

Preference Form

**MOLECULAR BIOPHYSICS UNIT
INDIAN INSTITUTE OF SCIENCE
BANGALORE**

THE AREAS OF RESEARCH IN MOLECULAR BIOPHYSICS UNIT ARE:

- Spectroscopy and physico-chemical studies of biomolecules.
- Macromolecular structure determination by X-ray crystallography, Cryo-electron microscopy and NMR.
- Peptides-synthesis, design and conformational studies.
- Proteins-chemistry, conformational analysis, structure, design and folding.
- Neurophysiology – Patch-clamp electrophysiology, ion-channels, computational neuroscience.
- Peptide chemical biology
- Biophysical & structural studies on protein-RNA complexes.
- Computational biology and Genomics
- Membrane biophysics.

Information about the research going on in each laboratory can be found at the departmental website: <http://mbu.iisc.ac.in/people.htm>

Vacancies exist in the following programmes of research for the academic year 2019-20. Names in brackets are those of faculty members with expertise in the respective areas of research. Please indicate your choice(s) by placing a tick [✓] mark in the appropriate boxes. Please try and tick at least one box in each row. However, if you are unable to decide upon an appropriate choice (s), you may leave the boxes blank and seek clarification at the time of the interview.

Sl. No.	AREAS OF RESEARCH	I would like to work in	I would not mind working in	I would not like to work in
1.	Bioinformatics & Computational biology: Structure, function, interactions & dynamics of proteins, protein-nucleic acid complexes & large assemblies; Infectious & other diseases; Cellular Signalling; Protein design. (N. Srinivasan) http://pauling.mbu.iisc.ac.in			
2.	Biomolecular Simulations, Molecular Modelling of Protein and RNA Conformations, Lipid Bilayer Simulations, Membrane Biophysics (Anand Srivastava) http://mbu.iisc.ac.in/AnandLab.htm/index.html			
3.	Protein stability, folding and design. (Raghavan Varadarajan) http://mbu.iisc.ac.in/~rvgrp/			
4.	Molecular basis of microbial pathogenesis (B.Gopal) http://mbu.iisc.ac.in/~bggrp/			

5.	Structural biology of integral membrane proteins (P.Aravind) http://aplabmbu.weebly.com/			
6	Biophysical & structural studies on protein-nucleic acid complexes. (Mahavir Singh) http://singhmlab.weebly.com			
7.	Design and engineering of therapeutic peptides (Jayanta Chatterjee) http://jctum13.wixsite.com/pelab			
8.	Nuclear Magnetic Resonance studies of proteins and protein-protein interactions. (Siddhartha P Sarma) http://mbu.iisc.ac.in/~siddlab/index.html			
9.	Studies of protein structure, dynamics, interactions, function and malfunction primarily using Nuclear Magnetic Resonance, biophysics of circadian rhythms, metamorphic and intrinsically disordered proteins. (Ashok Sekhar) https://mbubionmr.weebly.com/			
10.	Single neuron electrophysiology, information processing in neurons and their networks, activity-dependent plasticity of ion channels, computational neuroscience. (Rishikesh Narayanan) http://mbu.iisc.ac.in/~rngpr/			
11.	Biochemical and structural characterization of biological macromolecules using Cryo-EM. (Somnath Dutta) http://www.duttasn.com/			

NAME: _____ & APPLICATION No. _____

Contact Telephone/Mobile No: _____

E-mail ID: _____