



EMORY

Getting Ahead of Research Misconduct

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Ask RCRA

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AGENDA

Research Misconduct

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



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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.

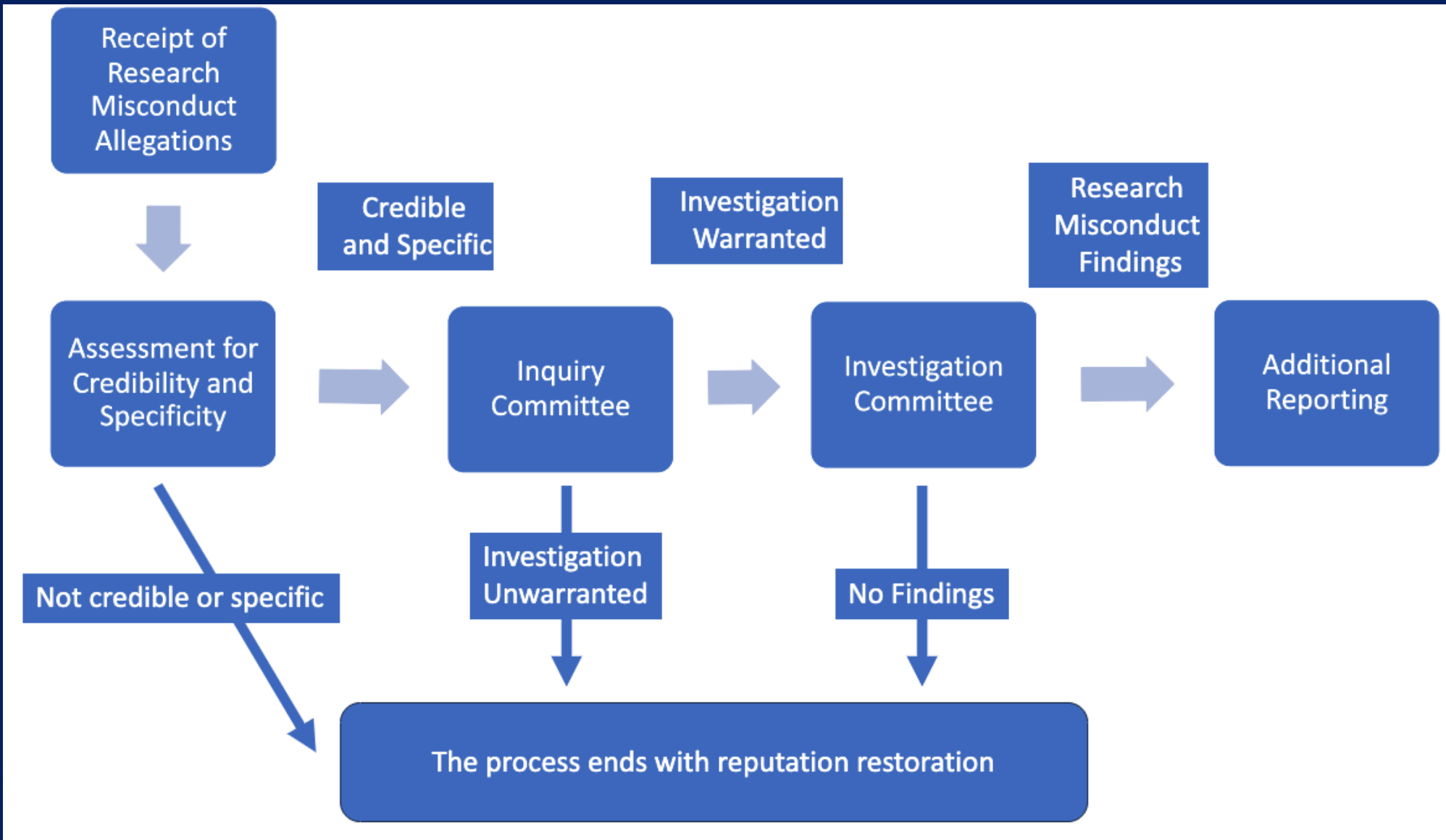


Policy 7.8

- 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



Recognizing Research Misconduct



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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

