Thoughts of a Postbac: What it Takes to Be an Ethical Researcher

By Ashley Pratt

In the fall of 2021, my lab met over Zoom to complete our annual ethics training. As we signed on for the meeting, I was less than eager to talk through the fictional scenarios that had been provided to us on an early Friday morning. It felt like another mundane task that needed to be checked off our to-do lists. To my surprise, though, the conversations that emerged from this training were interesting. As my fellow lab members shared concerns and anecdotes relating to research ethics, I realized how relevant the training is to my own work. I’d never really thought about the integrity of primary data, or the tensions that can arise from determining authorship, until I participated in this conversation. This experience opened my eyes to the value of exploring ethical ideas, both new and familiar, in preparing for a successful career in research.

Ethical standards ensure that we can work in a safe, productive field of research that impacts public health positively. It’s important that we take this role seriously. There are steps that individuals should take if they are committed to becoming ethical researchers, which begin at learning how ethics are already influencing research.

BECOME FAMILIAR WITH EXISTING ETHICAL STANDARDS

Ethical standards exist within biomedical research for a reason, and it’s important that we are aware of these expectations. The best way to avoid unethical behavior in our work is by knowing what the established standards are. This is straightforward and easy to accomplish, simply by listening to the guidance that is provided to us.

During our ethics training, my lab discussed the tricky matter of determining authorship in scientific papers. A member of my lab shared that in previous labs they worked in, they were exposed to how disappointing these decisions can be when collaborators have differing expectations. This colleague advised that

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Letter from the Editor

Your NICHD fellowship is more than skill building and data collection. It’s also a time for exploration. This month, postbac fellow Ashley Pratt shares her thoughts on research ethics—a topic she has enjoyed exploring following a recent ethics training session. And Dr. Cole Malloy, 2021 Mentor of the Year awardee, offers a few words on his appreciation for mentorship. Have you come across a training subject that you’ve found surprisingly interesting? Let us know!

What I find engaging is communication, so I’ll stop here so that you can enjoy this month’s articles, including a new Clinical Corner column, Rep Report, and the February announcements and events. See you next month!

Your Editor in Chief,
Shana R. Spindler, PhD

The NICHD Connection is for NICHD fellows, by NICHD fellows. Send your questions, ideas, and comments to our editor at shana.spindler@nih.gov.
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researchers should always discuss the matter of authorship for a given project at the beginning of work, rather than the end, to avoid misunderstandings and tensions later.

As a trainee, I had yet to encounter these decisions or the conflict that can arise about authorship at the time of this meeting. If anything, I saw such decisions as a matter that was awkward to discuss and should be delayed until a paper is written. Hearing this advice exposed me to the value of establishing expectations at the onset of research and ensuring that all collaborators have the same understanding of such expectations.

This same idea can be extended to other expectations in research, including ethical ones. If a researcher is unsure of the ethical standards that exist in their work, they should ensure that they become familiar with these practices before conducting such work. Trainings and lectures provide a means to learn about many of the ethical standards that already exist in different fields of research. Researchers can also promote ethical work by discussing such matters with their collaborators and trainees, to ensure that everyone is following the same expectations. It’s hard to uphold ethical standards if you don’t know what they are.

KNOW THE RATIONALE BEHIND ETHICAL STANDARDS

In addition to familiarizing oneself with ethical standards, it’s equally important that we understand the rationale behind these ideas. In a truly scientific nature, it’s okay, and should be encouraged, for researchers to ask why certain ethical standards exist in the first place. This is not to say that one should be distrusting, but rather that understanding the rationale behind ethical ideas can solidify one’s understanding of their importance. It’s very easy to fall into a habit of thinking “I should be doing x, but it’s okay if I don’t this time.” Researchers can become more susceptible to this sort of thinking when facing pressure to produce results.

The annual training discussed by my lab was titled “Under Pressure.” This theme focused on the idea that conducting research is often accompanied by many external pressures. The origin of these pressures could be anything from the expectations of an individual’s supervisor to suggestive language from a reviewer.

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When many sources of pressure are added together, it can lead a researcher to feel as though corners need to be cut to achieve a certain goal and appease others (or their own expectations). This theme sheds light on the idea that researchers sometimes feel justified to ignore ethical standards in conducting their own research.

