



INDIAN INSTITUTE OF TECHNOLOGY BOMBAY POWAI, MUMBAI 400076.

Advertisement No.: IRCC/EXT164/2022

Job Title

Junior Research Fellow

Job Reference Number

50345535

Application End Date

19.08.2022

Type of Employment

Proj. Staff Contract

No. of Position(s)

1

IITB Project Recruitment:

Project title: Towards Selective Cell Membrane Platforms for Drug-Membrane Interactions Biophysical Insights to Activity and Toxicity

Essential Qualifications & Experience:

MSc in Chemistry/Biotechnology with prior research experience. Handling mycobacterial culture, microscopic/spectroscopic methods is a must. Exp. with drug-membrane interaction project(s).

Job Profile:

In this project, we aim to employ surface sensitive techniques to quantitate drug-binding kinetics with lipid membranes derived from mycobacterium smegmatis (Msm) grown under different conditions that have a known effect on Msm lipidome. Next, we would like to probe changes in mechanical properties of the membrane systems using AFM and morphological changes using microscopy. We have sourced specific peptides and TB drugs, which show marked effect on Msm model membranes, and we shall work towards comparing the membrane interaction profiles of these classes of molecules to establish a selective interaction behavior of mycobacterial lipids towards membrane active agents. These insights will enable to develop improved classes of membrane active agents to specifically target Msm membranes, as well as to use our membranes for such drug screening purposes to contribute towards the success of membrane therapy against Tuberculosis.

Pay Details:

Consolidated salary Rs.25000/- p.m.

General information:

The position is temporary for a period of 1 year and tenable only for the duration of the project. The appointment is for time bound project and the candidate is required to work mainly for the successful completion of the project. The selection committee may offer lower or higher designation and lower or higher salary depending upon the experience and performance of the candidate in the interview.

Candidates called for interview will be required to attend at his/ her own expenses.

For any queries/clarification please contact: recruit@ircc.iitb.ac.in

