

# **REPORT ON EDUCATIONAL VISIT TO ANATOMY MUSEUM & PHYSIOLOGY RESEARCH UNIT TO KMC BEJAI, MANGALORE**

**DATE:** 04/02/2023

**VENUE:** Anatomy Museum & Physiology Research Unit, KMC  
Bejai, Mangalore

## **STAFF IN CHARGE**

1. Ms. Nireeksha V
2. Ms. Indira Badya

**TOTAL NUMBER OF STUDENTS PARTICIPATED: 19**

## **OBJECTIVE OF THE ACTIVITY**

- To develop the insights -attaining practical knowledge and their theoretical applications thereof.
- To provide the students with a broad-spectrum knowledge on various parts of the body and their anatomical and physiological importance.

## **OUTCOME OF THE ACTIVITY**

- Gained in depth knowledge on the parts of the human body
- Awareness about the pathological conditions that arise in the body and outcomes of it on the normal functioning.

## **DESCRIPTION OF THE ACITIVTY**

An educational visit was organized for the students of 1<sup>st</sup> M.Sc. on 4<sup>th</sup> February 2023 to the anatomy museum located at Kasturba Medical College- Centre for Basic Sciences, Bejai, Mangalore. A total of 19 students and 2 teaching staff visited the museum. The objective of the visit was to provide practical exposure to various organs of the human body and in detail knowledge about the morphology of different organs.

The anatomy museum is widespread in a 300 sq. ft area and comprises of 522 specimens and 229 models. The museum was divided into various sections related to the muscular system, central nervous system, respiratory system, digestive system, excretory system, circulatory system, and so on.

The students witnessed the MRI and CT scans of the skull, thorax, spine, nasal cavity, lumbosacral abdomen and urinary bladder. The museum had specimens and models of vertebral columns, brain, head, and in detail, the depiction of their role played in the central nervous system. There were models representing the structure of brain, hypothalamus, pituitary gland, various lobes of the brain as well as the glandular system of the axial region of the body which included the parotid gland, salivary gland, thyroid gland, parathyroid gland and so on. There were still models of the oral cavity, its nervous system, dentures which in detail had the pictorial representation of the axial region of the body. There were models pertaining to the lower limb, upper limb, thorax, muscular and neural system of hand and feet in the osteology section.

There was a good collection of specimens with respect to the digestive system that comprised of various sections of interior regions of the gall bladder, abdomen along with detailed dissection of the reproductive organs like testes, ovary, uterus, fallopian tube. There were specimens depicting the growth stages of fetus along with some of inborn errors in the fetus like congenital abnormalities of the face, palate, phocomelia, cyclops, anencephaly.

The various aspects of the research unit of the physiology department of Kasturba Medical College- Centre for Basic Sciences, Bejai, Mangalore was demonstrated by Prof. Nayanatara Arunkumar who is a neurophysiologist by profession. She in detail explained about the experiments conducted on the rats for the research purpose and on how to develop the required model for analysis. Through the presentation she in detail explained the importance of ethical committee in case of animal studies and explained on each variant of rat and mice used for study. The commonly used ones were Zucker rats, Wistar albino rats and mice.

The albino rats are subjected to various stress-related research studies which included Alzheimers, Parkinsons, and depression model and so on. The Zucker rats are generally used for the obesity model to study the effect of drugs on obesity, effect of body fat on the onset diabetes etc. The stress models were subjected to various stress parameters like swimming stress, immobilization stress (emotional stress), social stress (isolation and overcrowding) etc.

Dr. Nayanatara gave a brief description of the Sterotaxic surgery device which is used to locate the lesions in the brain and to deliver radiation therapy. The steps involved in stereotaxic procedure are lesions, stimulation, injection and implantation. The parameters used in studying physiological changes were sucrose preferred test, forced swim test, open fluid test, tail suspension test and object recognition test. The apparatus like 8 arm radial maze, rotarod test,

Morris water maze, elevated plus maze were used to check on the learning and memory skills of the study model.

On the whole the visit was very informative and knowledgeable. It gave a broad perspective on various aspects of physiology and anatomy.

*Educational Visit to Anatomy Museum & Physiology Research Unit to KMC Bejai, Mangalore*

