

# " Microbial Experimental Evolution With the Vibrionaceae: Case Studies With Squid-Vibrio Mutualism"

by Dr. William Soto

NSF BEACON Distinguished Postdoctoral Fellow  
Michigan State University



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3:00 – 4:00 PM

Science 2, room 109

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To date, the Vibrionaceae (*e.g.*, *Vibrio* and *Photobacterium*) have been underutilized in microbial experimental evolution research. This is a shame since this bacterial family possesses many traits that are useful studying evolutionary biology. For instance, the Vibrionaceae are capable of forming versatile and strong biofilms, which is a driver of ecological diversification in bacteria. The Vibrionaceae also possess a sophisticated quorum sensing machinery, which allows one to ask questions in social evolution and group selection. Additionally, the Vibrionaceae possess a propensity toward forming interactions with eukaryotic hosts, which comprise a continuum of commensalism, mutualism, and pathogenesis. This allows one to study the evolutionary transitions between these different host microbe interactions. In my seminar, I'll present examples of how experimental evolution with the sepiolid squid-*Vibrio* mutualism has been useful for addressing research questions in evolutionary biology.

Dr. William Soto has a B.S. in Biology from Fresno State and an M.S. in Biology from Wesleyan University. After a Ph.D. in Biology from New Mexico State University, Dr. Soto has pursued post-doctoral work at University of Arizona, University of Minnesota, and Michigan State University.