

are better. But we were always missing top universities that were visible internationally," says Jürgen Mlynek, president of the Helmholtz Association of German Research Centres and former president of Humboldt University in Berlin. "I see this as a first step in some differentiating among German universities. The good ones will get better." The excellence initiative "is a clear sign that the word 'elite' is no longer taboo," adds Karlsruhe's Ulrich. "It is becoming more acceptable to state that there exist differences."

Still, the excellence initiative won't fast-track anyone to Harvard-like

heights. "The usual suspects in the US—Stanford, Yale, Harvard, Princeton, and so on—spend roughly €100 000 per student per year. In Germany the average is €10 000 per year," says Mlynek. The ratio of students to professors is also higher in Germany. "For those who made it [to elite status] in the excellence initiative, there will be a 10% effect on their overall budget. It's not that much," Mlynek says. "Most of all, it's the reputation you gain when you win," says Schenzle. "Secondly, it's the money."

Although the best universities may become both better and better known,

the initiative "forced all universities to think about their strengths and weaknesses," says Joachim Rädler, a member of the LMU nanosystems research cluster. "It has generated a lot of movement. Also, universities that were not successful in the first round will refine their plans. They still have a chance in the second round."

Indeed, says Umbach, "now there is much more discussion between people who never had contact before. Maybe the best result of the whole initiative is that discussion between various leading people in the university has improved." **Toni Feder**

## Democrats expect to push strong science agenda in new Congress

**The bipartisan spirit may be tested by confrontations on global warming and the administration's opposition to expanded stem cell research.**

In October 2005, when the National Academy of Sciences released its landmark report, *Rising Above the Gathering Storm*, which called for a dramatic increase in funding for basic science research and education, both the Democrats and Republicans on Capitol Hill moved quickly to embrace most of the recommendations. Little more than a month later, Democrats in the US House of Representatives unveiled their "innovation agenda," which mirrored the "gathering storm" report. In February 2006, the Bush administration released a response in the form of the American Competitiveness Initiative (ACI).

The idea of increasing funding for basic research was suddenly very popular among politicians, in part because the NAS report tied science research and education directly to both US national security and economic well-being. As Bush's science adviser John Marburger often says, at the federal level science isn't just about science, it's about policy.

As the 110th Congress opens on 3 January with new Democratic majorities in both the House and Senate, the president's competitiveness initiative may provide a way for Democrats and Republicans to find common ground, at least for a while. "I don't have a crystal ball, but my impression is both parties have been aggressive on science," Marburger said. "And the positive response on ACI is a good indicator that we can move forward on that. Science is in a good position [in Congress]. The American public likes science."

The ACI calls for \$1.3 billion in new funding and \$4.6 billion in R&D tax in-

centives in fiscal year 2007 and another \$50 billion in new research money over the next 10 years. It would double basic research at NSF, the Department of Energy's Office of Science, and NIST. The initiative also calls for more than \$400 million in FY 2007 for science education programs.

### Deficit woes

The ACI-related increases had been supported in the last Congress, but the FY 2007 appropriations bills for everything but the Departments of Defense and Homeland Security are on hold. With the shift in power in Congress, the final budget for FY 2007, which started on 1 October 2006, may not be passed for several more months. Indeed, Nevada Senator Harry Reid, the new majority leader in the Democratic Senate, said the budget might not be finalized for a year while the Democrats and Republicans wrangle over how best to control the federal deficit, which is expected to top \$300 billion in FY 2007.

Although support for the ACI is strong, said Representative Rush Holt (D-NJ), with the deficit and "the \$9 trillion in national debt, it's going to be hard to make a sizable investment, even in the things where investments need to be made." Holt, one of two physicists in Congress, said that while the administration has been touting the ACI, "it's been more talk than investment."

One concern of science advocates on Capitol Hill is that the push by some of the most conservative Senate Republicans to cut spending may short-circuit the increases in basic research called for in the ACI. The conservative Republi-

cans' strong opposition to Bush's budget proposal is why Reid and others expect it will take months to resolve the FY 2007 budget.

Rep. Vernon Ehlers (R-MI), the other physicist in Congress, said he would like to accelerate the doubling of research money for NSF called for in the ACI. Ehlers was a strong candidate to replace retiring Rep. Sherwood Boehlert (R-NY) as chair of the House Committee on Science had the Republicans held the House. Democratic Rep. Bart Gordon, of Tennessee, will take over the committee instead.

"I don't think there will be too much of a shift on science issues," Ehlers said. "Maybe there will be on some issues like global climate change. That's one of the mantras of the Democrats, and they've been complaining about it for a long time."

Although Democrats and Republicans may be in widespread agreement on the ACI, they are sharply split on global warming, stem cell research, and the need for stronger alternative energy programs.

In one of the most dramatic philosophical shifts coming from the midterm elections, Sen. Barbara Boxer (D-CA), a strong supporter of tough carbon dioxide limits to slow global warming, takes over the Senate Committee on Environment and Public Works from Sen. James Inhofe (R-OK). Inhofe has called global warming a hoax; he held hearings in December trying to show that climate change is a false crisis manufactured by scientists and the media.

Boxer said one of her first acts will be

to draft legislation that would cut greenhouse-gas emissions to 1990 levels by 2020. On the House side, Gordon said that the science committee will “address global warming and climate change, topics that merit Congress’s attention.”

Loosening the current restrictions on stem cell research is another issue on which the Democratic Congress is likely to clash with the Bush administration. “We’ll just re-pass [the bill] Bush vetoed [in September] and hope he doesn’t have the nerve to veto it again,” Holt said. If Bush does, a partisan fight will likely ensue in an attempt to override the veto.

