Commitment to Training and STEM Education

Betsy Schock, PhD

I am passionate about providing quality mentorship to my trainees and promoting science education among children and schools with limited resources. I believe that we have the responsibility to foster not only the next generation of scientists in our own labs, but also the children in our local communities. By cultivating an environment where curiosity thrives and creativity flourishes, I aim to equip young minds with the tools they need to tackle complex challenges and make meaningful contributions to science and society.

Mentorship and Inclusion

I am committed to training the next generation of scientists and providing support as they work to achieve *their* career goals. I have found that through my experience training and mentoring undergraduate students that mentorship for every student looks slightly different. Successful mentorship focuses on fostering a students unique natural strengths, and providing opportunities for success. Deciding upon the best mentorship strategy for a given individual is a challenge I embrace. For undergraduates, I have found that giving each student a project that will result in a single figure (or part of a figure) for publication promotes a sense of ownership of the project. This approach also creates a positive and collaborative relationship between myself and the trainee. In my own lab, I will continue to apply these mentorship strategies to my trainees while also seeking out personal training opportunities to learn additional mentorship practices.

Additionally, I believe that it is important to cultivate a safe and inclusive environment in the lab for individuals from marginalized or underrepresented backgrounds. I think this starts by acknowledging that everyone has a story and seeking to learn about the experiences and ethos of each individual in my lab. Lab meeting will be a safe space for open dialogue between lab members where we can engage in open and respectful discussions about sensitive topics related to diversity, equity, and inclusion. Students will be encouraged to share their perspectives and ask questions, fostering an environment where differing viewpoints can be discussed constructively. These discussions will be guided by clear ground rules that prioritize empathy and active listening. I will also encourage trainees to participate in affinity groups where they can receive support from other individuals with shared identities or interests. Finally, my lab will strive to have culturally inclusive celebrations as a means of respecting diverse traditions and educating individuals from other cultures or practices. By adhering to these practices and continuously evaluating our approach, I aim to create an environment where every student feels valued, empowered, and equipped to succeed.

Mentoring Experiences

2014-present **Undergraduate Mentees**

- Georgina Kalamaris | Northwestern University
- Ashlyn Tu | Northwestern University | **Contributed to publication**

- Austin Li | Northwestern University | **Contributed to publication**
- Braden Cronin | Northwestern University
- Julie Chang | University of Cincinnati | **Contributed to publication**

2023 **Alumni Panel Member** for the 30th Annual Graduate Student Retreat
Molecular and Developmental Biology Graduate Program | Cincinnati Children's Hospital Medical Center

2020-2021 **Application Reviewer** for NSF-GRFP Application Editing Workshop
Interdisciplinary Biological Sciences Graduate Program | Northwestern University

2020-2021 **Panel Member** for "Graduate School and Life Science Career" & "Applying to Postdoctoral Positions" Forums
NSF-Simons Center for Quantitative Biology | Northwestern University

STEM Education

Much of the lack of diversity we observe in academia begins with a failure to establish strong STEM programming in schools with large minority populations. I plan to help change the outcome for these young students by participating in local STEM programs that provide training and educational opportunities to underprivileged and underrepresent students. Supplementing the education of young children is something I am passionate about and hope that I can recruit other scientists to participate in aiding local STEM programs as well. One of the greatest joys during my postdoc was participating in a Science Night at a local dual language elementary school in partnership with SACNAS (Society for Advancement of Chicanos/Hispanics & Native Americans in Science). It was encouraging to see young kids engage in a range of science activities from extracting DNA from strawberries to making their own electromagnets with batteries. These activities were presented to the students in both English and Spanish. As someone with a limited Spanish vocabulary, I loved seeing the same material presented in two languages and learned first hand about the importance of designing inclusive education material during this event.

In order to promote STEM education, I plan to partner with existing STEM programs for a monthly science program during normal school hours. This will help to ensure that all students are able to participate, not just those who are able to stay after school. My vision for this outreach focuses on: 1) science education, and 2) highlighting scientist role models from minority or underrepresented groups. As an example, one monthly program would begin with a demonstration of egg fertilization using *Xenopus laevis*, where students can watch the embryos "turn" over time, observe adult frog anatomy, and view frog embryos at different stages. During this time, students would be encouraged to hypothesize what was causing the embryos to "turn". This demonstration would be followed by our "role model of the month"

section where students would learn about Ernest Everett Just, a black scientist who made significant contributions to understanding the mechanics associated with egg fertilization. Just was also was the first recipients of the NAACP's Spingarn Medal and had to overcome extreme prejudice in the early 1900s as he was beginning his professional career. My hope is that children will be excited by the science presented and be encouraged that despite prejudice and hardship, scientists that look like them or come from the same socioeconomic background overcame and became successful scientists.

Science Outreach

2023	SACNAS Science Night at Red Oak Elementary | Highland Park, IL
2023	McGaw YMCA Children's Center STEAM Program | Evanston, IL
2017	Hopkins Cub Scout Pinewood Derby Build Day | Cincinnati, OH
2015	CCHMC High School Science Symposium (Chick demo) | Cincinnati, OH