

RESEARCH MISCONDUCT





OUR PROGRAM

I AM A CHAMPION FOR BEST BUDDIES

- One-to-One Friendships
- Integrated Employment
- Leadership Development
- Inclusive Living

A grid of six photos illustrating the program's activities: two young women smiling, a man in a suit, a woman speaking at a podium, two men sitting on a couch, and a person at a computer.

AGENDA

- Defining Terms
- Why Discuss Research Misconduct?
- Research in Action
- Research on Research Misconduct
- Video Case Scenarios
- Who to Contact



Defining Terms

Research Misconduct - Fabrication, falsification, or plagiarism in proposing, performing, or reviewing research, or in reporting research results.



Defining Terms

- **Fabrication** - Making up data or results and recording or reporting them.
- **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.
Changing data
- **Plagiarism** - Appropriation of another person's ideas, processes, results, or words without giving appropriate credit.
- *Research misconduct does not include honest error or differences of opinion.*

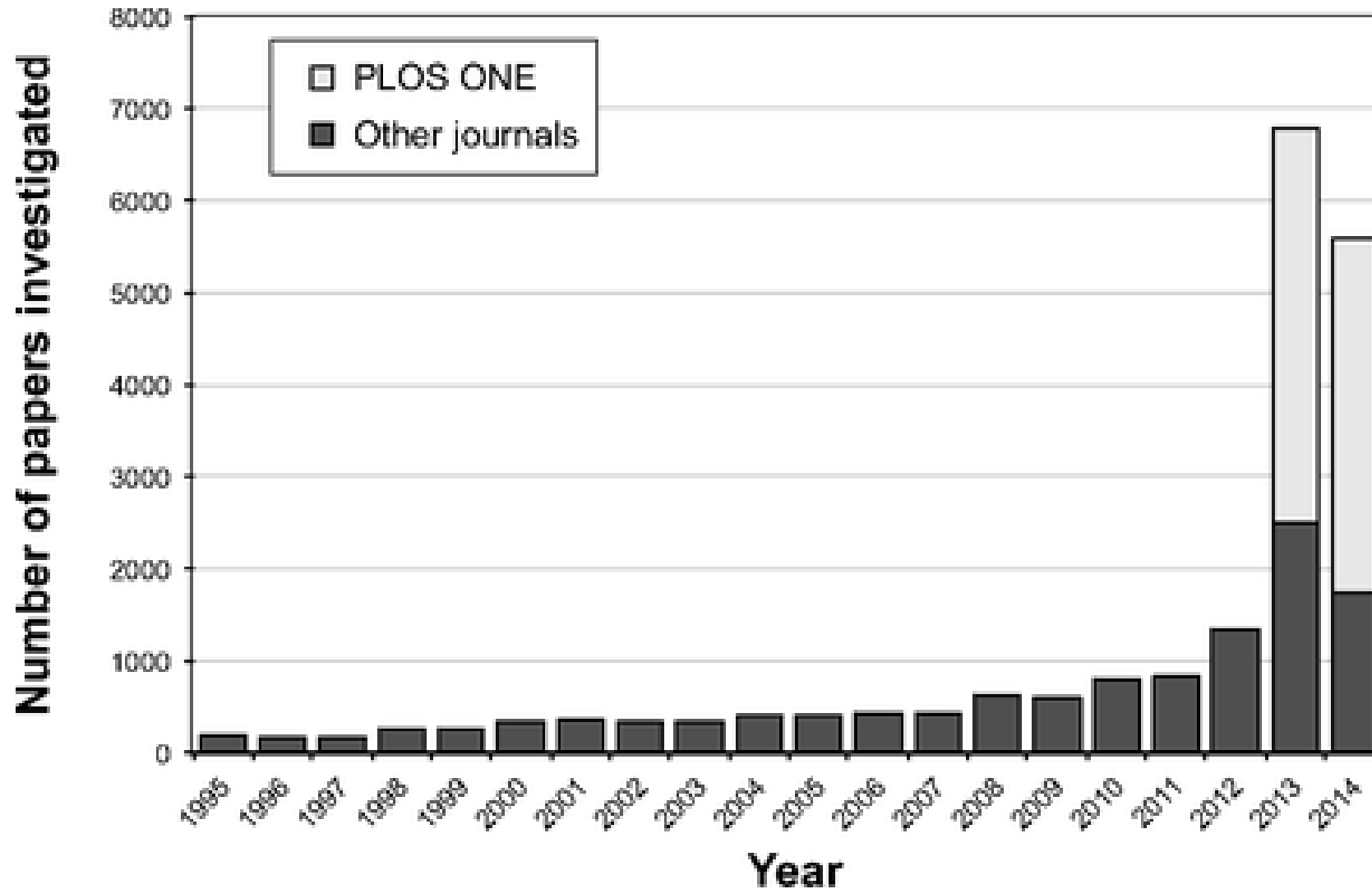


Falsification Examples

- Removing an outlier from a series of measurements
- Changing a measurement to make it look higher or lower
- Adding error bars to single measurements to suggest multiple measurements were performed
- Modifying the brightness and/or contrast of an image and presenting as a second image
- Duplicating some cells on a photo to make it look like a treatment caused a significant change (e.g., higher cell density)



Why Discuss Research Misconduct?



