

Pakistan's First Dental and BioMaterials Summer Camp August 17-21, 2015

Pakistan's first Dental and Biomaterials Summer Camp (DBMSC) was held successfully at the Interdisciplinary Research Centre in Biomedical Materials (IRCBM), COMSATS Institute of Information Technology, Lahore from 17-21 August 2015. It was a unique event of its kind as it brought together scientists, clinicians(dentists), students and faculty members from various Universities of Pakistan under the same roof to share their experiences and learn from each other's skills under the supervision of IRCBM's qualified resource persons.

This was attended by 30 participants from different clinical and scientific backgrounds. This includes students, PG trainees and early career professionals (from National University of Science and Technology Islamabad, Fatima Memorial Hospital Lahore, University of Health Science Lahore, Punjab University Lahore, University of Management and Technology Lahore and National Textile University Faisalabad). Please find details and images below.

Interdisciplinary Research Centre in Biomedical Materials (IRCBM) is the only research centre of its kind in Pakistan where more than 40 Scientists (including 20 holding international PhD degrees) focus entirely on applied research and development in the field of Biomaterials & Tissue Engineering.

Dental and BioMaterials Summer Camp 2015 gives you an opportunity to interact with world class researchers & be exposed to state of the art equipment and laboratories. Please join us from August 17-21, 2015 to increase your knowledge in the field of Tissue Engineering & Dental and



Interdisciplinary Research Centre in Biomedical Materials presents **Dental and BioMaterials Summer Camp 2015**

Pakistan's first interactive research grooming activity in Dental & BioMaterials

Camp Program

Day 1: Orientation

- Introduction to Dental & BioMaterials
- Training: Lab Safety & Experimental Design

Day 2: Interactive Talks

- Hard & Soft Tissue Repair using materials
- Biocompatibility & Cell Toxicity Assessment
- Advanced Materials in Dentistry & much more

Day 3: Lab Experiments

- Wet-chemical synthesis & processing of biomaterials
- Methods & Tools: Biocompatibility Assessment
- Development of dental composites & much more

Day 4: Characterization Techniques

- X-ray Diffraction, Scanning Electron Microscopy
- DSC/TGA, BET Surface Area, FTIR & much more

Day 5: Becoming an Efficient Researcher

- Improving Thesis & Publication writing skills
- Interactive Workshop: Designing a project

Venue: IRC in Biomedical Materials,
COMSATS Institute of Information Technology,
Defence Road, Off Raiwind Road, Lahore

State of the art facilities:

SEM, DSC/TGA, BET, FTIR, UV-vis, FI. Microscope

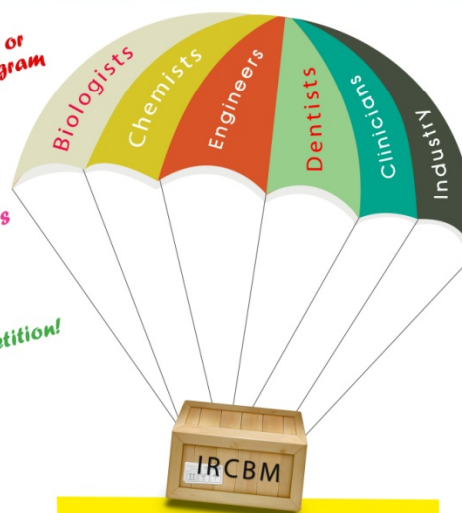
10%
Off!

Available for early bird registrations
(before 31st July 2015) and groups of 5
or more persons! Limited seats available!

Visit our facebook page or
website for detailed program

Free Refreshments

Best Project Competition!



August 17-21, 2015

Registration
Fee

PKR 7,500 for Students

PKR 9,000 for Professionals

Video Conference Lecture on Biomaterials by Foreign Experts

Facilities



For Registration & other details please visit our webpage

IRCBM Training Cell

Tel: 042 111001007 (Extn:829) & 0346 4389177

COMSATS Institute of Information Technology, Lahore, Pakistan

Weblink : <http://ircbm.ciitlahore.edu.pk> Email: ircbmtrainingcell@ciitlahore.edu.pk



