

## **REPORT**

With the efforts of Dr. Anoop Markande, Dr. Amaresan, Dr. Vijayalakshmi and Ms. Jinal Naik, a study tour was organized for the students on March 21<sup>st</sup> and 22<sup>nd</sup>, 2016.

Fifty two students of Third year (sem VI) Integrated MSc Microbiology had participated in the tour to the national institutes and research stations namely ,

- 1) Microbial Culture collection, MCC (part of National Centre for Cell Sciences, NCCS), Pune;
- 2) Indian Institute for Science Education and Research (IISER), Pune and
- 3) Regional Wheat Rust Research Station, Mahabaleshwar

Study tours enhance the knowledge of the students and have the potential to encourage and stimulate them to take up scientific careers in future. MCC and IISER being of international repute for research and education, was very fruitful with respect to student participation. Dr. Anoop Markande was in constant contact with the national research centres (MCC and IISER), where the study tour was intended for.

### **1) Microbial Culture collection, MCC (part of National Centre for Cell Sciences, NCCS), Pune**

The Microbial Culture Collection is a national facility funded by the Department of Biotechnology (DBT), Government of India. The MCC is affiliated to National Centre for Cell Science (NCCS), Pune, India. It is an affiliate member of the World Federation for Culture Collections (WFCC) and is registered with the World Data Centre for Microorganisms (WDCM, registration number 930) and has a status of International Depository Authority (IDA). The MCC scientists are actively involved in the research programmes relating to microbial diversity, metagenomics, ecology and taxonomy, using both classical and molecular approaches.

After a brief introduction about the institute, students were introduced to various recent research techniques and technologies used in Microbiology

1. Freeze drying or Lyophilization methods
2. Anaerobic cultivation of bacteria
3. GC-MS based FAME analysis of bacteria
4. International repository for patented microbial strains
5. Study of Luminescent and Magnetotactic bacteria
6. Various DNA sequencing techniques and facilities

### **2) Indian Institute for Science Education and Research (IISER), Pune**

The Government of India has established the Indian Institutes of Science Education and Research (IISER) at Pune. IISERs are a unique initiative in science education in India in which teaching and education will be totally integrated with the state-of-the-art research nurturing both curiosity and creativity in an

intellectually vibrant atmosphere of research. IISERs are destined to become Science Institutes of the highest caliber and reach the prestigious position in the global setting that IISc, IIMs and IITs presently enjoy.

An introduction to the institute and conception of IISER was given by Dr. Apurva. The students were shown basic study labs for the under graduates and post graduates at IISER. Students were also shown the Drosophila centre.

Various research labs of IISER were shown and students were encouraged to take up science in future and increase their scientific based thinking.

### **3) Regional Wheat Rust Research Station, Mahabaleshwar**

The regional centre for Wheat rust was established in 1941 to study one of the most destructive diseases of Wheat called as the "Rust disease". The centre has been established to study and eradicate the disease from the Indian system.