

Neutron Scattering Studies of Bio-Interfaces: From Model Systems to Living Cells

J. Majewski^{1,2}

¹ *Lujan Neutron Scattering Center, H-805, Los Alamos National Laboratory, Los Alamos, NM, 87545, USA.*

² *National Science Foundation, BIO/MCB/MB, Alexandria, VA 22314, USA.*

The non-destructive nature of neutron scattering coupled with its isotopic sensitivity and penetrability has made it an ideal tool to study model biological interfaces at different complex environments. In this presentation I will discuss methods to create and characterize the model bio-interfaces (from lipid membranes to cell cultures) which can mimic many of the critical attributes of living systems. I will demonstrate that neutron scattering methods can be used to characterize the structure, composition, and organization of these objects and their response to external stimuli like pH, temperature and flow shear.