

## Program Schedule

### DAY 1 Thursday, 16-12-2021

10.00 AM- 8.00 PM **Pre-conference workshop - I**  
International Workshop "BIOELECTRONIC MEDICINE", Organised by IIT(BHU) & IISc, Bangalore and co-hosted by Henry Royce Institute, UK

### DAY 2 Friday, 17-12-2021

2.00 PM - 4.30 PM **Pre-conference Workshop - II**  
"3D Graphy Workshop – 3D Bioprinting for Hard & Soft Tissue" Organised by 3D Graphy and IISc

5.00 PM - 7.30 PM **BIOTEM- 2021 Inauguration**

5.00 PM - 5.20 PM **Rejuvenation of SBAOI**  
**Bikramjit Basu**, President, SBAOI

5.25 PM - 5.30 PM **Welcome Address**  
**Anil Rana**, Director, Manipal Institute of Technology, India

5.35 PM - 5.40 PM **Theme of the Conference**  
**Bharath Raja Guru**, Convener-BIOTEM2021, MAHE, Manipal, India

5.45 PM - 6.00 PM **Guest of Honour's address**  
**Padma Vibhushan M. S. Valiathan**, National Research Professor, India

6.05 PM - 6.15 PM **Chief Guest's address**  
**Debashish Bhattacharjee**, Vice President, Technology & New Materials, Tata Steel

6.20 PM - 6.25 PM **Overview of IUSBSE's activities**  
**Jaochim Kohn**, President, IUSBSE

6.30 PM - 6.35 PM **Global outreach activities of ACerS**  
**Andrea Ross**, American Ceramic Society, ACerS

6.40 PM - 6.45 PM **Overview of ROYCE BIO activities**  
**Jonny Blaker**, Henry Royce Institute, UK

6.50 PM - 6.55 PM **Chair, Bioceramics 32 Congress**  
**Anna Tampieri**, ISTECC - CNR, Italy

7.00 PM - 7.05 PM **MAHE, MIT Documentary**

7.10 PM - 7.15 PM **Overview of STERMI activities**  
**Biman Mandal**, President, STERMI

7.20 PM - 7.25 PM **Felicitations Address**  
**C.P. Sharma**, Founder President – SBAOI, STERMI, Former Senior Scientist G & Head Biomedical Technology Wing, SCTIMST, Trivandrum India

7.25 PM - 7.30 PM **C.P. Sharma Award Announcement**  
**Bikramjit Basu**, President, SBAOI

**Session - 1: Chandra P. Sharma Award Lecture**Chair: **C. P. Sharma** and Co-Chair: **Bikramjit Basu**

7.30 PM - 8.30 PM **Clinical and basic science perspectives of the foreign body reaction**  
**James M. Anderson**, Case Western Reserve University, USA

**DAY 3 Saturday, 18-12-2021****Session - 2 Saturday, 18-12-2021**Chair: **Biman Mandal** and Co-Chair: **A. Siddharthan**

9.00 AM - 9.20 AM **Invited Lecture**  
**Engineering Material Surfaces for Blood Contacting Medical Devices**  
**Ketul C. Popat**, Colorado State University, USA

9.30 AM - 10.15 AM **Plenary Lecture**  
**Personalized Medical Devices Using Additive Manufacturing Technology**  
**B. Ravi**, IIT Bombay, India

10.25 AM - 10.55 AM **Keynote Lecture**  
**Biosensing based on carbon nanotube aerogel: A wonder material**  
**Kinshuk Dasgupta**, BARC, Mumbai, India

11.05 AM - 11.50 AM **Plenary Lecture**  
**Systems Engineering Perspective of Human physiology - Multiscale Models for Disease Characterization: Towards drug-discovery, Clinical Study, Disease management and Personalization**  
**K. V. Venkatesh**, IIT Bombay, India

12.00 PM - 12.30 PM **Industry Lecture**  
**Recent advancement of 3D bioprinting technologies in Therapeutics and Tissue Engineering**  
**Haruka Yoshie**, CELLINK, BICO, ALTEM Technologies

12.30 PM - 12.45 PM **Inauguration of Poster Session**

**LUNCH BREAK****Session - 3 Saturday, 18-12-2021**Chair: **Debrupa Lahiri** and Co-Chair: **Rachit Agarwal**

2.00 PM - 2.30 PM **Keynote Lecture**  
**Targeted Drug Delivery to Respiratory Neurons Using Nanoparticles Functionalized by Neural Tracing Proteins**  
**Guangzhao Mao**, University of New South Wales, Australia

