FACILITATOR GUIDE

The Lab

Avoiding Research Misconduct

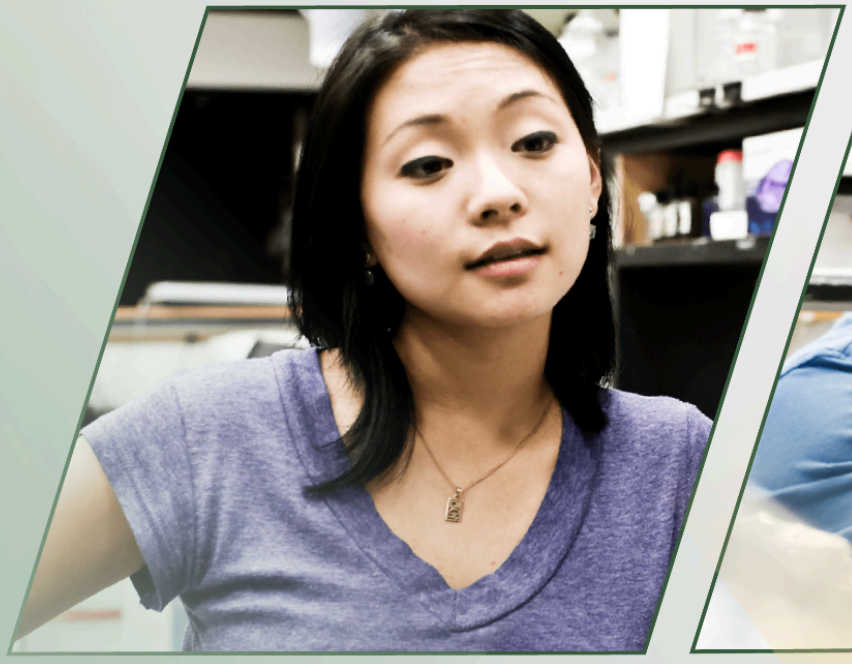

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Table of Contents

Disclaimer

In this program, you have the opportunity to become four distinct characters and deal with issues of ethical research conduct from various perspectives.

A tutorial for each character also provides the chance to examine the ethical decision-making process.

This fictional media is an educational product developed by the U.S. Department of Health and Human Services (HHS) and the Office of Research Integrity (ORI) to promote awareness of the responsible conduct of research.

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Before You Begin

Materials Needed

You will need the following materials and equipment to facilitate this program:

- Access to *The Lab* and the Internet
- Facilitator's Guide
- PC or Mac computer, monitor, or video projector
- Screen if projecting.
- Speakers

Accessibility and Configuration Options

By clicking on the gear or sprocket icon in the lower right corner, you can access controls for:

- Turning on/off Fullscreen
- Turning on/off Closed Captioning for all videos
- Turning on/off Audio Description
- Turning on/off Automatic Quality
- Changing the language from English to Spanish, Japanese, or Chinese

Technical Solutions & Suggestions

This section answers technical questions, helps to troubleshoot problems, and offers suggestions to create a technically better presentation of *The Lab* in a classroom setting.

Projecting for a Large Audience

The Lab can be projected onto a screen for large audiences, given the right equipment, if the classroom/auditorium is already set up to project multimedia.

Playback Problems

Video Skips and Hesitations

The Lab is not made for older computers and slower internet connections. Skips and hesitations in the video indicate that part of your computer is not processing quickly enough or your connection to the internet is slow or intermittent.

No Sound

Double-check the wires – be certain that the speakers have electricity, that all the connections are in the right places, and that the speakers are turned on and the volume is up. If you still do not have sound, contact your computer support technicians, and tell them you may have a problem with your sound card or speakers.

How To Facilitate

Introducing and Delivering the Training

Participants will engage in narrative-based training, experiencing scenarios from the viewpoints of a Principal Investigator (PI), Grad Student, Post Doc, and Research Integrity Officer (RIO). This immersive approach guides them through the critical aspects of upholding data integrity and preparing for various responsibilities within the laboratory.

The Lab is an interactive methodology that immerses participants in complex decision-making scenarios, allowing them to experience the immediate and cascading effects of their choices. It helps learners navigate challenges to avoid misconduct, prevent data falsification, and promote ethical decision-making in a lab setting.

This interactive simulation will guide users to:

- Define data falsification and lab misconduct.
- Identify where and how to report incidents of misconduct or falsification.
- Understand the role and responsibilities of a Research Integrity Officer (RIO).
- Follow the do's and don'ts of effective data management.

Each module includes didactic slides designed to meet key learning objectives, supported by "suggested facilitation" notes. These notes either align with slide content or provide additional details to enrich the presentation.

During interactive movie scenarios, engage the group in discussions about decisions, exploring both positive and negative outcomes. Address questions, encourage dialogue, and navigate backward as needed to explore alternative decision paths.

Characters

Beth Ridgley: Research Integrity Officer

Scenarios

Decision Point #1:
As the new RIO, you are working with your assistant, Patricia, to familiarize yourself with existing protocols and identify the IT professionals and Subject Matter Experts you might need in the future. You are also brainstorming ways to better promote the concept of research integrity, considering sending an email to students and staff, though you are unsure how it might be received. However, you are questioning whether just revising export control policies will suffice for now.

You have enough on your plate. Do you really want to send that email?

A. Sure. It can't hurt.
B. No. You don't want to do anything that might be perceived as hostile.

Choice A: "Sure. It Can't Hurt."
You send a follow-up to the original announcement and inform the appropriate department heads that you're available to help with Responsible Conduct in Research education. As a result, in the following weeks, you are contacted to speak about various aspects of research integrity and people begin seeking you out.

Remember, many researchers may not know what a RIO does or that one even exists at their institution. You should always take opportunities to promote research integrity and identify yourself as the Research Integrity Officer.

Choice B: "No. You don't want to do anything that might be perceived as hostile."
Many researchers may not know what a RIO does or that one even exists at their institution. You should always take opportunities to promote research integrity and identify yourself as the Research Integrity Officer. But by choosing not to send the email, you have missed out on an opportunity to educate others at your institution.
Try Again.

Decision Point #2:
You receive your first-ever complaint from Liam, who claims that his PI, Uli Kunkel, is a 'lying liar that you need to look into.' You can barely get a word in during this fifteen-minute conversation, and this isn't exactly how you thought it would go. Occasionally, you manage to ask a question or two, but his answers remain vague. After he leaves, you begin your assessment of the allegation.
Did Liam describe misconduct - and was the allegation credible?

A. Yes.
B. No.

Choice A: "Yes."
Upon further investigation, you find that Liam wasn't accusing the PI of fabricating results, but complaining about not being listed as an author. This is a lab issue, not research misconduct.

You didn't ask enough questions to understand the real issue. As a result, the department head, dean, and PI are upset over false rumors and wasted resources.

Always verify that an allegation qualifies as research misconduct and is credible and specific.**Try Again.**

Choice B: "No."
You don't have to think about it for very long to realize that there's no reason to move forward. You never actually received an allegation of fabrication, falsification, or plagiarism—and there was certainly nothing credible or specific about the claim. It seems like an authorship dispute, so there's no need to proceed further with this assessment.

Decision Point #3:
On the next Friday afternoon, you're almost out the door when a student calls about a potential research misconduct allegation. It's almost 5:00 p.m., and you have friends coming over for dinner.

What do you want to do?

A. Ask her to come to your office first thing Monday.
B. Get her story over the phone.
C. Ask her to come to your office right now.

Choice A: "Ask her to come to your office first thing Monday."
Although you get her name and set up a time to meet on Monday, she hangs up during your call. Monday comes and goes, and she never shows up.

It's difficult for someone to come forward with these types of allegations. The complainant (the person making an allegation of research misconduct) may be uncomfortable and unsure of herself, and she may wish to remain anonymous. You should talk to her as soon as possible and quickly establish some sort of trust. **Try Again.**

Choice B: "Get her story over the phone."
Although Kim starts to tell her story, she becomes distracted by students walking past and doesn't feel comfortable continuing the conversation. She hangs up the call.