For example, an individual might feel inclined to exclude specific results or details from a study if the work doesn’t support a paper’s overall argument. Although research is expected to be reported honestly and fully, this standard of transparency could be interpreted as more of a suggestion than a requirement. If an individual, however, is informed on the reproducibility crisis that already exists within scientific research, this expectation might seem like less of an option.

Understanding the rationale behind ethical standards can keep researchers honest about how closely they should follow ethical guidelines. This practice also encourages individuals to think more deeply about the broader implications of their work.

THINK ACTIVELY ABOUT THE IMPACT OF RESEARCH

Conducting research that relates to public health is both exciting and daunting because of the implications that one’s work can have on human beings. I can’t imagine that any biomedical researcher is interested in producing work that negatively impacts society. So, in addition to considering the ethics of how we conduct research, equally important are the ethical whys and whats of biomedical research: why is producing a given technology or drug beneficial; why is it a good idea to study a given condition; what do we hope to accomplish through this project.

These questions are broader and more complicated, but nonetheless need to be considered. This is not to suggest that trainees or researchers should have the answers to these questions. Instead, these individuals should simply commit to

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addressing these questions and attempt to develop their own perspectives. Practicing critical thinking and communication skills in relation to ethics can make this more approachable over time. Researchers need to be prepared to tackle broad ethical concerns and questions as they arise.

ENGAGE WITH NEW ETHICAL CHALLENGES

Although many ethical standards have already been established in biomedical research, new knowledge and technologies continue to develop. With the advancement of scientific discovery, our understanding of ethical practices and responsibilities will need to evolve as well. Taking advantage of the opportunity to actively engage with these topics now can prepare researchers for this task. Trainees are in a particularly opportune position to start practicing this engagement, since they may inherit the responsibility of leading these conversations in the future. The NIH provides a supportive environment in which this can be accomplished, and researchers should embrace this opportunity.

Our work as biomedical researchers can only benefit from greater ethical considerations. It’s never too early in one’s career to start thinking about the ethics of their work. Trainees should consider ethical training to be an important part of their development as researchers during their time at the NIH. By approaching these ideas with the same commitment that we do to scientific/medical knowledge and skills, we can ensure that we’re capable of engaging with these topics in our own work. It’s important that we take ethical training seriously now, so that we may continue to improve the health and wellbeing of our society in the future.
Mentor of the Year Awardee, Dr. Cole Malloy, on the Importance of Mentorship

Every day, dedicated scientists within NICHD do potentially life changing work for people around the globe. I've been honored with the privilege to work here, in the research field I enjoy so much. I am forever indebted and grateful to my mentors, the teachers and scientists who were so gracious and generous with their time and expertise, helping me to navigate my professional journey. So now, sharing my accrued skills and knowledge with budding NIH scientists seems very natural. Mentoring young researchers is certainly gratifying, but an aspect of mentoring that I hadn’t, quite frankly, fully appreciated are the benefits I receive from the relationship.

I feel it is crucial for us to secure the best possible scientists for the future and to foster their scientific interests. Providing the opportunity to allow students and postbacs to work side-by-side with our researchers in the day-to-day operation of our labs enables them to see the pivotal role they will have in a career in science. There is no better way to accomplish this endeavor than by dedicating time and effort through mentorship.
Sanjay Jumani, MD, is a first-year clinical fellow in the Inter-Institute Endocrinology Training Program. Under the mentorship of NICHD Director of Pediatric and Adolescent Gynecology, Veronica Gomez-Lobo, MD, he studies metabolic outcomes in transgender adolescents and young adults. Dr. Jumani attended medical school at Rutgers University, followed by a combined medicine and pediatric residency at University of Chicago. A member of the Gold Humanism Honor Society, he arrived at NIH in 2021.

The NICHD Connection asked Dr. Jumani a few questions to get to know the person behind the degree.

What are your interests outside of your research and medical work?
I really like cooking and eating at new restaurants. I am a big fan of dessert (don’t tell the other endocrinologists) and I’m on a mission to find the best tiramisu in Washington, DC! Other than that, I really love dogs and spending time with my fiancé, Larry, and fur baby, David.

What influenced you to study metabolic outcomes in transgender adolescents and young adults?
I have a background in social work and advocacy and an interest in outcomes research. Transgender adolescents and young adults make up an important group in society, and academic institutions are just now developing research projects to improve outcomes for this group.

Why did you choose the NIH for your fellowship?
There are tremendous research opportunities here and resources that you cannot find elsewhere. The mentorship here is unparalleled.

