

National
Science
Foundation



Office of
Inspector
General



Semiannual Report to Congress

September 2007

About The National Science Foundation...

The National Science Foundation (NSF) is charged with supporting and strengthening all research disciplines, and providing leadership across the broad and expanding frontiers of science and engineering knowledge. It is governed by the National Science Board which sets agency policies and provides oversight of its activities.

NSF invests approximately \$5 billion per year in a portfolio of approximately 35,000 research and education projects in science and engineering, and is responsible for the establishment of an information base for science and engineering appropriate for development of national and international policy. Over time other responsibilities have been added including fostering and supporting the development and use of computers and other scientific methods and technologies; providing Antarctic research, facilities and logistic support; and addressing issues of equal opportunity in science and engineering.

And The Office of the Inspector General...

NSF's Office of the Inspector General promotes economy, efficiency, and effectiveness in administering the Foundation's programs; detects and prevents fraud, waste, and abuse within the NSF or by individuals that receive NSF funding; and identifies and helps to resolve cases of misconduct in science. The OIG was established in 1989, in compliance with the Inspector General Act of 1978, as amended. Because the Inspector General reports directly to the National Science Board and Congress, the Office is organizationally independent from the agency.

About the Cover...

Front and Back Cover Photos by Kenneth L. Busch.

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From the Inspector General

This Semiannual Report to Congress summarizes the accomplishments of the National Science Foundation (NSF) Office of Inspector General (OIG) for the six months ending September 30, 2007. I am pleased to report that our office had a very productive period: we obtained two criminal convictions, secured \$806,399 in investigative recoveries, and disposed of 61 civil, criminal, and administrative cases. Our investigations into research misconduct resulted in 10 referrals to NSF for action, while past investigations yielded 4 misconduct findings and 7 debarments by the agency. In addition we issued 9 audit reports with \$197,371 in questioned costs. We thank NSF for its assistance and cooperation in these accomplishments.

This semiannual period has been notable for more than just positive statistics. We are pleased that Congress this summer amended the Program Fraud Civil Remedies Act to bring NSF within its coverage. This authority, which we have long advocated, allows the agency to pursue administratively all losses of up to \$150,000 associated with fraud. In addition, I would like to recognize Ginna Ingram, a staff attorney, whose excellent article on compliance programs was published in the most recent Journal of Public Inquiry. Compliance plans have proven to be effective in raising the awareness of oversight boards and senior managers regarding their responsibilities in this area, as well as increasing accountability for their actions. Finally, on p. 17 we report on the status of our ongoing series of audits of labor effort charges. We are gratified that Nature Magazine in its October issue thought the audit findings significant enough to devote both a feature article and an editorial to discuss their implications. The next audit report in this series will be issued early in 2008.

Our annual assessment of the most serious management challenges facing NSF appears in the appendix of this report. While NSF has made significant progress in addressing several longstanding challenges, such as award administration and workforce planning, two new challenges have emerged over the past year: the audit resolution process, and the management of United States Antarctic Program plant, property, and equipment. As the National Science Board reviews whether cost sharing should be brought back, this semiannual report contains two discussions of the problems NSF has encountered in administering cost sharing: one in the management challenges letter on p. , and one in the investigations section on p.

Finally, as I write this letter, the House of Representatives has passed H.R. 928 amending the IG Act of 1978, and the Senate is actively working on 5.2324 aimed at strengthening the independence of the Inspectors General. While legislation that would enhance the independence and accountability of the federal IGs is welcome, the language in the final bill regarding sensitive issues such as an IG's compensation must be carefully crafted to take into account the diverse set of circumstances our IGs work under. In the case of the National Science Foundation, I am concerned that an unintended consequence may be that future candidates for my position with strong credentials will be reluctant to accept a position with total compensation that is not competitive with that of comparable federal positions.

A handwritten signature in cursive script, reading "Christine C. Boesz".