It's difficult for someone to come forward with these types of allegations. The complainant (the person making an allegation of research misconduct) may be uncomfortable and unsure of herself, and she may wish to remain anonymous. You

should talk to her as soon as possible and quickly establish some sort of trust. **Try Again.**

Choice C: "Ask her to come to your office right now."
It's a good idea to get a complainant (the person making the allegation of research misconduct) in your office as soon as possible. Making these types of allegations is difficult - it may have taken a long time for her to work up the nerve to make this call. You don't want to give her an excuse to change her mind.

Decision Point #4:
You only have a few minutes before you meet with the complainant. This time, you have a bit of time to think about how to approach it. On one hand, you believe it might help to put her at ease by thoroughly explaining the process, showing her that you're prepared and competent. On the other hand, you worry that too much detail and administrative jargon upfront could intimidate her. It might be better to let her do the talking and see where it leads.

What do you want to do?

A. Let her talk, and see where it leads. Answer any questions she has.
B. Put her at ease by letting her know you're in control - steer the conversation.

Choice A: "Let her talk, and see where it leads. Answer any questions she has."
It's important to allow the complainant to tell the story and ask questions at her own pace, but as a RIO, you will need to guide the conversation which takes patience. Also, remember that grad students might be the most vulnerable population a RIO deals with.

Choice B: "Put her at ease by letting her know you're in control - steer the conversation."
You explain the process, but in doing so, you unintentionally freak her out a little.

Of course, every individual who comes to a RIO is unique. Still, it's a good idea to be quiet and let the story unfold. You can prompt the complainant if needed and answer questions as they arise. It's all about using your judgment to establish a comfort level. If you don't establish this comfort level, the complainant may not feel comfortable enough to give you all the information you need to determine the credibility of the allegation. Also, remember that grad students might be the most vulnerable population a RIO deals with due to their status in the lab. **Try Again.**

Decision Point #5:
Over the weekend, you spent some time reflecting on Kim's allegation, and one thing is bothering you: Kim and Greg's history together. You're questioning whether this alone is enough reason to drop the whole matter at this point.

Drop it right now?

A. Yes - her emotional connection discredits her allegation.
B. No.

Choice A: "Yes - her emotional connection discredits her allegation."
Discrediting Kim because of a perception she is too "emotional" is a form of sexism. Assuming she's "brokenhearted" isn't fair, and it isn't warranted - you don't know what happened or how Kim feels.

If the situation was reversed, and Greg was submitting a claim against Kim, would Beth count his romantic history against him?

You can't allow personal bias to cloud your objectivity. In assessing a complaint, you will have to naturally account for human factors, but you also have to stay objective and focused on the data. The fact is, there will often be some personal history, sometimes outright animosity, between the complainant and the respondent. Although this case seems to be an exception, people usually won't make an allegation against a friend. **Try again.**

Choice B: "No."
This leads directly to Decision Point #6.

Decision Point #6:
You decide not to drop it.

What do you want to do?

A. Call the old RIO - ask for his insights.
B. Figure it out for yourself.
C. Talk to Greg's PI.

Choice A: "Call the old RIO - ask for his insights."
Calling a colleague is a good idea. Use all the resources you have at your disposal.

But remember, in the early stages of an assessment, it might not be wise for a RIO to communicate with too many people about an allegation. People in labs do talk and may, either intentionally or inadvertently, alert respondents which may give them time to cover their tracks.

Choice B: "Figure it out for yourself."
This leads directly to Decision Point #7A

Choice C: "Talk to Greg's PI."
This leads directly to Decision Point #7B

Decision Point #7A:
You've laid the groundwork, reviewed procedures and protocols, and assembled your team. But now you're contemplating how to proceed. You have what appears to be a credible allegation, but Greg Anderson is one of the best scientists in an exceptional lab. It's already difficult enough to ask him to turn over data—you don't want to cause

unnecessary disruption in the lab or embarrass a researcher who may not be at fault. How do you want to approach this?

What do you want to do?

A. Use a backup team.
B. You may get better cooperation if it's not confrontational. Go alone.

Choice A: "Use a backup team."
This leads directly to Decision Point #7B

Choice B: "You may get better cooperation if it's not confrontational. Go alone."
You decide to handle the situation quietly and meet Greg alone. After giving him a written copy of the allegations and clearly stating what you need, he pretends to cooperate but claims he can't find the necessary information. Undeterred, you stay focused and thorough, gathering notes, transferring data from the lab computer to a thumb drive, and finding other misplaced data. The process takes almost three hours, but Greg refuses to sign a receipt when you're done. Despite completing the task, you later realize that you made a mistake. An inquiry is initiated, and you soon recognize your error.

You assembled a team to assist you -you should have used them. A RIO's main function throughout the process is to coordinate and see that each step is carried out properly following published policies. A failure to follow proper procedures can invalidate a case that may otherwise have merit. **Try again.**

Decision Point #7B:

What do you want to do?

A. Let him gather the data and bring it to you.
B. Tell him he needs to produce the data right now.

Choice A: "Let him gather the data and bring it to you."
You were gullible and Greg took advantage of you.

Showing empathy isn't bad. However, allowing a respondent time to "lose," destroy, or alter data is. **Try again.**

Choice B: "Tell him he needs to produce the data right now."
Being a Research Integrity Officer sometimes includes navigating a minefield of competing agendas. Possible financial and legal repercussions, not to mention the simple embarrassment of public disclosure, can influence an institution's response to allegations of research misconduct.

Decision Point #8:
Kim enters your office, visibly upset after being kicked out of the lab by Dr. Hutchins because Greg feels uncomfortable working with her. She explains that Dr. Hutchins prioritized Greg's work over hers, citing her presence as a distraction, likely stemming

from their previous conflict over Greg's paper. Kim is frustrated and concerned about the impact on her progress, while you reflect on the situation, feeling helpless and unsure how to intervene.

What do you want to do?

A. All you do is try to get her placed in another lab.
B. Go talk to the PI.
C. Take this to the administration.

Choice A: "All you do is try to get her placed in another lab."
You discuss with Kim the best way for her to transition smoothly with minimal disruption to her work. Though she's not thrilled, she feels reassured. By the time the conversation ends, she understands that it's not the end of the world.

There are times when placing a complainant in another lab is the best solution - sometimes, the only good solution. For instance, if there's no clear link between alleged retaliation and the incident that supposedly caused it, then it's better to put the complainant in another lab. But this wasn't necessarily one of those times.

Choice B: "Go talk to the PI."
When there is a real, conscious effort to retaliate, it may not be that easy to solve. Proving a direct link between the perceived retaliation and its supposed cause can be difficult. Dr. Hutchins made this one simple. Retaliation can't be tolerated, and there are remedies.

Choice C: "Take this to the administration."
It's true, you didn't do anything wrong. Every situation is different, and you have to use your best judgment. Gauge the personalities that are involved and make a call. Sometimes things just turn out badly.

Summary

Allegations of research misconduct may not be all that common, which makes it difficult to achieve a high degree of expertise as a Research Integrity Officer. It's important to have policies and procedures in place, and to be familiar with them so that you can competently respond to any credible allegations of research misconduct.

Criteria for Misconduct
Each allegation of research misconduct must meet the following criteria to fall within the jurisdiction of Public Health Service (PHS) policies:

- The research in which the alleged misconduct took place must be supported by, or involve an application for, PHS funds.
- The alleged misconduct must meet the definition of research misconduct outlined in the PHS Policies on Research Misconduct.
- The allegation must contain sufficient information to proceed with an inquiry

These are the key questions in an assessment of an allegation of research misconduct. The answer has to be "yes" to both to move forward.

- Does the allegation fit the definition of research misconduct?
- Is the allegation credible and specific?

Supporting Complainants

It can be challenging for someone to come forward with allegations of research misconduct. The complainant may feel uncertain, uncomfortable, or wish to remain anonymous. It's important to speak with them promptly to establish trust and provide reassurance. Delays could cause them to reconsider or withdraw their complaint. Meeting with them in person can help create a supportive environment.

Interviewing Complainants

It's important to allow the complainant to tell the story and ask questions at their own pace, but as a RIO, you will need to guide the conversation which takes patience.

