

responsibility of all scientists to ensure that all their students receive training which specifically addresses [professional ethics].”

“People are taking this seriously

now, but I don’t know if that will be the case in five years,” Tsang said. “That’s why we’d like to see more attention paid to the education aspect.”

Jim Dawson

NRC and NAPA Endorse Federal Funding of Smithsonian Science Centers

Direct federal funding of the Smithsonian Astrophysical Observatory (SAO) and five other science research centers operated by the Smithsonian Institution should continue, according to reports from the National Research Council and the National Academy of Public Administration. The reports resulted from a request that the Office of Management and Budget included in the Bush administration’s fiscal year 2003 budget proposal.

OMB officials were concerned that direct funding of the Smithsonian centers circumvented the competitive funding processes most scientists must go through and suggested that research funds going to the Smithsonian should be transferred to NSF. Research appropriations to the Smithsonian in FY 2002 totaled about \$111 million.

The NRC committee on Smithsonian scientific research, chaired by Cornelius Pings, president emeritus of the Association of American Universities, made specific findings for each of the centers, but in general found that “the research programs at the Smithsonian Institution provide essential support to the museums and collections, make substantial contributions to the relevant scientific fields, and fulfill the broader Smithsonian mission to increase and diffuse knowledge.”

The NAPA report focused on how efficiently the Smithsonian was running its research programs and whether Smithsonian scientists had a competitive advantage over other researchers because of direct federal funding. The NAPA report concluded that the Smithsonian “currently receives most of its funds for research projects through competitive processes” and found “no persuasive evidence that Smithsonian researchers have a consistent competitive advantage over others.”

The NRC report looked directly at how federal money flows to the SAO in Cambridge, Massachusetts, and found that, of the observatory’s \$83.9 million research expenditures in FY 2001, \$24.9 million was in the form of direct federal appropriations. Of that amount, \$7 million was for “major construction of scientific instrumentation”

at the Multiple Mirror Telescope in Arizona and the Submillimeter Array in Hawaii. The direct federal research grants total only about 30% of the budget because SAO receives about 59% of its total budget from federal contracts and grants, the report said, which are “obtained through competitive peer review.”

The NRC report cited several significant projects that originated at SAO, including the redshift survey, which allowed the three-dimensional study of the large-scale structure of the universe; the Chandra X-ray Observatory, which is still operating; pioneering work in very-long-baseline interferometry; and the early promotion of direct gamma-ray astronomy.

“The suite of SAO accomplishments has been made possible by steady support from direct federal appropriations, and many would not have been possible if the programs had to depend on the 3-year funding cycles of such agencies as NASA and NSF. . . .” the NRC report said.

“We feel that the OMB made a mistake in its understanding of research at the Smithsonian,” said Marc Davis, an astronomy and physics professor at the University of California, Berkeley, who served on the NRC committee. “It’s not as though each of these [research centers] is perfection on Earth, but the notion that you could transfer their funding to the NSF was ludicrous.” NRC committee chairman Pings concluded that “withdrawing federal support would likely lead to the demise of much of the institution’s research. . . .”

OMB officials haven’t commented on the reports, but political observers in Washington, DC, said that, as a result of the two studies, transferring the Smithsonian’s research money to NSF is unlikely.

In addition to the SAO, the Smithsonian research centers include the National Museum of Natural History, National Zoological Park, Center for Materials Research and Education, Environmental Research Center—all located in the Washington, DC, area—and the Tropical Research Institute, with several facilities in Panama.

Jim Dawson

UK Science Spending on Course to Double

Ian Halliday suddenly has money to play with. The UK’s Particle Physics and Astronomy Research Council (PPARC), which Halliday heads, has had a tight budget for years. But now the UK can become a real player in planning the next big particle accelerator, he says. “And we’ll most likely join LIGO”—the Laser Interferometer Gravitational Wave Observatory in the US.

Halliday’s newfound financial freedom is a result of the heftiest hike in the UK’s science and education budget in a decade. By 2005–06, this funding will grow by £1.25 billion (\$1.97 billion), the Treasury announced last summer. Of that, £350 million is tagged for university research, and £900 million will go to PPARC and the six other research councils, to swell their combined annual funding to £2.9 billion. The new money keeps science spending on course to double in the eight-year period beginning in 1997, when Tony Blair became prime minister. “The allocations are extremely good news for science,” says John O’Reilly, chief executive of the Engineering and Physical Sciences Research Council (EPSRC). Details of the money’s distribution were released in December.

The main physics funding agencies, PPARC and EPSRC, will get an extra £73.7 million and £105.8 million, respectively, by 2005–06, which increases their annual budgets by about 23% and 25%. Those figures include money for cross-cutting programs, such as the continuation of genomics and e-science—the linking via Internet of data and analysis within and across scientific fields—and new research focusing on stem cells (with an investment of £40 million), sustainable energy (£28 million), and rural economy and land use (£20 million). On top of the earmarked programs, the new money gives the research councils more flexibility this go-around, says Halliday. “We [at PPARC] can do what we like with about £25 million of it.”

Across the sciences and engineering, PhD and postdoctoral pay will increase by £4000 or more, to an average of £13 000 and £17 000 a year, respectively. Those stipends will then be on a par with the low end of salaries in the industrial sector, says Peter Cotgreave, director of the lobby group Save British Science. The pay raises are intended to make science careers more attractive.

Grass-roots protests against de-