## Ethics issues

Asked how the administration might respond to Democrats tightening carbon dioxide regulations and loosening stem cell restrictions, Marburger replied that those issues “mostly don’t have much to do with science itself.” The stem cell debate is “not a science issue, it’s an ethics issue,” he said. “Frankly, as a science adviser to the president, I don’t have too much to say on that.”

On climate change, Marburger noted that the US spends more than the rest of the world combined on research. “The real controversy is what do you do? It is more about economics than about science.”

Physicist Burton Richter, the former head of SLAC who spends a lot of time lobbying for the physical sciences on Capitol Hill, said the global warming issue is going to change in the new Congress. “Democrats take it much more seriously than Republicans do,” he said. “The Bush administration has said we aren’t going to do anything about it, and the Republicans have marched in lockstep.”

The Democratic push for global warming emissions restrictions is increasingly being supported by leaders in industry, Richter said. “Industry believes that sooner or later there will be a carbon-emissions fee, and they are trying desperately to see what the alternatives are before the fees are imposed,” he said. (See PHYSICS TODAY, December 2006, page 30.)

NASA’s plan to establish a small settlement of astronauts at the Moon’s south pole by about 2020, announced in early December, would likely continue the agency’s trend of moving money away from unmanned scientific programs (see the story on page 34). Returning to the Moon would be an enormously expensive endeavor, and NASA did not cite any financial figures in announcing the project. But John Logsdon, the director of George Wash-

ington University’s space policy institute, believes overall support for the space agency in Congress is strong. Logsdon cited the NASA Authorization Act of 2005, which included money to plan for the return of humans to the Moon. “It passed the House by 385 to 15, so I don’t think there is going to be a fundamental change in space policy with the Democrats taking charge.”

Logsdon expects Gordon’s science committee to keep NASA on a tighter leash, given the agency’s reputation for significant delays and cost overruns. “The oversight is appropriate to make sure the budget that NASA lays out is achievable,” he said.

Efforts to increase federal support for alternative energy, including wind, solar, biomass, and battery research, are expected to be taken more seriously by a Democratic Congress. “I’m sure we’ll have a less oil-drenched energy agenda,” Holt said.

Finally, the ongoing charges of the administration’s suppression and dis-

tortion of science that doesn’t fit with its policies will be subject to Democrat-run oversight hearings. “People can count on more oversight,” Holt said. “Is the EPA [Environmental Protection Agency] really working to protect the environment? Are scientists at NOAA [the National Oceanic and Atmospheric Administration] being gagged? I hear from scientists around the government who feel a chill in their work. We want to look into that.”

Rumors were circulating in early December that Gordon was going to reorganize the House science committee to create an oversight subcommittee that would investigate any claims of suppression of science in federal agencies. Gordon said it was “premature” to announce hearings, but “at my direction, the staff has already been working on such allegations at NASA and NOAA, and we expect to be better positioned to get answers to all our questions when Democrats have the gavel.”

Jim Dawson

## Fermilab’s new management looks to land linear collider

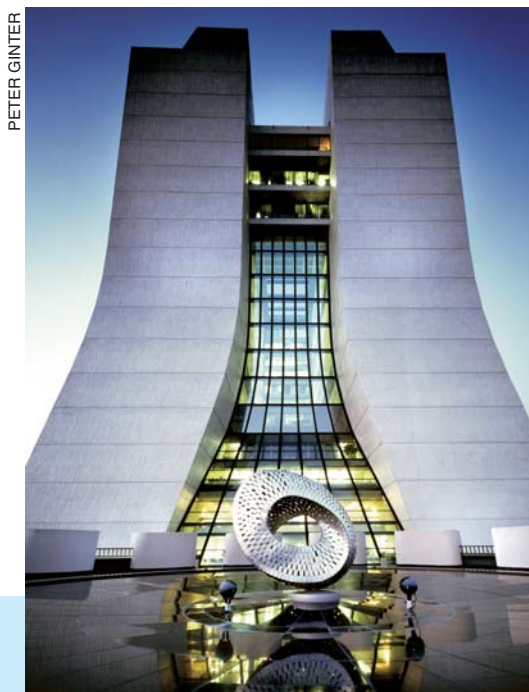
As of 1 January, the Universities Research Association (URA), which has managed Fermilab since the lab’s inception 40 years ago, is sharing the responsibility with the University of Chicago. The Department of Energy (DOE) awarded the pair’s Fermi Research Alliance a \$1.6 billion, five-year management contract.

“This is new management for a new era,” says Michael Turner, an astrophysicist at Chicago and a member of the FRA board. With other high-energy labs winding down or shifting focus (see PHYSICS TODAY, May 2005, page 26), the future of the field in the US “is on the shoulders of Fermilab,” says Turner. Changes at the lab, he adds, are “profound. Twenty years ago, the strategy at Fermilab would have had three elements: Accelerator, accelerator, accelerator. Now the three elements are the energy frontier, neutrinos, and particle astrophysics.”

Fermilab has increased its breadth, agrees lab director Pier Oddone. “But we’re betting on the ILC [International Linear Collider] for the future of the lab.” This bet dovetails with the recommendations in a recent National Research Council report, *Revealing the Hid-*

*den Nature of Space and Time* (see PHYSICS TODAY, June 2006, page 26), which says that particle physics is “entering an era of unprecedented potential” and recommends that the US mount a compelling bid to host the ILC.

URA, an association of 90 universities, “brings breadth and is responsive to the needs of the nation,” while the University of Chicago “is an institution



Fermilab, right, is positioning itself to make a strong bid to host the next big particle accelerator.