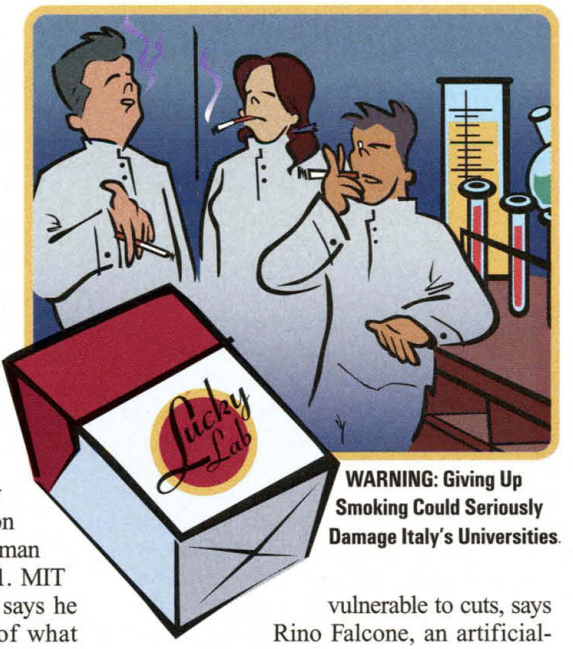
RESEARCH FUNDING

## Italian Researchers Facing Lean Times

**NAPLES**—Italian researchers are distraught this week after legislators approved a 2003 budget that could shutter some national facilities and threaten Italy's contributions to major international research centers. "It is the worst situation in research in Italy since [World War II]," says legal historian Luigi Capogrossi Colognesi, a member of the governing council of the National Research Council (CNR), the country's largest research organization.

The parliamentary vote came after days of heated debate in the Senate, punctuated by outraged researchers demonstrating noisily outside and a mass resignation by university rectors, who say that a written commitment to adequate funding is the only thing that will bring them back. The chamber of deputies was preparing this week to rubber-stamp the budget decision by the upper house.

The Senate budget contained $1.6 billion for public research organizations, a cut of 1.6%, and level funding of $6.3 billion for universities. Fixed costs such as salaries and operating expenses consume most of the budget, leaving ongoing research projects most vulnerable to cuts, says Rino Falcone, an artificial-intelligence researcher at CNR.




**WARNING: Giving Up Smoking Could Seriously Damage Italy's Universities**

It is not just the level of funding that has angered researchers. They are also incensed that the Ministry of Finance has proposed raising additional funds for universities by increasing the state tax on cigarettes. "I don't agree with people smoking to finance my research," says oncologist Alfredo Budillon of the University of Naples. Scientists are also galled by a government proposal to create a $98 million special science fund distributed at the personal discretion of Prime Minister Silvio Berlusconi. "This is a new attack on the autonomy of the scientific community and its institutions," says Falcone. Parliament was expected to vote this week on both proposals.

CNR, with about 100 research centers throughout Italy, will receive $477 million, about 2.5% less than in 2002, says Capogrossi Colognesi. But the actual impact on science will be greater because its shrunken budget must cover raises written into existing labor agreements. CNR recently announced that it might have to rescind its membership in the European Science Foundation, and other international collaborations might also be sacrificed.

The government gave no explanation for why some organizations were hit much harder than others. "It is very hard to understand what the original motivations for these moves are, apart from trying to cut budgets across the board," says physicist Alfonso Franciosi, chair of the National Committee for Synchrotron Radiation Research at the National Institute for the Physics of Matter (INFM). Facing a 30% cut, INFM will be forced to slash its contribution to the Elettra x-ray synchrotron in Trieste, which each year hosts 800 researchers from across Europe. Elettra could be shut down temporarily as early as next month. INFM officials are also wondering how to meet their $11-million-a-year obligation to other European x-ray and neutron projects, among them the European Synchrotron Radiation Facility, the Institute Laue-Langevin neutron source, both in Grenoble, and the future European Spallation Source.

The National Institute for Nuclear Physics says it will be able to maintain its subscription to major facilities such as the CERN particle physics lab near Geneva, despite a 10% cut. But it will have to reduce its contribution to the building of several detectors for the Large Hadron Collider there, reports physicist Carlo Bernardini of the University of Rome.

Researchers say that the new cuts only underscore the country's status as the stepchild of European research. Italy spends less than 1% of its gross national product on research, about half the European average. Nobelist Carlo Rubbia, whose National Agency for New Technologies, Energy, and the Environment faces a 15% cut, says that Italy is "marginal both in Europe and in the world in the field of science."

–ALEXANDER HELLEMANS

Alexander Hellemans is a writer in Naples, Italy.

2004 BUDGET

## No Holiday Cheer For NIH, NSF

When is a budget increase not really a budget increase? When President George W. Bush prepares a 2004 request to Congress before legislators have completed work on this year's budget.

Although the president's request for the next fiscal year won't become public until early February, *Science* has learned that the White House has settled on a 9% increase for the National Science Foundation (NSF), to roughly $5.4 billion. That sounds like a hefty increase for a domestic research agency when the economy is in a slump, a war against Iraq looms, and the budget deficit is growing. But it might be no more than Congress gives NSF this year. The $23.3 billion National Institutes of Health (NIH) has received similarly Scrooge-like news for the holidays: The White House has offered less than a 1% hike, and Department of Health and Human Services (HHS) officials are appealing.

The NSF request is less generous than it

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