Additional Suggestions

The regulations require that interviews be recorded or transcribed during an investigation. Although not a requirement in the regulation, recording or transcribing during the inquiry is recommended by ORI. The recordings or transcripts must be provided to the interviewee for correction, since there may be instances where the transcriber may not know all of the scientific vocabulary used during the interview.

In addition, RIOs should seek out information on effective interview skills to aid investigation panels. The transcripts of many interviews can be virtually worthless because the interviewers have little or no experience and have been given no guidance on how to conduct an interview to determine whether research misconduct occurred. Academic scientific discussions during the interview are often not useful. Also, each object examined and discussed during an interview should be explicitly described and tagged as an exhibit attached to the transcript. Otherwise, any discussion of it will be of no value when the transcript is read later by others.

Ways you may receive complaints:

- An anonymous tip to ORI or to your institution (through email or reporting hotline).
- Individuals name themselves, claiming some misconduct, but then refuse to be part of the investigation further.

Keep in mind the institution is obligated to investigate a claim of data misuse as long as there is a credible allegation. Whether they want to participate or not, you have now heard a credible allegation (supported by evidence) and should pursue it. They should also know that their role going forward will likely be only as a witness.

Personal Bias

You can't allow personal bias to cloud your objectivity. In assessing a complaint, you will have to naturally account for human factors, but you also have to stay objective and focused on the data. The fact is, there will often be some personal history,

sometimes outright animosity, between the complainant and the respondent. Although this case seems to be an exception, people usually won't make an allegation against a friend.

Gender Bias

Women, particularly in science, are often discredited, dismissed, or negatively judged for reasons that men are not. According to recent studies...

- Women in research teams are significantly less likely than men to be credited with authorship
- Qualitative surveys found that the reason that women are less likely to be credited is because their work is often not known, is not appreciated, or is ignored.
- Women in science receive smaller research grants than their male colleagues and earn less recognition from their peers
- Only 12 per cent of members of national science academies are women.

(Ross, M.B., Glennon, B.M., Murciano-Goroff, R. et al. Women are credited less in science than men. Nature 608, 135–145 (2022) https://doi.org/10.1038/s41586-022-04966-w)

https://unesdoc.unesco.org/ark:/48223/pf0000377250

Bias and Biased Behavior

Remember, bias and biased behavior can occur even between people of the same gender, the same race, etc. It's a good idea to check yourself and your decisions for bias.

Early Stages of Assessment

In the early stages of an assessment, it might not be wise for a RIO to communicate with too many people about an allegation. People in labs do talk and may, either intentionally or inadvertently, alert respondents which may give them time to cover their tracks.

RIOs should act in a careful way to assess allegations, and if the allegations warrant action, assemble a team and promptly sequester relevant records. Taking too long to do this, or talking to witnesses or even the respondent before sequestration, can allow guilty parties to alter or destroy critical raw data and other records. Everyone is best served if no one can subsequently claim that so-and-so could have altered or discarded records.

Navigating Competing Agendas

Being a Research Integrity Officer sometimes includes navigating a minefield of competing agendas. Possible financial and legal repercussions, not to mention the simple embarrassment of public disclosure, can influence an institution's response to allegations of research misconduct.

Retaliation
Retaliation is any adverse action taken against a complainant, witness, or committee member by any institution or one of its members in response to (a) A good faith allegation of research misconduct; or (b) Good faith cooperation with a research misconduct proceeding. Suspected instances of retaliation should be reported immediately to the university RIO.

Responsibility to Complainants
RIOs and institutions should take all the steps necessary to support complainants. Complainants are often treated harshly by others in their lab if their identity becomes known, as it nearly always is, and complainants' protection is very spotty. Admittedly, some complainants have issues that go beyond research misconduct allegations, or their dogged persistence may be hard to endure, but often this behavior is brought on or exacerbated by reluctance on the part of institutional officials to act.

Resolving Retaliation
When there is a real, conscious effort to retaliate, it may not be that easy to solve. Proving a direct link between the perceived retaliation and its supposed cause can be difficult. Retaliation can't be tolerated, and there are remedies.

Remember, every situation is different, and you have to use your best judgment. Gauge the personalities that are involved and make a call. Sometimes things just turn out badly.

Supporting Complainants Through Lab Relocation
There are times when placing a complainant in another lab is the best solution - sometimes, the only good solution. For instance, if there's no clear link between alleged retaliation and the incident that supposedly caused it, then it's better to put the complainant in another lab.

Institutions should provide a support mechanism for complainants so they do not feel as isolated as they often do at present, including facilitating their relocation to other laboratories if it is clearly not possible to continue comfortably in their current lab or if their research project has been totally compromised.

Kim Park: Grad Student

Scenarios

Decision Point #1:
Greg tells you that an article he and Aaron submitted has been accepted by Nature and that he has listed you as a co-author for data from your rotation project years ago. He admits that he didn’t ask for your permission first or show you the draft earlier, brushing it off as an oversight. He asks you to sign the proof, as it needs to be submitted today.

What do you want to do?

A. Tell him you need to read it.
B. Just sign.

Choice A: "Tell him you need to read it."
This leads to Decision Point #2

Choice B: "Just sign"
You're sure that because your experiment is such a small part of the article, there's little, if anything, for you to check for. You can read it after it's published.

As a scientist, you should always review an article that lists you as a co-author. Would you sign a legal contract without reading it?

Remember: every article, good or bad, you're an author of will follow you for your entire career. Make sure you're familiar with it before you "okay" it. **Try again.**

Decision Point #2:
Greg pressures you once again to sign the proof.

What do you want to do?

A. Read the article.
B. Skip reading and get to work.

Choice A: "Read the article"
You read the article once... then again... and again. Something doesn't feel right. The results don't match what you remember from your rotation project. The Western blots look different, and the disparity between the control group seems more dramatic than you recall. You don't have a photographic memory of the original film, but you'd never forget those results.

Choice B: "Skip reading and get to work"
So you decide not to read the article... As a scientist, you should always review an article that lists you as a co-author. Would you sign a legal contract without reading it?

Remember: every article, good or bad, you're an author of will follow you for your entire career. Make sure you're familiar with it before you "okay" it. **Try again.**

Decision Point #3:
You think your mother would be a good person to talk to about the article. When you discuss it with her, she suggests that your data may have been altered deliberately to fit a desired outcome. However, the conversation only leaves you more confused about what to do regarding the article.

What do you want to do?

A. Ask Greg about the article

B. Just let it go
C. Seek out more advice about what to do

Choice A: Ask Greg about the article
You confront Greg about discrepancies between the journal article and your raw data, showing him your old lab notes. He brushes off your concerns, promising to look into it, but weeks go by with no follow-up. Frustrated by his avoidance, you decide sharing this with Greg wasn't your best idea.

The power differential and hierarchy in a lab can make it difficult for whistleblowers to come forward. The tendency is often to be deferential and give the benefit of the doubt to more senior scientists. **Try again.**

It's probably not a good idea to confront or question someone you think may be falsifying or fabricating data. It could tip them off and, in turn, thwart an investigation later. **Try again.**

Choice B: Just let it go
You choose to let it go, completing your PhD and starting your postdoctoral work in Dr. Ali Hamid's lab. Then, you learn that Greg, now running his own lab, has been exposed for cutting corners. His dishonesty not only ruins his career but also tarnishes the reputations of everyone involved, including yours as a co-author of his articles.

Your career has been tainted, and you'll have to spend a long time distancing yourself from Greg and repairing your reputation. **Try again.**

Choice C: Seek out more advice about what to do
This leads to Decision Point #4

Decision Point #4:
After sleeping on it you decide to seek out more advice on your situation.

