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CONCURRENT SESSION TWO

Research, Graduate Students and Scientific Misconduct: Data and Publication Rights; Academic and Disiplinary Issues

Faculty:

Mary Beth Kurz
Pamela J. Bernard
Dr. Jay Wolfson
RESEARCH, GRADUATE STUDENTS AND SCIENTIFIC MISCONDUCT: DATA AND PUBLICATIONS RIGHTS; ACADEMIC AND DISCIPLINARY ISSUES

PRESENTED BY:

Pamela J. Bernard
General Counsel
University of Florida

Mary Elizabeth Kurz
General Counsel & V.P. for Legal Affairs
Michigan State University

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RESEARCH, GRADUATE STUDENTS AND SCIENTIFIC MISCONDUCT:
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Pamela J. Bernard
University of Florida

Mary Elizabeth Kurz
Michigan State University

INTRODUCTION

This outline will discuss the more practical issues of scientific research misconduct investigations. It is not intended to detail federal regulations which relate to research conducted pursuant to federal grants. Rather, it will address issues which are not necessarily addressed in pertinent regulations.

As a first step in reviewing an allegation of research misconduct, the university should determine whether the research is being conducted under a grant from the federal government. If the grant is awarded under the Public Health Service (PHS) Act or the National Science Foundation (NSF), the university should follow any requirements of federal regulations relating to PHS and NSF. These federal regulations are cited at the end of this outline.

Because most universities wish to adopt a single research misconduct policy, the policies usually incorporate the major requirements of the PHS and NSF. Thus, allegations of research misconduct which would not legally be subject to these federal regulations nonetheless would follow the federal requirements. This outline assumes the university will have but one policy for all research
misconduct. Since the PHS and NSF have slightly different regulations, the strictest standard would normally be used. For example, PHS requires that an inquiry be completed within 60 days and NSF provides for a 90 day completion period. In order to meet the requirements of each agency by a single policy, the 60 day timeframe should be used.

I. WHAT IS SCIENTIFIC MISCONDUCT?

Scientific misconduct is widely defined as falsification of research data by changing data or results, fabrication of data by making up data or results, and plagiarism which is using the ideas or words of another person without giving attribution.

NSF and PHS cast a much broader net over actions which could be deemed "misconduct" in the research process. For example, PHS includes "practices that seriously deviate from those that are commonly accepted within the scientific community for proposing, conducting, or reporting" research; NSF includes retaliation against a person who in good faith reports alleged misconduct. Since the PHS definition of misconduct was promulgated, there has been serious debate concerning whether the definition of misconduct should be expanded beyond the well known categories or fabrication, falsification and plagiarism. Debate has focused on whether intent should be a part of the definition. The National Academy of Sciences' Committee on Science, Engineering and Public Policy Panel on Scientific Responsibility and the Conduct of Research has recommended limiting the definition of misconduct in science to fabrication, falsification, or plagiarism in proposing
performing or reporting research. In June of last year, the PHS Advisory Committee on Scientific Integrity recommended that the current definition be amended to include intent and that the definition read as follows:

plagiarism; fabrication or intentional falsification of data, research procedures or data, research procedures or data analysis; or other deliberate misrepresentation in proposing, conducting, reporting or reviewing research.

The committee also recommended that the term "scientific misconduct" be changed to "research fraud." PHS has not yet acted upon the proposed recommendations. NSF in its recent Semiannual Report to the Congress indicated that the Office of the Inspector General considers the current NSF definition appropriate. Thus, unless and until the current definitions are changed, the phrase "other serious deviation from accepted practices" will continue to cause problems with regard to what types of practices come within its gambit. Institutional policies can address this matter by attempting to develop policies on what are commonly accepted practices in research and what types of behavior will be considered as serious deviations.

Notwithstanding the continuing debate over the federal definitions of misconduct, most university policies include the "or other serious deviations" language. Even this broader language should not capture all inappropriate conduct related to scientific research; the university should have other procedures addressing other types of inappropriate
practices which may not be violations of federal rules (e.g., human subjects research without approved protocols, misuse of funds).

II. WHO CAN BRING A COMPLAINT OF SCIENTIFIC MISCONDUCT?

Most allegations of scientific research misconduct are brought by faculty members, students or technical staff who work with the person accused of misconduct. Such individuals certainly are appropriate persons to bring a complaint. The person bringing such a complaint is generally defined as the "complainant."