What are your fellowship and career goals?
I hope to graduate as a leader in the field of transgender research, by learning to ask useful scientific questions and how to develop projects to answer them.

I’d love to be able to conduct longitudinal research for trans populations, starting in early adolescence and following people all throughout their life into their senior years. Pairing this with clinical endocrinology would be tremendous as well.
The Rep Report
By Lauren Walling, PhD

As the current NICHD Basic Sciences Institutes and Centers (IC) Representative, I represent NICHD postdoctoral fellows at the NIH Fellows Committee (FelCom) meeting every month and share the latest news with you here. Do you have a concern or question that you want brought up at the next meeting? Contact me at lauren.walling@nih.gov!

For anyone who needs a quiet place to conduct interviews, including postbacs who may have virtual graduate or medical school interviews, Office of Intramural Training & Education (OITE) can provide this. Please reach out to Lori Conlon (conlanlo@mail.nih.gov).

The Office of Intramural Research announced that Dr. Michael Gottesman is stepping down as the Deputy Director for Intramural Research. The search to replace him is ongoing, with interviews planned in March.

The 2023 Fellows Award for Research Excellence (FARE) award will be open from February 9th to March 9th. This year, there will be a new one-hour workshop available to introduce the FARE application, followed by a Q&A session. For more information, visit the FARE website, https://www.training.nih.gov/felcom/fare.

Save the date: The 2022 Women Scientists Advisors (WSA) Scholar Symposium will be held virtually on April 25th from 9–10:30 a.m. The 2022 WSA Scholars, Dr. Ching-Wen Chang, postdoctoral fellow in the Laboratory of Human Carcinogenesis (NCI), and Dr. Sally Chang, postdoctoral fellow in the Computational and Statistical Genomics Branch (NHGRI), will give talks on their current research. For more information about the 2022 WSA Scholar Symposium and other WSA events, please join the WSA listserv at https://list.nih.gov/cgi-bin/wa.exe?A0=WSA-L and visit the WSA website at https://sigs.nih.gov/wsa.
February Announcements

CONGRATS TO NICHD POSTBAC DANIEL TETREAULT ON HIS EXCELLENT POSTER AWARD!

Daniel Tetreault, postbac fellow in the lab of Dr. Philip Adams, received a Microbiology Society Award for Excellent Poster at the 6th Meeting on Regulating with RNA in Bacteria and Archaea held January 3–6, 2022. He was the only predoctoral scientist chosen out of 84 posters.

Daniel uses a combination of RNA-seq methods to identify potential small base-pairing RNAs (sRNAs). He characterized a novel sRNA and found it regulates virulence genes and is important during mouse infection.

Please join us in congratulating Daniel on this achievement!

THREE-MINUTE TALKS (TmT) COMPETITION DEADLINE TO ENTER: FEBRUARY 7

Don’t miss your opportunity to enter the 2022 TmT Competition!

» Learn how to explain your research effectively to a broad scientific audience, in three minutes or less, with one-on-one professional training from public speaking coach Scott Morgan.
» Get the chance to win up to $1,000 for use towards approved training or scientific conference participation.

To enter, complete the submission form by Monday, February 7. The 2022 Submission Form, competition rules, and judging criteria are available at the NICHD TmT Webpage. Up to 10 DIR fellows (postbac, predoctoral, postdoctoral, visiting and clinical) are invited to compete for these science communication honors.

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NIH GRANT WRITING COURSE
Are you planning to apply for a NIH research grant in 2021? There are various application due dates for NIH grants, and we are offering a virtual grant writing course that’s just for you!

In collaboration with three other institutes, we are offering an NIH Grant Writing Course for fellows this March and April. Led by Dr. Paula Gregory (Assistant Dean for Medical Student Research and Professor in the Department of Genetics, Louisiana State University), this course will help students prepare a successful NIH grant proposal, with special emphasis on the career transition “K” grant series. With high reviews from past participants, NHGRI has offered this course for several years, and as a result, many of their fellows have been awarded NIH grants!

The classes will combine didactic presentations with group discussions, assignments, and proposal writing. A distance-learning component will allow you to submit writings between the virtual meetings and receive edits and valuable feedback. Participants will also conduct an NIH mock study section. During the process of scoring real grant applications, trainees will learn about the review process and the key aspects of a successful application.

