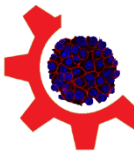


International Conference on Biomedical Materials & Technology – 2023 (BioTEEx 2023)

Venue: Seminar Hall and Lecture Theatres

Time (IST)	Conference Day 1	 BioTEEx 2023 Biomaterials to Technology	29 th November, 2023 Wednesday
08:00-Onwards	REGISTRATION FOR BIOTEX		
09:00-11:15	<p>INAUGURAL CEREMONY (Venue: Seminar Hall)</p> <p>[Prof. Rangan Banerjee (Director IITD), Prof. Naresh Bhatnagar (Dean R&D IITD), Dr. C. P. Sharma (Founder SBAOI & STERMI), Prof. Bikramjit Basu (President SBAOI), Prof. Biman Mandal (President STERMI)]</p> <p>GUEST OF HONOR: Prof. S.K. Sarin (Director, ILBS) Dr. Ashutosh Sharma (President, INSA) Dr. Akhilesh Gupta (Senior advisor, DST) Special invitee: Dr. Geeta Jotwani (Senior Deputy DG, ICMR)</p> <p>AWARD FELICITATION CEREMONY FELLOW INDUCTION CEREMONY</p>		
11:15-11:30	TEA		
11:30-13:45	<p>SBAOI FELLOW LECTURES (12 min. each) (Venue: Seminar Hall)</p> <p>Chairs: Prof. Prasad Shastri, Prof. Bikramjit Basu, Prof. Huinan Liu (Prof. Annie John, Prof. Naveen Kumar, Prof. Veena Koul, Prof. D S Katti, Prof. Vinoy Thomas, Prof. R S Jayasree, Prof. T.M. Sridhar)</p> <p>AWARD LECTURES C.P. Sharma Awardee: Prof. Abhay Pandit, University of Galway (30 minute) Distinguished Biomaterial Scientist Awardee: Prof. Ashok Kumar, IIT Kanpur (20 minutes)</p>		
13:45-14:30	LUNCH (Venue: Central Square)		

Time
(IST)

Conference Day 1



29th November, 2023
Wednesday

Parallel Session I

(Venue: 6LT-1)

Pioneering Biomaterials Technology

Chairs: Prof. Naresh Bhatnagar, Prof. Biman Mandal

Keynote Speakers

1. Prof. Ipsita Roy, University of Sheffield (14:30–14:55)

Title: Natural and Sustainable Polymers of Bacterial Origin and their Biomedical Applications

2. Prof. Kaushik Chatterjee, IISC (14:55–15:20)

Title: 4D Printed Tissue Scaffolds

3. Prof. Sampa Saha, IITD (15:20–15:45)

Invited Lectures

1. Prof. Greeshma Thrivikraman, IITM (15:45–16:00)

Title: Emulating the Native Intervertebral Disc Matrix with Photocrosslinkable Glycopolymers

2. Prof. Renjith S, SCTIMST (16:15–16:30)

Title: Poly (ionic liquids): wonder materials with promising bio-medical applications

Graduate Student Rapporteur:
Nilotpal Majumdar & Harshdeep Kaur

Parallel Session II

(Venue: 6LT-2)

Futuristic Technologies for Tissue and Organ Regeneration

Chairs: Prof. Ashok Kumar, Prof. Ambarish Kunwar

Industry Lecture

Ms. Sara Micó Insa (14:30-14:50)

Keynote Speakers

1. Prof. Finosh Thankam, Western University of Health Sciences (14:50–15:15)

Title: Translational communication between myocardial and epicardial stromal cells in cardiac regeneration

2. Prof. S N Rath, IITH (15:15-15:40)

Title: 3D Bioprintable Hypoxia-Mimicking PEG-Based Nano Bioink for Cartilage Tissue Engineering

3. Prof. Pradip Paik, IIT BHU (15:40-16:05)

Title: Novel polymers to mimic cellular environment, protect from oxidative stress and as a regenerative medicine

