# Preventing and Addressing Research Misconduct and Noncompliance Allegations

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IRB Webinar- March 14, 2024

# Agenda

### **RCRA Highlights**

### **Research Misconduct (RM)**

- RM Management @ Emory
- Recognizing & Preventing RM
- Outcomes of Research Misconduct Investigations
- Authorship and Plagiarism
- Building a Culture of Integrity

### **Research Noncompliance**

- Investigation Lifecycle
- External Reporting
- Resolution and Monitoring
- Investigations RACI @ Emory





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### OFFICE OF RESEARCH COMPLIANCE AND REGULATORY AFFAIRS (RCRA)



Institutional Animal Care and Use Committee

Conflict of Interest and Committment

**Export Controls** 

Research Integrity and Compliance

Research Security





Collaborate with Confidence & Compliance -Research Security & Export Controls Focus on Disclosure Compliance – COI, ICOI, COC



Research Operational Compliance – IACUC & Controlled Substances Use



Navigating an Everchanging Regulatory Landscape – Tik Tok, NPRMs, NSPM-33, Data Sharing, ORA Policies and more



Research Ethics – research misconduct, research noncompliance, investigations, external agency disclosures and reporting

# Managing Research Misconduct @ Emory

# Research Misconduct

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

According to NIH 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 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



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# Recognizing Research Misconduct

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### 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.

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### Recognizing Research Misconduct – Red Flags!



Data cannot be

replicated

 Research procedures are completed faster than usual

- Materials and protocols are hidden
- Research is completed when no one is around

# Getting Ahead of Research Misconduct

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### **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.

From Research Misconduct & Detrimental Research Practices: Overview & Case Studies at https://grants.nih.gov/learning-center/conference/precon-events/research-misconduct

# **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

### or damage their reputation.

 Use the <u>NIH Library's iThenticate plagiarism checking</u> <u>service</u>. This service is free and confidential for requesters who are the first, last, or corresponding author of NIH workrelated, 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: <u>https://rcra.emory.edu/\_includes/documents/section</u> <u>s/program-effectiveness/ai-authorship.pdf</u>

### **AI Publisher Disclosure Guidelines**

#### Publisher Statements on AI

More publishers are now establishing guidelines and policies surrounding AI and its use in scholarly publishing. These policies are s o change and adapt to new developments.

- Springer Nature, Jan 24, 2023: Tools such as ChatGPT threaten transparent science; here are our ground rules for the use
- Science, Jan. 26, 2023: ChatGPT is fun, but not an author
- JAMA Network, Jan. 31, 2023: <u>Nonhuman "Authors" and Implications for the Integrity of Scientific Publication and N</u>
  <u>Knowledge</u>
- ACS Author Guidelines, updated Feb. 7, 2023: <u>Authorship, Author List, and Coauthor Notification</u>
- AIP Publishing, Feb. 10, 2023: On the Use of AI Language Models in Scholarly Communications at AIP Publishing
- Taylor & Francis, Feb. 17, 2023: Taylor & Francis Clarifies the Responsible use of AI Tools in Academic Content Creaters
- Emerald Publishing, Feb. 22, 2023: Emerald Publishing's stance on Al tools and authorshi
- Elsevier, undated: <u>Publishing Ethics</u>
- Cambridge, Cambridge University Press policy on Al-generated content
- Other organizations involved in scholarly communications have also issued statements and guidelines
- Committee on Publication Ethics (COPE), Feb. 13, 2023, Authorship and Al tools
- World Association of Medical Editors (WAME), Jan. 20, 2023, <u>Chatbots, ChatGPT, and Scholarly Manuscripts: WAME</u>
   Recommendations on ChatGPT and Chatbots in Relation to Scholarly Publications

Al Authorship, Copyright & Plagiarism - Best Practices

#### ACCOUNTABILITY

Al can generate authoritative-sounding output that can be incorrect, incomplete, or biased, so applying the AI technology should be done with human oversight and control and all work should be reviewed and edited carefully. Any section of a manuscript written by a language processing system (NLP) system should be checked by a domain expert for accuracy, bias, relevance, and reasoning.



#### TRANSPARENCY

Because NLP systems may be used in ways that may not be obvious to the reader, researchers should disclose their use of such systems and indicate which parts of the text were written or co-written by an NLP system.

