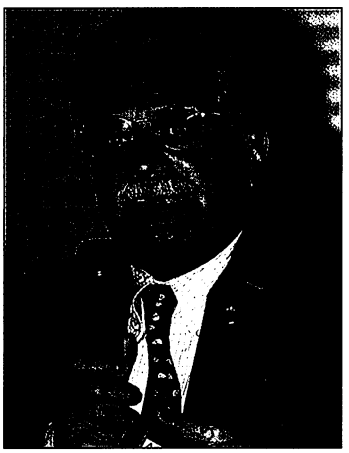
June 1999, p. 2083). Few people took either announcement seriously.

The latest pronouncement comes from a trio composed of Severino Antinori, a fertility expert at the Institute of Clinical Obstetrics and Gynaecology in Rome; Panos Zavos, a reproductive physiologist at the Andrology Institute of America in Lexington, Kentucky; and Avi Ben-Abraham, an American-Israeli biotechnologist whose current affiliation was not revealed. Speaking at a workshop at Antinori's institute, Ben-Abraham said that the team has "unlimited funding"—he declined to reveal the source—and plans to carry out the experiments in an undisclosed Mediterranean country. Ben-Abraham hinted that it could be Israel or an Arab nation, claiming that "the climate is more [receptive to human cloning research] within Judaism and Islam."



Fertile-minded. Severino Antinori says cloning could overcome male sterility.

The group wants to use cloning to help childless couples—particularly infertile men—start families. "Cloning may be the last frontier ... in our attempts aimed at defeating male sterility," says Antinori, who is no stranger to controversy: In 1994, he used in vitro fertilization to impregnate a 62-year-old woman. The trio would attempt cloning only for childless couples in which the men produce no sperm, Antinori says. He claims to have 600 such couples on a waiting list.

One of the few scientific details of the project revealed at the meeting was that the group plans to follow essentially the same approach that was used to produce the sheep Dolly: Transplant a nucleus from a somatic cell into an enucleated egg and kick-start the process with a jolt of electricity. Zavos claims that the group has many scientists on board, including animal cloning experts; he refused to reveal their names, citing "security" concerns.

Jaenisch and others have denounced the effort. "What these guys are suggesting is ridiculous," he says, warning that the rare cloned mammals that survive from hundreds of fertilized eggs often suffer severe health problems. "Many die very soon after or have serious problems, such as kidney and brain abnormalities or no immune system," he says. There's no reason, Jaenisch adds, to think that such problems—seen in all five mammalian species cloned so far—won't affect human clones. Dolly's creator, Ian Wilmut of the Roslin Institute in Edinburgh, U.K., adds: "We had a lamb born recently which looked perfectly formed, but it couldn't stop hyperventilating; in the end we decided it was kinder to kill it. It turned out that the muscles and arteries leading to its lungs were malformed. I would like to know what they propose to do with a human in a situation like this."

The mother of a human clone might also be at risk. Mammalian clones are often extra-large, and pregnant mothers become dangerously swollen and frequently miscarry. Antinori's team claims that problems with embryo culture medium could be the cause of this syndrome, and that altering the medium's ingredients could avoid the complication. Wilmut acknowledges that's a possibility but says that until this problem is resolved, human surrogate mothers would be put at great risk. Jaenisch says epigenetic factors may affect a clone's health and account for the high rate of failure in bringing cloned embryos to term. "They cannot screen for epigenetic abnormalities in the same way they can screen for chromosomal aberrations," he says.

Undaunted, Antinori revealed that the trio would meet in October in Monte Carlo, Monaco, to fine-tune its plan; the researchers hope to start implanting embryos within 2 years. Said Zavos, "The genie is out of the bottle." –JOHN PICKRELL

GENDER EQUITY

NSF Program Targets Institutional Change

Huddled around a campfire in the Colorado Rockies last fall, 30 women engineers plotted how to improve conditions for their academic colleagues. Out of that meeting, part of a 3-day workshop, came the idea for a Women in Engineering Leadersnip Institute (WELI). The campers' timing couldn't have been better: Last month, the National Science Foundation (NSF) unveiled plans for a new $20-million-a-year program aimed at improving career prospects for women scientists and engineers in academia, and organizers of the nascent institute are already working on a grant proposal.

