

# **DEPARTMENT OF MICROBIOLOGY AT MMC**

## **INTRODUCTION:**

The department of Microbiology is involved in academic and research activities of post graduate students besides teaching the undergraduate MBBS students. There are 7 well equipped service laboratories in the Department and a central laboratory in the Hospital. The department is equipped with automated blood culture system BacT ALERT, automated identification and sensitivity system VITEK 2, Automated RNS extractor, Real time PCR, Molbio (TRUNAT) machines, fluorescent and inverted microscope along with other conventional microbiological tools for diagnostic services.

The department conducts research projects for MBBS students (ICMR STS) and has a departmental Molecular lab which is NABL accredited.

## **HEAD OF DEPARTMENT:**



**Dr. Sapna Chauhan**

## **Associate Professor and Head of the department, Microbiology**

Dr. Sapna Chauhan is an MBBS from Himalayan Institute of Medical Sciences, Dehradun and has done her MD in Microbiology from SGRIM and HS Dehradun. She has more than 10 years of experience in teaching and has 20 plus articles being published in International and National journals as first author with over 50 citations.

She has researched in topics like drug resistance mechanism ESBL, Ampc MBL & MRSA, and Onychomycosis in patients attending Dermatology OPD Otomycosis in CSOM patients, Base line widal titre evaluation in Muzaffarnagar area, and Dengue and Widal co-infection.

She is currently working on various topics such as Fluorescence microscopy in lymphadenitis, Ciprofloxacin resistance in Pseudomonas from CSOM patients, and Onychomycosis in psoriatic patients.

### **Awards and Achievements:**

- Have conducted several Revised Basic and curriculum implementation workshops. Member of MEU, Institutional socio-cultural committee, Disciplinary committee, Infection control committee.
- Was giving 24\*7 diagnostic services during the Corona pandemic.

### **VISION OF THE DEPARTMENT:**

Our vision is to provide up-to-date and logistic theoretical and practical training for MBBS, MD (Microbiology), and to carry out front line research in all disciplines of microbiology.

### **MISSION OF THE DEPARTMENT:**

We are committed to diagnostic care of the patients; we aim to train our students, academicians and teachers with discipline and integrity.

### **FACILITIES AND EQUIPMENT:**

Department of microbiology have 7 well equipped service laboratories namely Bacteriology, Virology, Mycology, Immunology, Parasitology, Mycobacteriology and Serology in the Department. There is a 24x7 laboratory in hospital which provides round the clock services to patients. Integrated counseling and testing centre is being operated by Microbiology Department which provides free of cost HIV testing.

The Department is also carrying investigations under RNTCP program which includes TRUNAT, conventional methods as well as Fluorescence microscopy.

The microbiology laboratory is equipped with state of the art diagnostic facilities as automated blood culture system (BacT ALERT 3D SYSTEM), automated identification and antimicrobial susceptibility testing system (VITEK-2), Fluorescent and Inverted Microscopes along with other conventional microbiological tools for diagnostic services.

The Molecular lab of the Department is NABL accredited with Real Time PCR machine, Automated Extractor and Molbio (TRUNAT) Machines and departmental library with 127 books.

### **COURSES:**

We offer under-graduate (MBBS) and post graduate (MD) courses.

### **POST GRADUATE DEPARTMENT:**

The Department has all the required facilities for the post-graduate studies and is recognized for four seats since 2016.

### **EFFORTS WORTH MENTIONING:**

The faculty members have been working round the clock to provide emergency tests for Covid as well as Non covid patients. RT-PCR reports are dispatched within 24-48 hours.

Besides diagnostics the faculty members are also working meticulously to provide online and offline teaching. Assessments are also being carried out regularly along with other research activities.

### **ACADEMIC ACTIVITIES**

#### **Undergraduate:**

Lecture and Demonstration classes are conducted with the help of available different audio-visual aids i.e. LCD, OHP, Black board, teaching microscope etc. Students are encouraged to participate from time to time in sessions of problem based questions, multiple choice questions, spotting test exercises, Viva-voice, Model forming, and seminars. These activities are also reckoned for day-to-day assessment record of the students. A faculty member is always available to mentor the students whenever it is necessary.

#### **Postgraduate**

Seminars, Journal Club, Case/ Slide Presentation are conducted for the Postgraduate students. Postgraduate students are posted in Microbiology Division of Central Laboratory on rotations basis where they work under the guidance of faculty and perform all laboratory tests and learn their interpretation and reporting. These students are also posted in Pathology, Biochemistry and Molecular laboratory. They also participate and help in demonstration in MBBS practical classes.

### **PREPARATION FOR THE THIRD WAVE**

Our central laboratory as well as molecular laboratory is fully functional, well-equipped to cater the need of COVID-19 patients. We have increased the molecular lab capacity to up to 2000 RTPCR tests per day.