Emory resources related to publisher statements on AI are available at: <u>https://guides.libraries.emory.edu/AI/publis</u> hing

### Same image, different results!

### Figure 3c in *Nature Medicine*

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### Figure C.2.5 in NIH grant application



From Research Misconduct & Detrimental Research Practices: Overview & Case Studies at https://grants.nih.gov/learning-center/conference/precon-events/research-misconduct

### Medical Record alteration

Patient 10: Death Certificate "September 29, 1987" 28 months prior to last reported follow-up (2-2-90) 4 months prior to first shown (1-18-88) follow up

	Nopital Notre-Dame
1 2	Houtréal
	1560 est, rue Sherbrooke Montréal, Quèbec H2L 4M1
	×
	ATTESTATION DE DÉCÈS
	1
NOM (À la naissance)	
ADRESSE	4648 Cartier, Montréal, Québec
DATE DE NAISSANCE	31 décembre 1924
DATE DU DÉCÈS	29 septembre 1987

- FFP in clinical research involves
  - Interviews
  - Entry criteria
  - Screening logs
  - Approval forms
  - Follow-up visits, exams/data
  - Consent forms
  - Test scores
  - Laboratory results
  - Patient data
  - Number of subjects
  - Dates of procedures
  - Study results

From Research Misconduct & Detrimental Research Practices: Overview & Case Studies at <u>https://grants.nih.gov/learning-center/conference/precon-events/research-misconduct</u>

## Dr. Eric T. Poehlman

Eric T. Poehlman, Ph.D., former Professor, Department of Medicine at the University of Vermont College of Medicine, engaged in scientific misconduct in research. The research was supported by National Institutes of Health (NIH) grants from the National Institute of Aging (NIA), the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), and the National Center for Research Resources (NCRR).

He falsified data for participants enrolled, including data for specifically he reported to the NAASO falsified RMR and fat mass data on 40 women followed over six years (17 pre-menopausal, 18 post-menopausal, and 5-peri-menopausal)

Dr. Poehlman agreed to enter into the comprehensive criminal, civil, and administrative settlement filed in U.S. District Court, and served one year in prision. In September 2001, Dr. Poehlman resigned from University of Vermont and moved to Montreal, Canada to work as an academic researcher. Dr. Poehlman has subsequently left his academic position in Canada.



# Authorship and Plagiarism

- Generally, an authorship dispute involves members of the same research group who do not reach an
  agreement on the value of their effort to grant an authorship order
- Plagiarism involves someone taking information from someone else without giving them proper recognition
- If a student in a lab complains that a PI has taken their work without putting them on a publication, we consider that an authorship matter

### Self – Plagiarism

- Not Research Misconduct
- While there are some situations where text recycling is an acceptable practice, it may not be so in other situations. Authors are urged to adhere to the spirit of ethical writing and avoid reusing their own previously published text unless it is done in a manner that alerts readers about the reuse or one that is consistent with standard scholarly conventions (e.g., by using quotations and proper paraphrasing).
- In academic context DOUBLE DIPPING

### Tips to Prevent Research Misconduct Allegations

Presenting a graphic? Ensure that you are following the publisher's requirements Any image enhancements? Avoid changing the meaning of the graphic or results. Document changes in the image text at the time of submission

If you are adding one or more images in a graphic for publications, ensure you divide those graphics by a line and explain in in the text

Working with other disciplines? Make sure that information is share transparently so it can be checked by others with expertise in the area

Reinforce the idea that research integrity is of uttermost importance!

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### **Outcomes of Research Misconduct Investigations**

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

Claims that a practice is uncommon are not exempt from being substantiated as RM

Certifications

Common Consequences:

- Prohibited from serving
- Debarment

Assurances

# **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 <u>As a principal investigator</u>

establish specific standards for the staff on recording, reporting, and publishing data Be prepared to respond to a wider scrutiny <u>As a staff scientist in the lab</u>

commit to integrity and practice it on a daily basis

## Culture of Integrity

From: ORI's <u>5 Ways</u> **Supervisors Can** Promote Research Integrity







You are responsible for the integrity of your team's data.

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Prevent misunderstandings by making sure everyone is on the same page.

TRAINING PROVID and GUIDANCE

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Avoid making assumptions about anyone's skills or knowledge.



you ever suspect research misconduct.

# 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



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### Your Role: See Something, Say Something.



#### See Something

### Say Something

Report Any Research/Data Integrity Concerns to...

### rio@emory.edu

# **Research Noncompliance**

### What is Research Noncompliance?

- This may include research noncompliance, protocol noncompliance, research finance issues, research privacy violations or any other researchrelated concerns.
- Deviations from the approved research protocol, contract, agreement, or federal regulations
- Not all reportable events managed by IRB, but issues that need to be escalated as they affect Emory globally or present a reputation risk.