The competition may be fierce. WELI will be competing for one of five to 10 "institutional transformation" awards that NSF hopes to make by this fall as part of its new program, called ADVANCE. The program, which replaces NSF's earlier efforts to tackle the chronic problem of women being underrepresented in science, will also fund fellowships for women just starting or return-

ScienceScope

Purchasing Paralysis Rules meant to improve purchasing practices across the French government are stifling research, according to an Internet petition signed by more than 3200 French scientists. The guidelines, adopted over the last 2 years (*Science*, 12 March 1999, p. 1613), require all government-funded institutions to use only approved suppliers for purchases above $570; competitions are held at the beginning of each fiscal year.

The rules have put many researchers in a bind. Last month, for example, the autoclave in a microbiology lab at the University of Paris's Orsay campus broke down. But the only model that would fit through the lab's doors is made by a manufacturer that is not on the approved list.

Some help is on the way. The finance ministry earlier this month announced that, starting in September, it will triple the amount, now $43,000, that is exempt from the rules. (The Orsay lab had already reached that level.) But the lab would still have to wait 6 months to replace its autoclave. Such "paralysis of research activities is unacceptable," says Orsay microbiologist Betty Felenbok, a leader of the petition campaign (http://193.55.31.113). The petitioners want the bar for individual purchases raised from $570 to $2800 and no limit on purchases under that amount from unapproved suppliers.

Harvard's Catch Science advocates have a new and influential ally on the university scene. He's economist Larry Summers, named this week as the new president of Harvard University.

Summers, 46, who served as Treasury secretary in the Clinton Administration, became the university's youngest tenured professor at the age of 28. As part of the Clinton team, "he was an early and constant supporter of the need to keep the engine of intellectual capital going," says John Podesta, former White House chief of staff and now a professor at Georgetown University law school in Washington, D.C. Podesta says Summers pushed a number of research-related initiatives, from climate change to precollege education, during his stint in Washington.

Summers beat out University of Michigan chief Lee Bollinger and Harvard Provost Harvey Fineberg in the race to succeed Neil Rudenstine. He will take over on 1 July.

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ing to the academic track, and provide leadership awards to enhance institutional efforts already under way (see table).

The case for such a program is easy to make: Women comprise only 22% of the U.S. scientific and engineering workforce, and their growing share of undergraduate and graduate enrollments is not reflected in faculty hiring and movement up the tenure ladder (*Science*, 21 July 2000, p. 379). A recent study of the University of California system, for example, shows a drop over the last 2 years in the share of new faculty appointments going to women (*Science*, 2 February, p. 806).

ADVANCING THE STATUS OF WOMEN

Award	Number	Max. funding/duration
Institutional Transformation	5–10	$750,000/year for 5 years
Fellowships	20–40	$60,000 salary; $25,000/yr. research; for 3 years
Leadership	8–12	$200,000/year for 3 years

But improving those statistics is difficult. ADVANCE's predecessor, called Professional Opportunities for Women in Research and Education, gave out nearly 500 grants over 4 years to women who needed a boost on the road to an academic career. Although satisfied with individual success stories, NSF officials felt that the program wasn't doing enough to remove institutional barriers. They also worried that restricting participation to women could make the program vulnerable to attack by foes of affirmative action.

The new program addresses both those concerns by targeting the place where academic women work. NSF hopes that its money will be a carrot for universities to reform their attitudes toward everything from dual-career couples to those needing time off the tenure track. "We're trying to look at the problem at an institutional level, to both help raise their consciousness and give them the tools to change their policies and procedures," says Norman Bradburn, head of NSF's social and behavioral sciences directorate, which will manage the program. "And one nice aspect of this program is that it's not restricted to women."

Last May, President Clinton announced the program in a Rose Garden ceremony on pay equity for women. But it wasn't until 5 February that NSF finally spelled out the details and issued a call for proposals (NSF 01-69, www.nsf.gov/home/crssprgm/advance). There's an 8 May deadline for the institutional and leadership awards, while fellowship requests are due 21 to 24 August.

