

WISEST INITIATIVES / *POSTDOCTORAL PROGRAM/The Post-doc Institute*

Research Integrity

Case Studies presented by Prof. Brenda Russell

Professor of Physiology and Biophysics, Executive Associate Vice Chancellor for Research, Research Standards Officer of UIC
for Post-doc Institute Session 2
Nov. 28, 2007

October 2006

Prepared by Brenda Russell <russell@uic.edu>

For more information see <http://ori.dhhs.gov/>

Case: Confidential information

While reviewing Dr Levy's NIH grant Dr Powell found a key piece of data about a method that did not work in his lab. He went to his student, Charlie, to try this approach. It worked and they were able to submit a manuscript in two weeks. Essentially this was for the same project that Dr Levy had submitted.

By coincidence the Editor sent the manuscript to Dr Levy to review. Dr Levy knew Dr Powell was on the study section that had reviewed his grant from the NIH public roster. He guessed that his technical breakthrough had been copied during the review process.

What does Dr Levy do?

How do NIH and the university get involved?

Case: Pilot data in NIH grant

Jim Wang was a second year a graduate student who started working in the lab of Dr Susan Cole at Mid-Northern University in the microbiology department in January 2005. She is providing a stipend and a tuition waiver. Dr Cole was an Assistant Professor who had her own graduate work on detoxification by a genetically engineered bacteria published in Science. She was rapidly offered a tenure track position at Mid-NU and was funded by NIH. However, she has no publications and the grant was resubmitted but not funded. Dr Michael Jones, department chair, at her annual meeting with him told her that she needed to be funded in 18 months or he could not support her tenure application. She needed funding by December 2006. Dr Cole had also learned that she was pregnant a few weeks earlier but did not share that information with Dr Jones because she had miscarried in the previous year. However, she was confident that the resubmission of her grant would have a favorable outcome if only she could demonstrate to the reviewers that a pesky phosphoprotein change could be detected. She was certain it had to be there because the hypothesis was well supported by publications of others.

Jim was put on the project and tried his best with Westerns to find the expected changes. He talked to the lab next door and tried an ELISA approach and even went to the new core Proteomics Facility – but no matter how hard he tried he found the controls and the experimental data were both noisy and no significant differences were found between them. He sent data in XLS, statistical analyses, and many scans of the blots in electronic form to Dr Cole who was busily writing the grant for the Feb 1 2007 deadline. Jim did not see the grant because Dr Cole was mostly writing at home because of terrible morning sickness. The grant had to be submitted electronically but the department required a hard copy on file with all the original signatures. Just before the deadline he came in early one morning to print a midterm paper on the color printer, which was out of paper. When reloaded, the printer finished its old job - a final copy of Dr Cole's grant application!

GUESS WHAT HE SAW? The pilot data in the grant appeared to show that his experiments had worked. There was now a statistical significance between the control and experimental protein phosphorylations. The grant is due to be electronically submitted in four hours to NIH.

Points to discuss

Is this research misconduct? If so, is it falsification, fabrication or plagiarism?

What should Jim do?

Does anyone at Mid NU need to report this? If so, to whom?

What else could Dr Cole have done in her situation?

October 2007

Prepared by Brenda Russell <russell@uic.edu>

For more information see <http://ori.dhhs.gov/>

Case: Plagiarism or falsification?

Dr William Montgomery is reviewing a manuscript for the Journal of Bio-transduction whose editor is Dr Yun Choi. The senior author of the paper was no other than the recent National Academy of Science member, Julia Hernandez, a former star student of Dr Choi. The journal sent him an electronic reminder that his review was due in two days. Dr Montgomery hurriedly flipped through the file hoping to get it done fast before he left town for his annual family vacation. Figure 7 caught his eye because it showed a section of intestine with an impressive, multicolored immunochemistry staining. While it is true that many sections look like each other he kept seeing a familiar Mickey Mouse shape in it. Where had he seen that before? He thought it might be from an older paper that he'd cited in his own thesis. He quickly went on PubMed and put in a few names from that old literature. Ten minutes later he found the Mickey Mouse figure again - but with completely different labeling for another set of proteins.

Questions

Is this plagiarism or falsification?

What should Dr Montgomery do?

What should be done if the Editor does not take the allegation seriously?

Dr Hernandez is at North-South State University. Should NSU do anything?

NIH funds the grant supporting the research. Does that make any difference?

Office of Research Integrity Policy on Plagiarism (ORI Newsletter, Vol 3, December 1994)

Although there is widespread agreement in the scientific community on including plagiarism as a major element of the PHS definition of scientific misconduct, there is some uncertainty about how the definition of plagiarism itself is applied in ORI cases.

As a general working definition, ORI considers plagiarism to include both the theft or misappropriation of intellectual property and the substantial unattributed textual copying of another's work. It does not include authorship or credit disputes.

The theft or misappropriation of intellectual property includes the unauthorized use of ideas or unique methods obtained by a privileged communication, such as a grant or manuscript review.

Substantial unattributed textual copying of another's work means the unattributed verbatim or nearly verbatim copying of sentences and paragraphs which materially mislead the ordinary reader regarding the contributions of the author. ORI generally does not pursue the limited use of identical or nearly-identical phrases which describe a commonly-used methodology or previous research because ORI does not consider such use as substantially misleading to the reader or of great significance.

Many allegations of plagiarism involve disputes among former collaborators who participated jointly in the development or conduct of a research project, but who subsequently went their separate ways and made independent use of the jointly developed concepts, methods, descriptive language, or other product of the joint effort. The ownership of the intellectual property in many such situations is seldom clear, and the collaborative history among the scientists often supports a presumption of implied consent to use the products of the collaboration by any of the former collaborators. For this reason, ORI considers many such disputes to be authorship or credit disputes rather than plagiarism. Such disputes are referred to PHS agencies and extramural institutions for resolution.

Example of a plagiarism case

http://ori.dhhs.gov/misconduct/cases/investigation_summ_2003.shtml

Plagiarism: The respondent, a medical consultant, allegedly plagiarized published materials from uncited sources in material prepared for National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS) and National Institute of Dental and Craniofacial Research (NIDCR), NIH, grant applications. The research involved development of new synthetic biomaterials for use in bone grafting. The institution conducted an investigation into the matter. The institution concluded that plagiarized materials had been presented in the background sections of the questioned grant applications, but it could not be determined who was responsible for the inclusion of the plagiarized materials. Further, the institution concluded that the plagiarized materials were in the background sections only and were of relatively small significance to the evaluation of the grant applications. Therefore, the institution did not make a finding of scientific misconduct. ORI accepted the institution's conclusion that there was insufficient evidence to make a finding of plagiarism in the insertion of the questioned material into NIH grant applications by a specific person, and ORI did not make a finding of scientific misconduct.