

# Investigations

## Administrative Investigations

Administrative investigations involve allegations of wrongdoing that do not constitute violations of NSF's research misconduct regulation or federal civil or criminal statutes. During the past six months, we conducted several administrative investigations. Two investigations resulted in institutions returning significant amounts of grant funds to NSF. Other administrative cases involved possible weaknesses in agency hiring practices and potential employee misconduct.

### University Returns \$770,000 in Award Money to NSF

A Michigan university returned \$770,000 to NSF after investigating allegations of research misconduct involving plagiarism in an NSF proposal and in course materials created under the resulting NSF award. The university found that a co-PI's actions pertaining to the course materials did not constitute research misconduct, and the university was unable to determine whether the PI or the co-PI was responsible for the plagiarized material in the NSF proposal. The university required the PI to attend an ethics seminar and to submit proposals for university supervision for five years; since the co-PI had moved to another institution, the university did not take action against her. We agreed with the university's conclusions and sent letters to the PI and co-PI emphasizing the importance of appropriate citation.

During the course of the investigation, the university determined that it was unable to complete the NSF project. Therefore, it terminated the award, making \$150,000 of unexpended funds available to NSF, and it returned \$620,000 of previously expended grant funds to NSF.

### \$380,000 in CAREER Award Funds Returned to NSF

We received an allegation that the PI on a \$400,000 CAREER award to a Massachusetts university left her position to pursue a career in the arts, but the institution drew down nearly \$200,000 on the NSF award after her departure. NSF sent more than 21 overdue project report reminders, and neither the institution nor the PI responded.

The institution acknowledged that it had drawn down funds on the NSF award after the PI left, explaining that it used the funds to support graduate student projects. The institution also acknowledged that it had not notified NSF of these changes, as required. The primary purpose of NSF CAREER awards is to support the development of a PI's career, not to support graduate student work.

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The university terminated the award, making \$200,000 of unexpended funds available to NSF, and it returned \$180,000 of previously expended grant funds to NSF.

### **NSF Implements Recommendations to Properly Detail Employee and to Improve Maintenance of Performance Reviews**

Based on an allegation we received, we reviewed a Senior Executive Service (SES) vacancy posting and concluded that it adhered to relevant statutes, regulations, and policies, and that no conflict of interests existed with respect to the temporary incumbent's involvement in the posting at issue. However, in conducting our review, we found that the incumbent had been placed in the SES position for two years without formally being detailed to the position, as required by federal regulation. We also discovered that NSF employees' signed performance evaluations are not always provided to the Division of Human Resource Management (HRM), as required. NSF implemented our recommendations to properly detail the individual and to ensure that performance evaluations are provided to HRM and maintained as required.

### **NSF Addresses Three Employee Misconduct Matters**

An employee was counseled on the importance of properly accounting for his official time after we found that, for three months, he had been including exercise time as part of his eight-hour day. Another employee received an official reprimand from NSF and repaid \$700 to the agency after she failed to account properly for hours worked.<sup>6</sup> In the third matter, NSF management orally reprimanded an employee who used franked envelopes for personal use.

## **Civil and Criminal Investigations**

We investigate violations of federal civil and criminal statutes by applicants for and recipients of NSF funds, as well as NSF employees and contractors. When we find substantial evidence of wrongdoing, we refer cases to the Department of Justice for prosecution and recommend administrative action by NSF in appropriate circumstances.

During this reporting period, our investigations yielded significant results including a university returning \$500,000 to NSF after a PI used grant funds improperly and a university returning \$105,000 to NSF after charging unallowable costs to NSF grants.

### **Contractor Improperly Charged \$14.2 Million in Indirect Costs to NSF**

The OIG's Office of Audit and the Defense Contract Audit Agency determined that a contractor in Colorado overcharged NSF \$14.2 million over five years because it improperly reclassified allocations of indirect costs from its corporate parent headquarters as direct costs in the contract. Upon referral from the Office of Audit, we initiated an investigation.

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<sup>6</sup> Previously discussed in September 2009 Semiannual Report, p.27.

