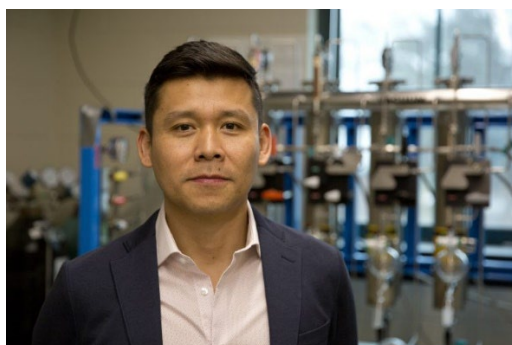




Department of Chemistry

University of Central Florida
Department of Chemistry Seminar Series – Fall Semester 2023
Friday, November 3rd, 9:00 AM, Location CB2 105

Inorganic Chemistry Lessons from Metal-Binding Host Defense Peptides



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Associate Professor

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Host: [Karin Chumbimuni Torres](#)

Abstract

For the last eleven years, my laboratory has been studying metal-binding host defense peptides. We now believe we are at the point of using this interesting chemistry to design agents with potential use in the clinic. My presentation will include the inorganic chemistry lessons we have learned from these wonderful systems. I will also show results on a synthetic peptide that utilizes the pool of phagosomal Cu ions in the host-Mtb interface to augment the mycobactericidal activity of macrophages while simultaneously exploiting the susceptibility of Mtb to ROS. This peptide serves as a model with which to develop next-generation, multi-functional antibiotics based on the chemistry of antimicrobial peptides.

Bio

Dr. Angeles was born and raised in Peru. He obtained his undergraduate (B.S.) degree from the Catholic University in Lima, Peru, and a Ph.D. in inorganic chemistry from Texas A&M University in 2007 (Advisor: Prof. Kim Dunbar). After a short stint at Halliburton, he did postdoctoral work at Texas A&M University (Advisor: Prof. Jean-Philippe Pellois) and Johns Hopkins University (Advisor: Prof. Justine Roth). He joined the Department of Chemistry at The University of Connecticut, where he is an Associate Professor. Dr. Angeles has been the recipient of a NSF Career Award as well as a Fulbright Fellowship. His research interests are in synthetic, structural, and mechanistic inorganic and bioinorganic chemistry, including the development of new catalysts for the reduction of CO₂ and the enhancement of antimicrobial activity of peptides.