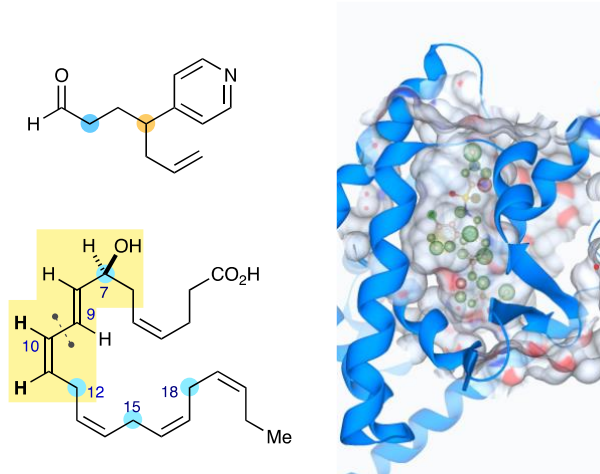


Organic Chemistry for Pharmaceutical Discovery: Exploiting the Reactivity of 4-Alkylpyridines



Professor Art Orellana
Department of Chemistry
York University

Organic chemistry plays a central role in drug discovery and therefore academic research in organic synthesis can make meaningful contributions to the development of pharmaceuticals.

In this presentation, I will first share the principles that guide our research program in organic chemistry, and explain how the demands of pharmaceutical discovery influence the research questions we pursue. I will then describe how our group has exploited the chemistry of 4-alkylpyridines to develop a variety of reactions for the synthesis of 'lead-like' molecules for pharmaceutical discovery.



I was born in El Salvador and immigrated to Ottawa, Canada with my family in 1986. I studied chemistry at the University of Ottawa and received a Bachelor's degree in 1997. Thanks to the CO-OP program, I had the opportunity to work at Shipley Company, Merck-Frosst and Boehringer-Ingelheim. I also worked for six months at the National Research Council before beginning graduate school. In 1998 I moved to Vancouver to study organic synthesis with Professor Ed Piers at the University of British Columbia, and received a Ph.D. degree in 2003. I was a post-doctoral fellow with Andrew Greene at Université Joseph Fourier (now Université Grenoble Alpes) in France, and Professor Tomislav Rovis at Colorado State University (now at Columbia). My education was generously supported with scholarships and awards at all stages, including undergraduate and graduate scholarships from NSERC and a Chateaubriand post-doctoral research fellowship from the French government.

I began my independent career at York University in 2007 and was promoted to associate professor in 2012 and professor in 2020.