Using Cultural Competence in Evolution Education and Beyond

Evolution is simultaneously one of the most important topics in biology and one of the most controversial among our college biology students; a nationwide survey of freshmen undergraduate biology students showed that 40% of students did not believe that all of life is related. College level instructors are often not equipped to mitigate negative attitudes towards evolution – many instructors struggle with implementing effective ways to increase student acceptance of evolution because they do not have a culturally competent understanding of students’ religious beliefs and how their students can reconcile their religion with evolution. In this seminar, I will describe a new evidence-based instructional framework for teaching evolution to religious undergraduates called “Religious Cultural Competence in Evolution Education (ReCCEE)” that can help instructors reduce students’ perceived conflict between their religious beliefs and evolution. I will describe specific instructional practices included in the framework and several studies that I have conducted in single classrooms and in a nationwide study that have illuminated the efficacy of this framework. I will further describe the implications of this work for the representation of racial/ethnic minority students in biology, who on average tend to be more religious and less accepting of evolution than majority students. Finally, I will discuss how the idea of reducing perceived conflict between student identity and their learning of controversial topics is promising for the teaching and learning of other important, yet controversial, topics in biology such as climate change and vaccines.