Deb Niemeier, incoming chair of civil engineering at the University of California, Davis, welcomes the new program, and she sees it as a chance to get WELI off the ground. The nascent institute, a virtual structure that draws on faculty at 10 research universities around the country, plans to submit a proposal for $750,000 a year for 5 years to run workshops, provide mentoring for women academic engineers, and help universities trying to increase the number of women in administrative ranks. "I'm really excited. It's a wonderful opportunity to channel our activities," says Niemeier, a WELI board member, who organized last fall's NSF-sponsored workshop.

NSF hopes to continue the program at its current level for at least 5 years, although Bradburn says its fortunes are tied to the overall NSF budget. That could mean tough sledding, as President Bush has requested only 1.3% more for the agency in 2002, a shock after NSF's 13.5% boost in the current year (*Science*, 9 March, p. 1882). At the same time, Bradburn notes that money isn't the real impediment to change. "None of this is a substitute for academic leadership," he says. "Without a strong institutional commitment, nothing will happen." —JEFFREY MERVIS

NEUROSCIENCE

Dyslexia: Same Brains, Different Languages

Pity the poor speakers of English. New research suggests that they may be especially prone to manifest dyslexia, the language disorder that makes reading and writing a struggle, simply because their language is so tricky.

The distinctive pattern of spelling and memory problems that characterizes dyslexia has a strong genetic basis, suggesting that some neurological oddity underlies the disorder. But there appears to be a cultural component to the disease as well, because dyslexia is more prevalent in some countries than others; for instance, about twice as many people fit the definition of dyslexic in the United States as in Italy. Researchers have suspected that certain languages expose the disorder while others allow dyslexics to compensate. Now a brain imaging study backs this theory up.

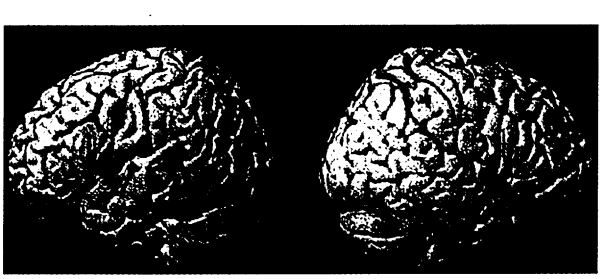
A multinational team of researchers used positron emission tomography (PET) scans to observe brain activity in British, French, and Italian adults while they read. Regardless of language, the team reports on page 2165, people with symptoms of dyslexia showed less neural activity in a part of the brain that's vital for reading.

"Neurologically, the disease looks very much the same" in people who speak different languages, says neurologist Eraldo Paulesu of the University of Milan Bicocca in Italy. "Therefore, the difference in prevalence of clinical manifestations [among different countries] must be attributed to something else." The researchers blame language.

English consists of just 40 sounds, but these phonemes can be spelled, by one count, in 1120 different ways. French spelling is almost as maddening. Italian speakers, in contrast, must map 25 different speech sounds to just 33 combinations of letters. Not surprisingly, Italian schoolchildren read faster and more accurately than do those in Britain. And it's no surprise that people have a harder time overcoming reading disorders if their language, like English or French, has a very complex, arbitrary system for spelling. "English comes with a built-in deficit," says education researcher Ken Spencer of the University of Hull in the United Kingdom.

Diagnosing a learning disability is notoriously subjective. Lack of access to good education and other social factors probably account for most reading disorders, says psychologist Richard Olson of the University of Colorado, Boulder. To avoid some of these issues, the researchers tested university students—people who have served plenty of time in classrooms and don't lack intelligence or willpower. The English and French dyslexic students have compensated for their disorder and are "very successful people," says study co-author Ute Frith of University College London, even though they need more time when taking exams and make frequent spelling mistakes.

Finding dyslexic Italian subjects was trickier, because practically no university students have been diagnosed with the disorder, Frith says. The team tested 1200 students and identified 18 with a pattern of verbal memory problems (such as difficulty remembering telephone number–like strings of digits) and slowed reading typical of the diagnosed dyslexics in France and the U.K. The "dyslexic" Italian students weren't told how they scored, but some (aware that they



Spelled out. As shown in this model, red areas are equally active in dyslexic and normal readers; green areas are sluggish in dyslexics.

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