

# Genetics and Genomics (G2) Seminar Series



**INSTITUTE FOR GENOME  
SCIENCES AND SOCIETY**  
TEXAS A&M UNIVERSITY

The Interdisciplinary Faculty of Genetics  
Genetics Graduate Student Association



## *Vibrio cholerae*: human pathogen and bacterial predator?

### Dr. Daniele Provenzano

Department of Biology, The University of Texas  
Rio Grande Valley

Dr. Provenzano focuses his research on *Vibrio cholera* type VI secretion system. *Vibrio cholerae* is the causative agent of cholera, a devastating and potentially lethal form of diarrhea that persists as a significant cause of morbidity and mortality all over the world. His studies on *Vibrio cholerae* strains endemic to the lower Rio Grande Delta led to the discovery of a wide range of effector/immunity pair alleles that kill adjacent cells but protect kin bacteria from T6SS-mediated killing. T6SS-mediated interspecies competition is linked to *V. cholerae*'s ability to colonize the human host because nearly all strains that harbor CT and TCP (which reside on horizontally mobilized genetic elements CT-phage and VPI respectively) possess the same T6SS effector/immunity alleles. His lab is currently working on characterization of novel episomal genetic elements and whole genome sequence data mining of *V. cholerae* strains endemic to the lower Rio Grande Delta as well as explorations of applications for therapeutic intervention strategies based on these T6SS discoveries.



**Monday, October 9, 2017**

4:00 p.m.

**Auditorium/Room 108**

**BioBio Building**

Refreshments at 3:30 p.m. in the lobby.

Seminar co-hosted with the Ecology & Evolutionary  
Biology (EEB) Seminar Series

Genetics

Texas A&M Institute for Genome  
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