During the bidding process, the contractor proposed a ceiling on its indirect rate to gain an advantage over its competitors. Shortly after commencing performance of the contract, changes at the contractor's corporate parent headquarters increased the general corporate indirect costs that were allocated to the contractor. The contractor could not obtain reimbursement from NSF for these increased charges due to the ceiling on the indirect-cost rate that it had agreed to during the bidding process. Instead of renegotiating the indirect rate ceiling with NSF when faced with mounting losses, the contractor added certain corporate parent indirect costs to other indirect costs that had been legitimately proposed for direct charge to the contract in its original proposal.

The contractor advised NSF of its plan of action, using language that blurred the distinction between the corporate parent's indirect costs and the other costs that had originally been proposed for direct charge. The contractor then implemented the plan based on an ambiguous oral statement by an NSF staff member that the contractor interpreted as constituting approval—even though the statement also indicated that an audit would be requested. The audit concluded that the contractor's selective reclassification of the allocated corporate parent indirect costs violated cost accounting standards.

We referred evidence of potential false claims to the U.S. Attorney's Office for the Eastern District of Virginia for action under the civil False Claims Act. The U.S. Attorney's Office declined to move forward with the civil suit and returned the matter to our office to allow NSF to seek an administrative recovery of the overcharges. We referred this matter to NSF with our recommendation that the agency administratively recover the questioned reclassified corporate allocations. NSF is evaluating its course of action.

### **University Agrees to Return \$500,000 and Enters into a Compliance Plan After Submitting False Claims and Certifications to NSF**

We investigated allegations of fraud, abuse, and mismanagement of NSF funds under a cooperative agreement at a Georgia university. We determined that the PI used NSF funds for entertainment expenditures, such as taking students bowling and on trips to amusement parks, and charged expenses related to his other projects to the NSF cooperative agreement. We also determined that the university failed to meet its cost sharing obligations and submitted false annual cost sharing certifications to NSF.

We referred the matter to the U.S. Attorney's Office for the Middle District of Georgia for action under the civil False Claims Act. A settlement agreement between the United States and the university required restitution in the amount of \$500,000 and a five-year compliance agreement, which we will monitor for its duration.

### **South Pole Hacker Sentenced**

We previously reported that an individual in Romania hacked into NSF's South Pole Station computer network and attempted to extort money from NSF by threatening to sell the information he obtained from the network to "interested parties."<sup>7</sup> A joint investigation with the FBI, Romanian authorities, and the OIG

<sup>7</sup> September 2003 Semiannual Report, p. 32.

resulted in the hacker's arrest and confession in 2003, and in this reporting period he was found guilty and sentenced by a Romanian court to two years in jail. The sentence was suspended for four years; however, he will have to serve the two-year sentence if he commits another crime in the next four years.

### **University Returns \$105,000 to NSF and Administrator is Recommended for Debarment**

We identified \$38,000 of unallowable costs charged to awards to two PIs at an Ohio university. The mischarges included the cost of personal travel for a PI's family. To assist us in determining whether the issues we identified were systemic or anomalous, the university agreed to conduct audits of two additional awards and identified an additional \$27,000 of unallowable and unsupported charges made to those awards. The university returned to NSF a total of \$105,000 in unallowable and unsupported charges and associated indirect costs, and overhauled its administrative policies and practices to ensure compliance with federal requirements.

Unrelated to the mischarges to NSF awards, the university determined that a department administrator (who was also responsible for overseeing one of the NSF PI's awards) had embezzled \$22,000. She pled guilty to aggravated theft in state court, and we recommended that NSF debar her for three years. NSF has issued a Notice of Proposed Debarment to the former department administrator, and its final decision is pending.

### **Debarments Recommended for Wrongdoing by Three Awardee Employees**

- The president of a Texas university used \$287,000 of university funds (not NSF or other federal funds) for home improvements, landscaping, and other personal purchases. She pled no contest and was ordered to pay \$127,000 in restitution and serve ten years of community supervision (a form of probation). Because the former president is currently affiliated with another university that receives significant NSF and other federal funds, in a faculty position in accounting, and because the former president's crimes reflected financial dishonesty and a lack of present responsibility, we recommended that NSF debar her for three years. NSF's decision is pending.
- An accounts payable clerk at a Wisconsin college pled guilty to a felony theft charge in a state court and was ordered to pay \$22,000 of restitution (\$1,700 from non-NSF federal awards). We recommended that NSF debar the former clerk for three years, and NSF's decision is pending.
- An administrator at a North Carolina university used a procurement card four times to charge personal expenses totaling \$525 personal expenses to an NSF award. The university terminated the employee and restored the improper charges to the grant. We recommended that NSF debar the former employee for one year, and NSF issued a notice of proposed debarment. NSF's final decision is pending.

