Workshop 13 Post-Symposium

Fundamentals of Tissue Engineering

Date: Thursday - Saturday, August 28–30, 2008 (3-days)
Time: 8:30 am – 5:00 pm
Venue: BSL 2 Laboratory, Juma Building
Participants: 20
Workshop Fee : Rs. 2,500 per participant

Introduction

Tissue engineering is the use of a combination of cells, engineering or tissue-matrix materials, and suitable biochemical factors to improve or replace biological functions. The need for human tissues is ever increasing due to burden of trauma and mutilating diseases. The ideal replacement for lost tissue would be a tissue which most closely matches the original. Thus, in the last few decades tremendous interest in tissue engineering has developed. Human tissues can be grown from donor cells obtained from blood or other organs. They may comprise differentiated cells or undifferentiated cells such as pluripotential stem cells. To be able to proliferate *in vitro*, cells of different lineages have specific requirements such as growth factors. Three dimensional scaffolds are sometimes required for growing tissues instead of cell monolayers. Grown cells are monitored for their phenotype using microscopy and immunocytochemistry.

Tissue engineering has found applications in many clinical settings as well as research, and with the current pace, it is expected to become a prominent component of therapeutics in the future.

Purpose of workshop

- To introduce participants to fundamental concepts of tissue engineering
- To provide hands-on experience in the techniques of cell culturing and phenotyping

Workshop Format and Methods

- A 3-day laboratory based workshop
- Oral presentations
- Group discussions
- Hands-on laboratory experience with cell culture, microscopy, immunocytochemistry and western blotting.

Workshop Faculty

- **Naseem Thielgaard**
  Consultant Biomechanical and Project Coordinator, Danish Technological Institute, Centre for Plastics Technology, Odense, Denmark
- **S. Javad Mortazavi**
  Professor and Head of Iranian Tissue Bank, Tehran University of Medical Sciences, Iran
- **Tashfeen Ahmad**
  Assistant Professor, Research in Departments of Surgery and Biological and Biomedical Sciences, Aga Khan University
- **Syed Ather Enam**
  Consultant Neurosurgeon, Associate Professor and Head of Neurosurgery Section, Department of Surgery, Aga Khan University.
- **Ahmed Yaqinuddin**
  Instructor Department of Biological and Biomedical Sciences, Aga Khan University
- **Ghulam Rehmani Lakho**
  Senior Instructor Department of Biological and Biomedical Sciences, Aga Khan University

Workshop Facilitators (Research Officers/PhD students)

- Zulfiqar Naqvi
- Sadia Habib
- Shamim Mushtaq

- Resham Rehman
- Touqeer Ahmed
- Shiraz Ahmed Anjum