Who should you seek advice from?
A. Steve, a fellow grad student in the lab
B. Talk to Hardik, a postdoc in the lab
C. Talk to a respected former undergraduate professor
D. Talk to your cousin
E. Research on the university website to seek out the proper authorities
F. Talk to your PI, Dr. Hutchins

Choice A: "Steve, a fellow grad student in the lab"
Speaking with Steve turned out to be less helpful than you had hoped. For some reason, you can't fully trust his promise to keep things confidential. **Try again.**

Choice B: "Talk to Hardik, a postdoc in the lab"

While it's comforting to know you have friends supporting you, the conversation has left you just as confused as before. **Try again.**

Choice C: "Talk to a respected former undergraduate professor"
Dr. Perkins always makes you feel better, but are you closer to decisiding what to do next? **Try again.**

Choice D: "Talk to your cousin"
While that was a good primer on Gary Cooper and Yoda, it didn't offer much else. Try confiding in someone else. **Try again.**

Choice E: "Research the university website to seek out the proper authorities"
This leads to Decision Point #5A

Choice F: "Talk to your PI, Dr. Hutchins"
This leads to Decision Point #5B

Decision Point #5A:
After some deliberation, you decide to explore the university's website and stumble upon information about the Research Integrity Officer, Dr. Elizabeth Ridgley.

Two weeks pass before you muster the motivation to pick up the phone and call her. When you finally do, she answers promptly.

What do you want to do?

A. Keep things hypothetical.
B. Spill the beans.

Choice A: "Keep things hypothetical."
This leads to Decision Point #6

Choice B: "Spill the beans."
This leads to Decision Point #6

Decision Point #5B:
As you're winding down for the evening, you consider bringing up your concerns about Greg with Dr. Hutchins. However, you quickly remind yourself that Greg is Hutchins' golden boy. He's unlikely to take your suspicions seriously, so you wonder if it's even worth trying.

Do you really want to talk to your PI about Greg?

A. No.
B. Yes.

Choice A: No.
Try again and return to Decision Point #4.

Choice B: Yes
Dr. Hutchins is doing some gaslighting here and doesn't actively listen to your allegation. ***Try again and return to Decision Point #4.***

Decision Point #6:
While on the phone with Dr. Ridgley, she asks if you can meet today with her.

What do you want to do?
A. Drop it.
B. Meet with Dr. Ridgley.

Choice A: Drop it.
Career Tainted. You have to spend a long time distancing yourself from Greg and repairing your reputation. **Try Again.**

Choice B: Meet with Dr. Ridgley.
This leads to Decision Point #7

Decision Point #7:
You meet with Dr. Ridgley, who begins outlining the process of filing a complaint and the subsequent steps. The sheer amount of information leaves your head spinning.

What do you want to do?
A. Leave now.
B. Stay.

Choice A: Leave now.
This leads to Decision Point #8

Choice B: Stay.
You tell Dr. Ridgley what you know about Greg and the article. She confronts Greg in the lab, and when unsatisfied, brings her team to sequester the data. Soon, most of the lab realizes you're the complainant, and sides are taken.

But eventually, you are key to bringing Greg's misconduct to light. This is a moment you'll always be proud of.

Decision Point #8:
You meet with Dr. Ridgley to discuss your concerns about filing a complaint. She reassures you about confidentiality and measures against retaliation but acknowledges the challenges involved. Overwhelmed, you are torn between taking action and avoiding the trouble it may bring.

What do you want to do?
A. Leave now.
B. Stay and tell your story.

Choice A: Leave now.
You choose to let it go, completing your PhD and starting your postdoctoral work in Dr. Ali Hamid's lab. Then, you learn that Greg, now running his own lab, has been exposed for cutting corners. His dishonesty not only ruins his career but also tarnishes the reputations of everyone involved, including yours as a co-author of his articles.

Your career has been tainted, and you'll have to spend a long time distancing yourself from Greg and repairing your reputation. **Try again.**

Choice B: Stay and tell your story.
You tell Dr. Ridgley what you know about Greg and the article. She confronts Greg in the lab, and when unsatisfied, brings her team to sequester the data. Soon, most of the lab realizes you're the complainant, and sides are taken.

But eventually, you are key to bringing Greg's misconduct to light. This is a moment you'll always be proud of.

Summary

Inappropriate Behavior
Teasing among friends is normal. But when it impedes someone from doing their job, or embarrasses them in a professional setting it crosses the line. Would they do this to a male colleague while he was giving a presentation?

Sexual Harassment
Diminutive nicknames can be a form of sexual harassment. Especially if the recipient isn't receptive. Greg probably wouldn't use language like that to persuade his male colleagues to sign a document.

Using it with Kim is inappropriate, disrespectful to her position in the lab, and seems pretty manipulative.

Review Before You Sign
As a scientist, you should always review an article that lists you as a co-author. Would you sign a legal contract without reading it?

Remember: every article, good or bad, that you're an author on will follow you for your entire career. Make sure you're familiar with it before you "okay" it.

Whistleblowing Challenges
The power differential and hierarchy in a lab can make it difficult for whistleblowers to come forward. The tendency is often to be deferential and give the benefit of the doubt to more senior scientists.

It's probably not a good idea to confront or question someone you think may be falsifying or fabricating data. It could tip them off and, in turn, thwart an investigation later.

Gaslighting

Questioning someone's version of events, diminishing their rationality in comparison to another individual, and even how they should feel–grateful–is a type of manipulation called gaslighting. It's meant to diminish a victim or a whistleblower and gain power over them.

Some common examples of gaslighting are:

- Denying or trivializing your recollection of events.
- Calling you emotional, "crazy" or "too sensitive" to discredit you.
- Avoiding or refusing to discuss a real issue.
- Twisting events to shift blame to you.
- Insisting you said or did things you know you didn't do.
- Spreading untrue gossip about you, especially where your judgment is questioned.
- Setting you up to fail.

What to Do About Gaslighting:

1. **Gather evidence.** Take screenshots, texts, emails, or other examples of your communication where gaslighting is happening. Take notes on verbal conversations with a date it occurred.
2. **Speak up about the behavior.** Call it out in the moment, "What you're saying is untrue. When you're ready to discuss the facts of the matter I will listen."
3. **Involve others.** Avoid one-on-one encounters with the gaslighter if possible. With witnesses, it's harder for the gaslighting to continue.
4. **Escalate the issue.** Take your evidence (and any witness accounts) to your department/program head or coordinator, ombudsman, or a member of the community designated as the individual to provide support for trainees or staff. If it involves potential research misconduct, reach out to your Research Integrity Officer (RIO).

When faced with gaslighting, it's important to stick to what *you* know to be true.

Complaints

Complainants can be unpopular, and they are often isolated and excluded by friends, colleagues, professors, and even lab mentors.

Unfortunately, RIOs can't protect complainants from being ostracized. RIOs can protect complainants if there is retaliation that affects their employment or education.

Retaliation

Retaliation is any adverse action taken against a complainant, witness, or committee member by an institution or one of its members in response to (a) A good faith allegation of research misconduct; or (b) Good faith cooperation with a research

misconduct proceeding. Suspected instances of retaliation should be reported immediately to the university RIO.

Dr. Aaron Hutchins: Principal Investigator

Scenarios

Decision Point #1
Your mentor and former Principal Investigator (PI) from your postdoc days stops by during your office hours for a chat. While you're talking, Greg, one of your postdocs, knocks on the door to inform you that he's stepping out to grab some coffee. He mentions that he's been in the lab since 10 a.m. the previous day and appears visibly disheveled. It's clear your mentor expects you to assist Greg, but you're mindful of maintaining a balance between providing support and avoiding micromanagement.

What do you want to do?

A. Tell him to go home.
B. Let him keep working.

Choice A: "Tell him to go home."
You make sure your post doc takes better care of himself. Part of being an effective lab chief is helping your post docs and grad students prepare themselves for careers as scientists. Reinforcing good work habits is essential to this.

Choice B: "Let him keep working."
Lots of post docs have been published after running themselves ragged, but do they achieve success because of this kind of self abuse or despite it?

Part of being an effective lab chief is helping your post docs and grad students prepare themselves for careers as scientists. Reinforcing good work habits is essential to this. **Try again.**

Decision Point #2:
The next day, you and Greg review some new experiment results together. During your discussion, Kim, one of your graduate students, reminds you that you had asked her to check back in later. She asks if you have time to help her identify what she might be doing wrong. However, you might be in the midst of one of your lab's most significant discoveries with Greg. While you've been postponing a meeting with Kim for some time, her project feels far less critical compared to the one you're currently working on with Greg.