## NSF Acts on Debarment Recommendations

In recent Semiannual Reports we reported several investigations that resulted in recommendations to NSF that it consider debarring the subjects based on the outcomes of our investigations. During this reporting period, based on our recommendations, NSF debarred each of the following individuals for three years:

- The former director of a university medical research center who improperly charged \$282,000 to an NSF award and \$678,000 to other federal awards.<sup>8</sup>
- A former professor who violated or disregarded various federal award administration requirements, violated university policies regarding conflicts of interests and outside compensation, and repeatedly misled both NSF and university investigations into the matter.<sup>9</sup>
- A former research employee based on her conviction for theft of funds from federal programs.<sup>10</sup>
- A former university employee who was convicted of embezzlement for her use of her purchase card for personal charges totaling \$24,000, half of which was charged to an NSF award.<sup>11</sup>

## Research Misconduct Investigations

Research misconduct damages the scientific enterprise, is a misuse of public funds, and undermines the trust of citizens in government-funded research. For these reasons, pursuing allegations of research misconduct by NSF-funded researchers continues to be a focus of our investigative work. In recent years, we have seen a significant rise in the number of substantive allegations of research misconduct associated with NSF proposals and awards. It is imperative to the integrity of research funded with taxpayer dollars that NSF-funded researchers carry out their projects with the highest ethical standards.

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<sup>8</sup> September 2009 Semiannual Report, p. 30.

<sup>9</sup> March 2009 Semiannual Report, p. 34.

<sup>10</sup> March 2009 Semiannual Report, p. 30; September 2009 Semiannual Report, p. 30.

<sup>11</sup> September 2009 Semiannual Report, p. 30.

### NSF's Definition of Research Misconduct<sup>12</sup>:

Research misconduct means fabrication, falsification, or plagiarism in proposing or performing research funded by NSF, reviewing research proposals submitted to NSF, or in reporting research results funded by NSF.

1. Fabrication means making up data or results and recording or reporting them.
2. Falsification means manipulating research materials, equipment, or processes, or changing or omitting data or results such that the research is not accurately represented in the research record.
3. Plagiarism means the appropriation of another person's ideas, processes, results or words without giving appropriate credit.
4. Research, for purposes of paragraph (a) of this section, includes proposals submitted to NSF in all fields of science, engineering, mathematics, and education and results from such proposals.

Research misconduct does not include honest error or differences of opinion.

During this reporting period, we referred seven cases to NSF which are summarized below. In the first two cases, NSF made a finding and took actions consistent with our recommendations. NSF's decisions are pending in the other five cases.

### PI Plagiarized in NSF-Supported Paper

A Florida university's investigation found that a PI's NSF-supported paper contained plagiarism. The PI argued to the university that his actions did not meet the definition of plagiarism because his community standards were such that only models, analyses, and results—but not text—were considered intellectual property. The university disagreed; however, it did not make a finding of research misconduct primarily because it concluded that the PI intended to cite the original sources but failed to do so because he was in a hurry to submit the paper, and it found no pattern of plagiarism.

We found the university's conclusions regarding the PI's intent to be unconvincing, so we conducted additional investigation. We examined the paper and found twice as much plagiarism as the university identified. Further, we examined several of the PI's other proposals and found additional plagiarism, constituting a pattern of plagiarism.

Based on our recommendations, NSF: sent the PI a letter of reprimand notifying him that NSF made a finding of research misconduct; required the PI to take a course on proper citation practices; and required the PI to certify for eleven months that all his submissions to NSF are free from plagiarism.

<sup>12</sup> 45 C.F.R. § 689.1.

