

Research Misconduct

**Dr. Patricia Maloney with the assistance of Carroll Rollman,
Office of Grants and Sponsored Programs, May 2019
Updated September 2022**

Research Misconduct Defined

Fabrication, falsification, or plagiarism in proposing, performing, or reviewing research or grants, or in reporting research or grant results.

Sources: Montgomery College Procedure 68005CP; US Department of Health and Human Services Office of Research Integrity

Research Misconduct: Fabrication

Making up data or results and recording or reporting them.

Sources: Montgomery College Procedure 68005CP; US Department of Health and Human Services Office of Research Integrity

Research Misconduct: Falsification

➤ Manipulating research results, equipment, or processes

Or

➤ Changing or omitting data or results such that the research is not accurately represented in the research record.

Sources: Montgomery College Procedure 68005CP; US Department of Health and Human Services Office of Research Integrity

Research Misconduct: Plagiarism

Appropriation of another person's ideas, processes, results, or words without giving appropriate credit.

Sources: Montgomery College Procedures 61008CP and 68005CP; US Department of Health and Human Services Office of Research Integrity

Research Misconduct:

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

Sources: US Department of Health and Human Services Office of Research Integrity



YOU SUSPECT RESEARCH MISCONDUCT NOW WHAT?

IF YOU ARE SUSPICIOUS

AVOID CONFRONTATION

Direct confrontation may lead to retaliation and/or tampering with evidence.

KEEP NOTES

Document details and save communications related to the misconduct. This will help you recall important information needed by the institution.

CONSULT YOUR RESEARCH INTEGRITY OFFICER (RIO)*

RIOs can help you better understand the situation. You can speak in hypotheticals as you consider making an official allegation.

EDUCATE YOURSELF

Read your institution's research misconduct policy or contact the U.S. Office of Research Integrity (ORI) with questions.

SEEK SUPPORT

You may want to get advice from someone you trust to help you consider all options.

**At MC, contact Director of Grants & Sponsored Programs or Counsel*



REPORTING MISCONDUCT IS DIFFICULT...BUT IT CAN BE WORTH IT.

PEOPLE OFTEN WORRY ABOUT:

- ❖ The reputation and career of the accused
- ❖ How others in the lab will be affected
- ❖ Implications for their own career
- ❖ Possible retaliation

REPORTING MISCONDUCT HELPS:

- ❖ Prevent false and misleading information from entering the research record
- ❖ Correct the scientific literature
- ❖ Ensure funding is awarded to responsible research
- ❖ Protect the public's trust in science

BE SPECIFIC

Provide the RIO with specific examples of suspected misconduct and where it occurred (e.g. manuscripts, presentations, posters, grant applications, etc.).

BE PREPARED FOR SILENCE

Institutional policies may limit your access to confidential information about research misconduct proceedings.

BE AVAILABLE

The RIO may require your help identifying and examining evidence, explaining how the research was falsified, fabricated, or plagiarized, and cooperating as a witness.

BE PATIENT

Research misconduct proceedings take considerable effort and time to complete.

MAKE AN INFORMED DECISION

If you want to talk anonymously or report misconduct
contact ORI at 240-453-8800 or askORI@hhs.gov.





CAN YOU SPOT RESEARCH MISCONDUCT?
INVESTIGATING IMAGE MANIPULATION

OBJECTIVE

See if you can detect the research misconduct in this sample results section. (See page 9)

METHODS

Thoroughly review the images on the following page to determine what was falsified or fabricated. (See page 9)

RESULTS

Check your findings with the explanations in the discussion section. (See page 10)