Invited Lectures

1. Prof. Santanu Pradhan, IITM (16:05–16:20)

Title: Matrix crosslinking dynamics regulate breast cancer cell morphogenesis

2. Prof. Vineet Joshi, LVPEI (16:20-16:35)

Title: Bioengineered Cornea - Validating rabbit model of stromal opacity and Human Ex vivo model for curvature and suture strength testing

Graduate Student Rapporteur:
Priya Gupta & Simran Kaur

Parallel Session III

(Venue: 4LT-2)

Innovations in Therapeutics and Medicine

Chairs: Prof. Willi Paul, Prof. Dirk Kukling

Keynote Speakers

1. Prof. Mayank Singh, AIIMSD (14:30–14:55)

2. Prof. Jyotsnendu Giri, IITH (14:55–15:20)

Title: Injectable nanofibrous carriers generate in-situ biomimetic 3D-matrix for stem cells delivery and cartilage repair

3. Prof. Vivek Singh, LVPEI (15:20-15:45)

Title: Restoring Vision: Stem Cell and Biomaterial Strategies to Combat Blindness

Invited Lectures

1. Prof. Indranil Banerjee, IITJ (15:45–16:00)

Title: Strategies to improve aqueous dispersibility of hydrophobic 2D nanomaterials for therapeutic applications

2. Prof. Chinmaya Mahapatra, NITR (16:00-16:15)

Title: Redox-active Nanomaterials in Therapeutics

3. Prof. Sushruta S Hakkimane, Manipal University (16:15-16:30)

Title: Recent advancements in Combating Candida Albicans using Nanomaterials

Graduate Student Rapporteur:
Maneesha & Gurpreet Singh

Parallel Session IV

(Venue: 3LT-2)

Advancement in Prognosis and Diagnosis

Chairs: Prof. Ketul Popat, Prof. Geeta Manivasagam

Keynote Speakers

1. Prof. Kulbhushan Tikoo, NIPER M (14:30–14:55)

Title: Unleashing the Therapeutical Potential of Postbiotics: A Path to Safe and Sustainable Nanoparticle Synthesis

2. Prof. Avinash Sonawane, IIT Indore (14:55–15:20)

Title: Engineered L-asparaginase with enhanced therapeutic properties to improve treatment of childhood acute lymphatic leukemia

3. Prof. Kaladhar K., Amrita University (15:20-15:45)

Title: Controlled release nanomedicines for Alopecia

Invited Lectures

1. Prof. Sreenath Balakrishnan, IIT Goa (15:45-16:00)

Title: Mechanics and mechanisms for physical characterisation of single cells

2. Prof. Anil Kumar, SCTIMST (16:00–16:15)

Title: Towards developing MIP-based sensor for quantifying gut microbiota derived metabolites

Student Oral Talks

1. Blessy Babukutty (16:15-16:25)

Title: Exploring the Dual Functionalities: Anti-bacterial and Anti-cancer properties of Ferrite ferrofluids

Graduate Student Rapporteur:
Manleen Kaur & Shivani

14:30-16:30

16:30-16:45

16:45-18:45

19:00-20:00

20:00-22:00

TEA

PLENARY SESSION

(Venue: Seminar Hall)

Chairs: Prof. Abhay Pandit, Prof. Dulal Panda

PL-I: Prof. Andreas Nüssler (16:45-17:15)

Title: 3D-Culture for Organ-on-Chip - Liver-Bone

PL-II: Prof. Prasad Shastri (17:15-17:45)

Title: Evolution of Bioprinting for Clinical Translation

PL-III: Prof. Ketul Popat (17:45-18:15)

PL-IV: Prof. Ashok Raichur (18:15-18:45)

Title: Snail mucus as a potential biomaterial for cartilage repair and fabrication of 3D scaffolds

POSTER SESSION

(Venue: Lawns 6LT1)

