

“International Conference on Clinical Translation of  
Biomaterial-based Therapeutics and Devices”  
“ICBTD 2025”



6<sup>th</sup> - 7<sup>th</sup> February, 2025



Somaiya Vidyavihar University

**Organised by:**

Somaiya Centre for Integrated Science Education and Research and  
Department of Mechanical Engineering, Somaiya Vidyavihar University

**Supported by:**

Internal Quality Assurance cell, SVU

**Endorsed by:**

Society of Biomaterials & Artificial  
Organs, India (SBAOI)

## Theme of the Conference

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Numerous biomaterials have been developed for tissue regeneration, drug delivery and diagnostic applications. Although there has been great progress in material innovation and preclinical testing, clinical translation of biomaterial based therapeutics and devices are very limited. Several biological and technological challenges have contributed to this huge gap between pre-clinical and clinical success. Additionally, there has been a lack of knowledge regarding the regulatory process and guidelines in the biomedical community. "This often results in the development of highly complex technologies that address unmet needs but fail to navigate the rigorous regulatory process." Conference aims to discuss progress in the development of materials intended for various biomedical applications, general concepts and regulatory guidelines related to clinical translation of biomaterials-based therapeutics and devices, highlight ethical considerations in translational biomedical research, and provide timely and detailed information on the latest advances in clinical translation of biomaterials for therapeutic and diagnostic applications.

## Scientific Sessions

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1. Advances and clinical translational challenges in Biomaterial design and processing
2. Regulations and Ethics of preclinical and clinical studies
3. Trends in diagnostic and therapeutic delivery systems
4. Data science-driven approaches in biomaterial research

## Conference Layout

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The technical program will run in four sessions, with Plenary, Keynotes, Invited Lectures, oral and poster presentation sessions and a special session on **“Challenges in translation of medical technologies”** by experts from Clinical, Industry, regulatory and Research setups.

## Participants

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Conference is intended for medical professionals, scientists, engineers, industrial personnel, entrepreneurs, research scholars and UG/PG students who have interest and are involved in the development of biomaterials for various biomedical applications.

## Awards

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Best Presentation Award will be conferred during the conference.

## About Somaiya Vidyavihar University

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Somaiya Vidyavihar University, a testament to over eight decades of educational prowess, is a private university established under the Somaiya Vidyavihar University, Mumbai Act, 2019 of the Maharashtra State Legislature. Situated on a verdant 50-acre campus in Mumbai, it serves over 10,000 students across diverse disciplines including Management, Engineering, Design, Humanities, Sciences, and more. The university, rooted in the legacy of Somaiya Vidyavihar founded by Padmabhushan K J Somaiya, offers a dynamic learning environment with 'major-minor' combinations for broadened academic exploration and connectivity to an extensive global alumni network. Recognized under the UGC Act of 1956, it presents unparalleled opportunities such as an incubation center for aspiring entrepreneurs, comprehensive placement services, and well-appointed on-campus housing, embodying the 'Freedom of Possibilities' for students to pursue excellence and self-discovery.

Know more: <https://www.somaiya.edu/en/>

## About Society of Biomaterials and Artificial Organs India (SBAOI)

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The primary objective of SBAOI is to cultivate an ecosystem nationwide for the growth of fundamental and technology-oriented research in Biomaterials and Artificial Organs. Another mandate is to serve as platform for the stakeholders, like clinicians, industry professionals, together with researchers from academia and national labs. This can accelerate translational research in the emerging field of significant societal relevance.

For further details: <https://biomaterials.org.in/>

## About IQAC, Somaiya Vidyavihar University

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The Internal Quality Assurance Cell (IQAC) at the University serves as the pivotal body overseeing and enhancing quality assurance and enhancement initiatives. It spearheads the development and implementation of robust quality processes for both academic and administrative functions, ensuring continuous improvement through periodic reviews and corrective measures.

Know more: <https://www.somaiya.edu/en/about-iqac/>

## About Somaiya Centre for Integrated Science Education and Research (SciSER)

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The Somaiya Centre for Integrated Science Education and research (SciSER) is formed with the vision of preparing professionals & researchers with unique skill sets in integrated sciences. Currently it offers a unique BS-MS dual degree programme. The emphasis of the programme is on conceptual understanding, rather than rote learning. It focuses on developing critical thinking to encourage logical decision-making & innovation.