2.40 PM - 3.25 PM **Plenary Lecture**  
**Affordable Healthcare Technologies in Sensing, Drug Delivery and Therapy**  
**Rohit Srivstava**, IIT Bombay, India

3.35 PM - 3.55 PM **Invited Lecture**  
**Indigenously developed highly pure and crystalline Hydroxyapatite powder for Biomedical applications**  
**Subrata Mukherji**, TATA Steel R &D, Jamshedpur, India

**Session - 4 Saturday, 18-12-2021**Chair: **Kaushik Chatterjee** and Co-Chair: **Pramod K**

- 4.05 PM - 4.35 PM **Industry Lecture**  
Integrated approach of materials in pharmaceutical drug discovery and development  
**Dhivya Shanmugarajan**, ALTEM TECHNOLOGIES, Bengaluru, Karnataka
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- 4.45 PM - 5.15 PM **Industry Lecture**  
Tuneable peptide hydrogels to provide physiologically relevant 3D cultures for *in vitro* studies  
**Adedamola (Dammy) Olayanju**, Manchester BIOGEL
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- 5.25 PM - 5.45 PM **Invited Lecture**  
How to conduct clinical trial: An evidence based approach  
**Balendra Pratap Singh**, KGMU, Lucknow, India
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- 5.55 PM - 6.15PM **Invited Lecture**  
"Viscotaxis"-directed migration of mesenchymal stem cells in response to loss modulus gradient  
**Abhijit Majumder**, IIT Bombay, India

**Session - 5 Saturday, 18-12-2021**Chair: **A Balamurugan** and Co-Chair: **Bharath Raja Guru**

- 6.25 PM - 6.55 PM **Keynote Lecture**  
Gastric resident drug delivery systems for sustained oral delivery  
**Ameya R. Kirtane**  
Harvard University, USA
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- 7.05 PM- 7.35 PM **Keynote Lecture**  
Revvng up the Immune System: TLR7/8-based Anticancer Nanovaccines  
**Jayanth Panyam**  
University of Minnesota, USA
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- 7.45 PM - 8.05PM **Invited Lecture**  
Making a polyesters' difference to nano pill  
**M.N.V. Ravi Kumar**  
The University of Alabama, USA

**8.15 PM – 9.30 PM SBAOI- Annual General Body Meeting**

**DAY 4 Sunday, 19-12-2021****Session - 6 Sunday, 19-12-2021**Chair: **H. K. Varma** and Co-Chair: **V. P. Shrivastava**

- 9.00 AM - 9.30 AM **Keynote Lecture**  
Deminerized Bone Matrix: Activities and Applications  
**Bo Han**, University of Southern California
- 9.40 AM - 10.00 AM **Invited Lecture**  
Cardioprotective Phenotypes and Regenerative Vesicles of Epicardial Adipose Tissue Derived Stem Cells in Translational Cardiac Regeneration  
**Finosh Thankam**, Western University of Health Sciences, USA
- 10.10 AM- 10.55 AM **Plenary Lecture**  
Articular Cartilage restoration - A road map to clinical translation  
**Vrisha Madhuri**, CMC, Vellore, India
- 11.05 AM- 11.35 PM **Keynote Lecture**  
Regeneration of intervertebral disc in a mouse disc degeneration model using bone marrow derived mesenchymal stem cell  
**Manish Baldia**, Jaslok Hospital, Mumbai, India
- 11.45 AM- 12.05 PM **Invited Lecture**  
Engineering New Materials for Healthcare: A Chemist's Perspective  
**Neetu Singh**, IIT Delhi, India
- 12.15 PM- 12.35 PM **Invited Lecture**  
Development of Lipidic Nanoplatform for Oral Delivery of Chlorhexidine: Characterization, Biocompatibility and Assessment of Depth of Penetration in Extracted Human Teeth  
**Krishnaraj Somayaji**, MCODS, Manipal

