



Youlim Kim (PhD student)

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Characterizes the gastric gland niche colonized by *Helicobacter pylori* focused on pathogenic interactions with local precursor and stem cells on a molecular level. Uses single-cell RNA sequencing technologies in human organoid infection models to examine how *H. pylori* alters its niche for long-term colonization and promotes disease.



Benedikt Geier, PhD (Postdoc)

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Developed correlative imaging approaches to study symbiotic interactions between microbes and hosts *in situ* by integrating mass spectrometry-based metabolite imaging with fluorescence microscopy and microtomography. Aims to understand how *Helicobacter pylori* drives pathogenesis in the gastric glands by imaging the metabolic and cellular interactions in chronic murine infection models and novel apical-out human gastroids.



Jessica Klein, PhD (Postdoc)

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Studies the gland niche as a reservoir for persistent *H. pylori* colonization. Uses molecular and genetic tools to alter local immune environments and gauge effects on niche availability and *H. pylori* population densities. Employs 3D tissue culture and *in vivo* models to examine population dynamics during infection with advanced high-resolution microscopy techniques.



Sophia Christina Parks, PhD (Postdoc)

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Is interested in metabolic interactions between *H. pylori* and the gastric epithelium that drive colonization. Plans to screen *H. pylori* mutant libraries in organoid and *in vivo* infection models to determine colonization factors that confer *H. pylori* competitive fitness at the epithelium. Will also examine dietary interventions to combat or prevent active infection.



Manuel Ricardo Amieva MD, PhD (Professor, PI)

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Professor of Pediatrics (Infectious Diseases) and Microbiology & Immunology, Stanford University and co-PI of the Perfection project. Research focus is on understanding how bacterial pathogens colonize epithelial surfaces and how epithelial colonization leads to infection and disease.