1056-E5-246 **Kris Kappmeyer**, **Sarah Minerva Venuti**, **Courtney Marie Chancellor** and **Padmanabhan Seshaiyer*** (pseshaiy@gmu.edu), 4400, University Drive, MS: 3F2, Department of Mathematical Sciences, George Mason University, Fairfax, VA 22030. *Enhancing teaching and learning of undergraduate mathematics majors through transformative research and training in biological and bio-inspired systems.* Preliminary report.

In this work we share our experiences from a multidisciplinary undergraduate research program in mathematical and computational modeling of biological and bio-inspired systems. This work emphasizes the importance of fostering integration of interdisciplinary research in mathematical sciences to help explain fundamental mechanisms underlying real-world problems, thereby enhancing the effectiveness of teaching and learning of undergraduate mathematics. Such transformative research automatically provides opportunities for undergraduate mathematics majors to perform research in areas that bridge the gap between mathematical and biological sciences. (Received August 19, 2009)