Christine C. Boesz, Dr.P.H.
Inspector General
October 19, 2007

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Report Highlights

- A management consulting firm retained by OIG determined that as of September 30, 2004 the unfunded liability for post-retirement benefits at NSF's five Federally Funded Research and Development Centers (FFRDC) surpassed \$80 million, and that this liability was expected to increase by another \$6.8 million in the following fiscal year. The firm also found that the value of medical benefits varied significantly among the five FFRDCs, with two having a higher value than benefits provided by comparable groups, and two with much lower values. All of the FFRDCs were found to have very similar pension programs, which exceeded the value of those provided by most comparative groups. The study made several recommendations including periodically comparing the benefit plans of the FFRDCs to those of comparable organizations as a check on their reasonableness, and provided specific ideas for helping to control benefit costs. **(See p. 14)**
- An audit of three awards for \$9.4 million to the University of Maryland Baltimore County (UMBC) found serious internal control deficiencies, including inconsistent adherence with UMBC's established financial management practices. These deficiencies resulted in \$174,655 of erroneous costs claimed to NSF grants and if not corrected, could have a significant impact on UMBC's ability to administer future award funds. Auditors found as a material weakness that UMBC staff did not always follow the University's cost accounting procedures to ensure that costs charged to NSF awards were accurate, allowable, and allocable. The university also lacked procedures to detect errors in the amount of indirect costs claimed, and failed to adequately monitor subawardees. UMBC concurred with all the report findings and indicated that it was taking corrective action. **(See p. 16)**
- The Inspector General community issued its *Report on National Single Audit Sampling Project* on the quality of annual audits performed by state auditors or independent public accountants and required by the Single Audit Act of 1984. The IGs' report established that improvements in performance of these single audits are needed government-wide. Quality control reviews of a random sample of 208 audits found that 115 were of acceptable quality, but that 30 or 16 percent had significant deficiencies and were therefore of limited reliability, and 63 or 35.5 percent were unacceptable and could not be relied upon. The most prevalent deficiencies were insufficient documentation of the understanding of internal controls over compliance and inadequate compliance testing of OMB A-133 compliance requirements. **(See p. 17)**

- A former professor at a Tennessee university pled guilty to a federal felony charge of making a false statement under an NSF grant. The professor admitted to sending university employees to conduct an evaluation project in support of the professor's private consulting business. The evaluation project was separate from the professor's work under the NSF grant at the university, and she was paid consulting fees separate from her university salary. The professor also admitted that the false statements and other conduct caused a loss of between \$10,000 and \$30,000 and that she abused a position of trust as Principal Investigator on the NSF grant and center director at the university. On July 30, 2007, the professor was sentenced to six months home confinement, 2 years probation, and ordered to pay restitution of \$25,598. **(See p. 25)**
- A former employee of an NSF-funded research center pled guilty to one count of mail fraud, in response to an indictment charging the subject with seven counts of mail fraud. On June 25, 2007, the subject was sentenced in U.S. District Court to 16 months in prison, 3 years of supervised release, payment of restitution of \$18,214.15, and payment of a special assessment of \$100. We referred the outcome of this investigation to NSF with a recommendation that the subject be debarred for a period of 5 years because she abused her position of trust and could readily obtain the same type of employment elsewhere, as well as the fact that her actions were intended solely for her personal financial gain. NSF's decision is pending. **(See p. 25)**
- A proposal by a professor at an Oregon university contained extensive sections of text and multiple figures duplicated from an earlier proposal that NSF had asked the professor to review according to an OIG inquiry and a university investigation. The investigation concluded that his actions were intentional, violated academic standards of scholarship, and that his plagiarism was therefore an act of research misconduct. The university prohibited the subject from submitting external proposals for 3 years, required 2 years of subsequent official prior review of any external proposals submitted, and placed a letter of reprimand in the professor's personnel file. Based on our recommendations, NSF made a finding of research misconduct, and applied several sanctions including proposing that the professor be debarred from receiving federal funds for a period of 3 years. **(See p. 29)**
- In an egregious example of student misconduct, a graduate student at a Washington university admitted he falsified and fabricated NSF-funded research data in four manuscripts, three of which were published. Our office received the allegation following the university's inquiry. During the investigation, the student admitted he falsified and fabricated the data because of "a combination of lack of motivation, laziness and a lack of interest in the work (especially experiments)." The university made a finding of research misconduct, dismissed the student from the university, and revoked his master's degree. We recommended that NSF: make a finding of research misconduct; send the subject a letter of reprimand; debar him for 3 years, require both certifications and assurances for 3 years following debarment, and bar the subject from serving as an NSF reviewer for 3 years. **(See p. 31)**