



Sponsored by:
Science & Engineering Research Board (SERB)
under the Accelerate Vigyan Scheme

High end workshop on Advanced Techniques in Material Sciences & Molecular Medicine


Jointly Organized By:
Department Of Biomaterials &
Centre Of Molecular Medicine & Diagnostics
Saveetha Dental College & Hospitals






01st to 07th July, 2K22





Website: <https://rb.gy/i0vdnc>





Program Schedule

Day-1, 01st July 2022

8:00 - 9:00	Registration	
9:00 -10:00	Inauguration	
10:00 -10:20	Refreshment Break	
10:20 - 11:20		Dr. A. Sreekumaran Nair Corporate Manager (R&D), Advanced Design and Materials Group MRF Limited, Chennai <i>Tentative Title: Principles and applications of Scanning Transmission Electron microscopy (STEM)</i>

11:20 – 12:20		Dr. Kranthikumar Maniam Senior Project Leader, The Welding Institute (TWI) Limited And Marie Curie Fellow, Materials Innovation Centre, University of Leicester, UK <i>Tentative Title: Recent techniques and challenges in Sample preparation for advanced image analysis</i>
12:20 – 13:30	Lunch	
13:30 – 14:30		JEOL Technical Specialist <i>Tentative Title: Cryopreservation and Live cell imaging using JEOL STEM</i>
14:30 – 15:30		Dr. Rajalakshmanan Eswaramoorthy Professor, Department of Biomaterials, Saveetha Dental College and Hospitals, SIMATS- Deemed University, Chennai, Tamil Nadu <i>Tentative Title: Advanced Image analysis using STEM platform</i>
15:30 – 15:50	Refreshment Break	
15:50 – 17:00	Demo on sample preparation and hands on training on image capturing in JEOL STEM	
Day-2, 02nd July 2022		
10:00-11:00		Dr. Ullas Mony Professor, Centre for Molecular medicine and Diagnostics Saveetha Dental College and Hospitals, SIMATS- Deemed University, Chennai, Tamil Nadu <i>Tentative Title: Flow cytometry and applications</i>
11:00 - 11:20	Refreshment Break	
11:20 - 12:30		Dr. Neeraj Sidharthan Clinical Professor and Head, Clinical Haematology & Stem Cell Transplantation, Amrita Institute of Medical Sciences and Research Centre, Kochi, Kerala <i>Tentative Title: Bed side to bench and back in clinical hematology</i>
12:30 - 14:00	Lunch Break	
14:00 - 15:00	Sample preparation (immunophenotyping) for Flow cytometry	
15:00 - 15:20	Refreshment Break	
15:20 - 17:00	Hands on training in Flow cytometer (BD. FACSLytic)	

Day-3, 03rd July 2022		
10:00-11:00		<p>Dr. Dinesh Kumar Rajendran Assistant Professor National Institute of Technology (NIT), Srinagar <i>Tentative Title: Additive manufacturing and 3D printable biodegradable polymers for medical applications.</i></p>
11:00 - 11:20	Refreshment Break	
11:20 - 12:30		<p>Dr. Thirumurgan Mahadhevan Research Scientist, 3D health care consultant, Altem Technologies <i>Tentative Title: 3D printable materials for drug delivery applications</i></p>
12:30 - 14:00	Lunch Break	
14:00 - 15:00	Additive preparation at wet lab, Department of Biomaterials	
15:00 - 15:20	Refreshment Break	
15:20 - 17:00	Hands on training in Form labs SLA 3D printers	
Day-4, 04th July 2022		
10:00-11:00		<p>Dr. Chinnadurai Sivaswamy Technical Head plus Quality Manager, Thyrocare Technologies Ltd, New Delhi. <i>Tentative Title: Clinical sample analysis and its diagnostics</i></p>
11:00 - 11:20	Refreshment Break	
11:20 - 12:30		<p>Dr. R. Rukkumani Associate Professor and Head Department of Biochemistry and Molecular Biology Pondicherry University, Pondicherry <i>Tentative Title: Role of Genomics, Proteomics and Bioinformatics in Molecular Medicine</i></p>
12:30 - 14:00	Lunch Break	
14:00 - 15:00	Hands on training in SimpliAmp™ Thermal Cycler	
15:00 - 15:20	Refreshment Break	
15:20 - 17:00	Hands on training in advanced Proteomics techniques	

Day-5, 05th July 2022		
10:00-11:00		Instron Technical Specialist Tentative Title: Nano-CT: Principles and Applications in Material Science and molecular medicine
11:00 - 11:20	Refreshment Break	
11:20 - 12:30		Dr. Jeyalakshmi Somasundaram Chief Scientist, White Lab- Centre of Excellence -Material Characterization Saveetha Dental College and Hospitals, SIMATS- Deemed University, Chennai, Tamil Nadu <i>Tentative Title: ASTM standards and their requirements for Biomechanical Analysis using Instron UTM 3000</i>
12:30 - 14:00	Lunch Break	
14:00 - 15:00	Live demo on Zigs used in the Instron Elctropuls 3000 UTM	
15:00 - 15:20	Refreshment Break	
15:20 - 17:00	Hands on training in Instron Elctropuls 3000 UTM	
Day-6, 06th July 2022		
10:00-11:00		Bruker Technical Specialist Tentative Title: Nano-CT: Principles and Applications in Material Science and molecular medicine
11:00 - 11:20	Refreshment Break	
11:20 - 12:30		Dr. Ganesh Thothadri Associate Professor, Department of Materials Science and Engineering Adama Science and Technology University, Ethiopia Tentative Title: Instrumentation and modern sample handling techniques
12:30 - 14:00	Lunch Break	
14:00 - 15:00	Live demo on Nano- CT software module and sample preparation	
15:00 - 15:20	Refreshment Break	
15:20 - 17:00	Hands on training in Bruker Nano- CT	

Day-7, 07th July 2022	
10:00-11:00	Live demo of advanced instruments such as Bruker ATR-FTIR and Vickers Hardness Tester at Centre of Excellence – Material Characterization (White Lab),
11:00 - 11:20	Refreshment Break
11:20 - 12:30	Live demo of advanced instruments such as Stylus profilometer, Hard tissue microtome, brushing simulator, and Goniometer at Centre of Excellence – Material Characterization (White Lab),
12:30 - 13:00	Assessment of training module (25 MCQs covering workshop study materials)
13:00 - 14:00	Lunch Break
14:00 - 15:30	Visit to Centre of excellence facilities such as Animal house, Microscopy facility, implantology, Plastination at Saveetha University
15:30 - 16:00	Valedictory function and certificate distribution