

## SCOPE



The scope of this workshop encompasses theoretical understanding and hands-on training in the preclinical evaluation of biomaterials for tissue engineering and regenerative medicine. It is designed to provide participants with an integrated framework linking material design, biological response, and translational applicability. The workshop will cover principles of biomaterial characterization, cell-material interactions, and the selection of appropriate animal models for studying osteogenesis, angiogenesis, and tissue regeneration.

Participants will gain practical exposure to experimental planning, ethical animal handling in accordance with the 3Rs principle, biomaterial implantation strategies, and outcome assessments using histological and imaging techniques. The program also addresses data interpretation, reproducibility, and reporting standards essential for high-quality translational research. Emphasis is placed on multiscale modeling approaches that allow cost-effective and ethically refined screening prior to advanced preclinical validation.

By fostering interdisciplinary interaction among researchers from biomedical engineering, life sciences, and clinical backgrounds, the workshop promotes the development of indigenous regenerative technologies aligned with national and global biomedical priorities.



**SCAN TO REGISTER**  
No Registration Fees.

Last date for Registration: **18<sup>th</sup> March 2026.**  
Eligibility of Participants: PG/PhD, based on the "Statement of Purpose", 20 participants will be selected and informed.

Accommodation will be provided to candidates in accordance with SRIHER norms and charges. (Registration kits, lunch, and refreshments will be provided for the entire duration of the workshop)

## ABOUT SRIHER

Sri Ramachandra Institute of Higher Education and Research (SRIHER), Chennai, is a globally recognized NAAC A++ accredited Deemed University known for excellence in education, healthcare, and multidisciplinary research. Established in 1985, it houses one of India's largest health sciences campus, integrating advanced teaching, research, and clinical facilities. With strong national and international collaborations, SRIHER supports high-quality research and innovation through state-of-the-art laboratories, accredited hospitals, and specialized research centers. The institution emphasizes ethics, quality, and translational research, making it a preferred choice for global partnerships and conferences. Its graduates and researchers contribute to leading universities, industries, and healthcare systems worldwide, reflecting SRIHER's commitment to societal impact and global advancement.

*Sponsored by*



*For more information*

**Dr. Vimalraj Selvaraj**

vimalraj@sriramachandra.edu.in | 9994987307

*Facilitators*

**Akshaya Manikandan**

akshayaam@sriramachandra.edu.in | 9444568557

**Tina S Biju**

u022401030@sriramachandra.edu.in | 9176419195

**Lalitha Raajagobalan**

U022401171@sriramachandra.edu.in | 7010408681

**Arthi Carounanidhi**

U022401165@sriramachandra.edu.in | 7305446557



**SRI RAMACHANDRA**  
FACULTY OF  
BIOMEDICAL SCIENCES AND TECHNOLOGY

## HANDS-ON WORKSHOP ON ADVANCED BIOMATERIALS AND TISSUE ENGINEERING: MULTISCALE ANIMAL MODELS FOR TRANSLATIONAL REGENERATION

*Sponsored by*

**ANUSANDHAN NATIONAL RESEARCH FOUNDATION  
(ANRF)  
GOVERNMENT OF INDIA**



*Jointly organised by*

**Department of Biotechnology, FBMS & T  
and  
Centre for Toxicology & Developmental  
Research, SRIHER (DU)**

**25<sup>th</sup> - 27<sup>th</sup> March, 2026**

# TOPIC OF INTEREST

Tissue engineering and regenerative medicine represent rapidly advancing areas of biomedical research aimed at restoring, replacing, or regenerating damaged tissues through the integration of biomaterials, cells, and bioactive cues.

While significant progress has been made in the design of advanced biomaterials, the translation of these materials into clinically viable solutions critically depends on robust preclinical evaluation using appropriate animal models.

A major challenge faced by early-career researchers and clinicians is the lack of structured, hands-on training in selecting, implementing, and interpreting multiscale animal models for regenerative applications.

This workshop focuses on bridging this gap by emphasizing the systematic assessment of biomaterials using developmental, small animal, and disease-relevant experimental models.

Particular attention is given to angiogenesis, tissue integration, host immune response, and functional regeneration key determinants of translational success.

By combining foundational lectures with intensive practical sessions, the program highlights ethical considerations, experimental design, and reproducibility in animal research.

The workshop will expose participants to state-of-the-art methodologies in biomaterial implantation, in vivo assessment, imaging, and data interpretation. Overall, the program is designed to enhance translational thinking and experimental rigor, enabling participants to advance tissue-engineered solutions from laboratory investigations toward clinically relevant outcomes.

## Convener

**Dr. Vimalraj Selvaraj**  
Associate Professor  
Dept of Biotechnology, SRIHER (DU)

## Co-Convener

**Dr. V. Gayathri**  
Head, CEFTE, SRIHER (DU)

## Organizing Committee

**Prof. Charles Emmanuel Jebaraj**  
Head, Dept of Biotechnology, SRIHER (DU)

**Dr. R. Siva**  
Veterinarian, CEFTE, SRIHER (DU)

**Dr. A. Annapoorani**  
Assistant Professor, Dept of Biotechnology, SRIHER (DU)

**Dr. Mary Elizabeth Gnanambal K**  
Professor, Dept of Biotechnology, SRIHER (DU)

**Dr. Balaji Raghavendran**  
Professor, Dept of Clinical Research, SRIHER (DU)

**Dr. Alan M. Punnoose**  
Associate Professor, Dept of Clinical Research, SRIHER (DU)

## Speakers

**Prof. Suvro Chatterjee**  
The University of Burdwan

**Dr. B. Arumugam**  
Harvard Medical School, USA

**Prof. Poornima Budime Santhosh**  
Bulgarian Academy of Sciences, Bulgaria

**Prof. Swathi Sudhakar**  
AMBE, IITM

**Dr. Narayanan Madaboosi Srinivasan**  
MST, IITM

**Dr. Madan Kumar Perumal**  
CFTRI

**Dr. V. Gayathri**  
CEFTE, SRIHER (DU)

**Dr. Siva**  
CEFTE, SRIHER (DU)

**Dr. S. Vimalraj**  
SRIHER (DU)



## ABOUT THE DEPARTMENT

The Department of Biotechnology functions as a premier centre for research and education within Sri Ramachandra Faculty of Biomedical Sciences and Technology, offering a multidisciplinary environment with B.Sc. (Hons.) Medical Biotechnology, B.Sc. Medical Biotechnology, M.Sc. Biotechnology and PhD programs. With expert faculty, modern infrastructure and funding from DST, DBT, MoES and ICMR, the Department is equipped with labs for Tissue Engineering and Regenerative Medicine, Molecular Oncology, Plant Biotechnology and Nanodiagnostics, Molecular Biotechnology, Medical Probiotics, Microbial Genomics, Marine Biotechnology, Pathobiology and Phytomedicine. The department has a strong alumni who have secured distinguished positions at globally renowned institutions such as Stanford University School of Medicine, Heidelberg University, Bios Partners (USA), Washington University and King's College London, reflecting the Department's strong academic foundation and international impact.

## ABOUT CEFTE

The Centre for Toxicology and Developmental Research (CEFTE/CEFT) at SRIHER is a GLP accredited preclinical toxicology centre with CPCSEA-registered (ABSL-II) animal facilities and advanced laboratories. Equipped with analytical instruments for cell biology, proteomics, analytical chemistry, toxicokinetics, and residue analysis (including HPLC), it offers services in regulatory and developmental toxicology, genetic toxicology, pharmacology, behavioural studies, and pathology, providing a comprehensive preclinical testing platform for academic and industry research.