



Feby Mariam Chacko

Project P05:
Mechanism and Structure of MbxA protein

MOI IV fellow since: November 2020

Educational background:

Integrated Bachelors and Masters (BS-MS) dual degree graduate from Indian Institute of Science Education and Research Thiruvananthapuram (IISER-TVM).

Research and work experience:

In my master's thesis, I screened for membrane fission catalysts in bacterial cells using an in vitro biochemical assay system known as the Supported MembraneTube (SMrT) assay system. This work was done in collaboration with Dr. Thomas Pucadyil and Dr. Sunish Radhakrishnan of IISER-Pune.

I also worked in a structural biology lab of Dr. Vinesh Vijayan (IISER-TVM) where we focused on finding out the core region responsible for the aggregation of a protein known as CPEB3 (Cytoplasmic Polyadenylation Element Binding protein isoform 3), which is important in the long term memory formation in mammals. Here, I get familiarized with techniques such as NMR and CD-spectroscopy.

PhD student at:
Institute of Biochemistry

Main supervisor:
Prof. Dr. Lutz Schmitt

Nationality:
Indian

Advantages of being an MOI IV fellow:

I am really lucky that I got into MOI graduate school at HHU. Here, I get an excellent opportunity to explore different topics in the field of host-pathogen interactions mainly through lab rotations and collaborations between different labs. The lecture series as part of MOI is really great and this helps the MOI fellows from different backgrounds to understand more about infectious biology. Additionally, MOI opens a window to stay abroad for 6 weeks as part of the curriculum and this is an admirable opportunity to learn techniques that is sometimes really essential to drive the project forward. Furthermore, I believe that the workshops and symposia provided by MOI will definitely help me to develop my soft skills like presenting science, communication in science, etc. and it will also give me the possibility to organize various events. In my opinion, MOI is an excellent platform to develop as a young researcher in the field of Infectious biology.

Personal interests/motto:

Though simpler in appearance than the eukaryotic cell, the complex mechanisms that the bacterial cells operate at 2-4 femtoliter volume have inspired me to work more on fundamental molecular mechanisms governing growth and development in prokaryotes. Furthermore, I am curious to learn more about how does this simple but complex organism invades the highly multiplex mammalian immune system.