Beyond the Pipeline: Science Education for Everyone Else

Our lab is driven by the objective of science for all. Science continues to be primarily an exclusive domain that does not represent the diversity of our larger population. And, individuals outside of science careers often have relatively small roles in decision-making about the socio-scientific issues we face. As a result, science continues to suffer from the lack of diverse perspectives that influence and expand the questions we ask, what we observe, and how we interpret data. Our research addresses two general problems: 1, how can we develop a diverse next generation of biologists? and 2, how can we encourage non-science majors to become engaged, science literate citizens? In this presentation, I will share three research vignettes: (1) a comprehensive comparison of inquiry-based learning to traditional lab learning; (2) the development of an innovative test of scientific literacy skills; and (3) an interview study to understand students’ perceptions of scientists and how these stereotypes can serve as barriers to interest in science learning and recruitment to STEM fields. I’ll end with a brief discussion about current and future research directions, including work to articulate what non-majors should learn in biology.