Magomedov-Shcherbinina Memorial Prize and Lectureship Award Winner

Neal Devaraj

University of California, San Diego

Wednesday, September 19th, 2018

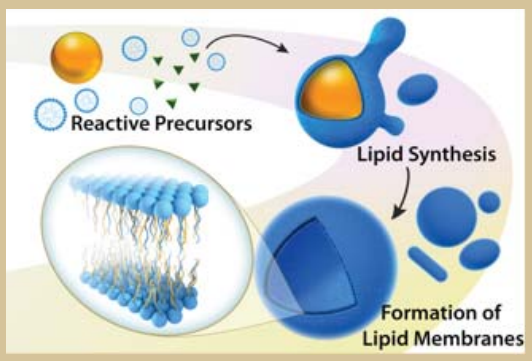
12:00 pm - 1:00 pm

140 Lander Auditorium, Hutchison Hall

Host: Michael Neidig
michael.neidig@rochester.edu
(585) 276-6006

There will be a welcome reception at 5:00 pm in the 1st Floor Hutchison lounge area.

Peering into the Lipid World



Lecture Abstract: Lipids remain one of the most enigmatic classes of biological molecules. Lipids were likely one of the first components necessary for life, yet our understanding of how lipid membranes could have arisen spontaneously is a mystery. Human cells produce thousands of unique lipid species, but the purpose for such diversity remains unknown. Dysregulation of lipid metabolism is a key factor in some of the most common diseases that afflict human beings. My lab is using imaging and chemistry to understand the assembly and function of lipids. We are watching the formation of artificial cells that consist of synthetic membranes that can continually reproduce. We are designing specific chemical reactions to manipulate and image lipids within living cells during cell death and disease. Our ultimate goal is to answer fundamental questions about the origins of lipid membranes and build a functional understanding of the diverse array of lipids present in life today.

Biography: Neal K. Devaraj received a dual B.S. in Chemistry and Biology from the Massachusetts Institute of Technology and his Ph.D. in Chemistry from Stanford University. After a postdoctoral position in molecular imaging at the Harvard Medical School, he joined the faculty of the University of California, San Diego in 2011, where he is currently a professor of Chemistry and Biochemistry. His research focuses on the design of bioconjugation reactions for addressing problems in bottom-up synthetic biology and cellular imaging. He is the recipient of the 2017 ACS Award in Pure Chemistry and the 2016 National Fresenius Award. He was recently named the 2018 Blavatnik National Laureate in Chemistry.