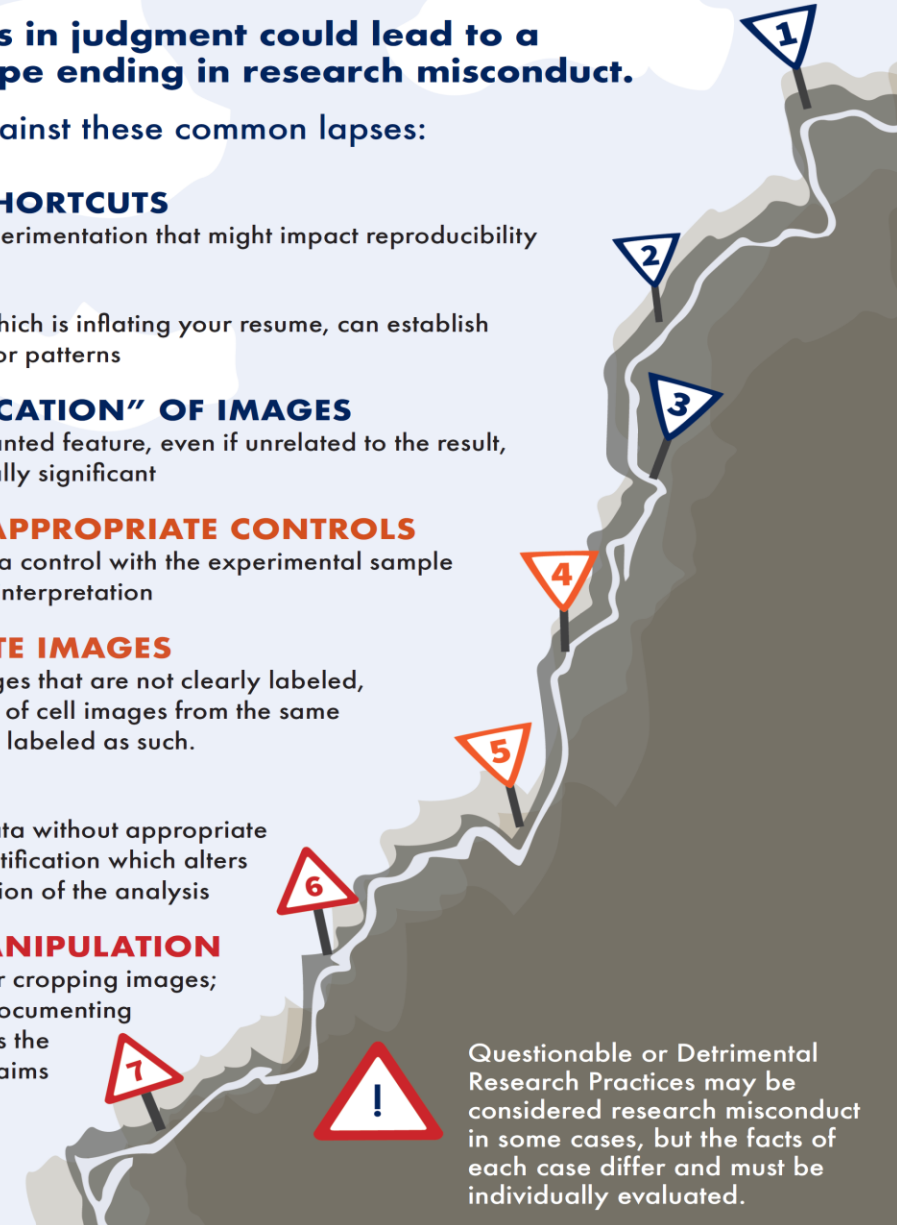
Assemblies of images that are not clearly labeled, such as a montage of cell images from the same experiment but not labeled as such.

