

#### NATIONAL SCIENCE FOUNDATION OFFICE OF INSPECTOR GENERAL OFFICE OF INVESTIGATIONS

# **CLOSEOUT MEMORANDUM**

Case Number: A13010014

Page 1 of 1

We received an allegation that the annual reports a PI submitted to NSF were inaccurate and misrepresented the publications supported from his grant. We determined the allegation was credible and referred the matter to the grantee University. It concluded the PI's misrepresentations met the University's and NSF's definition of falsification and made a finding of research misconduct. We concurred with the University and recommended NSF make a finding of research misconduct and take other actions to protect NSF's interests. NSF made a finding and required the PI to take an RCR course and to provide certifications and assurances for three years. Accordingly, this case is <u>closed</u> with no further action taken. This memorandum, NSF's adjudication, and OIG's report of investigation compose the closeout.

#### NATIONAL SCIENCE FOUNDATION

4201 WILSON BOULEVARD ARLINGTON, VIRGINIA 22230

OCT 2 1 2015



#### CERTIFIED MAIL-RETURN RECEIPT REQUESTED



Re: Notice of Research Misconduct

Dear Dr.

This letter serves as formal notice that the National Science Foundation ("NSF") has made a finding of research misconduct pursuant to 45 C.F.R. Part 689. The basis for this finding is set forth in the attached report of the NSF Office of the Inspector General ("OIG").

As a result of this finding, NSF is taking or imposing the following actions:

- 1. Issuance of a letter of reprimand. This letter documenting NSF's finding of research misconduct also serves as your letter of reprimand.
- 2. You are required to complete a comprehensive responsible conduct of research training course within one year from the date after your research misconduct determination becomes final, and provide documentation of the program's content. The instruction should be in an interactive format (e.g., an instructor-led course, workshop, etc.) and should include a discussion of falsification.
- 3. For a period of three years after your research misconduct determination becomes final, you are required to submit contemporaneous certifications that any proposals or reports you submit to NSF do not contain plagiarized, falsified, or fabricated material. All certifications and assurances should be submitted in writing to the following e-mail address: certification@nsf.gov.

4. For a period of three years after your research misconduct determination becomes final, you are required to submit contemporaneous assurances by a responsible official of your employer that any proposals or reports you submit to NSF do not contain plagiarized, falsified, or fabricated material. All certifications and assurances should be submitted in writing to the following e-mail address: certification@nsf.gov.

#### Research Misconduct

Under NSF's regulations, "research misconduct" is defined as "fabrication, falsification, or plagiarism in proposing or performing research funded by NSF ..." 45 CFR § 689.1(a). NSF defines falsification as "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." 45 CFR § 689.1(a)(2).

A finding of research misconduct requires that:

- (1) There be a significant departure from accepted practices of the relevant research community; and
- (2) The research misconduct be committed intentionally, or knowingly, or recklessly; and
- (3) The allegation be proven by a preponderance of evidence.

45 CFR § 689.2(c)

As the OIG report indicates, while a Professor in the Curvey Department at ("University"), you received funding from NSF, and in conjunction with the NSF funding, you submitted two annual reports that contained multiple inaccuracies, including the citation of publications and publications not related to the NSF funding because they were published prior to the grant. Specifically, your first annual report ("AR1") listed 23 papers, yet only 9 papers were products of the NSF award. Of these 9 papers in AR1, only 2 acknowledge NSF support. Your second annual report ("AR2") listed 51 papers, yet only 23 papers were a product of the NSF award. Of these 23 papers in AR2, only 8 papers acknowledge NSF support.

The University referred this matter to an Investigating Committee ("IC") who concluded that your actions represent research misconduct, reflected a gross deviation from the standards of conduct that a reasonable individual would observe, and were a significant departure from accepted practice of the research community. The University imposed the following actions: responsible conduct of research training, quarterly progress reports for one year, and review of all annual reports before submission for three years.

