

## **ORAL PATHOLOGY & MICROBIOLOGY - ACTIVITY**

### **Clinical Laboratory – Various Investigation**

#### **Hematology Section**

Hematology section is equipped with Mindray BC-3000 Plus Haematology Autoanalyzer to carry out prompt and rapid complete blood count (CBC) investigations. Blood grouping, Screening for HIV 1&2, HBsAg and HCV are also carried out.

#### **Biochemical Section**

Biochemical investigations include estimation of blood sugar level, serum electrolytes, lipid profile, liver function test and blood chemistry are carried out utilizing Star 21 Semiautomatic biochemical analyzer.

#### **Urine Analysis**

Routine Urine analysis

#### **Histopathology Section**

This section comprises of hard and soft tissue microtomy.

#### **Soft tissue Microtomy**

The soft tissue biopsy specimen is received, macroscopy of the same is done and recorded. The representative tissue bits are processed and sectioned with Leica 2155 soft tissue microtome, this is followed by routine H&E staining, PAS staining and Toluidine blue staining. Special staining procedures includes Van-Geison staining, Masson Trichrome stain, Alcian Blue, Mucicarmin, Gordin & Sweets stain for Reticulin, Highmans Congo red, Alizarin red and Picrocirus staining are also carried out.

#### **Hard Tissue Microtomy**

The hard tissue biopsy specimen is received, mounted and sectioned with Leica 1600 hard tissue microtome. Many postgraduate students faculty of various dental institutions in India utilizes hard tissue microtomy facility. This facility is available only in very few dental institutions in India.

#### **Cytology Section**

The section helps the clinician in early diagnosing oral lesions with help of PAP Stain, H&E and PAS stain. Many cytomorphometric studies are carried out by using AgNOR stain with help of basic ProgRes image analysis software

#### **Microbiology Section**

In the microbiology section routine culture & sensitivity, aerobic & anaerobic studies are being done regularly. The Digital colony counter facility is available.

## **Research Section**

Research comprises creative work undertaken on a systematic basis in order to increase the stock of knowledge. It is used to establish or confirm facts, reaffirm the results of previous work. A research project may also be an expansion on past work in the field. To complete this task the department is equipped with Leica DMRB Research Microscope and Leica stereomicroscope attached with *Jenoptik digital camera* installed with basic ProgRes image analysis software. Leica DMRB Research Microscope has Phase contrast, Polarized, Interference, Fluorescent, Dark-field microscopic facilities.

Utilizing the above facilities, various Studies and Dissertations have been completed. Various dental fraternity within Karnataka as well as by other states utilize the research facilities. Even medical, textiles & engineering students have utilized the research facilities which are available in the department. Research work, which were done in the department have been awarded in state & national level conferences.

## **Under Graduate Section**

The Practical hall is very well illuminated and aerated with a large surface area. This hall can accommodate 60 students easily at a time. Here students are being taught the practical aspect of oral anatomy, oral histology (IBDS), oral pathology & microbiology (IIBDS & III BDS). For the teaching purpose, there are 50 light microscopes, which are being used to demonstrate the microscopic features. There are good numbers of self-explanatory charts/models of normal & abnormal structures of oral region. The department conducts regular discussions, tests & mock exams and internal assessments so that they are prepared well for annual examination.

The theory class are conducted using video enabled learning solution that includes lecturer captured flipped classes live stream by using Impartus software solutions.

The students have to present seminars and prepare charts related to subject. The extra-curricular activities of the students are identified, nurtured, inspired, supported, appreciated & provided the right platform to go ahead with their talent.

## **Museum**

The museum has unique collection of study models, hard & soft tissue specimens which are neatly displayed in separate sections like dental anatomy, comparative dental anatomy, developmental disturbances, pathological lesions based on various etiologies. This is very useful for the undergraduates to understand the normal & disease process in a better way. As the saying Seeing is believing, many a times the patients are getting motivated to quit the bad habits after seeing the museum.

## **Vaccination Section**

The department undertakes vaccination against Hepatitis B for the Teaching staff, Undergraduates, Postgraduates, Office staff, Para dental staff, Attenders, Peons etc.