

3 D Cell based therapeutic approach for tissue repair

The skeleton serves structural support for the body, permits movement by acting as levers for the muscles. It protects vital internal organs and the marrow inside the bone serves as reservoir of growth factors and cytokines, and thus providing a niche which supports hematopoiesis. Bone remodeling is a continuous process in which each bone constantly undergoes modeling during life to help it adapt to changing biomechanical forces, as well as remodeling to remove old, micro-damaged bone and replace it with new, mechanically stronger bone to help preserve bone strength.

The course will cover current advances in the use of cell based tissue engineering for skeleton and heart regeneration. It will cover the pathologic challenges and current strategies developed to face these challenges. Topics covered will include, bone, Cartilage and heart histology, bone metabolism, bone cells differentiation and function, current approaches for bone transplantation

Dates for the Course	Jan 26, 2016 –Feb 5, 2016
Host Institute	IIT Madras
No. of Credits	2
Maximum No. of Participants	50
You Should Attend If...	<ul style="list-style-type: none"> ▪ You are a Mechanical engineer, Engineering Design, Applied Mechanics, Biotechnologist, Biochemist, and life Science Graduate or research scientist interested in designing 3D scaffold and tissue engineering. ▪ you are a student or faculty or Scientist from academic institution and industry, interested in learning how to do design 3 D scaffold for tissue repair in treating damaged tissues.
Course Registration Fees	<p>The participation fees for taking the course is as follows:</p> <p>Student Participants: Rs.2000 Faculty Participants: Rs.6000 Government Research Organization Participants: Rs.10000 Industry Participants: Rs.20000</p> <p>The above fee is towards participation in the course, the course material, computer use for tutorials and assignments, and laboratory equipment usage charges.</p>

Accommodation	Mode of payment: Demand draft in favour of “Registrar, IIT Madras” payable at Chennai The participants may be provided with hostel accommodation, depending on the availability, on payment basis. Request for hostel accommodation may be submitted through the link: http://hosteldine.itm.ac.in/iitmhostel
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Course Faculty



Professor Noam Levoet,
Department of Physiology
and Cell Biology, Faculty of
Health Sciences, Ben-Gurion
University of the Negev,
Beer-Sheva, Israel.

His is expert in Molecular and cellular basis of bone in health and disease, Cell biology of bone cells, Bone cell-matrix mediated signaling and Regulation of bone cells by poly-ADP ribosylation.



Professor Rama S Verma
Department of Biotechnology,
Indian Institute of Technology
Madras (IITM), Chennai.

He works in the area of Stem cell and tissue regeneration. His lab has developed bio prosthetic valve and heart patches using several biological and biodegradable Scaffolds and Stem cell.

Course Coordinator

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URL:
<https://biotech.iitm.ac.in/web/faculty/verma/index.html>