

AICTE QIP SHORT TERM TRAINING PROGRAMME

On

RECENT ADVANCES IN BIOTECHNOLOGY RELATED TO TISSUE REGENERATION

January 7, 2019 – January 11, 2019

Coordinators:

Dr. Rama Shanker Verma

Sponsored by

All India Council for Technical Education



Organized by

**Department of Biotechnology
Indian Institute of Technology Madras**

BACKGROUND

The proposed short-term course is designed to enhance and strengthen the basic knowledge on stem cells their potency and their role in tissue regeneration.

It is aimed to familiarize the participants with advanced topics that include biomaterials used for tissue regeneration, 3D printing, nanotechnology in tissue regeneration and molecular techniques such as molecular cloning, transfection, transduction and western blotting.

COURSE CONTENT

Stem Cells

- Introduction
- Potency of Stem Cells
- Types of Stem Cells and their therapeutic use

Biomaterials

- Bioactive Scaffolds
- Regenerative Scaffolds
- Current trends and Clinical trials of Biomaterials

3D Printing

- Designing strategies in 3D Printing
- Organ Printing Bioreactors
- Future prospects in 3D Printing

Nanotechnology in tissue regeneration

- Nanofabrication Technique
- Application in Medicine

Molecular Techniques

- Molecular Cloning, transfection and transduction
- Western Blotting

COURSE MATERIAL

Each registered participant will be provided with a set of comprehensive lecture notes.

FACULTY

1. Dr. Rama Shanker Verma
Professor, Indian Institute of Technology Madras.
2. Dr. Madhulika Dixit
Associate Professor, India Institute of Technology, Madras
3. Dr. Vignesh MuthuVijayan
Assistant Professor, Indian institute of Technology, Madras

4. Dr. Nibedita Lenka
Scientist 'F', National center for Cell Sciences
NCCS Complex, Pune University.
5. Dr. P. Ponmurugan
Associate Professor, Bharathiyar University,
Coimbatore.
6. Dr. S.KrishnaKumar
Director of Uveitis and ocular Pathology
Department, Sankara Nethralaya.
7. Dr. Geetha K Vemuganti
Professor, School of Medicinal Science, University
of Hyderabad.
8. Dr. Janani Radhakrishnan
Indian institute of technology Madras.

COURSE DURATION & VENUE

The course is of five days duration from **January 7 to January 11, 2019**. Classes will be held at IC&SR, IIT Madras, Chennai.

