

## **Abstract**

Cell membrane and membrane proteins play fundamental roles in cell life. Cells use transporters and ion channels to interact with the environment and maintain cellular homeostasis. Therefore, their understanding and characterization are important area of basic and applied research. Large size of the cell and membrane protein insolubility make hamper their study and requires more sophisticated approaches, e.g. for the research of individual channels and transporters.

This work seeks to create a simple overview of the most used methods for creating artificial lipid membranes. They are LB film, DIB, BLM and SLB. They can be examined by applying lipid bilayer and individual proteins. The work also outlines the procedure for the preparation, use and benefits of different approaches and briefly describes the membrane proteins, biological membranes and conventional methods for their study.