

University of Central Florida

Department of Chemistry Seminar Series – Fall 2020

Organic synthesis and materials science as tools for the development of efficient anticancer therapies



Prof. Jesus Cordova-Guerrero

Department of Chemistry, California Lutheran University

Host: Prof. Fernando Uribe-Romo

October 26, 2020 **10:00 AM** – Zoom

Meeting Room: <https://ucf.zoom.us/j/95787434425> Passcode: 184066

Dr. Cordova Guerrero's research group encompasses organic synthesis and materials science as tools to develop new anticancer therapies. Spirocycles are molecules that due to the structural complexity and useful biological applications represent interesting synthetic targets. One of the goals is the development of a new method for the stereoselective synthesis of spirocycles via Claisen rearrangement of bicyclic precursors to have access to spirocyclic aldehydes and ketones. His research group is also focused on the synthesis of *p*-terphenyl organic linkers as building blocks for the crystallization of Metal-organic frameworks as potential drug carriers for the efficient absorption and controlled delivery of anticancer agents.

Bio

Dr. Cordova Guerrero earned his B.S. in Chemistry from the Autonomous University of Baja California, in Baja California, Mexico; he earned his Ph.D. in Chemistry from UCLA and was awarded the prestigious CONACYT-UCMEXUS fellowship while working under the supervision of Dr. Michael Jung in the total synthesis of natural products. After graduation he gained some teaching experience by teaching in Mexico for three years, followed by postdoctoral work at UCF in Dr. Fernando Uribe Romo's research group working in the synthesis of highly substituted *p*-terphenyl organic linkers as building blocks for the crystallization of metal-organic frameworks with energy applications. He gained additional postdoctoral experience working at UC Davis in the Dr. Olson's lab in the synthesis of natural products, and in Dr. Jared Shaw's lab in the stereoselective synthesis of heterocycles via metal-catalyzed C-H insertion reaction. Dr. Cordova Guerrero's joined California Lutheran University as an Assistant Professor in 2017 and his research group is focused on the synthesis of organic molecules and organic linkers as building blocks for the crystallization of metal-organic frameworks with potential biological activity.