

PMRF-ISSS Teaching Programme

Prime Minister Research Fellowship students' teaching requirement facilitated by the Institute of Smart Structures and Systems



Module PMRF-ISSS047/2024

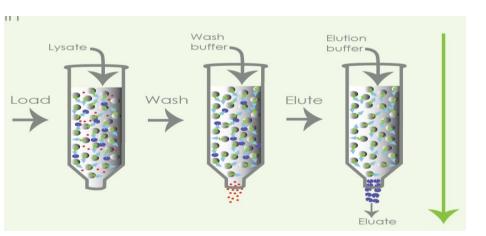
Proteins: structure, function and purification processes

Name of the PMRF student

Surabhi Chandra

Required background of the students taught

Anyone interested in protein biology and the detailed experimental techniques usually carried out in laboratories working with proteins can register for the course (UG/PG/1st year PhD students)





Details of the content of the module

- 1. Protein shapes and structural hierarchy
- 2. Why study structure?
- Amino acid composition, configuration, titration curves
- 4. Protein folding and solubility
- 5. Methods to study proteins
- 6. Basic bioinformatic tools
- 7. Protein purification including cloning and expression optimisation
- 8. Chromatographic techniques in details and how to read a chromatogram
- 9. Different types of columns to be used based on the characteristics of protein
- 10. Protein labelling approaches
- 11. Enzyme kinetics and inhibition
- 12. Molecular visualisation tools

Schedule of the module

Start Date: 1st April

2024 (tentative) End Date: 4 May 2024

(tentative)

Timings: Mon - Sat (6:30 pm to 8 pm, Saturdays mostly for doubt clearing and problem-solving sessions and

paper discussions)

Recorded lectures will be uploaded on these days

Meeting link: Will be shared later

Link

Contact email ID: <u>isss.forum@gmail.com</u>

Registration:

https://forms.gle/f5MmzsZn1X8qrcYn7