FIGURE 1. COMET ASSAY

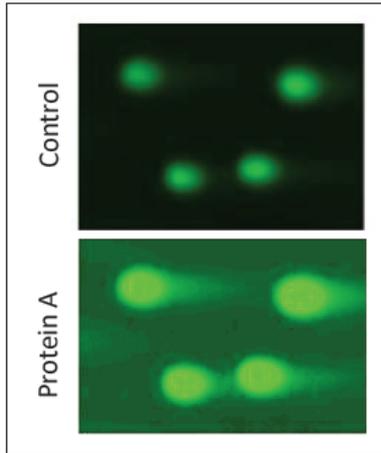


FIGURE 2. IMMUNOFLUORESCENCE COLOCALIZATION ASSAY

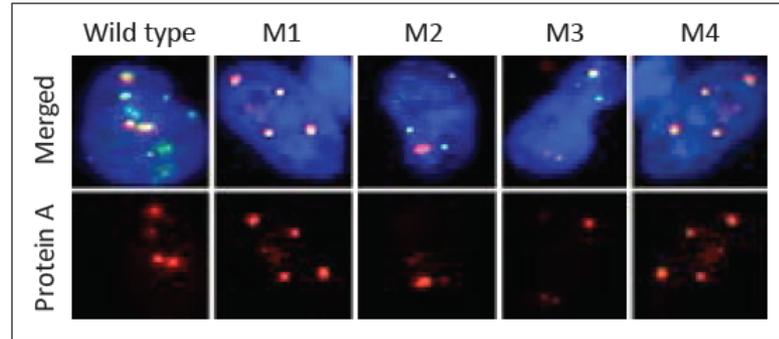


FIGURE 3. WESTERN BLOT

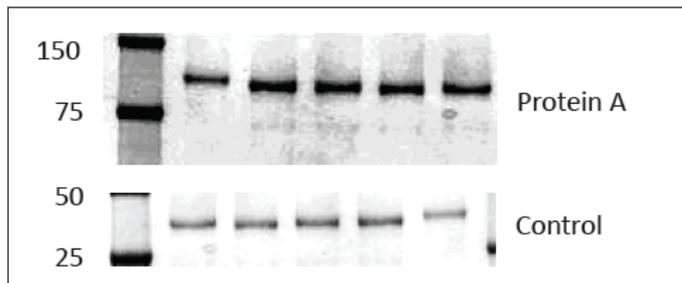
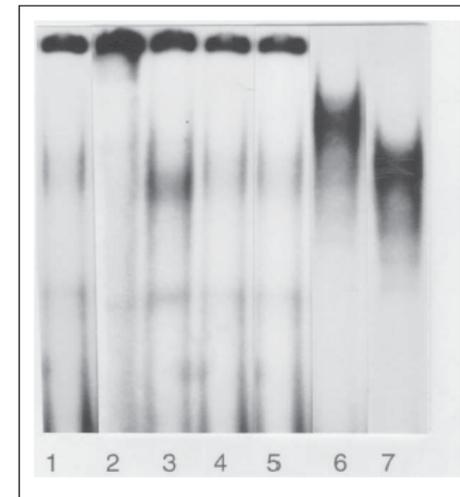


FIGURE 4. GEL SHIFT ASSAY



DISCUSSION

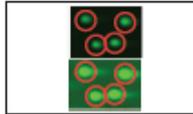


FIGURE 1. COMET ASSAY

The control image was cropped and relabeled as the image for Protein A. It was also intentionally lightened to make the “tails” appear longer.

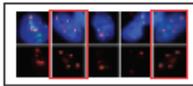


FIGURE 2. IMMUNOFLUORESCENCE COLOCALIZATION ASSAY

M1 and M4 are the same image but flipped vertically.

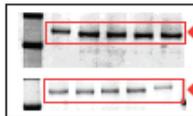


FIGURE 3. WESTERN BLOT

The top panel and bottom panel of Figure 3 are from the same source image. The Protein A blot image has been flipped horizontally and represented as the control blot image.

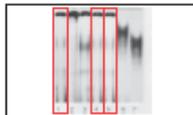


FIGURE 4. GEL SHIFT ASSAY

Lanes 1, 4, and 5 are from the same image source and were relabeled and reused to represent different experimental conditions.

CONCLUSION

Readers play an important role in detecting image manipulations. If you think you see research misconduct, make your concerns known to your institutional Research Integrity Officer.

**DID YOU
SPOT IT?**

Learn more about image processing at: <http://ori.hhs.gov/ImageProcessing>



ori.hhs.gov



@HHS_ORI



#ORledu



Suspect Research Misconduct?

Steps to Take

- Discuss concerns with trusted colleagues, project manager, or supervisor.
- Contact the MC Office of Grants & Sponsored Programs at 240-567-9038 or grants@montgomerycollege.edu
- Report your concerns anonymously via EthicsPoint at 844-572-2198 or www.montgomerycollege.ethicspoint.com
- Contact the Office of Compliance, Risk, and Ethics at 240-567-7396 or compliance@montgomerycollege.edu

Your report is confidential.

Further Information

- *The Lab*, an interactive movie from HHS available in English, Spanish, and Chinese. Make decisions about research integrity from different perspectives. <https://ori.hhs.gov/content/thelab>
- *Tips for Avoiding Plagiarism* infographic from HHS. <https://ori.hhs.gov/sites/default/files/2019-02/Tips%20for%20Avoiding%20Plagiarism.pdf>
- *Online Learning Tool for Research Integrity and Image Processing from HHS*. <https://ori.hhs.gov/education/products/RIandImages/continuum/default.html>
- *Online Ethics Center for Engineering and Science (includes social sciences, engineering, and laboratory sciences)*. <https://onlineethics.org/>

MC MONTGOMERY
COLLEGE