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*

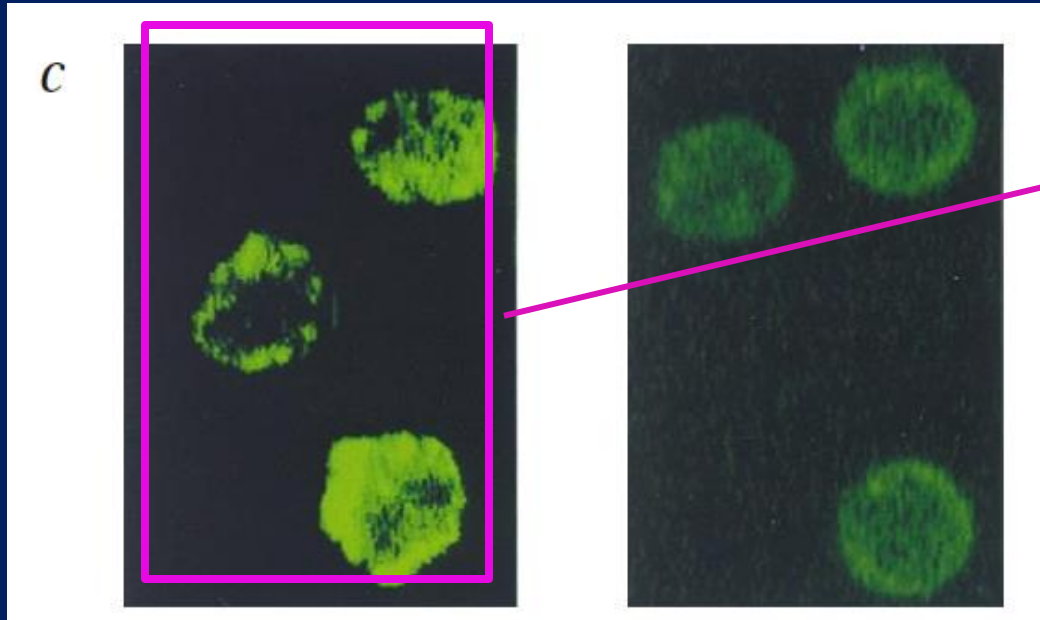
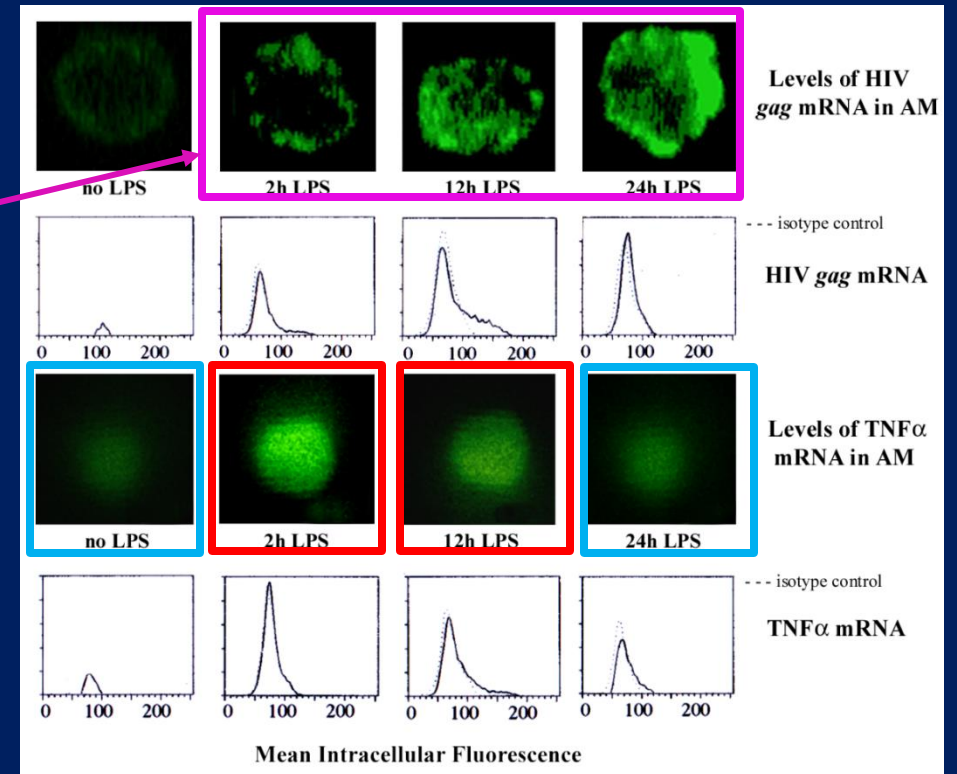
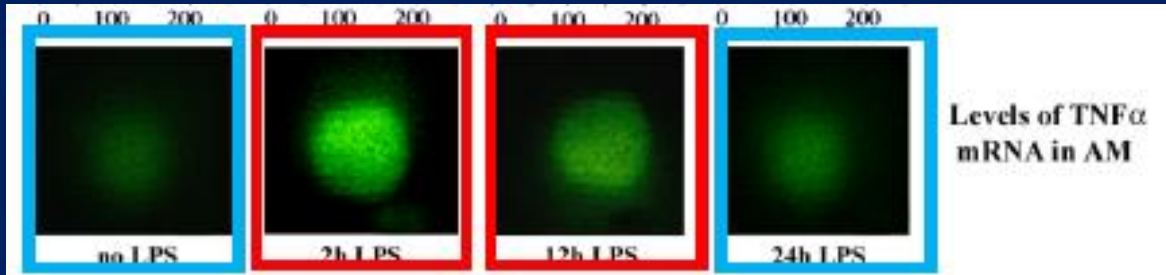