What do you want to do?

A. Talk to her now.
B. Steer her to your other post doc.

Choice A: "Talk to her now."
As a PI, it's crucial to recognize that the time you choose to spend with specific individuals in the lab can signal bias—or create the perception of it.

Working closely with Kim allows you to provide guidance, review her raw data, and monitor her progress on experiments. By extending this level of engagement to the entire lab, you gain exposure to everyone's raw data and ongoing projects. This approach helps you stay informed and maintain a comprehensive understanding of your lab's overall progress.

Choice B: "Steer her to your other post doc."
Maybe your affinity for Greg's projects comes across as favoritism.

As a PI, it's important to engage both your grad students and post docs as equally and fairly as you can. This can be difficult, especially considering that some projects have higher priorities than others. **Try again.**

Decision Point #3:
The next day, while you're working with Greg, a graduate student named Steve interrupts. He appears visibly troubled and asks if he can speak with you privately.

What do you want to do?

A. Meet with him.
B. Grad students need to understand that you have priorities. Tell him to meet you later.

Choice A: "Meet with him."
Steve confides that he's considering temporarily leaving school to take a high-paying sales job. He admits he's been struggling with grad school. You take the time to help him explore ways to overcome his challenges and regain his motivation. Eventually, Steve decides to stay and continue to do good work.

As a PI, you're very influential in the lives and careers of your grad students and post docs. Simply listening and sharing what you know can make a huge difference.

Choice B: "Grad students need to understand that you have priorities. Tell him to meet you later." *This leads to Decision Point #4.*

Decision Point #4
You ask Steve to check back in with you later. When he returns to your office later that day, you're exhausted and feeling drained, but he asks if now is a good time to talk.
Do you want to meet with Steve?

A. You're exhausted, and he deserves your full attention. So not right now.
B. Yes.

Choice A: "You're exhausted, and he deserves your full attention. So not right now."
Too bad. You missed an opportunity. **Try again.**

Choice B: "Yes."
Steve confides that he's considering temporarily leaving school to take a high-paying sales job. He admits he's been struggling with grad school. You take the time to help him explore ways to overcome his challenges and regain his motivation. Eventually, Steve decides to stay and continue to do good work.

As a PI, you're very influential in the lives and careers of your grad students and post docs. Simply listening and sharing what you know can make a huge difference.

Decision Point #5
Kim approaches you and asks if you have a moment to talk privately. She confides that she suspects Greg may be involved in research misconduct. You find yourself questioning how seriously to take her concerns—after all, she's just a graduate student still gaining experience in the field.

What do you want to do?

A. Continue to humor her.
B. Cut her off.

Choice A: "Continue to humor her."
As Kim continues to explain, you acknowledge to yourself that this is a matter worth investigating.

Choice B: "Cut her off."
Days later, the ROI contacts you about an allegation they're looking into. You're totally blindsided by this. If you took the time to listen to Kim, you may have avoided this situation that's developing in your lab too.

Among other things, engaging and supporting grad students and post docs can build trust between you and them. This trust can be key in exposing any potential problems in your lab. **Try again.**

Decision Point #6
On the way home, you reflect on how to handle Kim's allegation.

What do you want to do?

C. Handle it in-house.
D. Go to the university RIO.

Choice A: "Handle it in-house."
When you ask Greg for the raw data, he struggles to locate it due to his disorganization. Ultimately, you don't find any clear evidence of misconduct, but you're also left feeling uncertain about the reliability of his research.

Go to Decision Point #7.

Choice B: "Go to the university RIO."
You meet with the university's Research Integrity Officer (RIO), and the potential gravity of the situation becomes immediately clear to her. She informs you that she will need to interview Kim and may have to sequester data from your lab. Although you're wary of the disruption this could cause, you understand that gathering evidence is a necessary part of the process.

Decision Point #7
When you ask Greg for the raw data, he struggles to locate it due to his disorganization. Ultimately, you don't find any clear evidence of misconduct, but you're also left feeling uncertain about the reliability of his research.

What do you want to do?
A. Let it go.
B. Go to the university RIO with this.

Choice A: "Let it go."
A few years later you find out that Greg was exposed for other misconduct when he eventually became a PI of his own lab. Greg's dishonesty will not only embarrasses his university, but you're afraid the ripple could eventually affect you. Maybe this could have all been prevented. If you'd just reported Greg when you had your suspicions, maybe his dishonesty could have been nipped in the bud. **Try again.**

Choice B: "Go to the university RIO."
After bringing in her team to gather more data on the allegation, Kim suspects that Greg has gone back and covered his tracks. Now, you begin to question your decision to handle the matter on your own and consider confronting Greg directly.

It is generally not advisable to confront or question a respondent, as it could tip them off and potentially derail the investigation. **Try again.**

Summary

Part of being an effective lab chief is helping your postdocs and grad students prepare themselves for careers as scientists. Reinforcing good work habits is essential to this.

Prioritizing self-care
Prioritizing self-care for yourself and your team will help create a healthy workplace culture.

The example you set and the care you demonstrate send a powerful message: that you care about your lab members' well-being and that, while the work is always important, success is not achieved through overwork and personal neglect.

Leading with Priorities and Support

As a leader, you're at a point in your career where you should have a good grasp of your priorities, goals, and definition of success - as well as some idea of what's important to the people you lead.

Although you have to juggle the multiple responsibilities of being a PI it's important to engage and support the members of your lab. This can build trust between you and them, and, in turn, can be key in heading off any potential problems.

Suggestions:

PIs should be effective mentors. The single most effective tool in reducing the level of research misconduct by junior scientists is through better mentoring and monitoring of students and fellows.

Mentoring-leading by example is crucial for instilling in nascent scientists a code of behavior and good research practices. Monitoring is important to ensure that students and fellows' notebooks are properly maintained and that the raw data match the textual claims, tables, and figures presented to the laboratory and outside the scientific community in the form of talks, posters, grant applications, and papers. Monitoring may seem onerous, but senior scientists who have been victimized by dishonest junior lab members swear by it.

PIs and the Perception of Bias

As a PI it's important to be aware that who you choose to spend time with in the lab might be an indication of bias - or might create the perception of bias.

These trainees are well aware of the hierarchy and power dynamics within their lab - and their PI's unconscious biases. Leaders should regularly examine their actions and decision-making process for evidence of unconscious bias.

- Do you favor some individuals over others? Why?
- Is it just about the research - or are there other factors possibly in play?
- Factors like gender, race, or age - or even personality?

Fundamental Concepts of Human Bias

- Bias is a normal human attribute. Even well-intentioned people have biases
- Biases are often unconscious or "implicit"
- Unconscious biases manifest even in individuals who, at the conscious level, reject prejudices and stereotyping
- Unconscious biases can influence our actions

Managing Biases Through Self-Regulation

- If we are aware of our implicit biases
- And we are motivated
- We can choose to implement bias-free behavior ("controlled responses")

(Monteith et al., 2010; Devine et al., 2012)

Beyond Publications and Awards

One way to gauge the legacy of a PI is to take into account his or her entire body of work as a professional. Not just the publications and the awards, but also how he runs his lab and how he mentors his grad students and post docs.

Quality of Life

At this point it's appropriate to ask - how much is too much?

The term "work-life" balance is one we hear a lot - the implication sometimes seems to be that work isn't a legitimate part of life. But of course, it is. But there are times when work-related pressures can adversely impact other parts of our lives.

Everyone struggles to find the right mix, and there's no perfect answer. - there will always be tradeoffs.

But it's worth asking yourself, "Am I constantly short-changing one facet of my life in favor of another?" The key is to be mindful of how it all fits together and how you can adjust to achieve the best quality of life at any given time.

Redefining “Success”

The success of your lab depends on your personal success. But - consider that cultivating great careers for your trainees is another dimension of success.

Empowering others is a personally fulfilling measure of achievement and a way to make a meaningful difference with your talents.

Psychological Safety

Psychological safety is a trait of an organization's culture where employees feel comfortable being their authentic selves, feel respected for who they are, and feel empowered to speak up.

How should you respond if someone comes to you with a suspicion of research misconduct?