Chairs: Prof. Finosh Thankam, Prof. Greeshma Thrivikraman

Graduate Student Rapporteur: Simran Kaur & Nilotpal Majumdar

SBAOI General Body Meeting/STERMI General Body Meeting

(19:30-20:00)

(Venue: 6LT-2/6LT-1)

CONFERENCE DINNER

(Venue: SAC Lawn)

Time

08.00-
onwards

REGISTRATION

09:30–11:00

PLENARY SESSION

(Venue: Seminar Hall)

Chairs: Prof. Vinoy Thomas, Prof. Ashok Raichur

PL-V: Prof. Huinan Liu (09:30-10:00)

PL-VI: Prof. Devendra K. Agrawal (10:00-10:30)

Title: Biotechnological Strategies to Enhance Healing Response in Rotator Cuff Tendon Injury

PL-VII: Prof. Bikramjit Basu (10:30-11:00)

Title: Translational Research on Biomaterial Implants in India: Current Status and Future Scope

11:00-11:15

TEA

Parallel Session V

(Venue: 6LT-1)

**Pioneering Biomaterials
Technology**

**Chairs Prof. Debrupa Lahiri,
Prof. Kaushik Chatterjee**

Keynote Speakers

1. Prof. Biman Mandal, IITG (11:15-11:40)

Title: Bioengineered human tissues and organs: The way forward in healthcare

2. Prof. Ambarish Kunwar, IITB (11:40-12:05)

Title: Robotic, Non- Robotic and IoT-based Systems for Surface and Air Disinfection

3. Prof. Ashutosh Kumar Dubey, IIT BHU (12:05-12:30)

Title: Piezoelectrically Induced Neural, Osteogenic and Antibacterial Response

4. Prof. Siddharth Jhunjhunwala, IISc (12:30-12:55)

Title: Biomaterial - Neutrophil Interactions

Invited Lectures

1. Prof. Vipul Agarwal, University of New South Wales (12:55-13:10)

2. Prof. Himansu Nanda, IIITDM Jabalpur (13:10-13:25)

Title: Design and Finite Element Analysis of THA implants using functionally graded materials

Graduate Student Rapporteur:

Nilotpal Majumdar & Harshdeep Kaur

Parallel Session VI

(Venue: 6LT-2)

**Futuristic Technologies for Tissue and
Organ Regeneration**

**Chairs: Prof. Andreas Nüssler,
Prof. Sourabh Ghosh**

Industry Lecture

Dr. Madhujit Damle (11:15-11:35)

Keynote Speakers

1. Prof. S. Kanagraj, IITG (11:35-11:50)

Title: Early diagnosis of knee osteoarthritis using mechanical methods and their validation using radiographic images

2. Prof. Geetha Manivasagam, VIT (11:50-12:15)

Title: Biomimetic Implants: The Ultimate Choice For Improved Service Life In Orthopedic Implants

3. Prof. Abhijit Majumdar, IITB (12:15-12:40)

Title: Chromatin Organization and Mechanobiology: A Two-way Road

Invited Lectures

1. Prof. Dhiraj Devidas Bhatia, IITGn (12:40-12:55)

Title: DNA based programmable nanodevices to instruct biological systems

2. Prof. Manasa Nune, Manipal University (12:55-13:10)

Title: Cell derived matrices for Peripheral Nerve Tissue Engineering applications

Student Oral Talks

1. Asha V. Nath (13:10-13:20)

Title: Development and Characterization of Dual-layered Small Diameter Tissue Engineered Vascular Graft

2. Ashwini Vasudevan (13:20-13:30)

Title: Development of 3D bioprinted functional hepatic lobule using silk fibroin-gelatin bioink and primary hepatocytes

Graduate Student Rapporteur:

Priya Gupta & Simran Kaur

Parallel Session VII

(Venue: 4LT-2)

