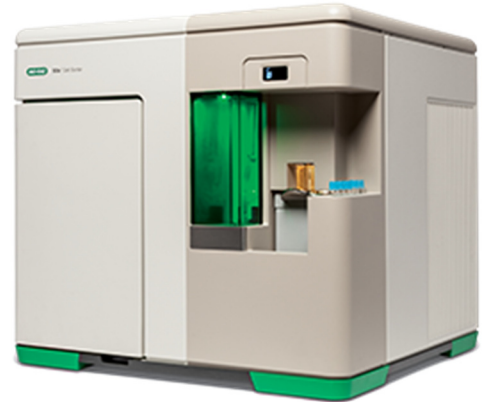


**CENTER FOR STEM CELL RESEARCH AND REGENERATIVE MEDICINE,  
MADRAS VETERINARY COLLEGE, CHENNAI**

**FACILITIES/ INFRASTRUCTURE AVAILABLE FOR RESEARCH**

**1. Cell Sorter**

Flow cytometry is a widely used method for analyzing the expression of cell surface and intracellular molecules, characterizing and defining different cell types in a heterogeneous cell population, assessing the purity of isolated subpopulations and analyzing cell size and volume. It allows simultaneous multi-parameter analysis of single cells. The S3e™ cell sorter designed to offer affordable, dependable and simplified cell sorting. Samples are analyzed using traditional jet-in-air technology and events can be sorted at high speeds while maintaining sensitivity and high purity.



**2. Real Time PCR**

The CFX96 Touch System is a powerful, precise, and flexible real-time PCR detection system. This six-channel (five colors and one FRET channel) real-time PCR instrument combines advanced optical technology with precise temperature control to deliver sensitive, reliable detection for singleplex or multiplex reactions.



**3. Thermal Cycler**

The Eppendorf Mastercycler nexus gradient is a gradient thermal cycler supporting over 12 columns. The nexus gradient has a gradient range of 4-99°C with an aluminum thermal block and 96x 0.2 ml PCR tubes or 77x 0.5 ml PCR tubes or 1x 96 well PCR plate capacity with a 1-20°C temperature control range and a gradient temperature range of 30-99°C. The Master cycler nexus gradient is a fast, safe gradient thermal cycler.



#### 4. Freeze Dryer

Freeze drying, also known as lyophilisation or cryodesiccation, is a low temperature dehydration process that involves freezing the product, lowering pressure, then removing the ice by sublimation. This is in contrast to dehydration by most conventional methods that evaporate water using heat. Because of the low temperature used in processing, the quality of the rehydrated product is excellent, and the original shape of the product is maintained. Primary applications of freeze drying include biological (e.g., bacteria and yeasts), biomedical (e.g., surgical transplants), food processing (e.g., coffee) and preservation.



#### 5. Hygene Bioreactor / Fermentor

Bio-Reactor with 3 liter total volume and 2.5 liter working volume autoclavable Glass Reactor with Data acquisition system.



#### 6. Electroporation Systems

The Gene Pulser Xcell system is a flexible, modular electroporation system for transfecting every cell type from primary, suspension and difficult to transfect cells including T cells to bacteria and fungi.



## 7. Cryopreservation Facility

A stem cell cryopreservation facility is a facility that collects and stores human/Animal Stem Cells from donor for private and public use or for research and development purpose.



## 8. Imaging Core

The ECLIPSE Ti2 inverted microscope delivers an unparalleled 25mm field of view (FOV) that revolutionizes the way you see. With this incredible FOV, the Ti2 maximizes the sensor area of large-format CMOS cameras without making compromises, and significantly improves data throughput. The Ti2's exceptionally stable, drift-free platform is designed to meet the demands of super-resolution imaging while its unique hardware-triggering capabilities enhance even the most challenging, high-speed imaging applications, by gathering data from internal sensors, eliminating the possibility of user errors. In addition, the status of each sensor is automatically recorded during acquisition, providing quality control for imaging experiments and enhancing data reproducibility.



### To avail services, Contact:

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