Figure C.2.5 in NIH grant application

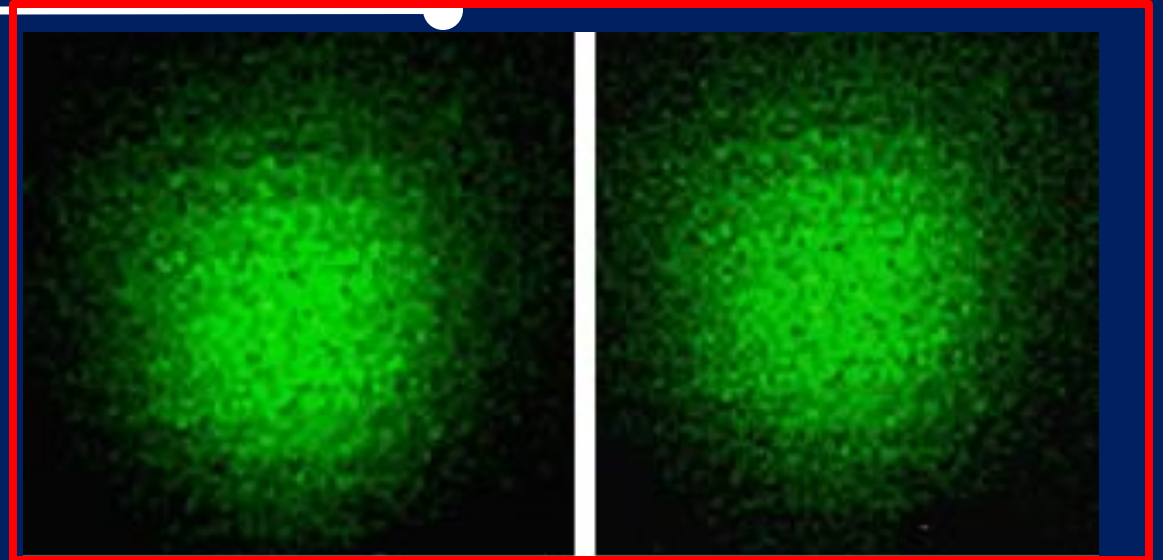


From **Research Misconduct & Detrimental Research Practices: Overview & Case Studies**
at <https://grants.nih.gov/learning-center/conference/precon-events/research-misconduct>

Image alterations that change results!