You acknowledge and take responsibility for the inconsistencies in AR1 and AR2. Your admission and the facts identified by NSF's OIG permit me to conclude that your actions meet the applicable definition of falsification as set forth in NSF's regulations.

Pursuant to NSF's regulations, NSF must also determine whether to make a *finding* of research misconduct based on a preponderance of the evidence. 45 CFR § 689.2(c). Based on information in both the OIG investigative report and the IC report, it is clear that you were responsible for the falsification of reports to NSF and acted knowingly. You overwhelmingly misrepresented your accomplishments through your publications to NSF. More than 90% of the publications in AR1 (21/23) and 80% of the publications in AR2 (42/50) are not valid. You claim that distractions led to inaccuracies in AR1 which, in turn, led to inaccuracies in AR2 because AR2 was based on AR1. However, this is not credible. Not only does the evidence support an extensive number, diversity and history of false listings but, in addition to the errors replicated from AR1 to AR2, you edited AR2, which indicates that you chose what to include. Furthermore, you overrepresented your accomplishments by falsely listing journal publications that did not exist and that did not cite any NSF support or that cited previous NSF support. As noted in the OIG investigative report and IC report, all of your examined annual and final reports, as well as your listed publications, contained falsifications which indicate a continuing pattern of behavior.

These facts permit me to conclude that, based on a preponderance of evidence, the falsification of reports was committed knowingly and constitutes a significant departure from accepted practices of the relevant research community. Therefore, I am issuing a finding of research misconduct against you.

NSF's regulations establish a range of actions (Group I, II, and III) that can be taken in response to a finding of research misconduct. 45 C.F.R. § 689.3(a). Group I actions include issuing a letter of reprimand; conditioning awards on prior approval of particular activities from NSF; requiring that an institution or individual obtain special prior approval of particular activities from NSF; and requiring that an institutional representative certify as to the accuracy of reports or certifications of compliance with particular requirements. 45 C.F.R. § 689.3(a)(1). Group II actions include award suspension or restrictions on designated activities or expenditures; requiring special reviews of requests for funding; and requiring correction to the research record. 45 C.F.R. § 689.3(a)(2). Group III actions include suspension or termination of awards; prohibitions on participation as NSF reviewers, advisors or consultants; and debarment or suspension from participation in NSF programs. 45 C.F.R. § 689.3(a)(3).

In determining the severity of the actions to impose for research misconduct, I have considered the seriousness of the research misconduct, which indicates that you knowingly falsified annual reports. I have also considered other relevant circumstances. See 45 CFR § 689.3(b). Based on these criteria, I propose the actions enumerated in paragraphs 1-4, above.

# Appeal Procedures for Finding of Research Misconduct

Under NSF's regulations you have 30 days after receipt of this letter to submit an appeal of this finding, in writing to the Director of the National Science Foundation, Attention: 4201 Wilson Boulevard, Arlington, Virginia 22230. 45 C.F.R. § 689.10(a). For your information, we are attaching a copy of the applicable regulations.

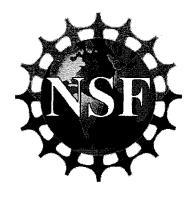
Sincerely,

Richard O. Buckius Chief Operating Officer

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Enclosures: OIG Report of Investigation 45 CFR Part 689

# National Science Foundation Office of Inspector General



# Report of Investigation Case Number A13010014

September 30, 2014

# This Report of Investigation is provided to you FOR OFFICIAL USE ONLY.

It contains protected personal information, the unauthorized disclosure of which may result in personal criminal liability under the Privacy Act, 5 U.S.C. § 552a. This report may be further disclosed within NSF only to individuals who must have knowledge of its contents to facilitate NSF's assessment and resolution of this matter. This report may be disclosed outside NSF only under the Freedom of Information and Privacy Acts, 5 U.S.C. §§ 552 & 552a. Please take appropriate precautions handling this report of investigation.