Is a college or university responsible for pursuing complaints about researchers who are no longer at the institution? Must a complaint by someone no longer at the institution be pursued? Can a faculty member bring a complaint on behalf of a student who has since graduated? Can a parent bring a complaint on behalf of his or her child? Can an employee bring a complaint on behalf of a co-worker who does not wish to come forward? The answer to all these questions is yes. The federal regulations place an obligation to ensure scientific integrity on the institution. Thus, once the allegation has been made it is the responsibility of the institution to review the charge, regardless of whether the complainant or the party charged is a member of the university community. The university's obligation does not depend on who is making the charge or whether the accused is at that time a member of the university community. If the allegation relates to research done at the institution, the matter must be pursued.
Keep in mind, however, that when drafting a procedure you may have provisions to keep the "complainant" informed of the status and the result of the review. When a faculty member complains on behalf of a former graduate student, the "complainant" may be, under the policy, the co-worker and not the graduate student. Although the graduate student can be viewed as the real "complainant", your policy may require your institution to keep two "complainants" advised.

Should an anonymous complaint be taken seriously? Federal regulations require an institution to review all allegations, even anonymous allegations. Therefore, anonymous complaints must be reviewed. As previously noted, the institutional responsibility ensuring the integrity of the research requires such review. As addressed later in this outline, however, such complaints may not have sufficient basis to continue beyond the stage of an inquiry unless the complaint can be substantiated by documentary or other evidence.

III. PRE-INQUIRY REVIEW

Federal regulations require a two step process for reviewing misconduct allegations: 1) an inquiry and, if there appears to be sufficient basis for the allegation, 2) an investigation. Before moving into the inquiry stage, an informal review of the allegation should be undertaken to determine whether it has any basis. Many allegations of scientific misconduct can be the result of personality conflicts, jealousy, or a lack of understanding of the research. Often a review of
the allegation and a discussion with each party may indicate that the allegation has no basis but was the result of a misunderstanding. If such is the case, then the matter may be resolved by a discussion between the complainant and the researcher. If such parties are in serious disagreement after such a discussion, then the matter should immediately go to an inquiry. Also, if there is any question about the integrity of the data or a history of problems involving the particular research unit, then the matter should also go immediately to an inquiry. The decision of the university will thus be reviewed and a written record of the decision will be available to support whatever result is achieved.

The university official who will be conducting the inquiry should be the same individual who conducts the pre-inquiry review. Generally this is the dean or the department chair. Some universities may use a standing or ad hoc committee. If this is the case, it is important to make sure that the individual or individuals have no conflict of interest and can undertake the review without bias. Former or present research collaborators should not be involved in any decision-making capacity. At the pre-inquiry stage the allegation may be dismissed as being wholly lacking in any basis. In such a case, a record of the allegation and the reasons for its dismissal should be maintained.

Keep in mind that the obligation to review the allegation does not depend upon the complaining party’s willingness to participate by providing a written complaint. Also, keep in mind that sometimes a complaining party may feel that he or she has a stake in the matter and
may demand to have a more active role in the inquiry and any investigation should one occur. Sometimes a charging party may want to be present during witness interviews and even to question other witnesses, including the accused. We recommend that the charging party not be given the enhanced role of prosecutor but rather be treated as a witness. The role of conducting the inquiry and any resulting investigation is the responsibility of the university and is not dependent upon the active presence of the charging party.

An early review of the allegation also affords the dean or department chair the opportunity to obtain more information about the allegation. Although it is up to the university whether to require the allegation to be placed in writing, many universities require a written allegation so the person making the allegation will not bring it precipitously or carelessly. The university should require as much detail as possible from the complainant. The amount of detail needed to review the complaint will depend on the type of complaint.

IV. WHO NEEDS TO BE NOTIFIED OF THE ALLEGATION?

Although many universities notify the accused as soon as a complaint of research misconduct is lodged, it is not necessary as a due process requirement to notify the accused at such an early time. On the one hand, a pre-inquiry review could reveal that the complaint was wholly without substance so as to eliminate the need to notify the accused. On the other hand, such an approach may be considered to be
overly protective of faculty who may feel they have the right to know about any complaints lodged against them.