## Assessment of Pattern in Research Misconduct Cases

The NSF research misconduct (RM) regulation states that, in deciding appropriate final actions in an RM case, NSF officials “should consider whether the actions were an isolated event or part of a pattern.”<sup>13</sup> If our investigation of an RM allegation confirms that falsification, fabrication, or plagiarism occurred, we examine a representative sample of other research work by the subject, including proposals submitted to other funding agencies, internal proposals, lab notebooks and other research publications and reports, to look for other instances of falsification, fabrication, and/or plagiarism, which would establish a pattern.

Evidence of a pattern of RM is relevant for two purposes. First, it can negate any suggestion by the subject that the RM act was inadvertent, which is necessary to establish the level of intent to make an RM finding. Second, it can inform the adjudicator about the seriousness of the subject’s misconduct.

### PI Plagiarizes Text in Four SBIR Proposals

We concluded that four Small Business Innovation Research (SBIR) proposals submitted to NSF by a scientist working at a small Florida company contained plagiarized text. We did not believe that such a small company could conduct an impartial investigation, so we conducted our own investigation.

During our investigation, the PI stated that she had used some material in her proposals that was prepared by a marketing specialist and some material that was from commercial sources. She stated that she did not believe she needed to quote such material.

We determined that the PI plagiarized, and that factors such as her education, publications, and work experience demonstrated that she was aware of the appropriate scholarly standards. Therefore, we concluded that she acted knowingly when she copied material into her NSF proposals.

Based on our recommendations, NSF sent the PI a letter of reprimand informing her that NSF has made a finding of research misconduct against her; required her to certify for one year that proposals or reports she submits to NSF do not contain plagiarized, fabricated, or falsified material; and directed the PI to certify to our office that she completed a course in research ethics within one year of the final disposition of the case.

### Pattern of Plagiarism in Researcher’s Proposals

We referred an allegation to a Virginia university that a PI submitted a proposal to NSF that contained plagiarized text. The PI denied plagiarizing, asserting he did not understand NSF’s citation policy. However, the university substantiated the allegation and found additional plagiarism in that proposal as well as in several of the PI’s other proposals, which constituted a pattern of plagiarism.

<sup>13</sup> 45 C.F.R. § 689.3(b)(3).

In contrast, the committee determined that the PI appropriately cited his sources in manuscripts he submitted to scientific journals, thus demonstrating he was aware of appropriate citation practices. Nonetheless, the PI—who is a faculty member, a researcher, a director of an NSF-funded center, and a former editor-in-chief of a scientific publication—contended that he was not familiar with NSF’s standards and expectations for proposals. The university did not find his claim of ignorance to be plausible.

We concurred with the university’s conclusions and its finding of research misconduct. We recommended that NSF: send the PI a letter of reprimand notifying him NSF is making a finding of research misconduct; require the PI to take a course on responsible research practices with emphasis on proper citation and attribution practices of proposals; for the next three years, require the PI to provide with every submission to NSF a certification that the submitted work is either entirely his own writing or is properly cited; and, for three years, require the PI to provide an assurance by the university’s research integrity officer that, to the best of his or her knowledge, the PI’s work is entirely his own writing or is properly cited. NSF’s decision is pending.

### **PI Breached the Confidentiality of NSF’s Merit Review Process and Plagiarized Text**

We determined that a PI who was a senior professor at a Texas university submitted three NSF proposals, two of which were funded, containing text copied from multiple source documents. One source document was an NSF proposal the PI received for merit review.

The university determined that the PI violated NSF proposal review rules, failed to put copied text into quotations, and failed to provide citations for additional materials copied from websites. However, the committee stated that the community standards for referencing websites are rapidly changing and therefore the PI’s lack of citations to websites were not inconsistent with community standards. The Committee concluded that, although the PI should face some disciplinary action, the violations did not warrant a finding of research misconduct.

We disagreed with the university’s conclusion that the requirement for referencing websites is different than references to other written material. Attribution to the work of authors is required regardless of the source. Distinguishing and attributing copied material serves two essential objectives: giving credit to the source authors, and also informing the reader that the author is not taking credit for the distinguished material.