- Understand that this is not an easy thing to do, and treat the complainant with respect and compassion.
- Assure them that you take the matter seriously, and it will be looked into.
- Don't shoot the messenger! You may feel angry that you must now deal with potential misconduct in your lab. If any anger is directed at the complainant, you've made a mistake.
- Document the facts. Prepare a summary of the meeting immediately upon its conclusion. Be careful not to document your opinions or "legal theories." Stick to what you heard.

Be aware...

There is a solid argument for not going to the PI with these sorts of concerns. Some institutions actually designate a person or office whose job it is to field these sorts of reports.

The rationale is that if the PI is not aware of a potential problem, they won't be tempted to "look into it" themselves and inadvertently taint evidence or present the appearance of a cover up.

It may seem counterintuitive, but keeping suspicions of research misconduct away from PIs can ultimately benefit them: it protects them, the evidence, the process, and helps to maintain confidentiality.

Trust

Among other things, engaging and supporting grad students and post docs can build trust between you and them. This trust can be key in exposing any potential problems in your lab.

Reporting Research Misconduct

If you have reason to believe that fabrication, falsification, or plagiarism has occurred, you should report it immediately to your university's Research Integrity Officer.

It's not your job to sort out the truth from the bad faith allegations or to assign punishments. There is an entire process in place to learn the facts.

Suggestions

Initial allegations should not be handled by the laboratory director, and this responsibility should be transferred to the Research Integrity Officer (RIO).

When Primary Investigators are left to sort out allegations of misconduct the typical results are improper sequestration and intemperate action by the lab chief, such as firing an individual without providing due process.

The best way for research institutions to deal with this problem is frequent and widespread circulation of information to faculty about proper ways of handling allegations of misconduct and other compliance matters. Having a prominent link on an institution's web page so that all are constantly reminded of a policy at the institutional level is very helpful.

You can't be everywhere all the time.

But everything flows from a lab's culture – a lab with a healthy culture will be less vulnerable to the conditions that can lead to research misconduct.

Being Present

There's no substitute for being present. While each member of the lab has a part to play in creating a successful culture, the PI is responsible for seeing that the characteristics of a healthy day-to-day work culture are modeled, supported, reinforced, and prioritized.

Hardik Rao: Post Doc

Scenarios

Decision Point #1
You're not seeing the results you and Dr. Hutchins hypothesized, and your PI suspects you might be doing something wrong. As you work together to identify the source of the error, it's sometimes hard to tell if he's just thinking out loud, giving you a direct order, or subtly suggesting that you manipulate the data to fit the hypothesis. What you do know is that Dr. Hutchins hears about Greg's work every day and is likely wondering when you'll deliver something equally impressive. Maybe you'll have to say—or do—whatever it takes to satisfy your PI. After all, when you're on a work visa, there's only so much room for error, right?

You are not sure if your PI is asking you to make the data fit the hypothesis. What do you say to him?

A. Make your PI happy and say, "we're close to something big"
B. Seek clarification and say, "Are you saying I need to find a way to make this data fit the hypothesis?"
C. Nothing. Let it go.

Choice A: "Make your PI happy and say, "we're close to something big"
Sometimes grad students and post-docs will view suggested experiments or avenues of inquiry as ironclad directives. They'll assume that their continued presence in the lab depends not on intellectual and technical competence, but upon giving the "the boss" the results that he or she expects.

Clear communication inside the lab and out will help you identify priorities. If you're unsure of others' expectations, don't guess - ask. **Try again.**

Choice B: "Seek clarification and say, "Are you saying I need to find a way to make this data fit the hypothesis?"

When you ask your PI for clarification, he explains, "When I say you're doing something wrong, I mean we must be thinking about this the wrong way—I don't mean this particular experiment." So, you decide to keep plugging.

Choice C: "Nothing. Let it go."
Sometimes grad students and post-docs will view suggested experiments or avenues of inquiry as ironclad directives. They'll assume that their continued presence in the lab depends not on intellectual and technical competence, but upon giving the "the boss" the results that he or she expects.

Clear communication inside the lab and out will help you identify priorities. If you're unsure of others' expectations, don't guess - ask. **Try again.**

Decision Point #2

After the ultrasound appointment, your wife, Neha, asks if you're heading back to the lab. When you suggest that you might, you can see the disappointment in her eyes. You're exhausted from spending so much time in the lab when, by now, you should be done. You find yourself wondering how much you can tweak your experiment without ruining it. Losing time is frustrating, but in this moment, you can't help but feel that your marriage might be more fragile than your research.

Go back to the lab?

A. Scrap the experiment. Spend the evening with your wife and start over tomorrow.
B. You can't skip this time point. It's probably the one that matters most.

Choice A: "Scrap the experiment. Spend the evening with your wife and start over tomorrow."

You decide not to feel guilty about having dinner with your wife. It's all too easy for life to narrow down to nothing but your work in the lab, leaving little room for anything else. The resulting pressure can be overwhelming. Sometimes, it helps to step back, take a high-level view, and sort out which pressures are genuinely unavoidable and which ones you're placing on yourself.

Choice B: "You can't skip this time point. It's probably the one that matters most."

It's easy and normal to allow life to narrow down to the point that you really don't see much besides your work in the lab. The resulting pressure can become pretty intense. From time to time, it's helpful to take in the view from thirty thousand feet and sort out which pressures are realistic and which are self-imposed. **Try again.**

Decision Point #3

As the Data Maintenance Seminar approaches, you find yourself torn. It's only an hour, maybe a little more—but attending could mean the difference between spending the evening with your wife or eating another cold dinner alone. Lately, the stress has been piling up, and part of you thinks that putting in more work now might free up time for things like this later. Besides, you already know most of the material being covered. So—are you going?

Go to the RCR training?

A. No. You know all that stuff, you fon't have time.
B. Yes. Even though you don't have the time – there will be cookies.

Choice A: "No. You know all that stuff, you don't have time."

So you stay in the lab and keep working. It's not necessarily all about what you know or don't know. It's about acknowledging that even you need to observe responsible practices. We never want to cut corners in science, and from time to time, we need to be reminded of that. **Try again.**

Choice B: "Yes. Even though you don't have the time – there will be cookies."

So you get the training and some cookies. A while later, you have a little time on your hands, and you're actually inspired to clean up your act a little. You gather all the napkins and scraps of paper, permanently affixing them in your notebook, and you're able to reconstruct after the fact what you should have been keeping up with all along. Writing down the dates and times and every step of every experiment in detail - not skipping pages or even leaving spaces in your notebook.

Also, you begin the process of transferring it all into the computer, backing up files, and making sure it's properly labeled. It takes a little while, but you feel a little more sane when you're finished. It's not ideal - you should have been keeping up with this all along - and you promise yourself that you will from now on. Turns out that RCR training was pretty worthwhile, after all.

Decision Point #4
After making an error in your experiment, you're frustrated about losing two days of work you'll never get back. JD invites you to join him for lunch in the break room—he's made your favorite, lamb vindaloo. But you're behind, and you know you really need to stay on track.

Take a break, get some food?

A. Sure
B. No time. No.

Choice A: "Sure"
You decide to take a break. While eating, JD remarks, "The lab will become your whole world if you let it. It's funny, isn't it? We get on this treadmill, running and running, always feeling like we're waiting for our real lives to start—but this is it. This is your real life." His words resonate, and you can't help but think he might be onto something. When you return to work, you feel a little lighter, a little more grounded.

Choice B: "No time. No."
The pressures of the lab can be intense. Taking just a few moments away from work can be a benefit - it can help you clear your head and return to work with a fresh perspective. **Try again.**

Decision Point #5
Later in the day, Neha calls to remind you about dinner with her parents at 6:00 p.m.—they've traveled all the way from India to visit. You realize how little time you've spent with them during their trips because of work. But the experiment still needs another 90 minutes to finish.

Mentally, you start weighing your options. You could risk upsetting your in-laws and angering Neha by arriving late for dinner, finishing the cell harvest after the full eight hours. You could cut the experiment short, recording the harvest as eight hours to be on time. Or you could scrap the entire experiment and restart it tomorrow.