A good general rule of thumb is that the accused should be notified at an early point after there appears to be some basis for the complaint, certainly no later than the beginning of the formal inquiry. The accused should not be notified until some review of the complaint has occurred so that data and other relevant materials can be secured if necessary. A university's policy may also require notification at some point of the research misconduct coordinator, the research vice president, or the university's chief academic officer. In an effort to keep the complaint as confidential as possible, it may be best to wait to give these notifications at least until after the initial informal "pre-inquiry" stage.

If the research falls under PHS or NSF regulations, these agencies must be informed as soon as an initial inquiry reveals enough substance to support forwarding the allegation to the investigation stage.

A difficult issue is when to notify journals which have accepted for publication the research being challenged. This will be discussed later in the section of this outline entitled "The Investigation."

V. SECURING DATA

Securing scientific data and other information relevant to the allegation of research misconduct is one of the most critical steps the
university must take. Because faculty and students often view laboratory notebooks, primary research or other data as "their own", the university must make very clear that this information belongs to the university and will be secured immediately. Depending on the nature of the allegation, at times it is necessary for a person with institutional authority to arrive at the doorstep of the accused and secure the data however uncollegial such an action might be. The data should be inventoried and photocopied for the accused whenever possible. If the accused must have access to original data (e.g. slides of tissue samples), the accused should be given access only under strict supervision of the university.

VI. THE INQUIRY

1. Who does it?

The inquiry can be conducted by a department chair, a dean, a vice president, or a designated research misconduct coordinator. We favor the inquiry being conducted by middle management level rather than by a vice president because middle management may be making a recommendation to the vice president for action. The inquiry can be performed either by an individual or by a committee. If a dean conducts the inquiry the dean might request others in his office such as an associate dean to assist him in conducting the inquiry. Alternatively, a dean may wish to have a small panel of individuals who have expertise in the area assist the dean with his or her review. This would not necessarily be a committee, but it would give the dean some technical
expertise to enable the dean to conduct an inquiry. Federal regulations require that the institution secure necessary and appropriate expertise in order to carry out a thorough and authoritative evaluation of the relevant evidence. Also be careful to make sure that persons involved in the inquiry decision is not a former or present collaborator or friend of the researcher under inquiry. Federal regulations require the institution to take precautions against real or apparent conflicts of interest on the part of those involved in the inquiry or investigation.

Because federal regulations impose time constraints on reviewing a research misconduct allegation, a committee, if used, should be kept small in order to facilitate scheduling. This also will enhance confidentiality at this early stage.

In addition, whatever process the institution adopts should be followed carefully so as not to fall prey to a breach of contract claim. While it is debatable whether due process attaches to this stage of the proceedings, the accused may also charge that due process violation has occurred if the established procedures are not followed.

2. How do you conduct an inquiry?

An inquiry basically requires gathering and reviewing data, research materials, relevant scientific information, interviewing those who have knowledge of the alleged misconduct, and writing a report which will state whether the initial fact finding warrants forwarding the allegation to the investigation stage. Although the subject matter is
more technical, an inquiry is an abbreviated version of the normal process for an investigation. An important characteristic of a research misconduct allegation as opposed to other types of allegations is that those conducting the inquiry should be knowledgeable in the scientific area at issue.

The first step in the process is to talk to the complainant and gather as much detail as possible. It is helpful to require the complainant to submit any evidence he or she is relying on in making the charge. Next, it is critical to gather all relevant data and other documents and to carefully review them. It may be necessary to interview others such as technical staff, co-workers, or secretarial staff.

When interviewing witnesses, it is a good idea to keep a memorandum to file outlining the details of the preliminary interview. Some favor obtaining witnesses' signatures on the memoranda in order to ensure accuracy.

As a part of the inquiry, the accused should be given the opportunity to respond to the allegation. By now the accused should have received written notification of the allegation and any information on which the allegation is based. The accused may choose to meet with the person reviewing the complaint in which case the interview should be treated like any other interview by making a contemporaneous memorandum to file.
At this point (or earlier) the accused may seek to retain an attorney. This is perfectly within the accused's legal rights, but the role of the attorney will be defined by the university as discussed more thoroughly in the section of this outline entitled "Investigation". Neither the attorney nor the accused has the right to attend interviews of others who may have knowledge of the allegation, nor do they have the right to "cross-examine" any witnesses at this point. Likewise, an overzealous complainant does not have such a right.