We determined that the PI had breached the confidentiality of merit review and plagiarized text into three NSF proposals. We recommended that NSF: make a finding of research misconduct against the PI; send the PI a letter of reprimand; require the PI’s employer to submit assurances for three years; prohibit the PI from serving as a reviewer of NSF proposals for five years; and require the PI to provide certification for completion of a course in ethics training. NSF’s decision is pending.

## **PI Blames Students for Plagiarism**

We determined that a PI at an Alabama university plagiarized a substantial amount of text from someone else's proposal into his own. During our inquiry, the PI told us he received a copy of an awarded proposal from NSF and gave it to more than eighty of his students to perform a literature review—and he did not assess their work before incorporating it into the proposal he submitted to NSF. The PI also told us there was no unattributed copied text in any of his other proposals, but we found copied text in two other proposals. We referred the matter to his university for investigation. The university concluded the PI was solely responsible for the plagiarism in his proposal; however, the PI left the university before the investigation was completed.

We concurred with the university's conclusions. We recommended that NSF: send the PI a letter of reprimand notifying him NSF is making a finding of research misconduct; require the PI and his students to take a course on responsible research practices with emphasis on proper citation and attribution practices; for the next two years, require the PI to provide a certification with every submission to NSF that the submitted work is either entirely his own writing or is properly cited; for the next two years, require the PI to ensure his employer submits assurances that the PI's submitted work is either entirely his own writing or is properly cited. NSF's decision is pending.

## **PI Plagiarizes from Online Sources**

We determined that a PI from a Texas university submitted a proposal to NSF containing text plagiarized primarily from online sources. The PI admitted that he copied the material, but explained he was rushing to meet a deadline. We referred the matter to the university for investigation. The university concluded that the PI recklessly committed plagiarism and required the PI to: not submit external grant proposals for one year; recuse himself from acting as a merit reviewer for federal grants for two years; not be eligible for a merit pay increase for one year; and complete an ethics course within three months.

We concurred with the university assessment, but concluded that the PI plagiarized knowingly: plagiarizing to meet a deadline does not render the perpetrator less aware of his actions. We recommended that NSF send a letter to the PI informing him that NSF made a finding of research misconduct; require the PI to certify for two years that proposals he submits to NSF contain no plagiarized, falsified, or fabricated material; and direct the PI to complete a research ethics course within one year. NSF's decision is pending.

## **PI Plagiarizes Text in NSF Proposal**

We concluded that a PI from a Louisiana university submitted an NSF proposal that contained plagiarized text, some of which was taken from a funded NSF proposal. The PI admitted that she had plagiarized, but she argued that, since the proposal had been withdrawn and was not funded, there could be no research misconduct. The university found that the PI committed plagiarism, citing, among other reasons, that the PI had signed a university form prior to submission of the proposal that clearly stated that the PI certifies the proposal

is free of plagiarism. The university's actions included: prohibiting her from submitting proposals, papers for publication, or papers for presentations for one year unless they were reviewed and approved by administrators; making her ineligible for merit salary increase for one year; requiring her to take an ethics class; barring her from serving on one student program for one year and another for two years.

We agreed with the university's conclusions and recommended that NSF: make a finding of research misconduct; send the PI a letter of reprimand; require her to certify for one year that proposals or reports she submits to NSF do not contain plagiarized, fabricated, or falsified material; provide documentation that she completed the two-day ethics course; and bar the subject from serving as a merit reviewer for one year. NSF's decision is pending.

### **Actions by NSF Management on Previously Reported Research Misconduct Investigations**

NSF has taken administrative action to address our recommendations on five research misconduct cases reported in our March and September 2009 reports. In each case, NSF made a finding of research misconduct and issued a letter of reprimand. NSF also took additional significant actions in response to our recommendations as summarized below.