#### **Executive Summary**

OIG received an allegation that a PI's annual reports were inaccurate and misrepresented the publications supported from his grant. We reviewed one of the PI's annual reports and confirmed it had numerous misrepresentations. We referred the matter to the University, which concluded the PI's misrepresentations met the University's and NSF's definition of falsification and made a finding of research misconduct. We concur with the University and recommend NSF make a finding of research misconduct; require the PI to take an RCR course; and require the PI to provide certifications and assurances for three years.

# OIG's Inquiry and Referral

OIG received an allegation that a PI's¹ (the Subject's) annual report for the grant (the grant²) contained inaccuracies—including publications that did not exist, papers that were published before the grant started, and papers that did not cite NSF support—that were so misrepresentative as to be unethical and constitute research misconduct. The complainant provided a list of questioned publications that appeared to be a subset of the Subject's second annual report (AR2) for the grant.

We reviewed AR2<sup>3</sup> and found it listed 51 publications. Of those, we found only 11 were published after the start date of the grant, and of those 11, 6 were published within the first 3 months of the grant. Eleven papers were previously listed as being supported from the Subject's previous NSF grant.<sup>4</sup> We were unable to locate 14 publications with the information provided in AR2. Ultimately, it appeared only three of the papers were accurate and acknowledged the grant, meaning approximately 94% of the information provided in this section appeared false.

NSF guidance for proper listing of publications in annual and final reports states: "For each publication that you list in the Products section, you must indicate whether you acknowledged NSF support in the product and whether it was peer reviewed. (Do not include publications that are outside the scope of NSF's support for the project.)" The guidance at Research.gov states the publications listed should be from that project and from the specified reporting period: "Within the Products section, you can list any products resulting from your project during the

Professor (the University).

2 The grant was awarded to the University and listed the Subject as the PI.

3 Tab 1

4 Was one of seven proposals totaling approximately proposals. The largest of these (in award size) was awarded to the University and listed the Subject as PI.

<sup>&</sup>lt;sup>5</sup> http://www.nsf.gov/pubs/2013/nsf13094/nsf13094.jsp

specified reporting period". Furthermore, the guidelines in the Federal Register of the Office of Science Technology Policy affirm that misrepresentations of a researcher's publications may constitute falsification or fabrication.

NSF's definition of "[f]abrication means making up data or results and recording or reporting them."8 NSF's definition of falsification means "changing ... results such that the research is not accurately represented in the research record".9 Either could potentially apply to the Subject's actions, so we considered the allegation of the Subject's misrepresentations of his accomplishments, as evinced by his publications, to be an allegation of research misconduct.

We wrote to the Subject<sup>10</sup> who responded<sup>11</sup> acknowledging inconsistencies, but disputing some of our analysis. He said AR2 only listed 34 publications, of which he identified 22 papers as "published, accepted, in press, or published", 9 as "submitted", and 3 as "in preparation". Of the 22 papers, he agreed he should not have claimed six as being supported by the grant. Even after removing the six papers he said were inappropriately listed, only four of the remaining publications give credit to the support furnished by the grant.

Because the Subject's response did not dispel the allegation, and we were unable to confirm the authenticity of unpublished papers, we referred an Inquiry to the University where a committee would have better access to evidence supporting or refuting this allegation. 12

#### **University Action**

During its inquiry, the Inquiry Committee (Committee) requested clarification of several issues, including the allegation and the scope, which we addressed.<sup>13</sup> The Vice President for Research<sup>14</sup> (VPR) subsequently notified us that the Committee concluded an Investigation was not warranted. 15 The VPR sent a follow-up letter reaffirming the Committee's decision and indicating the Committee

<sup>6</sup> http://www.research.gov/researchportal/appmanager/base/desktop?\_nfpb=true&\_pageLabel=research\_page\_n\_about\_por

<sup>&</sup>lt;sup>7</sup> https://www.federalregister.gov/articles/2000/12/06/00-30852/executive-office-of-the-presidentfederal-policy-on-research-misconduct-preamble-for-research#p-37

<sup>8 45</sup> CFR § 689.1(a)(1)

<sup>9 45</sup> CFR § 689.1(a)(2)

<sup>&</sup>lt;sup>10</sup> Tab 2. Note that we incorrectly identified the number of publications in AR2 as 52 in the letter.