And, because it
impacts you!



Research in action — psychiatry

December 30, 2019 — Medscape Medical News

- A former New York University School of Medicine, Langone Medical Center psychiatry researcher, faked clinical data according to the US Office of Research Integrity (ORI).
- In studies of anorexia, depression, and posttraumatic stress disorder (PTSD), "misrepresented the characteristics of the subjects entered in the research" using tactics such as "combining data from multiple subjects to represent single subjects to justify financial payments" and "changing and/or instructing his staff to change, omit, or ignore clinical and psychiatric assessment data
- Neumeister, who agreed to a 2-year ban on federal funding and to correct or retract four papers — two of which appeared in JAMA Psychiatry —



Research in Action – Social Psychology

- Ever wonder whether there's any truth in the saying "no pain, no gain" or whether failure can be better for you than success?
 - Diederik Stapel - Dean of Social & Behavioral Sciences at Tilburg University, 150+ publications
 - Failure sometimes feels better than success
 - Beauty ads make women feel ugly
 - Power increases infidelity among men and women
 - Meat eaters are more selfish and less social than vegetarians



Research in Action – Social Psychology

- The Problem - Diederik Stapel fabricated his data
- Repercussions
 - Retracted at least 55 articles
 - Work of co-authors discredited
 - Forced to resign, PhD taken away
 - Criminal Proceedings, settled for community service
- The value and quality of our research is based on previous research (Review of the literature)



Research on Research Misconduct

Accountability in Research, 21:9–25, 2014

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Evaluating U.S. Medical Schools' Efforts to Educate Faculty Researchers on Research Integrity and Research Misconduct Policies and Procedures

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Evaluating U.S. Medical schools

- Examines how well U.S. medical school institutions are doing to promote research integrity
- Focuses on 115 medical schools and 16,336 PIs' knowledge of what constitutes research misconduct
- Participants reviewed scenarios that depicted situations likely to be of misconduct or unlikely to be research misconduct
- Selected 1 of 3 options:
 - Likely Research Misconduct
 - Not Likely Research Misconduct
 - Don't Know If Research Misconduct



Scenario 1

You are responsible for tracking the radioactive materials received in the labs. It is normal procedure for your colleagues to circulate all manuscripts to lab staff for review and comments. In your review of a colleague's manuscript, you notice that there are more subjects involved in experiments using radioactive iodine than were discussed in the lab meeting. You also know that no radioactive stocks have come into the laboratory during the proceeding weeks. You calculate the quantity of radioactive iodine that would have had to be used with the subjects in the experiments and conclude that this was not possible.

- Likely Research Misconduct
- Not Likely Research Misconduct
- Don't Know If Research Misconduct



Results – Scenario 1

| | | |
|-------------------------------------|---------------|--------------|
| ▪ Likely Research Misconduct | 6, 657 | 50.7% |
| ▪ Not Likely Research Misconduct | 879 | 6.7% |
| ▪ Don't Know If Research Misconduct | 5, 590 | 42.6% |



Scenario 2

You head a central data storage and analysis center serving a number of departments. You notice that the statistical tables for two different experiments included in a colleague's manuscript look identical. You point that out to him. He says it was the result of a file error and that he will fix it. Several months later you happen to see the actual publication and the tables for the two experiments have been substantially changed. Curious, you look to see what data files for this work your colleague has sent recently to the data storage facility. There are none that look like those in the publication, and the files you previously found problematic have been deleted.

- Likely Research Misconduct
- Not Likely Research Misconduct
- Don't Know If Research Misconduct



Results – Scenario 2

| | | |
|-------------------------------------|-------------|--------------|
| ▪ Likely Research Misconduct | 7855 | 61.1% |
| ▪ Not Likely Research Misconduct | 457 | 3.6% |
| ▪ Don't Know If Research Misconduct | 4566 | 35.5% |



Scenario 3

You are working on a series of related neurophysiology studies in a research group led by a more senior investigator. At a series of group meetings, the group leader assigned leadership and authorship for each of the studies and the expected resulting manuscripts. The group leader then confirmed the assignments with an e-mail to the group. You were assigned one set of experiments and first authorship on the two manuscripts expected to result from them. You conduct the experiments, draft both manuscripts, and send them to the group leader for review. In return, the group leader tells you that he has decided to be first author on both manuscripts despite being only minimally involved in conducting the experiments and writing the manuscripts

- Likely Research Misconduct
- Not Likely Research Misconduct
- Don't Know If Research Misconduct