**LUNCH BREAK****Session - 7 Sunday, 19-12-2021**Chair: **P. T. Reddy** and Co-Chair: **Mathew Peter**

- 1.30 PM- 1.50 PM **Industry Lecture**  
Building 3D bio-printers in India for R&D and industrial applications  
**Sumant Bhutoria**, ALFATEK, Kolkata, India
- 2.00 PM - 2.30 PM **Keynote Lecture**  
Viscoelastic tissue in Dermal Tissue regeneration  
**Harish Madhyastha**, University of Miyaziki, Japan
- 2.40 PM - 3.25 PM **Plenary Lecture**  
Silk based bioengineered human tissues & organs: The way forward  
**Biman B. Mandal**, IIT Guwahati, India
- 3.35 PM - 4.05 PM **Keynote Lecture**  
Dental Implants –Biomaterials in action  
**Vibha Shetty**, Ramaiah University of Applied Sciences, Bangalore, India
- 4.15 PM - 4.35 PM **Invited Lecture**  
Strategies for cementation of all-ceramic restorations  
**Kishore Ginjupalli**, Manipal College of Dental Sciences, Manipal, India
- 4.45 PM - 5.05 PM **Invited Lecture**  
Nanofibrous polymers for instructive design of biomaterial devices  
**Deepthy Menon**, Amrita Vishwa Vidyapeetham, India

**Session - 8 Sunday, 19-12-2021**

5.15 PM - 7.15 PM

**SBAOI-MAHE Young Scientist Award Contest****Session - 9 Sunday, 19-12-2021**Chair: **R.S. Jayasree** and Co-Chair: **Raviraja NS**

7.30 PM - 8.00 PM

**Keynote Lecture**

Design of third-generation bioactive glasses for soft tissue engineering – Challenges and open questions

**Ashutosh Goel**, Rutgers, The State University of New Jersey, USA

8.10 PM - 8.40 PM

**Keynote Lecture**

Plasma Engineering of Biomaterials for Improved Bio-interfaces

**Vinoy Thomas**, The University of Alabama, USA**DAY 5 Monday, 20-12-2021****Session - 10 Monday, 20-12-2021**Chair: **S. Kanagaraj** and Co-Chair: **Kishore Ginjupalli**

9.00 AM - 9.30 AM

**Keynote Lecture**

Engineering Bioresorbable Implants and Structures for Biomedical Applications

**Huinan Liu**, University of California, Riverside

9.40 AM - 10.00 AM

**Invited Lecture**

Functionalized LbL patches for targeted delivery of chemotherapeutics in colon cancer

**Venkata Vamsi Krishna Venuganti**, BITS Pilani, Hyderabad, India

10.10 AM- 10.30 AM

**Invited Lecture**

Mesoporous Silica Nanoparticles (MSNs): Versatile Multifunctional Carriers

**Usha Y Nayak**, Manipal Academy of Higher Education, Manipal, India

10.40 AM- 11.00 AM

**Invited Lecture**

Development of HPMA-based Polymeric Micellar Systems for the Delivery of Anticancer Chemotherapeutic

**Balaram Ghosh**, BITS Pilani, Hyderabad, India

11.10 AM- 11.30 PM

**Invited Lecture**

Lipidic Nanoparticles for drug delivery and targeting: Overview and case studies

**Srinivas Mutalik**, Manipal College of Pharmaceutical Sciences, India

11.40 AM- 12.00 PM

**Invited Lecture**

'SMART' self-assembling micelles as chemo-photodynamic therapy in cancer

**Swati Biswas**, BITS Pilani, Hyderabad, India

12.10 PM- 12.40 PM

**Keynote Lecture**

3D Printing from bench to Bed side Challenges and opportunities

**Quazi Syed Zahiruddin**, Datta Megha Institute of Medical Sciences- Wardha**LUNCH BREAK**

**Session - 11 Monday, 20-12-2021**Chair: **Bikramjit Basu** and Co-Chair: **Willi Paul**

2.00 PM - 2.45 PM

**Plenary Lecture**

Combining technologies, materials and cells in 3D bioprinting

**Michael Gelinsky**, TU Dresden, Germany

2.55 PM - 3.40 PM

**Plenary Lecture**

New approaches for the engineering and regeneration of different tissues

**Rui L. Reis**, University of Minho, Portugal

3.50 PM - 4.20 PM

**Keynote Lecture**

Bone regeneration capacity of magnesium phosphate minerals

**Uwe Gbureck**, University of Wurzburg, Germany

4.30 PM - 5.00 PM

**Industry Lecture**

Evolving Medicine with 3D Bioprinting

**Mauro Petretta**, RegenHU, Switzerland**TEA BREAK****Session - 12 Monday, 20-12-2021**

5.10 PM - 6.30 PM

**SBAOI-BAJPAI-SAHA and MAHE Student Award Contest**

7.00 PM

**Valediction & Announcement of Awards**