Know more: <https://sksc.somaiya.edu/en/programme/integrated-bachelor-of-science-master-of-science/>

## About Department of Mechanical Engineering, Somaiya Vidyavihar University

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Department of Mechanical Engineering imparts the skills and expertise in the areas of design, manufacturing, and thermal sciences that are the backbone of most sectors of the industry. The department is committed to providing quality education in mechanical engineering that enables students to achieve excellence in their field of specialization

Know more: <https://kjsce.somaiya.edu/en/programme/bachelor-of-technology-mechanical-engineering/>

## Important dates to remember

**Abstract Submission  
Opening**

November 10<sup>th</sup>, 2024

**Abstract Submission  
Deadline**

December 10<sup>th</sup>, 2024

**Abstract Acceptance  
Intimation**

January 1<sup>st</sup>, 2025

**Registration  
opening**

November 15<sup>th</sup>, 2024

**Early Bird  
Registration**

Till January 5<sup>th</sup>, 2025

**Regular  
Registration**

Till conference date

## Abstract submission

Participants can submit either extended abstract or Full paper according to their choice.

See website for abstract/full paper submission details: (<https://www.somaiya.edu/en/icbtd-2025>)

Selected submissions may be accepted for publication after going through the editorial workflow of the respective journal under Springer Nature.

## Registration

All participants in the conference must register for the conference.

Payment can be done through the registration link, which is provided in the website:

(<https://www.somaiya.edu/en/icbtd-2025>)

Category	Indian & Foreign Delegates (In Rupees)	
	Early (Before January 5, 2025)	Regular (Till January 15, 2025)
Industry Delegates	5000/-	6000/-
Faculty member Scientist/ Researcher from industry	3000/-	4000/-
Research Scholars	1500/-	2000/-
UG/PG students	500/-	750/-

## Confirmed speakers



*Title of the talk:*

Bench to Bed – Challenges in Translation of Biomaterials for Clinical Applications

**Dr Harikrishna Varma**

Head Biomedical Technology Wing, Sree Chitra Tirunal Institute for Medical Sciences and Technology, Kerala



*Title of the talk:*

Drug Delivery across the Blood-Brain Barrier: A New Approach Using Drug-Polysorbate Conjugates

**Prof A Jayakrishnan**

(Senior Scientist (INSA); Former Professor, IIT Madras; Former Vice Chancellor, Kerala University; Former Scientist (SCTIMST); Department of Chemistry, University of Kerala)



*Title of the talk*

Biomedical applications of peptides and polymer modified peptides

**Prof V.N. Rajasekharan Pillai**

Professor  
Department of Polymer Science  
Somaia Vidyavihar University



*Title of the talk:*

Micro- and Nano-Scale Innovations to Enable Next Generation Therapeutic Delivery

**Prof Nitin Joshi**

Harvard Medical School



*Title of the talk:*

From Laboratory to Clinic:  
Improving Patient Care Through  
Silk-Based Bone Regeneration

**Dr Anuya**

Founder & CEO Serigen Mediproducts



*Title of the talk:*

Minimally Invasive Cardiovascular Devices

**Dr Sujesh S**

Engineer, Artificial Internal Organs,  
Department of Medical Devices Engineering,  
Biomedical Technology Wing, SCTIMST,  
Trivandrum, Kerala, India.



*Title of the talk:*

Hard Tissue Reconstruction:  
Lessons Learnt in Rodent Models

**Dr Francis B Fernandez**

Scientist, BMT Wing, SCTIMST



*Title of the talk:*

Surface Modification Strategies to Improve  
Hemocompatibility of Titanium-Based  
Implants

**Prof Ketul C Popat**

Professor and Chair  
Department of Bioengineering, George  
Mason University, Fairfax, VA, USA



*Title of the talk:*

Organically Modified Ceramic  
Polymer Based Radiopaque  
Composites for Dental  
Applications

**Dr. Lizymol P.P.**

Scientist G, BMT Wing, SCTIMST,



*Title of the talk:*

Tissue Engineering Research in India:  
Pasteur's Quadrant Perspective

**Dr A M Kuthe**

Professor (Higher administrative grade)  
Visvesvaraya National Institute of  
Technology, Nagpur



*Title of the talk:*

Novel Approaches to Manage  
Osteoarthritic pain

**Dr Lakshmi S Nair**

Department of Orthopaedic Surgery,  
Department of Materials Science and  
Engineering,  
University of Connecticut



*Title of the talk:*

From Research to startup, navigating  
a road less travelled

**Mr. Balram S**

(Scientist G, BMT Wing, SCTIMST & CEO  
SCTIMST-TIMED)



*Title of the talk:*

4th Dimension of Paediatric Deformity  
Correction in Children

**Dr Taral Nagda**

Senior Consultant, MBBS, MS (Orthopaedics), DNB (Orthopaedic Surgery),  
Pediatric Orthopaedic Surgeon, SRCC NH Children Hospital, Jupiter Hospital, Hinduja Hospital, Saifee Hospital  
Director: Jupiter CP Clinic, Director: Jupiter gait analysis lab