<sup>11</sup> Tab 3

<sup>&</sup>lt;sup>12</sup> Tab 4

<sup>&</sup>lt;sup>13</sup> Tab 5 includes the Committee's questions and our response.

<sup>15</sup> Tab 6

had considered evidence from the University's Compliance Department audit, which was the first indication from the University of such an audit. 16

We did not accept the Inquiry report for several reasons and requested clarification of the Committee's reasoning and conclusions.<sup>17</sup> The University responded by providing a copy of the compliance audit and requesting additional time.<sup>18</sup> We notified the University of our concern about the audit report and reiterated the guidance we had earlier provided to the Committee about the allegation<sup>19</sup> and scope.<sup>20</sup> The University notified us the Committee, in light of our clarifying questions, recommended a full investigation, and the University agreed.<sup>21</sup> We referred the investigation to the University, reiterating our concerns about the allegation and scope.<sup>22</sup> The University appointed an Investigation Committee (the IC) that would address the range of concerns we raised.

The University provided us with the IC's report, the Subject's response to the IC report, the University adjudication, and an appendix assessing each questioned publication.<sup>23</sup> The IC assessed the allegation as the Subject misrepresented his publications in two annual progress reports (AR1<sup>24</sup> and AR2) to NSF and failed to credit the NSF grant as the source of funding in the publications.<sup>25</sup>

The IC's report noted AR1 listed 23 papers and concluded: 2 were duplicates; and 12 were published or "in press" before the grant began, so should not have been included. The IC determined no more than 9 of the 23 papers the Subject listed should have been included. Of those nine, seven do not acknowledge the grant. Regarding the accuracy of the listings, one paper designated as "in press" was not and two papers designated as "submitted" were not.<sup>26</sup>

In AR2, 51 papers were listed (actually 50 papers and 1 book chapter). The IC concluded: 7 were duplicates; 20 papers could not have been or were not supported by the grant. The IC determined no more than 23 of the 50 papers should have been included. Of those 23, 15 do not acknowledge the grant.<sup>27</sup>

 $<sup>^{16}</sup>$  Tab  $^{7}$ 

<sup>17</sup> Tab 8

<sup>18</sup> Tab 9

<sup>&</sup>lt;sup>19</sup> As noted earlier in the report, the Subject's actions could be considered to meet NSF's definition of fabrication or falsification. At this point, we considered the allegations of the Subject's misrepresentations to be allegations falsification, rather than fabrication, because some of the publications appeared legitimate.

<sup>&</sup>lt;sup>20</sup> Tab 10

<sup>&</sup>lt;sup>21</sup> Tab 11

<sup>&</sup>lt;sup>22</sup> Tab 12

<sup>&</sup>lt;sup>23</sup> The documents provided by the University are Tab 13.

<sup>&</sup>lt;sup>24</sup> Tab 14

<sup>&</sup>lt;sup>25</sup> AR1 reported results from Sep 2010 – Aug 11 and AR2 reported results from Sep 11 – Aug 12.

<sup>&</sup>lt;sup>26</sup> Tab 13, B, p. 3 [page numbers in this report refer to the page of the pdf]

<sup>&</sup>lt;sup>27</sup> Ibid.

The IC interviewed the Subject to determine what criteria he considered necessary to warrant acknowledging the grant in a publication. He considered that if the paper reports any material gathered or analyzed, or any portion of the text was written or edited by him during the grant period, then the grant would be acknowledged. The IC tried to look at his salary during the grant in order to compare when funds were being used to the dates papers were published, but the grant only provided 2 months of salary. He did not file any effort reports during this time, so there is no record of how the Subject allocated his time during the funding period.