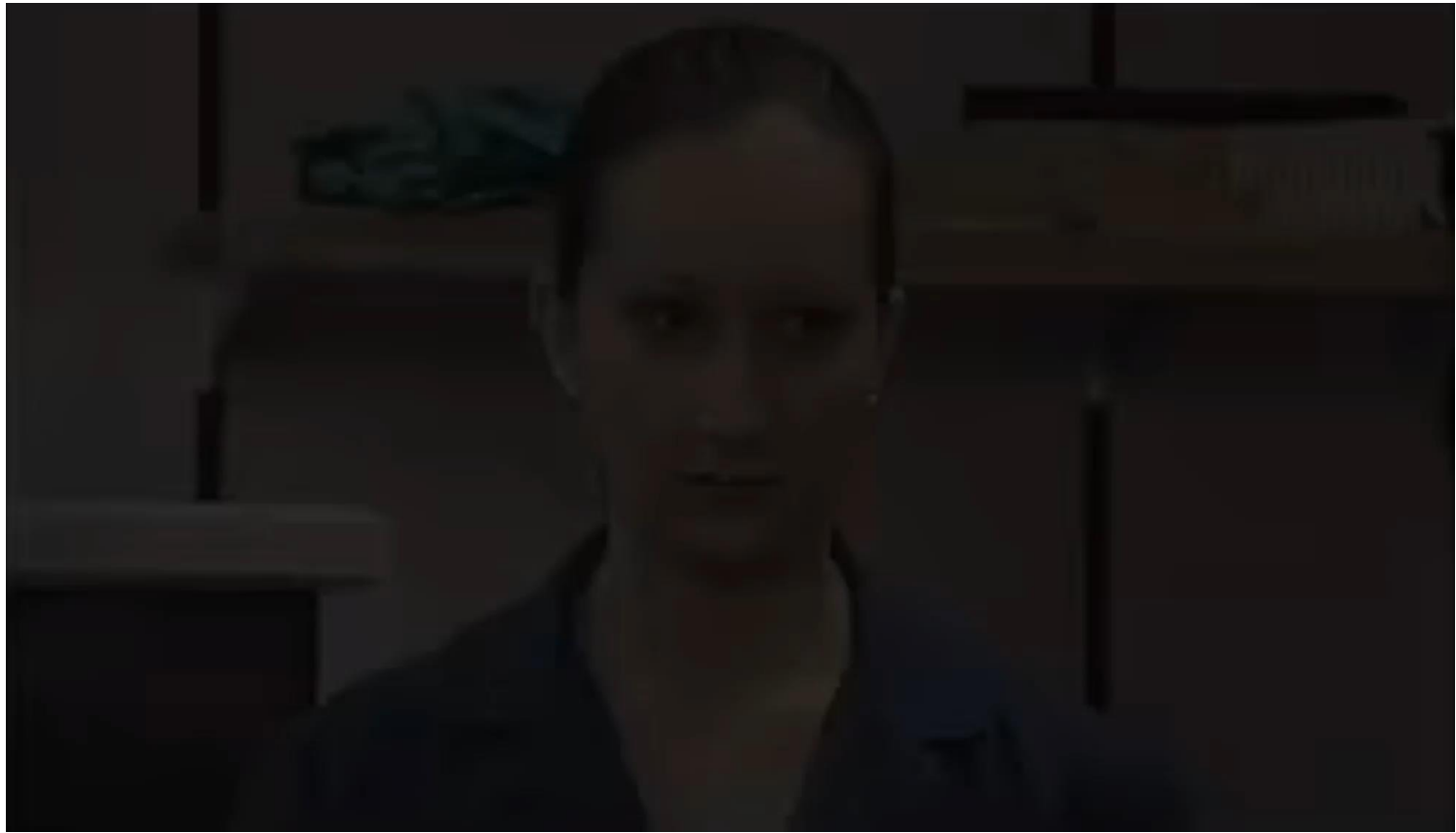
Results – Scenario 3

| | | |
|---|---------------|--------------|
| ▪ Likely Research Misconduct | 5, 592 | 43.0% |
| ▪ Not Likely Research Misconduct | 4, 673 | 35.9% |
| ▪ Don't Know If Research Misconduct | 2, 738 | 21.1% |



Video Case Scenarios





Discussion Question

- As faculty, what can we do to mitigate this type of dilemma?
 - Focus on the accuracy of the data
 - Discussions with research assistants
 - Data verification (neutral verifiers)
 - Apply appropriate pressure
 - Consider and anticipate delays





Research Integrity: Case Study
You Suspect Research Misconduct.
Now What?



ori.hhs.gov | [@hhs_ori](https://twitter.com/hhs_ori) | askORI@hhs.gov



Discussion Questions (1 of 4)

- What should the Graduate Assistant do next?



Discussion Questions (2 of 4)

- What are the possible outcomes?



Discussion Questions (3 of 4)

- Are the possible benefits of remaining silent greater than the potential fallout if someone else figures out that misconduct occurred?



Discussion Questions (4 of 4)

- If you were in this situation, who would you talk to for advice or to report your suspicions?



Summary

- **Research Misconduct** - Fabrication, falsification, or plagiarism in proposing, performing, or reviewing research, or in reporting research results.
- Research Misconduct is a growing concern
- Research Misconduct impacts everyone



References

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