

## **Department of Physiology**

The department of physiology has a strong history and background in cardiovascular research. Research interest of the faculty in this field includes studies on contractility of the heart, pace making mechanisms and heart rate variability. Various facilities are available for studying cardiac function in cells, tissues, isolated heart (Langendorff perfusion), small animals like rats and also in human beings. Facilities available include patch clamp facility to record ionic currents and action potentials from isolated cardiac and pacemaker cells.

Calcium imaging with confocal microscopy is also done in these cells with the use of fluorescent probes like Fluo-4. A human physiology laboratory is available for studies on exercise physiology, heart rate variability and other tests to assess the autonomic nervous system. Recently the department is involved in the development and validation of a new blood pressure measuring device.



**Physiology department faculty, post-graduates and staff**



**Langendorff perfusion system**



**Patch clamp system**