The IC noted the Subject accepted responsibility for submitting false annual reports regarding his scientific publications. He told the IC he would submit an erratum for each publication that failed to acknowledge NSF but should have. He said back surgery and the concomitant backlog of "urgent responsibilities ... may have impaired his judgment and/or perspicacity" during the preparation of AR1. The Subject said AR2 contained duplicate citations because FastLane automatically populated listings from AR1. He failed to notice this and correct it. The Subject described his false reports and failure to acknowledge NSF support as due to error and haste on his part.

The IC unanimously concluded the Subject's act met definition of falsification: "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". It further concluded the Subject acted recklessly, but not intentionally, "in that his actions reflected a gross deviation from the standards of conduct that a reasonable individual would observe". It concluded the Subject's reckless falsifications constituted research misconduct because they were a significant departure from accepted practice. It stated its conclusions were supported by a preponderance of the evidence based on the diversity of the falsification, which included duplicate references, references reported before the funding period, references that did not acknowledge the grant, and misrepresentation of the manuscript status. 30

The IC examined progress reports for two of the Subject's previous grants to determine if there was a pattern of false listings.<sup>31</sup> The first grant (grant1<sup>32</sup>) did not list any journal publications in the annual or final reports. The second grant (grant2<sup>33</sup>) did not list any publications in the first annual report, but the second annual report listed 11. Of those, the IC was able to find only seven of them; of

<sup>&</sup>lt;sup>28</sup> *Id.*, p. 4, 7 [emphasis added by IC, p. 4]

<sup>&</sup>lt;sup>29</sup> Id., p. 2, 4, 7

<sup>&</sup>lt;sup>30</sup> *Id.*, p. 2, 7

<sup>31</sup> Tab 13 B, p. 6

was submitted by the University and lists the Subject as PI. It was awarded for and was active from Aug 15, 2010 – Jul 31, 2013.

was submitted by the University and lists the Subject as PI. It was awarded for and was active from Sep 1, 2008 – Aug 31, 2011.

those seven, only one acknowledged NSF support (the IC did not identify which seven it could find, nor did it identify which one acknowledged NSF support). The IC noted the third annual report repeated the publications of the second annual report (actually, the Subject listed 12 publications in the third annual report). The IC did not address the final report, but it lists 29 journal publications and one book chapter. The IC acknowledged repeated failure on the part of the Subject to accurately list his NSF-supported publications, but concluded "there is not enough evidence to indicate a 'pattern'".<sup>34</sup>

The University adjudication agreed with the IC that the Subject's actions "meet the standard of research misconduct" as defined by and NSF.<sup>35</sup> It concluded the research misconduct was a consequence of reckless action and took the following actions: 1) the Subject must complete on-line RCR training and provide certificate of completion; 2) the Subject must provide quarterly progress reports for any externally funded project for one year; 3) if the progress reports are accurate and timely, he will no longer be required to provide them. If they are not, he will have to provide them another fiscal year; 4) the Subject must provide, no less than 2 weeks prior to submission, all annual reports he plans to submit to any funding agency for a period of three years, and may submit them only after his office confirms their accuracy.

#### OIG's Assessment

NSF's Research Misconduct Regulation states that a finding of misconduct requires: (1) there be a significant departure from accepted practices of the relevant research community; (2) the research misconduct be committed intentionally, or knowingly, or recklessly; and (3) the allegation be proven by a preponderance of the evidence.<sup>36</sup>

We concluded the University's procedures were reasonable, and its report was accurate.<sup>37</sup> Accordingly, we accept the University's investigative effort and report. Both the University and OIG use preponderance of the evidence as the standard of proof. An important caveat for this ROI is that the IC and OIG only considered whether a journal listing was accurately attributed to a particular grant during a particular reporting period. Neither the IC nor OIG attempted to determine whether the research described in the paper was scientifically related to the research supported in the grant.

