

Regenerative medicine

Course Overview

Regenerative medicine is an emerging field in medicine that holds promise for replacement or regeneration of failing organs or tissues. It refers to a group of biomedical approaches to clinical therapies that may involve the use of stem cells. Given the emerging importance of stem cells in the field of medical practice this elective will be a timely addition to the list of elective courses available to the MBS students in the Fall semester. This 2 credit elective course will expose students to various important aspects of this field from basic science to current clinical trials in the broad area of regenerative medicine. This course will provide an elective choice for students interested in basic science aspects of molecular and translational medicine.

Topics to be covered include:

1. Current perspectives in Regenerative Medicine/Introduction
2. Diseases impacted by Regenerative Medicine /Replacement Therapy
3. Cellular Aspects of Regenerative Medicine. Concept of Stem Cells
4. Adult Stem Cells
5. Embryonic Stem Cells
6. Induced Pluripotent Stem Cells
7. Hematopoietic Stem Cells
8. Clinical applications