



**S N BOSE NATIONAL CENTRE
FOR BASIC SCIENCES**

Block JD, Sector III, Salt Lake, Kolkata 700 106

DEPARTMENTAL SEMINAR

Chemical, Biological & Macro-Molecular Sciences

01st March, 2022

4.00 PM

ONLINE

SPEAKER

**Prof. Chaitali Mukhopadhyay,
Professor, Department of Chemistry, University of Calcutta**

TITLE OF THE TALK

Ganglioside GM1 in Model Membranes : *in vitro* and *in silico* studies

ABSTRACT

Gangliosides are sialic acid containing glycosphingolipids that are ubiquitous components of mammalian plasma membrane and constitute a significant fraction of the brain lipids. Gangliosides help to maintain membrane structure and organization and act as the receptor of lectins, toxins and pathogens. We have developed model membranes with physiologically relevant composition containing monosialylated-ganglioside GM1 and analyzed their morphology using microscopic and spectroscopic techniques. Structural changes of some functionally important peptides/proteins in presence of GM1-containing model membranes were investigated using spectroscopic and molecular modeling approaches. Molecular Dynamics simulations have been used to study the effect of incorporation of GM1 in model bilayer systems.

HOST FACULTY

Prof. Rajib K Mitra and Dr. Suman Chakrabarty
CHEMICAL, BIOLOGICAL & MACRO-MOLECULAR SCIENCES