The IC's evaluation of the annual reports is very similar to ours. For AR1, out of the 23 papers listed, only 2 were correctly listed with appropriate attribution,

, Vice President of Research and Research

<sup>34</sup> Tab 13 B, p. 6

<sup>&</sup>lt;sup>35</sup> Tab 13 D. The adjudicator was Integrity Officer for the University.

<sup>36 45</sup> C.F.R. §689.2(c)

<sup>37 45</sup> C.F.R. §689.9(a)

so only 9% were valid. For AR2, only 8 papers out of the 50 were correctly listed with appropriate attribution, so only 16% were valid. Papers in which the grant should have been acknowledged, but wasn't represent 30% of AR1 (7 out of 23) and 30% of AR2 (15 out of 50). The effect of the Subject's falsifications is that he substantially over-represented his actual accomplishments to NSF, while simultaneously not acknowledging to the community NSF's support for his research.

Regarding the Subject's intent, he claimed distractions for AR1, which led to problems with AR2 because AR2 was based on AR1. The IC concluded this was reckless. We concur with the University the Subject acted with a culpable state of mind, but given the amount and diversity of falsification the Subject engaged in, we conclude the Subject acted knowingly. He edited AR2, which indicates he was knowingly choosing what to remove and what to include. Furthermore, for each publication, he decided at that time not to include NSF in the acknowledgments, yet he falsely told NSF they were accomplishments supported by NSF. He also knew many of those publications were submitted before the grant began, so could not have been supported by the grant, particularly those listed in AR2. We also note the totality of the effect of his numerous misrepresentations enhances, rather than diminishes, his perceived productivity with NSF grants, which could be indicative of intent for doing so.

As noted above, the IC examined some of the Subject's journal publications listed in previous grants' reports. It found no publications for one grant1, and found journals listed in the annual reports of grant2. The second annual report of grant2 lists 11 journal publications, the third annual report lists 12, and the final report lists 29 journal publications and 1 book chapter.<sup>38</sup> The first 11 entries of the final report duplicate those of the second annual report, and the 12th entry is the new addition to the third annual report. Like the IC, we could only verify one journal publication cited grant2 from the second annual report. The additional, nonduplicative listing in the third annual report also cited grant2. Of the additional 16 journal publication entries in the final report, we could only find one that acknowledged grant2 (some could not be found; some acknowledged other NSF grants, mostly grant1). The second annual report of grant2 lists only one paper citing grant2, the third annual report lists only one paper citing grant2, and not previously cited in the second annual report, and the final report lists one additional publication acknowledging grant2. Thus, out of the 29 publications in the final report of grant2, only 3 actually cite grant2 (10%). Given that every annual or final report, which we examined and that lists publications, contains numerous, false publications purportedly documenting his accomplishments from a grant, we disagree with the IC that the evidence does not indicate a pattern.

<sup>&</sup>lt;sup>38</sup> The final report for grant2 is Tab 15. The publication list begins on p. 10. The publications that acknowledge grant2 are highlighted.

# The Act

As described above, the Subject overwhelmingly misrepresented his accomplishments, via his publications, to NSF. More than 90% of the publications in AR1 (21/23) and 80% of the publications in AR2 (42/50) are not valid. We agree with the University the Subject's misrepresentations in AR1 and AR2 meet NSF's (and the University's) definition of falsification. Furthermore, we conclude approximately 90% of the publications listed in the annual and final reports for grant2 meet NSF's definition for falsification.

#### Intent

The University concluded the Subject actions were reckless, noting the circumstances surrounding the creation of the annual reports. We did not find those explanations compelling, particularly weighed against the evidence supporting the extensive number, the diversity, and the history of false listings. Additionally, many listings in later reports appear copied and pasted from early reports, which is a knowing act. Thus, we conclude the Subject acted knowingly.