Or what? What do you want to do?

A. Do the harvest on time and join them late.
B. Do the cell harvest now – call it 6:00 pm.
C. Scrap the experiment and start over tomorrow.
D. Do the harvest just before 6:00 pm and freeze it. You'll be going off protocol, but maybe the experiment will work tomorrow.

Choice A: "Do the harvest on time and join them late."
Obviously, your research is important, but so is your life outside the lab. If your life is out of balance, everything is going to be out of balance. *Leads to Decision Point #6*

Choice B: "Do the cell harvest now – call it 6:00 pm."
As a scientist, your research will always be a priority. But if you don't properly balance it with other priorities, every area of your life may suffer. *Leads to Decision Point #6*

Choice C: "Scrap the experiment and start over tomorrow."
If everything is all or nothing, then some part of your life is going to suffer. Learn to balance your priorities. Again, clear communication inside the lab and out will help you identify priorities. If you're unsure of others' expectations, don't guess - ask. *Leads to Decision Point #7*

Choice D: "Do the harvest just before 6:00 pm and freeze it. You'll be going off protocol, but maybe the experiment will work tomorrow.
It is important to balance priorities, and you've certainly found a way to do that. But is this really the best way to conduct your research? *Leads to Decision Point #6*

Decision Point #6

After dinner, Neha's parents return to your apartment to visit for a while. It's a pleasant evening—just sitting, talking, and enjoying some much-needed family time. But then you glance at the clock and realize it's almost 9:30 p.m., and you still have your 12-hour harvest to complete. You want to head back to the lab, but Neha insists you stay. After all, her parents are only here tonight and will be leaving early tomorrow.

What do you want to do?

A. Stay home. Start over tomorrow.
B. Go to the lab in time to do the harvest.

Choice A: "Stay home. Start over tomorrow."
You decide it's not the end of the world to restart your experiment tomorrow.

Choice B: "Go to the lab in time to do the harvest."
Sometimes you can't split the difference. And sometimes no matter what you choose you'll face some negative consequences. The important thing is that you think through your options and deal responsibly with the fallout of your decision. **Try again.**

Decision Point #7

Uh-oh. You froze the harvest last night, and this morning you discovered it had deteriorated, forcing you to scrap the experiment—something you hadn't anticipated.

Now you're left with a choice. You could tell Aaron the truth. He won't be happy, and it'll likely mean writing a detailed explanation justifying the decision to go off protocol. But he might sympathize—he has a family, after all.

There's another option, though. You've done nearly identical experiments before, and it wouldn't be difficult to fill in the blank with a corresponding time point from one of those.

What do you want to do?

A. Just tell your PI the truth.
B. Proceed with the 24 hour harvest. Use data from a previous experiment.

Choice A: "Just tell your PI the truth."
Last night you did what you felt was best, and that's ok. You were right to be honest with your PI about it.

Choice B: "Proceed with the 24 hour harvest. Use data from a previous experiment."
You could have just taken responsibility for your decisions. But you chose to go another way. **Try again.**

Decision Point #8
When you and Kim are alone in the lab, you ask if she still plans to report Greg's alleged research misconduct. She tells you she doesn't think so—maybe after she submits her dissertation, but even then, probably not.

What do you want to do?

A. Offer to go with Kim to report the suspected misconduct.
B. Let it go.
C. Go to the PI.
D. You know the Department Head. Go to him.

Choice A: "Offer to go with Kim to report the suspected misconduct."
The next day you and Kim find the office of the Research Integrity Officer and Dr. Ridgley introduces you to the process: *Lead to Decision Point #9*

Choice B: "Let it go."
This didn't end terribly for you, but it didn't go so well for the person who provided you the opportunity to get ahead. **Try again.**

Choice C: "Go to the PI."
Could bias account, at least partially, for the PI's dismissal of these suspicions? If you suspect research misconduct, be careful who you talk to about it. **Try again.**

Choice D: "You know the Department Head. Go to him."
Seeking guidance from an objective third party is a good move. A department head, an uninvolved PI, or some other neutral faculty member - these are all people who

may offer good advice and steer you in the right direction. *Backs to back to Decision Point #8*

Decision Point #9
Dr. Ridgley explained the process to you both. She said it begins when you tell her you believe you have knowledge of research misconduct. If you want to learn about the process without officially starting it, she mentioned you could ask questions or speak in hypotheticals, like, "What if someone did X?"

Kim is looking to you for help with this one. What do you tell her?

What do you advise Kim to do?

A. "Speak in hypotheticals"
B. "Just tell her what happened."

Choice A: "Speak in hypotheticals"
When making an allegation, vague assertions don't cut it. The more facts and details a complainant (the person making the allegations) can provide, the better. **Try again.**

Choice B: "Just tell her what happened."
A few days later, you're in the lab when Dr. Ridgley and her team arrive to sequester the data. A couple of months after that, Greg finally admits to altering images, fabricating data, and making things up. As a result, he's out of the lab—and probably out of science, for good.

Summary

You have no idea if Dr. Hutchins realizes the pressure you're under - or if he's ever dealt with these kinds of anxieties.

More on The Challenges Faced by International Students
It's worth acknowledging, right up front, the unique challenges that foreign trainees face. Every lab and every individual is different, but the emotional and mental stressors are real: language and cultural barriers can make it difficult to fit into the lab - and as a foreign researcher on a work visa, it can feel as though your time to make an impact is limited. Realistically or not, there's often the feeling that one screw up, or a long dry spell, and all of your hard work could be for nothing... because you're gone.

The need to constantly prove yourself, the reluctance to ask questions, and the sense that there is little room for error, combined with the obligations of your personal life - can take its toll on your work ethic and emotional well-being.

Clear Communication in the Lab
Sometimes grad students and post-docs will view suggested experiments or avenues of inquiry as ironclad directives. They'll assume that their continued presence in the

lab depends not on intellectual and technical competence, but upon giving "the boss" the results that he or she expects.

Clear communication inside the lab and out will help you identify priorities. If you're unsure of others' expectations, don't guess - ask.

More challenges for being an “only”
It’s easy to misconstrue or internalize offhand comments – especially if you’re an “only,” or worse, feel that you’re a token in your lab. It’s easy to feel inadequate – especially if you suspect that people think you have less potential and you wonder if you’re getting access to the same opportunities and resources.

Pressure in the Workplace
Pressure to succeed can come from many external and internal sources. This pressure will impact individual work productivity, lab culture, and the ability to achieve personal and organizational goals.

Certain types of pressure aren't always a bad thing: small to medium levels of stress can enhance motivation, increase focus, build resilience, and encourage growth.

Effects of Stress: Personal and Professional
Additionally, stress can assist with interpersonal relationships in the workplace, allowing coworkers to bond with one another and create positivity despite tough times. But negative/excessive stress can increase the probability of error and contribute to poor work performance, mental health issues, burnout, and conflict in the workplace.

Work-Life Balance
Everyone struggles to find a balance between their research and their personal life. And feeling that you need to work twice as hard due to factors that having nothing to do with science - only add to that struggle.

The term "work-life" balance is one we hear a lot - the implication sometimes seems to be that work isn't a legitimate part of life. But of course, it is.

But there are times when work-related pressures can adversely impact other parts of our lives. Everyone struggles to find the right mix, and there's no perfect answer. - there will always be tradeoffs.

But it's worth asking yourself, "Am I constantly short-changing one facet of my life in favor of another?" The key is to be mindful of how it all fits together and how you can adjust to achieve the best quality of life at any given time.

Competing Priorities
There's not necessarily a right or wrong way to go in a situation like this. It's a matter of balancing competing priorities and obligations. In this instance you had to think about:

- Ongoing, important research...
- Your standing in the lab...
- And spending time with your family...

It's all about priorities - how do these sorts of daily challenges fit into your overarching priorities?

- Is establishing yourself in your career the most important goal at this point in your life?
- Are you interested in pursuing interests or hobbies outside of work?
- Do you have a family or other personal relationship that you want or need to nurture?

If you haven't already, it's worthwhile to ask yourself these questions. And when you have a clear picture of what's important to you, it will help you prioritize what's really important on a day-to-day basis.