DAY 1: Lab Safety and Experimental Design – 17th August 2015		
Time	Activity	Resource Person
08:30–09:00	Registration/ participants to be seated	
09:00– 09:15	Welcome Remarks- Ideology Behind IRCBM and this Summer Camp	Dr. Aqif Anwar Chaudhry & Dr AsmaTufail
09:15 –10:40	Lab Safety Training	Dr. Abdul Samad Khan
10:40–11:10	Hi-Tea	
11:10–12:40	Introduction to Biomaterials and Tissue Engineering	Dr. Aqif Anwar Chaudhry
Lunch Break		
13:45– 14:45	Introduction to Dental Materials	Dr. Abdul Samad Khan
14:50–15:30	Case Scenario Evaluation and Material selection	Panel discussion
15:35–17:00	Experimental Design: things to consider	Dr. Muhammad Yar
Day 2: Interactive Sessions on Dental and Biomaterials– 18 August 2015		
09:00 – 09:50	Bone repair and regeneration using bioceramics	Dr. Aqif Anwar Chaudhry
10:00–11:00	Advanced materials in clinical dentistry (video conference)	Prof. Jukka P. Matinlinna (University of Hong Kong)
11:05 –11:55	Polymers and their application in regenerative medicine	Dr. Anila Asif
12:00 – 12:50	Metals and alloys for Biomedical applications	Dr. Farasat Iqbal
Lunch Break		
14:00 – 14:50	Biomaterials: Lab to patient	Dr. Aqif Anwar Chaudhry
15:00– 15:50	Biocompatibility and cytotoxicity of biomaterials	Dr. Arshad Jamal
16:00–16:50	Bioswitches for medical applications	Dr. Akhtar Hayat/Dr. Abdur Rahim
16:50–17:00	Strategic discussion and Closing Remarks for the day	
Day 3: Exposure to hands on experimentation– 19 August 2015		
09:00 – 17:00 (Lunch Time 13:00-14:00)	Polymers Synthesis and Composites	Dr. Muhammad Yar and LubnaShahzadi
	Processing of nanoparticles (electrospinning, consolidation and ball milling)	Dr. Ather Farooq Khan and Mr. Faisal Manzoor
	Fabrication of Dental composites	Dr. Abdul Samad Khan and Dr. Nawshad
	Paper based sensors for Biomarkers	Dr. Akhtar Hayat and Dr. Muhammad Nasir
	Histology of biological samples using Microtome	Dr. Faiza Sharif and Dr. Umar Nishan
Day 4: Exposure to Characterization Techniques (Lectures and Hands on Exposure) – 20 August 2015		
09:00 – 17:00 (Lunch Time 13:00-14:00)	Structural Characterization of Biomaterials by X-Ray Powder Diffraction	Dr. Saadat Anwar Siddiqui
	Fourier Transform Infra-Red Spectroscopy	Dr. Abdul Samad Khan
	Thermal analysis of Biomedical Materials by TGA/ DSC	Dr. Anila Asif
	Morphological insight into the Biomedical materials by Scanning Electron Microscope	Dr. Saadat Anwar Siddiqui and Dr. Farasat Iqbal
	BET Surface Area Analyzer for Biomaterials	Dr. Aqif Anwar Chaudhary
	Mechanical Testing in Biomedical applications	Dr. Farasat Iqbal and Mr. TanzeelurRehman
Day 5: Becoming an effective researcher– 21 August 2015		
09:00 –10:00	Thesis Writing Skills	Dr. Ather Farooq Khan
10:00 –11:00	Scientific Paper Writing	Dr. Akhtar Hayat & Dr. Nawshad Muhammad
11:20 –13:00	Using Referencing Software in Scientific writing	Dr. Muhammad Yar& Dr. Muhammad Nasir
Lunch Break		
14:00 –16:00	Workshop and competition in Project designing	Dr. Sobia, Dr. Abdur Rahim and Dr. Umar Nishan
16:00–16:15	Closing Remarks	Dr. Aqif Anwar Chaudhry
16:15 –16:30	Certificate Distribution	
16:30 –17:00	Refreshment	



Registration Desk and Tilawatof DBMSC on 17 Aug 2015

On August 17, 2015 the Summer Camp opened with the recitation of verses from Holy Quran followed by the welcome remarks from one of the member of IRCBM training cell Dr. AsmaTufail Shah. Dr. Aqif Anwar Chaudhry (Head of IRCBM) briefed the participants about the ideology behind the creation of the centre, its aims, objectives and future vision. The first day of the Summer Camp mainly focused on topics related to Lab Safety and Experimental Design along with panel assisted discussions on Case Scenario Evaluation and Material selection. The main aim of the first day activities was to introduce the participants in true sense to dental and biomaterials, sensitize them about lab safety and matters of appreciate the importance of experimental deign.



Lectures related to BioMaterials

Second day of the Summer Camp was based on interactive sessions on dental and biomaterials and covered diverse range of topics ranging from bone repair and regeneration using bioceramics by Dr. Aqif Anwar Chaudhry to polymers and their application in regenerative medicine by Dr. Anila Asif. Dr. Farasat Iqbal shared his expertise on Metals and alloys for biomedical applications. The participants were introduced to biocompatibility and cytotoxicity of biomaterials and bioswitches for medical applications by Dr. Arshad Jamal and Dr. Akhatr Hayat of IRCBM respectively. The salient feature of the day a lecture of IRCBM's international collaborator Prof. Jukka P. Matinlinna from University of Hong Kong on advanced materials in clinical dentistry using the video conferencing facility of IRCBM.



Lab activity during Third Day of DBMSC

On third day of the Summer Camp participants were given exposure to hands on experimentation on various techniques such as polymers synthesis and composites, processing of nanoparticles, fabrication of dental composites, paper based sensors for biomarkers and histology of biological samples using Microtome. The participants were divided in several groups and the above mentioned activities were led by the concerned scientists of IRCBM.

Fourth day of the Summer Camp was a nice blend of lectures and hands on exposure to characterization techniques such as X-ray powder diffraction, Fourier Transform Infrared Spectroscopy, Thermogravimetric Analysis/ Differential Scanning Calorimetry, Scanning

Electron Microscopy, Brunauer–Emmett–Tellers surface area analysis for biomaterials and mechanical testing.



Characterization Techniques activity on Day Four of the DBMS

Realizing the importance of the participation of dental and biomedical students and clinicians in research the fifth and final day of the Summer Camp was mainly focused on “how to become an effective researcher”. Lectures were presented on the important topics of thesis writing skills and scientific paper writing. Understanding the difficulty of young researchers in citing other research papers and different styles of referencing, special detailed lecture was presented on “using referencing software in scientific writing”. The second half of the final day was dedicated to workshop and competition in project designing which was actively participated and thoroughly enjoyed by the participants.

Certificates distribution ceremony was held and closing remarks were presented by Head IRCBM thanking the participants for their confidence, exemplary discipline and great deal of interest in dental and biomaterials summer camp.



Final Day of the DBMSC