Once the inquiry has been concluded, the person or persons conducting the inquiry should draft a report outlining the nature of the allegation, the information reviewed in making a determination about whether misconduct has possibly taken place, the findings and the basis for the findings. Federal regulations require that the accused be provided a copy of the report. The university may wish to provide a copy to the complainant as well although this is not required by law. Federal regulations also require that the accused be permitted to provide comments to the report which then become a part of the record.

VII. THE INVESTIGATION

If the result of the inquiry is that there appears to be some evidence of research misconduct, federal regulations require that the allegation be fully investigated.

1. Who should be notified that the allegation is being investigated?
Federal regulations require immediate notification of PHS and NSF when an inquiry has resulted in an allegation moving into the investigation stage. Other individuals outside of PHS and NSF might also be notified at the point the allegation goes into an investigation. For example, sponsors of research (e.g., corporate sponsors) might be notified. All notifications at this point should be prefaced with a statement that the matter is at an investigation stage only and no finding of guilt has yet been made.

Affiliated institutions or journal editors probably should not be notified at this early point. Rather, they should be notified if the investigation results in a finding of misconduct. There are exceptions to this view. If a paper which was based on what strongly appears to be false data is scheduled for immediate publication and such publication could create jeopardy to the public safety or welfare, the university may wish to notify the editor of the journal. An example of such a case might be where a "cure" for AIDS is being reported in a prestigious medical journal which could result in reliance by other researchers or produce false hopes in the public. If the university chooses to notify a journal editor at this point, it does so with some risk and thus might afford the accused the opportunity to notify the journal him or herself first.

2. How can an investigation remain confidential?

In reality it is very difficult to maintain confidentiality over a research misconduct investigation. This is due in part to the
fact that usually the investigative committee will need to talk with a number of people, all of whom have their own "confidants". Several steps can be taken to maximize confidentiality:

- Instruct the complainant that the matter is highly confidential and any dissemination of information concerning the investigation is in violation of university rules. Be sure to include such a statement in the university's policy.

- Advise the accused of the same. Do not underestimate the offensive tactics which an accused who feels under siege may take, including wide dissemination of the allegation to the scholarly community and to the media.

- Instruct staff to the committee or to the review official of the confidential nature of the investigation.

- Instruct all witnesses of the confidential nature of the investigation.

- Maintain all documents relating to the investigation in a secure location.

3. Who should conduct the investigation?
Usually a university will use the committee process to handle research misconduct investigations. The committee can either be a permanent university committee with a core group and some open slots to be filled by individuals with expertise in the subject matter at issue, or the committee can be totally ad hoc. In any event, individuals with expertise in the scientific area are important in order to understand the technical aspects of the allegation. It is also possible to use experts outside of the university to assist the committee. It is wise to place on the committee individuals who have experience in investigations and in committee processes, as well as individuals who are highly regarded at the university and in their disciplines. It is a policy decision whether persons who participated in earlier stages of the inquiry will serve on the investigative panel at this stage. If persons who participated in the inquiry or pre-inquiry process are not members of the committee, these persons (or at least the chief reviewer) should appear before the investigative committee to explain or answer questions about the inquiry report.

Aside from the inquiry report and any information generated during the inquiry, the committee should be provided with a copy of the university's written policy on research misconduct. In addition, the committee should have access to legal counsel in order to deal with the many legal issues in such cases including due process, standard of proof, weight of evidence, and issues which may be raised by legal counsel for the accused.
It is important to keep the size of the committee to a workable number. Not only is scheduling more difficult with a large committee, but the dynamics of a small group are lost with more than five or so members.

4. Are meetings of the investigation committee open to the accuser, accused or to the public?

The answer to this question could depend on your state's law. Many states have open meetings laws, but there may be exemptions to these laws when personal information concerning an employee or student is discussed. If at all possible, it is far better to have the committee meetings closed so as to encourage candid information from witnesses and candid discussion by committee members.

Neither the accuser, accused nor her attorney is entitled to be present at committee meetings. The committee should, however, interview the accuser and accused and give the accused a full opportunity to respond both orally and in writing to the allegations.