### Investigation Lifecycle



Evaluate	Issue Spotting	Identify Policies and Procedures
Does the allegation sufficiently specify facts, so that potential evidence of a violation can be identified? Is this a student, faculty or staff member? What sources are funding the research?	Identify and classify issues If DEI, Title IX: Stop and consult these groups If this is a possible research misconduct: Stop and consult RCRA	Identify applicable policies, procedures, and regulatory requirements, including whether external reporting is required

### Identify Stakeholders

Identify who to consult, inform, and/or include on the investigation team

Involving as necessary, RCRA offices, ORA offices, regulatory committee members, SMEs, University offices, and School Leadership

### Confidentiality

 Although confidentiality cannot be always guaranteed for compliance with certain federal requirements, RCRA will maintain the confidentiality, to the extent possible

### • Retaliation

 Emory prohibits retaliation against employees, who in good faith, report possible violations or participate in investigations. Complainant will be informed of the policy against retaliation and advised to report to RCRA if they feel retaliated against or have been threatened with retaliation related to a research compliance investigation.

## Conflict of Interest

RCRA will determine whether any person involved in handling any aspect of the investigation has any personal, professional, or financial conflict of interest and take appropriate action, including recusal, to ensure that no person with such a conflict is involved in the proceedings.



### External Reporting – Disclosure and Notifications

For compliance with federal agency requirements, external reporting and notifications may be needed, to meet timelines mandated by the applicable regulatory agency.



The appropriate leadership will decide the corrective action(s) for the Respondent and/or the University, if any.

The appropriate leadership will implement the corrective action(s).

RCRA will monitor implementation of corrective action(s) and follow-up at 30-60-90 business day intervals to ensure completion.

# Stakeholder Roles &

Responsibilities

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RACI Chart-Tasks	Responsible	Accountable	<b>Consulted</b> (as applicable)	Informed (as applicable)
Trigger: receive noncompliance allegation	RCRA	RCRA	School Leadership	Relevant RCRA/ORA offices Complainant (of receipt)
<b>Triage:</b> evaluate allegation; classify issue; identify relevant policies/procedures/regulatory requirements and departments/units/committees	RCRA	RCRA	Relevant RCRA/ORA o ffices	School Leadership OGC Provost Office
<b>Plan &amp; Assign:</b> assemble investigation team; develop assessment plan (interview list, document/evidence list); assign roles	RCRA	RCRA	Relevant RCRA/ORA offices School Leadership OGC/Provost Office	HR
Investigation & Evaluation: gather and review documents; conduct interviews; summarize findings; review and evaluate results recommend action, if appropriate	RCRA School Leadership	RCRA	Relevant RCRA/ORA offices School Leadership OGC	SVPR/VPRA School Dean Provost Office
<b>Report:</b> prepare report of investigation; circulate; review with appropriate leadership	RCRA	RCRA	Relevant RCRA/ORA offices School Leadership OGC-Provost Office	SVPR/VPRA School Dean Provost Office
<b>Resolution:</b> decide corrective action, if any; implement corrective action	RCRA School Leadership SVPR/VPRA	RCRA	OGC	Provost Office
<b>Closeout:</b> execute external reporting, if required; update/finalize case report; closeout case	RCRA	RCRA	OGC/SVPR	School Leadership Complainant Respondent
Monitoring: monitor corrective action; follow-up at 30-60-90 business days	RCRA	RCRA	SVPR/ORA	School Leadership Respondent

### How to Report Research Noncompliance

- Any research noncompliance issue (an egregious event that could also be in the Emory IRB or IACUC's purview) should be reported to RCRA.
- Report any concerns directly to RCRA at (<u>researchcompliance@emory.edu</u>) involving research at Emory University or under Emory's oversight.
- This may include research noncompliance, protocol noncompliance, research finance issues, research privacy violations or any other research-related concerns.
- To remain anonymous, report your concerns using the <u>Emory Trust</u> <u>line</u>.
- If the matter involves a Title IX or DEI issue, RCRA will forward the information you provide to the Emory DEI Office, or you can report to the Emory DEIOffice directly.

### **Contact Information**



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# Questions?



### Links shared during Q and A

<u>Authorship Infographic</u> <u>Policy 7.30 Policy on Authorship Guidelines and Dispute Resolution</u> <u>Preventing Research Misconduct @ Emory</u>