

CLOSEOUT FOR M-92060023

On June 12, 1992, OIG received allegations of misconduct in science from the complainant, [REDACTED] a graduate student [REDACTED]. The complainant alleged that her advisor, the subject, [REDACTED] who is a faculty member in the same department: 1) published results that were based on incorrect assumptions; 2) published results on two separate occasions that contained a fundamental (conceptual) error associated with the determination of an equilibrium value for a chemical reaction; 3) harassed the complainant after she challenged the subject's scientific results to the point that the harassment interfered with the complainant's development as a scientist; and 4) misused NSF funds that supported the complainant when he interfered with the complainant's development as a scientist. The subject was funded by an NSF award, [REDACTED] and the complainant was supported under the graduate research fellowship program awards [REDACTED] to the institution.

OIG examined the complainant's letter and supporting documents. We contacted the complainant who provided additional information and documents, such as letters, notes and annotated copies of the publications involved.

With respect to allegation #1, the subject's co-authored paper contained an interpretation of a specific compound's molecular structure that allegedly was derived from experimental results that were based on incorrect assumptions. The complainant alleged that the subject was made aware of these incorrect assumptions when, prior to the publication of the subject's co-authored paper, she questioned the subject's graduate student in the subject's presence about the experimental procedures and assumptions. In addition, the complainant claimed that the subject later received "advance notice" of another research group's proposed interpretation of the same molecular structure. She alleged that the "advance notice" showed that the proposed interpretation by the subject and his graduate student was incorrect.

In OIG's interviews of the complainant, we were told that, when she questioned the subject's graduate student, she had no evidence that their assumptions were incorrect. She explained that her questions were her attempt, as a graduate student, to learn by challenging procedures and results that seemed uncertain.

The complainant told OIG that the "advance notice" consisted of a single-page faxed copy of another research group's proposed molecular structure for the same substance as the one being studied by the subject and his graduate student. The other group's submitted structure was different from the one proposed in the subject's co-authored paper. The complainant said that

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the "advance notice" was received by the subject about one week before the subject's co-authored paper was published. When OIG asked the complainant whether or not the subject should have withdrawn his paper, she explained that the subject had no scientific obligation to do so. She said that both proposed structures were interpretations, each based on different experimental evidence and assumptions, and consequently neither was necessarily correct.

The complainant provided no evidence that the subject's assumptions were unacceptable or that the subject's interpretations of the experimental data based on these assumptions were unreasonable. The subject's and his graduate student's paper, which described their experiments testing their assumptions, had been refereed by their scientific peers for the journal and had been accepted for publication by the journal's editor. It appears that the subject and his graduate student were using experimental results to test their hypothesis and related assumptions about an experimental system. This approach is described by the traditional scientific method, and, in this case, is not an issue of misconduct in science.

With respect to allegation #2, the subject allegedly made a fundamental (conceptual) error in determining the equilibrium value of a chemical reaction. The complainant claimed that the subject published his experimental results supporting the incorrect equilibrium value in two different publications.

The complainant told OIG that she did not discover the subject's alleged error and inform him about it until after both of his papers had been published. The complainant said that the subject had been unaware of the alleged error prior to her telling him about it and the alleged error was an honest mistake. Unintentional errors such as this one are not issues of misconduct in science.

With respect to allegation #3, the subject allegedly harassed the complainant, a graduate student in his research group, by creating a hostile environment that restricted her participation in group discussions. The alleged harassment culminated with the subject formally removing the complainant from his laboratory. Allegedly, the subject's actions impeded the complainant's growth as a scientist.

The complainant claimed that the subject's actions were in direct response to her confronting him about his scientific accuracy. She believed that the harassment began when she questioned his graduate student's assumptions (allegation #1), and continued until she pointed out the subject's error in his publications (allegation #2). She informed OIG that, one week after the latter incident, the subject formally removed her from his laboratory.

However, additional information provided by the complainant indicated that the alleged hostile environment existed prior to the events associated with allegation #1. The subject and complainant apparently did not communicate or relate well with each other almost from the very

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beginning of their advisee-advisor relationship. This poor working relationship apparently culminated with the subject removing the complainant from his laboratory. OIG was informed that the subject's alleged harassment of the complainant did not impede her development as a scientist or prevent her from completing her degree because the department and the institution arranged for the complainant to complete her Ph.D. degree in another laboratory. Further, OIG determined that the complainant was not retaliated against as a good faith whistleblower under NSF's misconduct in science regulation because, according to the complainant, the subject's alleged harassment was part of their poorly functioning advisee-advisor relationship which existed before she informed him about the possible errors with his research.

With respect to allegation #4, the complainant alleged that the subject's harassment constituted a misuse of the NSF funds supporting her because the subject had a legal and moral obligation to NSF to maintain certain minimal ethical standards in their advisee-advisor relationship, which the complainant claimed he failed to do. NSF hopes that PIs and graduate students are able to develop and maintain positive and supportive relationships. However, OIG recognizes that not all advisee-advisor mentoring relationships are successful and that not all develop in ways that prove to be entirely beneficial to both parties. The deteriorating relationship between these two individuals that resulted in the graduate student's removal from the subject's laboratory and placement in another laboratory where she completed her degree does not represent a misuse of NSF funds. This allegation has no substance.

This inquiry was closed and no further action will be taken.

cc: Staff Scientist, Deputy AIG-Oversight, AIG-Oversight, IG