*Title of the talk:*  
Orthopaedic Implants - materials, design and using data driven approaches

**Dr. G. SARAVANA KUMAR**  
( Professor, IIT Madras)



*Title of the talk:*  
RRR: An Insight Into EC Submissions (Regulations, Requirements & Reviews)

**Dr Usha Nayak**  
Professor & Head  
Department of Pharmacology  
K.J.Somaiya Medical College,  
Mumbai



*Title of the talk:*  
Affordable healthcare technologies for India

**Prof Rohit Srivastava**  
Himanshu Patel, Chair Professor,  
Department of BSBE, IIT Bombay, Powai,  
Mumbai 400076



**Dr Taslimarif Saiyed**  
CEO and Director, C-CAMP Adjunct Faculty at  
Indian Institute of Technology (IIT) Madras and  
Amrita Institute School of Biotechnology

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## Chief Patron

### **Shri Samir Somaiya**

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### **Prof V N Rajasekharan Pillai**

Vice Chancellor, Somaiya Vidyavihar University

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Professor of Eminence, Department of Polymer Science,  
Faculty of Science, Somaiya Vidyavihar,  
University, Mumbai

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Director,  
K J Somaiya School of Engineering,  
Dean,  
Faculty of Engineering and Technology

### **CA Monica Lodha**

Director, SKSC, SVU

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## Conference Chair

### **Prof S Sivaram**

Professor of Eminence, Department of Polymer Science, Faculty of Science, Somaiya Vidyavihar University, Mumbai

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### **Prof Lakshmi S Nair**

UCONN Health, Connecticut , USA

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Harvard Medical School, USA

### **Prof Vinoy Thomas**

University of Alabama at Birmingham (UAB), USA

### **Prof Finosh Thankam**

Western University of Health Sciences, Pomona, CA

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Founder SBAOI

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IIT Kanpur (President, SBAOI)

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Sree Chitra Tirunal Institute for Medical Sciences & Technology, Trivandrum, Kerala

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Director and CEO, Centre for Cellular and Molecular Platforms (C-CAMP)

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IIT Goa

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Retd Prof IIT Madras

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SCTIMST, Kerala, India

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BARC

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IIT Bombay

### **Dr Raju Vaishya**

Sr Consultant Orthopaedics, Indraprastha Apollo Hospitals, New Delhi

### **Prof Geetha Manivasagam**

VIT Vellore

### **Dr Francis Fernandez**

SCTIMST, Kerala, India

### **Dr Taral Nagda**

Department of Orthopedics, Jupiter Lifeline Hospital

### **Dr Chasanal Rathod**

Department of Orthopedics, SRCC Children's Hospital

## Local Advisory Committee

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### **Dr Achala Danait**

Dean - Strategy & Industry Partnerships, Professor of Chemical & Polymer Sciences, Faculty of Science, SVU

### **Dr Sangeeta Srivastava**

Executive Director at Godavari Biorefineries Limited.

### **Dr Neetin Desai**

Dean, Faculty of Science, SVU

### **Dr Santosh Narayankhedkar**

Dean Research & Academics, SVU

### **Prof Soumyadeb Ghosh**

Head, SciSER & Department of Polymer Science, Faculty of Science, SVU

### **Dr Nilesh Wagh**

Head, Department of Environment Science, Faculty of Science, SVU

## Convenors

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### **Dr Biji Balakrishnan**

SciSER, SKSC, SVU (convenor)

### **Prof Ramesh Lekurwale**

Head, Department of Mechanical Engineering and Director, IQAC, SVU (Co-Convenor)

## Local Organising Committee

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Department of Mechanical Engineering,  
Faculty of Engineering, SVU

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Somaiya Centre for Integrated Science  
Education and Research, Faculty of Science,  
SVU

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Somaiya Centre for Integrated Science  
Education and Research, Faculty of Science,  
SVU

### **Dr A V Radhakrishnan**

Somaiya Centre for Integrated Science  
Education and Research, Faculty of Science,  
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Science, SVU

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Faculty of Engineering, SVU

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Faculty of Engineering, SVU

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Department of Mechanical Engineering,  
Faculty of Engineering, SVU

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Science, SVU

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Department of life sciences, faculty of  
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Head, Department of Life science, Faculty  
of Science, SVU

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Faculty of Science, SVU

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Department of IT and Computer Science,  
Faculty of Science, SVU

### **Dr Deepti Gupta**

Department of life sciences, faculty of  
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### **Ms Mousmi Pawar**

Department of IT and Computer Science,  
Faculty of Science, SVU

### **Mr Hemant Waithande**


SVU






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