

New Mexico State University

Biomedical Research Seminar Series
Speaker Announcement

Friday, April 28, 2017, 3:30 pm

Domenici Hall, Rm 109

(Refreshments served at 3:00)



Manuel Amieva, PhD,

Associate Professor,
Pediatric Infectious Diseases
and Microbiology & Immunology,
Stanford University

How to survive in the harshest environment of the human body- the microscopic biogeography of Helicobacter pylori

Helicobacter pylori, sometimes called “the ulcer bug”, is a bacterium that can chronically infect the human stomach, surviving there for the life of the individual. It is the main cause of stomach ulcers, and stomach cancer. However, it co-exists peacefully without causing disease in the majority of infected people. It is an example of a microbe that evolved tricks to colonize one of the most extreme environments in the human body, a churning vat of hydrochloric acid that kills most microorganisms. Our lab explores how *H. pylori* and other bacteria colonize mucosal surfaces. We found that *H. pylori* can sense metabolites emanating from our cells that attract them to the epithelial surface. Here, *H. pylori* find and colonize a protected niche and can live directly on the surface of our cells. Some *H. pylori* even swim through fissures and channels that make the glands of the stomach and colonize deep in the tissue. The gland-associated *H. pylori* induce inflammation and inject toxins that alter the proliferation and growth of the epithelium, including our stomach stem cells. We will describe some of our findings that relate how the microscopic localization of *H. pylori* may lead to diseases like gastric cancer.

The BMRS series is supported by the Office of the Provost, the College of Arts and Sciences, the Departments of Chemistry & Biochemistry and Biology, and the NM-INBRE, RISE, MARC, and HHMI programs. The full semester schedule can be found at <http://events.research.nmsu.edu>

For more information or to meet with the speaker please contact Shelley Lusetti at slusetti@nmsu.edu



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