CHEMICAL BIOLOGY AND BIOCHEMISTRY SEMINAR

Monday, October 30, 2023 3:30 PM, BRWN 4102

"Disintegration of cellular membranes: reconstituted studies"

Dr. Jean K Chung Assistant Professor of Biochemistry Colorado State University



Abstract:

The cellular membrane not only defines the boundary of the cell, but also mediates the communication with the environment, and organizes vital processes in space and time. Therefore, maintaining the structural integrity of the mostly self-assembled phospholipids is critical to cellular function and the general health. Here, we explore how the structural integrity of the cell membrane may be attacked: (1) externally by the membrane-active peptides in animal venoms, and (2) internally by the oxidative processes leading to the accumulation of lipid peroxides. We use model membrane systems, such as lipid vesicles and supported lipid bilayers combined with fluorescence spectroscopy and imaging to investigate the reactions involved in membrane breakdown.

