Getting Ahead of Research Misconduct

Deepika Bhatia, Associate VP, Research Integrity Officer
Maria Davila, Director, Deputy Research Integrity Officer
Research Compliance & Regulatory Affairs

Ask RCRA
February 15 2024
AGENDA

Research Misconduct

• Emory Research Misconduct Policy
• Recognizing Misconduct
• Getting Ahead of Misconduct
• Building a Culture of Integrity
• Research Misconduct Outcomes
Research Misconduct

Research Misconduct is defined as “fabrication, falsification, or plagiarism in proposing, performing, or reviewing research, or in reporting research results.”

According to ORI:

• Fabrication occurs when researchers make up the data used to support their findings, or the sources of information used.

• Falsification involves “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.”

• Plagiarism occurs when researchers use the ideas, information, processes, or results produced by others but do not provide appropriate credit.

• Research misconduct does not include honest error or differences of opinion.
Policy 7.8

- Policy 7.8 on Research Misconduct has been updated with information in the policy streamlined for better readability and make it more accessible.
- The policy details the process of reviewing allegations.
- Research Integrity Team @ Emory defined in policy.
Reporting and Case Management @ Emory

Receipt of Research Misconduct Allegations

- Credible and Specific
  - Assessment for Credibility and Specificity
    - Not credible or specific
    - Investigation Unwarranted
      - Investigation Committee
        - No Findings
          - The process ends with reputation restoration
  - Investigation Warranted
    - Investigation Committee
      - No Findings
      - Research Misconduct Findings
        - Additional Reporting
Recognizing Research Misconduct
Recognizing Research Misconduct – Red Flags!

**Time**
- Usable data is only created to meet a deadline
- Research procedures are completed faster than usual

**Results**
- If data appears too good to be true
- Data cannot be replicated

**Lack of Transparency**
- Raw data does not exist or cannot be accessed
- Materials and protocols are hidden
- Research is completed when no one is around
Questionable Practices Can Result in Research Misconduct

Small lapses in judgment could lead to a slippery slope ending in research misconduct.

Be vigilant against these common lapses:

1. **TAKING SHORTCUTS**
   Lack of care in experimentation that might impact reproducibility

2. **CHEATING**
   Such as puffery, which is inflating your resume, can establish dangerous behavior patterns

3. **“BEAUTIFICATION” OF IMAGES**
   Removing an unwanted feature, even if unrelated to the result, could be scientifically significant

4. **LACK OF APPROPRIATE CONTROLS**
   Failure to perform a control with the experimental sample could affect result interpretation

5. **COMPOSITE IMAGES**
   Assemblies of images that are not clearly labeled, such as a montage of cell images from the same experiment but not labeled as such.

6. **OUTLIERS**
   Omitting outlier data without appropriate pre-experiment justification which alters the overall conclusion of the analysis

7. **IMAGE MANIPULATION**
   Splicing, cutting, or cropping images; without properly documenting changes, that alters the results or falsely claims a result which was not obtained.

Questionable or Detrimental Research Practices may be considered research misconduct in some cases, but the facts of each case differ and must be individually evaluated.
Same image, different results!

Figure 3c in *Nature Medicine*

Figure C.2.5 in NIH grant application

Image alterations that change results!

Same cell images representing “2h LPS” and “12h LPS”

Intensity Enhanced and size adjusted

Same cell images representing “no LPS” and “24h LPS”

Causes of Research Misconduct

ORI provided data from 61 cases of RM with the following root cause reasons:

- Inadequate supervision, guidance or training
- Excessive work-load
- PI accepting summary data or prepared tables/graphs
- PI not present in the laboratory
- Demanding desired results to meet a deadline
- Use of threats and intimidation as tactics to obtain results
- Sloppy research records
- No guidance or standards for keeping data
Getting Ahead of Research Misconduct
Proposal Submissions

You submit an NIH grant application not aware that the data and/or text included by others were falsified and/or plagiarized.

Are you liable for research misconduct?

YES

Decisions by an ALJ on a recent case established that a PI and/or corresponding author, can be liable for research misconduct even if he/she was completely unaware of any falsification or plagiarism.

Pre-Publication: Plagiarism Detection

NIH Library Resource

iThenticate is a widely recognized plagiarism detection tool for researchers and authors to check their manuscripts to feel confident that their submission will not be at risk of rejection or damage their reputation.

• Use the NIH Library’s iThenticate plagiarism checking service. This service is free and confidential for requesters who are the first, last, or corresponding author of NIH work-related, unpublished manuscripts.

iThenticate should not be used to check student coursework. Emory’s Turnitin subscription integrated in Canvas is available to all classes for student use.
Post Publication Monitoring

PubPeer Surveillance
Routinely check your published articles for any negative comments in PubPeer that may reflect errors that could be reported as research misconduct allegations.

Journal Inquiries
Ensure any clarifications requested by journals on your publications are promptly addressed and responded to in order to prevent these from resulting in research misconduct allegations.
Avoid AI Copyright & Authorship Issues

RCRA Infographic

An RCRA infographic on best practices for AI use in authorship to prevent copyright and plagiarism concerns is at: [https://rcra.emory.edu/_includes/documents/sections/program-effectiveness/ai-authorship.pdf](https://rcra.emory.edu/_includes/documents/sections/program-effectiveness/ai-authorship.pdf)

AI Publisher Disclosure Guidelines

Emory resources related to publisher statements on AI are available at: [https://guides.libraries.emory.edu/AI/publishing](https://guides.libraries.emory.edu/AI/publishing)
Building a Culture of Integrity

As a senior official
set the tone for the institution and make integrity a high priority

As an administrator
develop and implement policies that support integrity

As a principal investigator
establish specific standards for the staff on recording, reporting, and publishing data
Be prepared to respond to a wider scrutiny

As a staff scientist in the lab
commit to integrity and practice it on a daily basis
Culture of Integrity

From: ORI’s 5 Ways Supervisors Can Promote Research Integrity
Outcomes of Research Misconduct Investigations

In deciding Research Misconduct, the committee needs to conclude that the plagiarism was done knowingly, recklessly, or intentionally. Also, the committee/ORI has ruled out that the plagiarism was an honest error.

Claims that a practice is uncommon are not exempt from being substantiated as research misconduct.

Common Consequences:
- Certifications
- Assurances
- Prohibited from serving
- Debarment
Research Integrity Team @ Emory

- **Deciding Official (DO)**
  - Robert Nobles, DrPH, MPH, CIP
- **Research Integrity Officer (RIO)**
  - Deepika Bhatia, MSBME, CCRP, CHRC, CHPC, CCEP
- **Deputy RIO**
  - Maria Davila, MD, MA(Bioethics), CCRC, CIP
- **Research Integrity Manager**
  - Danisha Biossat, BA

RIOW@EMORY.EDU
Your Role: See Something, Say Something.

- Report Any Research/Data Integrity Concerns to: rio@emory.edu
Contact Information

Deepika Bhatia

Associate Vice President/Research Integrity Officer / Chief Research Security Officer
Research Compliance and Regulatory Affairs

Maria Davila

Director, Office of Research Integrity and Compliance / Deputy Research Integrity Officer

rio@emory.edu
Questions?