5. What are the rights of the accused during an investigation?

Like the rights of any employee accused of misconduct, the accused is entitled to a clear notice of the prohibited conduct, notification of the charge against him, access to the evidence against him, an opportunity to refute the evidence before an unbiased tribunal, and an opportunity to know of the outcome of the investigation. In
potentially "high-stakes" cases such as research misconduct, the accused is probably also entitled to legal counsel, although that counsel need not necessarily actively participate in the investigation. As stated earlier, the accused is not entitled to cross-examine witnesses or sit in on interviews. The only exception to this rule is if the university is using the investigation as a hearing on the charges. In that case, the accused would be entitled to some examination of witnesses.

6. What standard of proof should be used by the investigative committee?

Most administrative investigations follow a "preponderance of evidence" standard which means it is more likely than not that the event occurred or that a majority of the evidence indicates the event occurred. Another standard of proof common in misconduct cases is "clear and convincing evidence" which is a higher standard than preponderance of evidence. By no means should the "beyond a reasonable doubt" standard be used inasmuch as it is reserved for criminal cases.

7. Can the investigative committee seek advice from the same university lawyer who advised the dean during the inquiry stage?

Although the same lawyer can probably advise the investigative committee on procedural matters, it is far better to have another lawyer advise the investigative committee. In addition, if the accused has any appeal rights as discussed later in this outline, yet another lawyer should advise the appeal authority. These protective steps are
necessary in order to avoid charges by the accused of due process violations. Essentially, the accused might allege that the same legal counsel "infected" the process.

Because few institutions can afford to hire outside counsel in these cases, at a minimum different lawyers within an office should provide the advice to the various levels of review and should not discuss the case among one another. This may not even be sufficient, however, because there is some authority for the proposition that disqualification of a lawyer in an office will disqualify the entire office for purposes of ethical conflicts, although it can be argued that such a rule is overly restrictive for purposes of internal hearing processes. In any event, it is essential that legal counsel be made available to the investigative committee. The work of the investigative committee will form the basis for the university's findings and must be procedurally and substantively sound in order to withstand a challenge by an accused during a formal hearing at a later time.

8. What should be included in the committee's report?

Once the committee reaches a conclusion about the allegation, it must draft a report of its findings. The report should include the allegation, the facts gathered during the investigation, the evidence relied upon to reach a conclusion, and the procedures used by the investigative committee. Federal regulations require that the report be submitted within 120 days (PHS) or 180 days (NSF) of the beginning of
the investigation unless there are reasons to extend the investigation which must be documented.

The report should also contain recommended sanctions if research misconduct is found. In addition, other specific information is required by federal regulations when dealing with federal grants. Such regulations should be consulted throughout the process and before drafting a report.

The report should be detailed and thorough. The report should specifically respond to any rebuttals of the accused. It is advisable to have an appendix to the report containing the evidence (or a summary if appropriate) on which the committee relied in reaching its determination. It is also advisable (and federal regulations require) that all evidence reviewed be retained by the institution for a period of years. This would include any memoranda of interviews, laboratory notebooks, primary research or other information.

VIII. CHARGES AND APPEAL RIGHTS

The university can choose to either make the investigation purely investigative or it may wish to incorporate a hearing process into the investigation. The way in which a university chooses to provide a hearing process for the accused will depend on existing university policies and rules. Some universities choose to reserve the investigation process as purely investigative, with the investigation committee recommending sanctions to a university official who may then
notify the accused of her intent to impose such sanctions and of any rights to appeals or hearings under the university's normal disciplinary rules. If a hearing is incorporated into the investigation, the investigation must have various due process protections as discussed earlier, such as access to evidence and cross-examination of witnesses. The hearing should be recorded and transcribed so that the accused has access to a record of the hearing. Many universities already have such hearing mechanisms in place for non-research related misconduct. Even when the investigation stage is purely investigative, the meetings of the committee (but not its deliberations) should be recorded.

One difficult issue in defining a process for handling a research misconduct charge is the difficulty created when university procedures already require that disciplinary actions be handled by a particular committee or through a particular process already in place. As stated earlier, research misconduct requires expertise in the scientific and technical areas involved. Federal regulations require an investigation of appropriate individuals of allegations of research misconduct which have some basis in fact. Although avoidance of duplicative process is desirable, it may be difficult to deny an accused the right to certain existing university processes unless those processes have been specifically pre-empted by the research misconduct policy and have been done so through appropriate authorities at the university, such as the university's senate.