- NSF debarred for five years a PI at an east coast university who extensively plagiarized into two NSF proposals, and also barred the PI from serving as a merit reviewer for five years.<sup>14</sup>
- NSF proposed debarring for three years a doctoral student at a Pennsylvania university who demonstrated a pattern of purposeful data falsification.<sup>15</sup> NSF also required certification of the retraction of the published work and her completion of ethics training; for three years following the debarment period required the submission of certifications and assurances; and banned her from serving as a reviewer of NSF proposals.
- NSF's Deputy Director debarred for two years a research professor who fabricated and falsified data in his NSF proposal, and also required the subject and his employer to provide certifications and assurances for three years after debarment ends, prohibited the subject from serving as a reviewer of NSF proposals for three years, and required the subject to complete a course in ethics training.<sup>16</sup> The subject appealed all actions, which were upheld by the Director.

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14 March 2009 Semiannual Report, pp. 45-46.

15 September 2009 Semiannual Report, pp. 21-23.

16 September 2009 Semiannual Report, p. 23.

- NSF required certifications for one year from a doctoral student at a Nevada university who plagiarized in a proposal he submitted to NSF requesting support to complete his dissertation.<sup>17</sup> NSF also required the student to send to OIG the materials he developed for the university-imposed presentation on research ethics; and required certification that he completed a research ethics course.
- NSF required certifications from a PI at a Wyoming university who plagiarized into three separate proposals he submitted to NSF.<sup>18</sup> NSF also required the PI to send our office all materials developed for the university-imposed research ethics presentation, and required certification that he completed a course in research ethics.

## Reviews to Improve NSF Processes

When we conduct investigations, we look for problems that could be avoided prospectively if NSF modified its internal processes or external requirements. During this reporting period we completed two reviews that arose from investigations, resulting in recommendations involving possible NSF staff conflicts of interests.

### Using Electronic Means to Handle Conflict of Interests Recusals by NSF Staff

NSF staff avoid conflicts of interests (COIs) by recusing themselves from handling proposals and awards with which they have an actual or possible appearance of a conflict because they have an affiliation or relationship with an institution, person, or project. Traditionally, each NSF program division handled COI recusals manually, with each staff member being responsible for informing the division's conflicts official about proposals/awards, individuals, and institutions from which the staff member should be recused.

NSF's electronic proposal system includes a conflict of interests module which staff can use to declare and record any institutional, individual, or proposal conflicts. We reviewed the use of this module by NSF's divisions and concluded that it has several advantages over manually checking for conflicts of interests. Therefore, we recommended that NSF require staff to use the COI module in the electronic proposal system. We also recommended that NSF ensure that all relevant staff receive training in the use of the module and make other technical improvements. NSF's decision is pending.

### Recommendations to Improve NSF's Hiring Process

We received allegations that a temporary NSF employee, hired through the Intergovernmental Personnel Act (IPA), inappropriately participated in the hiring of a division director who would be directly involved in determining significant

<sup>17</sup> September 2009 Semiannual Report, p. 23.

<sup>18</sup> September 2009 Semiannual Report, p. 24.

funding for the IPA's home institution. Based on our review, we made two recommendations to NSF to strengthen the integrity of its hiring process. Our investigation into the alleged conflict of interests is ongoing.

The IPA had sought advice from NSF's Designated Agency Ethics Official (DAEO) on his involvement in an earlier hiring effort for a program position related to his home institution, and the DAEO advised him not to participate. When the hiring process began for the new director of the division that included that same program—raising, in our view, the same conflicts issues—the IPA did not directly seek new or clarifying advice from the DAEO for the new position. Late in the selection process, concerns came to the DAEO's attention and she advised the IPA not to participate in the selection process. NSF's Division of Human Resource Management was not notified of the DAEO's advice and therefore did not recuse the IPA from his role as selecting official or other aspects of the selection process.

Since many NSF supervisory program executives are IPAs, the issue that arose could recur. In response to our recommendations, NSF concluded that the new division director will handle any issues on which the IPA may be conflicted without involvement of the IPA. NSF agreed to revise its Manual 14, "Personnel Manual," to explicitly require IPAs (including Assistant Directors (ADs) and Division Directors) with selection authority to seek advice from the DAEO regarding participation in the hiring process. HRM will consider implementing mechanisms to ensure that hiring actions are conducted consistent with the DAEO's advice. In addition, the DAEO agreed to provide such guidance to ADs in writing; this latter step is consistent with recent OGE guidance to DAEOs on conflict of interests waivers.