Managing Work Pressure and Perspective

It's easy and normal to allow life to narrow down to the point that you really don't see much besides your work in the lab. The resulting pressure can become pretty intense. From time to time, it's helpful to take in the view from thirty thousand feet and sort out which pressures are realistic and which are self-imposed.

Respecting Accents and Language in the Workplace

Mocking someone's accent, especially in the workplace, is never okay. Whether the victim of the comment was offended or not, this behavior reinforces demeaning cultural and racial stereotypes.

Appropriate Behavior in the Workplace

Even if the lab has an informal feel - even among people you consider friends - it's still a workplace and appropriate behavior is called for.

Rule of thumb - don't single anyone out for ridicule, even if it seems to be all in good fun. And stay away from suggestive language.

Organization

It's not necessarily all about what you know or don't know. It's about acknowledging that even you need to observe responsible practices. We never want to cut corners in science, and from time to time, we need to be reminded of that.

Being organized might not make you a great scientist. However, being disorganized might make you a less effective scientist.

The "5 Surprising Benefits of Being Organized"

1. Organization Reduces Stress
2. Organization Helps You Sleep Better

3. Organization Promotes A Healthier Diet

4. Organization Increases Productivity At Work

5. Organization Can Improve Your Relationships

Taking Breaks for Better Focus
The pressures of the lab can be intense. Taking just a few moments away from work can be a benefit - it can help you clear your head and return to work with a fresh perspective.

Don't feel guilty about quick work breaks -- whether you need to step away for lunch, or even go on a walk to take your mind off of how overwhelming things can get. You'll come back more productive. It's good for your health, happiness, and your work too.

Balancing Priorities
As a scientist, your research will always be a priority. But if you don't properly balance it with other priorities, every area of your life may suffer.

Time Management
Another factor in self-care is time management - a crucial skill. Bad time management can throw your whole life out of sync and undermine your efforts at achieving physical and emotional wellness.

A lab is a unique work environment, but these tips still apply...

1. Know how you spend your time. Track what you do for a week to see how much of your time is spent on crucial tasks and how much is spent on distractions.
2. Have a plan for your day. Know the most important tasks you intend to accomplish.
3. Prioritize ruthlessly. Look at the plan you have for your day, figure out the four or five most important tasks, and cut the rest from the list.
4. Place a time limit on each task. This might help you get down to work without getting distracted or procrastinating.
5. Stay organized. How much time do you waste just looking for a certain email or document? Create systems that keep your work tools organized and handy.
6. Avoid multitasking. Focus on one task at a time. Multitasking reduces focus and increases distractions.
7. If multitasking is needed to conquer your workload, be sure that it's through organized and concise methods. Evaluate what can be done while you're waiting for long reactions or incubation periods, for example.
8. Create a healthy routine and stick to it. Every routine is subject to variation, but in general, when you find a daily routine that facilitates productivity, stick with it.

Making Tough Decisions Responsibly
Sometimes you can't split the difference. And sometimes no matter what you choose you'll face some negative consequences. The important thing is that you think through your options and deal responsibly with the fallout of your decision.

More on international scientists and quality of life

International scientists on work visas often worry about stability and what could happen if they're unable to fulfill their workplace duties. The uncertainty of shifting visa policies and the stress of constant visa renewal can leave the ever present feeling that careers and home-lives are at risk. Some respond by focusing single-mindedly on the science.

While there's nothing wrong with working hard, if the work becomes a drag on your physical or emotional well-being - or compromises your personal relationships - you might want to reevaluate your priorities and figure out if you can benefit from devoting more time to some other areas of your life.

Maintaining a healthy outlook

You had built up a nightmare vision where one more failed experiment would mean the end of your career in this lab. The reality was much less dire. This is often the case.

Don't expect the worst, don't talk yourself into a panic. Do what you need to do to find some perspective.

Embracing Negative Results

Lack of positive results can be important. Don't fall in love with your hypothesis and don't set aside data you don't like simply because you don't think it's what the PI wants. Good scientists will accept the lack of results and, armed with good records, be able to redirect their approach.

Maintaining Resilience

Part of effective self care is developing the ability to admit to difficulties and seek help from colleagues, leaders, and other resources. Successful people are resilient and able to step back, appraise, and redirect their approach.

Challenges of Reporting

Seeking guidance from an objective third party is a good move. A department head, an uninvolved PI, or some other neutral faculty member - these are all people who may offer good advice and steer you in the right direction.

When you're a minority in a sea of other faces or genders that don't resemble you, it may be difficult to speak up when there's wrongdoing in your workplace. You may not feel as protected or may feel your words will go unheard. Knowing there are systems and resources in place that ensure proper communication is always comforting - in this case, learning what may happen if there's an issue related to research misconduct in the lab.

Gender Bias in Science

Consider this. The higher one advances in science, the more male-dominated it seems to be. In some labs there is little space for women to advance or be taken seriously. And in some instances a lab is no different than any other workplace in that stereotypes associated with age, gender, or ethnicity can create even more hurdles. In

this instance, it's fair to at least wonder - is Kim being dismissed because she's a young Asian woman? If so - it certainly isn't fair to her nor a credit to the lab's work.

Reporting an Allegation

When making an allegation, vague assertions don't cut it. The more facts and details a complainant (the person making the allegations) can provide, the better. For more information on resources available to complainants, click the link below.

Complainant

The complainant, the person making the allegation, is an essential element in the effort to protect the integrity of Public Health Service (PHS) supported research because researchers do not call attention to their own misconduct. Prior to making an allegation of research misconduct a complainant should carefully study the policy established by their research institution, ORI, or a Public Health Services(PHS) funding agency to:

- determine what information should be included in the allegation
- to whom the allegation should be reported
- what protections are provided for the complainant
- what role the complainant will play in the ensuing proceedings

How to Handle Allegations

Allegations should be made to the institution where the research misconduct has occurred, ORI, or a Public Health Services(PHS) funding agency. All complainants should make sure they are knowledgeable of the institutional policies in place for responding to allegations of research misconduct. An allegation containing the following information is most useful:

- name of respondent(s)
- name of complainant(s)
- names of witnesses
- description of misconduct
- when misconduct occurred
- where misconduct occurred
- supporting documentation
- grant number or title
- funding sources

Ethical Decision-Making Tutorials

What Is Ethics?
Ethics are standards of behavior – how we ought to act as our best selves.

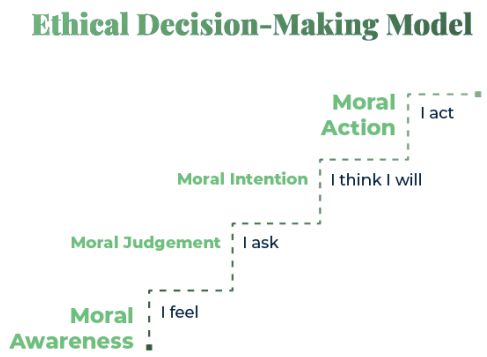
What Is Ethical Leadership?
Ethical leaders help the people they work with to be their best selves. They put the needs of science ahead of their own needs.

What Is Ethical Decision Making?
It's a step-by-step way to make ethical decisions. You recognize an ethical issue, decide what to do, and act. There are many ways to do this, but they tend to have common concerns.

Ethical Decision-Making Focuses On:
- Moving past what's good for you alone
- Finding the right thing to do
- Trying to achieve benefits and limit harm
- Relying on a rational process

Using a Decision-Making Model
James Rest (1986) said there are four parts to making moral decisions. Thomas Jones (1991) added that characteristics of the moral problem influenced decision-making and behavior. The Canadian Forces and Department of National Defence created a survey based on these ideas. Elizabeth Holmes (2006) re-tooled the Ethics Survey to study how Naval Academy midshipmen and Navy chaplains made decisions.

Holmes' research found that people's reactions can be influenced by moral intensity factors:



1. How much your social group (peers, family, friends) agree that a given action is good or bad
2. How close or distant you feel to the people affected by your decision
3. How much your actions harm or benefit someone
4. How likely it is that something bad will happen

Asking questions about these factors can reveal how much they are affecting decisions.

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