Sanctions imposed by the university can include counseling, reprimand, suspension, termination, removal from a particular research
project, requiring the taking of additional courses such as research techniques, or variations of the above. For example, the institution could require supervision over research in a particular area, removal of graduate students from a faculty member's charge, disallowance of further work on a research project, disallowance of publication under university auspices, etc.

In determining sanctions it is important to keep in mind that sanction such as removing graduate students or limiting research could impact on a non-tenured professor's ability to gain tenure, or on a graduate student's receipt of an advanced degree. Thus, sanctions should be considered in a context of short term and long term consequences to the accused.

University policies should address who is authorized to recommend sanctions and who ultimately decides what the sanction will be. The answer will normally be determined by whether your institutional research misconduct policy integrates into its process your faculty, staff or student disciplinary policies or whether the research misconduct policy supersedes in whole or in part these other policies. It is important that there be some consistency in application of discipline for research misconduct and some logical relationship between the sanction to be imposed and the nature and degree of the proven charges.
IX. SPECIAL ISSUES RELATED TO STUDENTS

1. Should the research misconduct procedure or the existing student disciplinary procedure be used for students?

As with faculty and staff, it is desirable to avoid duplication of proceedings when a student has been accused of misconduct. Unfortunately, it is likely that your institution has different existing hearing mechanisms for students, faculty and staff. The university must decide whether to amend these existing procedures (including any collective bargaining agreements) to allow the research misconduct policy to supersede these more general procedures. If that is accomplished, the research misconduct policy should include hearing procedures which afford appropriate due process.

Alternatively, the research misconduct policy can dovetail into existing procedures at some point (i.e. when misconduct is found and dismissal charges are recommended by the investigative committee). In such a case the university should attempt through its policy to have the scientific findings of the investigative committee binding upon the hearing body so that the "investigation" is not re-invented at the hearing stage. The hearing body would have authority to recommend different sanctions than did the investigative committee. Adopting this approach is more time-consuming than granting the investigative panel the authority to act as a hearing body. This is one of the most difficult practical issues to deal with in the midst of an allegation,
therefore the university would be well served to address the issue before dealing with an actual case.

2. How does the university protect a student from possible retaliation by a faculty member who is the student's major doctoral professor or otherwise exercises a high degree of control over the student's academic progress?

As discussed below under retaliation issues, the university must protect students from any adverse action which may result from a student either reporting research misconduct or cooperating with an investigation. It may be necessary to replace a faculty member who has been accused of misconduct with another on the student's dissertation committee, or to permit the student to withdraw from a course.

3. In the case where a student is working closely with a research professor, who "owns" the data generated from the research?

It is the university's position that all data generated as the result of research performed at the university is owned by the university, not by the individual professor or student. This conclusion results from the consequences of an employer-employee relationship and is supported also by the fact that regulations governing federally supported research normally permit the grantee university to retain legal title to scientific data. Federal regulations relating to scientific misconduct also recognize the obligation of the grantee university to take dominion and control over research data when there
are allegations of research misconduct calling into question the
integrity of data or research practices. In cases where graduate
students are working under research grants, they are subject to the same
constraints as are faculty.

4. How does the university handle publication by a student of the
results of data where allegations of research misconduct are under
review?

Often the question comes up as to whether and when editors of
journals should be notified of research misconduct charges and whether
the institution can prevent its employees or students from publishing.
For public institutions where due process and the first amendment are
considerations, these are important questions. They are also important
because of the potential for defamation or other tort claims. It is
normally prudent to await the conclusion of the investigation before
notifying journal editors unless, as stated earlier, there are
compelling reasons such as danger to human health or safety. This
allows the accused the opportunity to defend against the allegations
before potentially adverse action might be taken. In the case of
graduate students who are being assisted by faculty in their
dissertations, the institution may upon making a finding of misconduct
withdraw university support or sponsorship for the publication or refuse
to accept the work done as fulfillment of advanced degree requirements.
X. RETALIATION ISSUES

The university has an obligation to protect those reporting or cooperating with a research misconduct investigation from retaliation by the accused. Indeed, some federal regulations consider retaliation for such reporting to be included in the definition of scientific misconduct. Many states also have laws which protect whistleblowers from retaliation. Moreover, no process of the university will be effective unless individuals who in good faith report and cooperate with investigations are adequately protected.

