



# Library Indian Institute of Science Education and Research Mohali



DSpace@IISERMohali / Thesis & Dissertation / Master of Science / MS-18

Please use this identifier to cite or link to this item: <http://hdl.handle.net/123456789/5424>

|                         |   |
|-------------------------|---|
| Title:                  | Study of Lipid Membranes Interaction With Cholesterol and Functional Peptides   |
| Authors:                | <a href="#">Kumar, Harshit</a>  |
| Keywords:               | Lipid Membranes<br>Cholesterol<br>Functional Peptides   |
| Issue Date:             | Apr-2023  |
| Abstract:               | Cellular membranes are important targets for many membrane-active peptides and drug compounds. Here we are interested in deciphering how lipid membranes are perturbed by several membrane-active molecules, such as cholesterol and crucial peptides such as $\alpha$ -amylase. We employ phase-separated ternary lipid model membranes in the form of giant unilamellar vesicles (GUVs) to simulate raft-like structures that have been proposed to govern many important processes in plasma membranes (e.g., intracellular signaling and trafficking). Specifically, we use phase contrast microscopy to interrogate how those membrane additives modulate the phase behaviour of free-standing GUVs and the bending rigidity of the membranes. We quantify these changes in the bending rigidity of the lipid membrane and predict cellular characteristics. |
| URI:                    | <a href="http://hdl.handle.net/123456789/5424">http://hdl.handle.net/123456789/5424</a>   |
| Appears in Collections: | <a href="#">MS-18</a>   |

## Files in This Item:

| File                               | Description | Size    | Format    |                           |
|------------------------------------|-------------|---------|-----------|---------------------------|
| <a href="#">embargo period.pdf</a> |             | 6.04 kB | Adobe PDF | <a href="#">View/Open</a> |

Show full item record



Items in DSpace are protected by copyright, with all rights reserved, unless otherwise indicated.