#### Significant Departure

We concur with the Committee that the Subject's actions represent a significant departure from accepted practices of the research community. As noted above, NSF expects PIs to provide an accurate representation of their accomplishments under the grant. One way in which PIs do so is through their publications. NSF's guidance is clear in that publications should be related to the grant in substance and in the time frame of the grant. We conclude the Subject's inflation of his accomplishments in his annual and final reports significantly depart not just from community standards, but also NSF's expectations of adherence to its standards for reporting results.

We conclude the Subject over-represented his accomplishments due to his NSF grants by falsely listing journal publications that did not exist, that did not cite any NSF support, or that cited previous NSF support. We conclude the Subject did so knowingly, and the falsifications were a significant departure from accepted research community and NSF standards. Accordingly, we conclude the Subject committed research misconduct.

# **OIG's Recommended Disposition**

In deciding what actions are appropriate when making a finding of research misconduct, NSF should consider several factors,<sup>39</sup> three of which we discuss below.

#### Pattern

As noted in the IC report and in this ROI, all of the Subject's annual and final reports that we examined and that list publications contain falsifications. We

<sup>39 45</sup> C.F.R. §689.3(b)

disagree with the IC that the evidence does not indicate a pattern of the Subject misrepresenting his accomplishments as represented by publications listed in the annual and final reports of his grants.

# Impact on the Research Record and Seriousness

The effect on the research record as a result of the Subject's actions is moderate to potentially significant. Annual and final reports are available to the public. Thus, to the extent the Subject's reports have been disseminated, the research record is affected and creates a false impression of the magnitude of the PI's publications, hence research accomplishments, with NSF support. The Subject and his collaborators have received approximately \$6.8M just from the grants discussed in this ROI. While the Subject has listed over 100 publications attributed to those grants and particular performance periods, only 11 are correctly attributed. If the false impression created by the PI has affected reviewers and NSF program officers to more favorably consider his proposals for funding over other's with fewer publications, then his misrepresentations have had a very significant negative impact on NSF and the research record.

#### The Subject's Response

The Subject did not respond to our draft ROI.

# Recommendations

Based on the evidence, we recommend NSF:

- Send the Subject a letter of reprimand notifying him that NSF has made a finding of research misconduct.<sup>40</sup>
- Require the Subject to certify to the Assistant Inspector General for Investigations (AIGI) his completion of a responsible conduct of research training program and provide documentation of the program's content within 1 year of NSF's finding.<sup>41</sup> The instruction should be in an interactive format (e.g., an instructor-led course) and specifically include falsification.

For three years as of the date of NSF's finding:

- Require for each document (proposal, annual or final report, etc.) to which
  the Subject contributes for submission to NSF (directly or through his
  institution),
  - the Subject submit a contemporaneous certification to the AIGI that the document does not contain plagiarism, falsification, or fabrication; and that the annual and final progress reports reflect

<sup>&</sup>lt;sup>40</sup> A Group I action 45 C.F.R. 689.3(a)(1)(i)

<sup>&</sup>lt;sup>41</sup> This action is similar to Group I actions 45 C.F.R. 689.3(a)(1).

#### Sensitive

- research directly supported by the grant and accomplished during the reporting period of the submitted report.<sup>42</sup>
- o the Subject submit contemporaneous assurances from a responsible official of his employer to the AIGI that the document does not contain plagiarism, falsification, or fabrication; and that the annual and final reports reflect research directly supported by the grant and accomplished during the reporting period of the submitted report.<sup>43</sup>

These recommendations mirror the University's actions.

<sup>&</sup>lt;sup>42</sup> This action is similar to 45 C.F.R. 689.3(a)(1)(iii).

<sup>&</sup>lt;sup>43</sup> A Group I action 45 C.F.R. 689.3(a)(1)(iii).