Upon the receipt of a complaint and after a pre-inquiry, the university should thoroughly discuss with the accused the issue of retaliation and the possible sanctions for such behavior. This should be done even in cases where the allegation is "hard to believe" because of the reputation or popularity of the accused. It is all too common that individuals accused of research misconduct strongly defend their reputation, rightly or wrongly, by engaging in strong offensive and inappropriate attacks on the accuser. Individuals need to be aware that such actions are not only violative of the federal regulations but may also violate state Whistleblower Protection Acts. The institution may also deny indemnification to employees who willfully and intentionally violate university rules governing the reporting of scientific misconduct.
XI. FRIVOLOUS ALLEGATIONS

If the institution determines that an allegation is frivolous or brought in bad faith, the person bringing such an allegation should be subject to sanctions. The university's policy should specifically address this issue.

XII. PUBLIC RELATIONS ISSUES

Many allegations of research misconduct go unnoticed by the university community, the public, and the media. When all parties act in good faith and the university takes steps to ensure confidentiality, the process may move quietly to resolution, including a resolution that research misconduct has occurred. More often than not, however, the allegations become public.

When a serious allegation of research misconduct has become public or appears may eminently become public, the university should put together a small team of crisis managers to deal with the media and public relations issues. This team should include a representative from the university's research department, its legal department, its media or public relations department and the college involved. It is important not to leave this task to be handled by the investigative committee or by the official reviewing the complaint lest those individuals devote more time the media issues than to the substantive review. If an allegation becomes public, it may be in the university's best interest
to release its findings at the end of the process so that the public will have confidence that the university is appropriately handling such allegations. Universities should consult legal counsel when dealing with such issues because of laws or university regulations which may limit the university's ability to report disciplinary actions taken against employees or students. State laws relating to employee personnel records and, in the case of graduate students, the Family Educational Rights and Privacy Act (FERPA) may specifically prohibit disclosure or provide limits on whether and how much disclosure may take place. Nonetheless, the university should never take a "no comment" position to the media. Even if it cannot talk about a particular case, the university certainly can be helpful to the media in describing the process for resolving allegations and provide other general information that will assist the media and the public in understanding the university's process.

Also to be considered are public records laws of the state. Many states permit public access to records which are not personally identifiable. Some public records laws also permit non-disclosure for intra-agency memoranda. Such laws may protect preliminary recommendations but permit final decisions to be made public unless prohibited by other laws such as FERPA. Again, legal counsel should be consulted regarding the applicability of these laws to a research misconduct investigation.
XIII. HOW TO GET A MISCONDUCT POLICY DRAFTED

1. Who should be involved in the drafting of a misconduct policy?

Many research misconduct policies emerge from a university's health center or research divisions. Any research misconduct policy should have input from its health center, from its research divisions, and from administrators who work in this area. In addition, a university may wish for the university senate or other university governance committees to provide input into the policy. Policies are generally better accepted when the audience to whom the policy will be directed has had input.

2. Should a university have one misconduct policy or should individual colleges have their own?

This point is not settled nor do federal regulations require one or the other. A consideration in having a single policy is that the procedures and sanctions will be uniform throughout the university which reduces the possibility of procedural errors and arbitrary action. On the other hand, certain divisions of the university may feel that they need more stringent policies than others based on the work performed in that division. Regardless of the choice made by the university, the policy should be in writing and should be widely disseminated to potentially affected individuals so as to avoid notice problems.
XIV. CONCLUSION

It is important for all members of the academy to be aware of these federal regulations governing research misconduct and their institutional regulations. Failure to follow the regulations may result in continued federal expansion into areas normally reserved to the academy and undesired federal intrusion into the process. Good faith monitoring of research practices and the immediate review of allegations of scientific misconduct hopefully will ensure the integrity of research and the continued ability of colleges and universities to themselves address problems in the research process.
SELECTED RESOURCES

1. Regulations of the Public Health Service, 42 C.F.R. Part 50, Subpart A.

2. Regulations of the National Science Foundation, 42 C.F.R. Part 689.