Below is the schedule (must attend all sessions):
» March 3: 1 p.m.–4 p.m.
» March 4: 1 p.m.–4 p.m.
» March 17: 1 p.m.–4 p.m.
» March 18: 1 p.m.–4 p.m.
» March 31: 1 p.m.–4 p.m.
» April 1: 1 p.m.–4 p.m.

There are four spots available for NICHD fellows. If you would like to join this course, please email Dr. Erin Walsh (erin.walsh@nih.gov) and indicate which NIH grant you are planning to apply for.

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GENETICS POLICY AND GENETICS EDUCATION FELLOWSHIP OPPORTUNITIES
Beginning this month, applications will be accepted for the 2022–23 Genetics & Public Policy and Genetics Education & Engagement fellowships, cosponsored by the American Society of Human Genetics (ASHG) and the National Human Genome Research Institute (NHGRI). For more information, and to apply, visit Genetics & Public Policy Fellowship and Genetics Education & Engagement Fellowship.

DON’T FORGET: NICHD EARLY CAREER AWARD APPLICATIONS ARE DUE THIS MONTH
Please refer to the email distribution for the full award announcement and application instructions. All questions may be directed to Olga Cherkasova (olga.cherkasova@nih.gov). Applications are due by Monday, February 14, 2022.

This award is a competitive, internal funding opportunity aimed at promoting the research careers of early-stage intramural researchers in the basic, clinical, and translational sciences. Awardees will receive up to $25,000 for outstanding, original research proposals, to support one-year research projects. Additionally, awardees will receive up to $10,000 for proposed scientific meeting participation and/or training that supports scientific and/or professional development.

Postdoctoral fellows, research fellows, and clinical fellows in the NICHD Divisions of Intramural Research and Population Health Research are eligible to apply for this award. Staff clinicians may apply with clear justification of how this award fits within your career trajectory.

Contractors are not eligible for this opportunity.

Please note that this opportunity is separate from the NICHD Intramural Research Fellowship, administered by the NICHD Office of Education.
February Events

WEDNESDAY, FEBRUARY 2, 1–2 PM
Postbac Seminar Series
The Medical School Search and Application Process
Led by Triesta Fowler, MD

To register, please email Veronica Harker (veronica.harker@nih.gov). The Zoom link will be circulated a few days prior to the seminar.

WEDNESDAY, FEBRUARY 9, 1–2PM
Building a Positive Online Brand Using LinkedIn
Led by Lauren Celano (Propel Careers)

For those of you interested in creating or improving your LinkedIn page, this webinar will provide guidance on leveraging this platform for developing your professional online brand. You will dive deep into which parts of a profile to focus on and how to customize your profile to your career area(s) of interest. Lauren Celano will discuss:

» Strategies for highlighting your background and experiences as a compliment to your resume
» How organizations use LinkedIn to identify talent for open positions and which sections are most important
» How to use the job preference features to inform internal and external recruiters about what you’re looking for

Trainees at all levels are encouraged to attend. To register, please email Katherine Lamb (katherine.lamb@nih.gov). The Zoom link will be circulated a few days prior to the seminar.

FRIDAY, FEBRUARY 11, 1–2 PM
Three-Minute Talk (TmT) Training/Introductory Workshop

Learn about scientific storytelling, speaking plain language, and creating effective visual aids in this hands-on workshop for TmT participants. To enter the 2022 TmT Competition, please complete the 2022 Submission Form by Monday, February 7.

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WEDNESDAY, FEBRUARY 16, 1–2 PM
Postbac Seminar Series
The Medical School Personal Statement
Led by Triesta Fowler, MD

To register, please email Katherine Lamb (katherine.lamb@nih.gov). The Zoom link will be circulated a few days prior to the seminar.

WEDNESDAY–THURSDAY, FEBRUARY 16 & 17, ALL DAY
18th Annual NIH Graduate Student Research Symposium
Virtual platforms

The NIH Graduate Student Research Symposium is the premier event for NIH graduate students to showcase their research to the NIH community. All members of the NIH community are invited to attend.

More information and the symposium agenda are available at https://www.training.nih.gov/gsc/symposium/18th.

ONGOING EVENTS AROUND CAMPUS
NIH-Wide Office of Intramural Training and Education (OITE) Events
For more information and registration, please visit Upcoming OITE Events.

NIH Library Training and Events
For more information and registration, please visit the NIH Library Calendar.