

Department of Biotechnology and Genetics Laboratory

UG Biotechnology Laboratory – I & II



At MSRCASC, Department of Biotechnology laboratory is fully equipped with various instruments such as Electrophoresis and blotting, Imaging and quantitation, Real-time PCR. Preparative and analytical chromatography, Spectrophotometry and immunoassays kits. Practical's of all the three years BSc course, Cell Biology & Genetics, General Microbiology, Biological chemistry, Molecular biology, Genetic Engineering & Environmental, Immunology & Animal Biotechnology, Plant Biotechnology and Industrial Biotechnology are conducted and student's mini research projects are handled at Biotechnology laboratories.

UG Genetics Laboratory – I & II



At MSRCASC, UG Genetics Laboratory is equipped with Genomics DNA/RNA isolation related equipment's. DNA/RNA/Protein Purification Systems, Laboratory Centrifuges. Bench top Centrifuges, PCR Equipment, Spectrophotometry instruments. Molecular biology and genetics related labs, Cell Biology, Genetics, Cytogenetics, Molecular Genetics, and Recombinant DNATechnology, Basic Human Genetics, Developmental, Evolutionary and Biometrical Genetics, Applied and Behavioural Genetics labs are conducted for BSc-Genetics course and Genetics related projects are also conducted at Genetics laboratory.

PG Biotechnology Laboratory



The M.Sc. Biotechnology Program was inducted in 2002 under the affiliation from Bangalore University. At present our college is affiliated to Bengaluru City University.

We conduct the various laboratory experiments related to different fields of science viz.

- Cell Biology and Molecular Genetics
- General Microbiology and Biochemistry
- Enzymology and Immunology
- Molecular Biology and Environmental Biotechnology
- Plant, Agricultural and Animal Biotechnology
- Genetic Engineering and Bioinformatics
- Bioprocess Engineering and Medical Biotechnology

We also conduct the Project Work for the PG students.

The lab is well equipped with major and minor instruments, to carry out the day to day laboratory experiments.

Laboratory personnel's:

Lab Assistant : Mrs.Kavitha
Lab Attender : Mr.Samiulla
Lab Sweeper : Mrs.Yashodamma

Plant tissue culture Laboratory



In the domain of biotechnology, there have been many stunning innovations and achievements in the past century. However, only a few of them have managed to garner widespread attention. Among these, the Plant Tissue Culture (PTC) technique has been a remarkable one. At MSRCASC, the plant tissue culture lab is well equipped for the students and research scholars to perform many plant biotechnology related short term projects and syllabus based PTC experiments. Various *in vitro* plant tissue culture techniques like callus, anther, shoot tip culture, extraction of bioactive compounds, protoplast isolation, and synthetic seed preparation is carried out under aseptic environment.

Animal Cell Culture Lab



Animal cell culture laboratory is established to cater academic training and to carryout research projects. The successful growth and maintenance of animal cells under *in vitro* condition requires aseptic culture environment that mimic *in vivo* condition with respect to temperature, oxygen, carbon dioxide, pH, osmolarity, and including the components that provide nutrition. Hence, cell culture laboratory is considered as a sterile zone and quite often fumigation is practiced to avoid cross contamination. Good laboratory practices are following with all precautions for the maintenance, culturing and sub-culturing of cell lines in the laboratory. The temperature, humidity and pressure are monitored on day to day basis for maintenance of overall culture development. For experimental studies cell lines are treated with chemical/plant-based drug(s),and harvest for various biochemical or molecular-based assays.