“Case Studies in Research Misconduct”

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NCURA Regions VI & VII Spring Meeting
April 7, 2009
Santa Fe, New Mexico

Disclaimer

• The speakers do not claim expertise on the topic of Research Misconduct
• This presentation is designed to demonstrate the teaching effectiveness of Responsible Conduct of Research training through case studies and interactive technology
References

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• http://en.wikipedia.org/wiki/
• http://ccnmtl.columbia.edu/projects/rcr/rcr_misconduct/foundation/index.html#1_B_3
• http://www.responsibility.research.umich.edu/case_materialsdir.html#plag
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Definition of Research Misconduct

• Research misconduct means fabrication, falsification, or plagiarism in proposing, performing, or reviewing research, or in reporting research results.

42 CFR 93.103
Fabrication

• Fabrication is making up data or results and recording or reporting them.

Infamous Cases

John Darsee

• Research Fellow at Harvard University, 1979
• Produced 5 major papers in 15 months; offered faculty position in 1981
• Colleagues became concerned about the accuracy of Darsee’s results.
John Darsee

• Investigation found that Darsee had been altering dates on his laboratory work to make a few hours’ work appear to be several weeks of data.

• Further scrutiny revealed Darsee had previously used false data between 1966 and 1970 at Notre Dame University; subsequently, 52 papers and abstracts published between 1974 and 1979 at Emory University were retracted.

John Darsee

• Darsee later apologized in the New England Journal of Medicine citing career ambition and professional pressures as motivation.

• Coauthors were criticized for their unfamiliarity with his work and their lack of awareness of the scientific misconduct.
Falsification

- **Falsification** is 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.

Infamous Cases

Robert Slutsky

- Cardiologist, University of California at San Diego, 1986
- Published 161 articles in 6 years; at one time he was completing an article every 10 days
- Included the names of many co-authors to mislead editors and cover up for what was later found to be false output
Robert Slutsky

• Publications between 1975 to 1985 contained “statistical anomalies” and “duplicated data” that raised the question of falsified research records
• Investigation of 137 of his publications found that 77 were valid, 48 were questionable, and 12 were fraudulent

Infamous Cases

Jan Hendrik Schön
• Bell Labs Researcher, 2002
• Performing groundbreaking electronics research in superconductivity, molecular crystals, and molecular electronics
• Producing one paper every 8 days and was deemed to be on the ‘fast track’ to a Nobel Prize
Jan Hendrik Schön

- An independent committee found Schön had made up or altered data at least 16 times between 1998 and 2001; Bell Labs terminated his employment
- Schön "did this intentionally or recklessly and without the knowledge of any of his co-authors"
- *New Scientist* editors stated that collaborators should have been held accountable since only one of them actually witnessed the research

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Plagiarism

- **Plagiarism** is the appropriation of another person's ideas, processes, results, or words without giving appropriate credit.
A Famous Case

Ward Churchill

- Professor, Ethnic Studies, University of Colorado
- Wrote an essay in 2002 about the Sept. 11th terrorist attacks referring to World Trade Center workers as "little Eichmanns," a reference to Nazi Adolf Eichmann, the "architect of the Holocaust."
- Following public outcry, CU began probing his work. He was fired in 2007 for academic misconduct after officials concluded he plagiarized and lied about historical facts in his writings.
- Churchill has won a wrongful-termination lawsuit against CU and is now seeking reinstatement.

Clarifications

- Research misconduct does not include honest error or differences of opinion
- The definition of research misconduct does not include disputes over authorship or credit
Authorship

Who should be an author?
• People who have left the lab?
• Technical staff?
• PI with no involvement in the work?
• Contributors on already published work?

How should authors be listed?
• First author, last author, co-first authors?
• Should authors specify who did what?
• Patent percentage vs. authorship?

When should work be published?
• Can you publish without the PI?
• “Incomplete” work?
• To which journal or journals?
• Should practical issues influence decision?
  (graduation, grant deadline, tenure)

What Causes Research Misconduct

• “Bad Apples”
• Academic environment
  – Career advancement:
    • tenure / fame / reputation
  – Financial rewards
  – Poor training in standards and methods
  – Conflicts of interest
  – Large collaborative groups
  – Remote laboratory managers
How Prevalent?
Office of Research Integrity (ORI)
• 2006: 111 institutions reported a total of 151 allegations of misconduct
  – 69 allegations of falsification
  – 53 of fabrication
  – 29 of plagiarism
• 2007: ORI opened 14 new cases, 39 remained open, 28 closed
  – ~33% of ORI cases find misconduct
• Most common actions
  – 2/3rds were debarred from federal funding for minimum of 3 years to lifetime

How Prevalent?
• Surveyed 4,298 researchers, 2,212 responded (51%), primarily biomedical
  – 8.7% observed or had direct evidence of misconduct over the previous 3 years
    • 60% fabrication or falsification
    • 36% plagiarism
  – 37% of incidents were not reported
• Rank of those suspected
  • Professor or senior scientist: 22%
  • Associate professor 14%
  • Assistant professor 17%
  • Graduate student 14%
Conclusion

• Not all unethical or inappropriate behavior in the conduct of research constitutes “research misconduct” under federal or institutional policies

• A variety of institutional policies beyond research misconduct policy may be relevant to addressing problems

Resources

• University of Utah Policy
  – <http://www.admin.utah.edu/ppmanual/6/6-1-1.html>

• Federal PHS Policy

• Federal Office of Research Integrity (ORI)
  – <http://ori.dhhs.gov/>