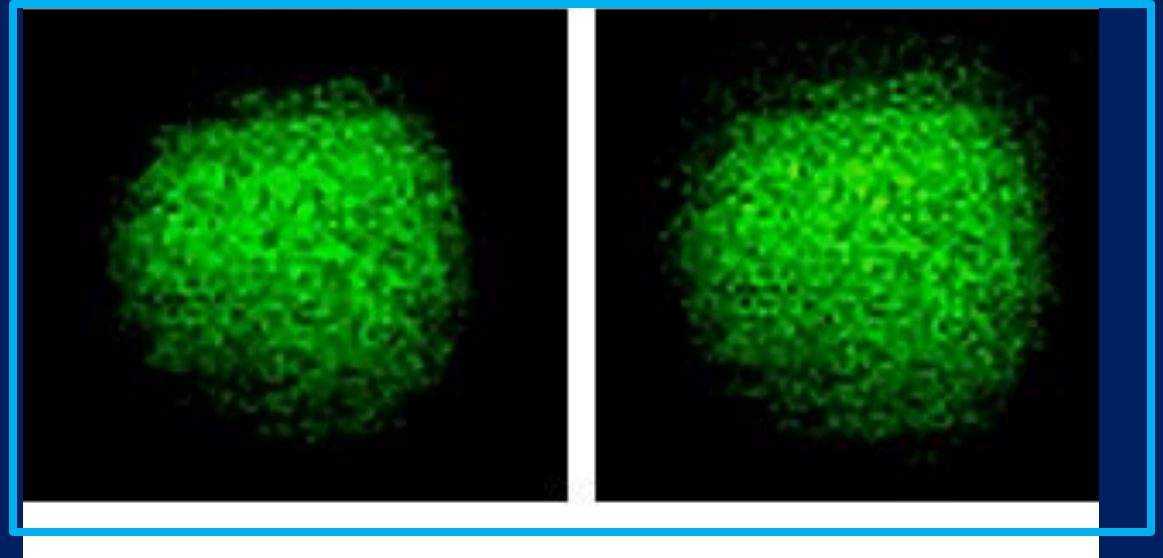


Same cell images representing
“2h LPS” and “12h LPS”



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



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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 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.

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>

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 subject to change and adapt to new developments.

- Springer Nature, Jan 24, 2023: [Tools such as ChatGPT threaten transparent science; here are our ground rules for their use](#)
- Science, Jan. 26, 2023: [ChatGPT is fun, but not an author](#)
- JAMA Network, Jan. 31, 2023: [Nonhuman "Authors" and Implications for the Integrity of Scientific Publication and Medical Knowledge](#)
- ACS Author Guidelines, updated Feb. 7, 2023: [Authorship, Author List, and Coauthor Notification](#)
- 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 Creation](#)
- Emerald Publishing, Feb. 22, 2023: [Emerald Publishing's stance on AI tools and authorship](#)
- Elsevier, undated: [Publishing Ethics](#)
- Cambridge, [Cambridge University Press policy on AI-generated content](#)

Other organizations involved in scholarly communications have also issued statements and guidelines:

- Committee on Publication Ethics (COPE), Feb. 13, 2023, [Authorship and AI tools](#)
- World Association of Medical Editors (WAME), Jan. 20, 2023, [Chatbots, ChatGPT, and Scholarly Manuscripts: WAME Recommendations on ChatGPT and Chatbots in Relation to Scholarly Publications](#)

AI Authorship, Copyright & Plagiarism - Best Practices



ACCOUNTABILITY

AI 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: <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](#)

1 **BE AVAILABLE & APPROACHABLE**



Your team wants to learn from YOU!



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

3 **COMMUNICATE EXPECTATIONS**

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



4

Avoid making assumptions about anyone's skills or knowledge.



5 **RESEARCH INTEGRITY OFFICER**

Be prepared in case you ever suspect research misconduct.



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

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Your Role: See Something, Say Something.



See Something



Say Something



Report Any
Research/Data
Integrity Concerns
to...



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Contact Information



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Questions?



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