**Innovations in Therapeutics and
Medicine**

**Chairs: Prof. Anil Kumar,
Prof. Prakriti Tayalia**

Keynote Speakers

1. Prof. Shailja Singh, JNU (11:15-11:40)

Title: Iron nanoparticles fortified Artesunate Nanomedicine to combat Malaria

2. Prof. Ambarish Ghosh, IISc (11:40-12:05)

Title: Magnetic helical nanobots: from intracellular biophysics to fantastic voyage

Invited Lectures

1. Prof. Ajay Tijore, IISc (12:05-12:20)

Title: Confinement Suppresses Mechanical Force-Mediated Cancer Cell Apoptosis

2. Prof. Durba Pal, IIT Ropar (12:20-12:35)

Title: Development of a multicellular 3D tumor model to study cellular heterogeneity and mitochondrial health in NSCLC tumor microenvironment

3. Prof. Apurba K Sau, NIIA (12:35-12:50)

Title: Arginine metabolism in Helicobacter pylori: An opportunity for the development of inhibitors for this bacterium

Student Oral Talks

1. Madhu Verma (12:50-13:00)

Title: In vitro/In vivo Bio-distribution and Toxicity Profile of PDMS Nanoparticles for Drug Delivery Applications

2. Niranjan Chatterjee (13:00-13:10)

Title: Biological Application of In-situ Carbonized Porous Silica Particles for Biodegradable Therapeutic Carriers of Lesser Consequence on TGF- β 1 Mediated Fibrosis

3. Parul Sirohi (13:10-13:20)

Title: Non-immunogenic polymeric nanoparticles for sustained drug delivery

4. Sneha Singh (13:20-13:30)

Title: PDMS Nanoparticles mediated siRNA delivery for breast cancer therapy

Graduate Student Rapporteur:

Maneesha & Gurpreet Singh

Parallel Session VIII

(Venue: 3LT-2)

**Advancement in Prognosis and
Diagnosis**

**Chairs: Prof. Asheesh Srivastava,
Prof. Manoj Komath**

Keynote Speakers

1. Prof. Yashveer Singh, IITRpr (11:15-11:40)

Title: Self-assembled peptides and nanomaterials for tissue regeneration applications

2. Prof. Maya Nandakumar, SCTIMST (11:40-12:05)

Title: NanoMaterial-Microbial Interactions

Invited Lectures

1. Prof. Prasoon Kumar, NIT Rkl (12:05-12:20)

Title: Designing passive micropumps using paper microfluidic to facilitate rapid and uniform spreading of biofluids for diagnostic applications

2. Prof. Gowri Balachander, IIT BHU (12:20-12:35)

Title: Human liver-on-a-chip recapitulates non-alcoholic steatohepatitis (NASH) progression

3. Prof. Suchetan Pal, IIT Bhillai (12:35-12:50)

Title: Glucose-responsive hydrogels towards artificial pancreas

Student Oral Talks

1. Aditya Upadhayay (12:50-13:00)

Title: Unlocking Multi-Target Strategies: Cellulase Enzyme's Computational Approach Against Salmonella Typhi Biofilm

2. Sreejith T (13:00-13:10)

Title: Remote loading of minoxidil in nano-reservoirs leads to polymorphism and controlled release

3. Dinesh Kumar Singh (13:10-13:20)

Title: Optimization of Polymer Ratio in Multiparticulate Gastro-Resistant Drug Delivery for Managing Chronic Gastroesophageal Reflux Disease (GERD)

Graduate Student Rapporteur:

Manleen Kaur & Shivani

13:30-14:00

LUNCH

(Venue: Central Square)

Parallel Session IX
(Venue: 6LT-1)

Pioneering Biomaterials Technology

Chairs: Prof. Jayasree, Prof. T. M. Sridhar

Keynote Speakers

1. Prof. Christian Demitri, University of Salento (14:00-14:25)

Title: Design of materials for tissue engineering and smart medical device applications.

2. Prof. Debrupa Lahiri, IITR (14:25-14:50)

Title: Enhanced neurogenic differentiation on anisotropically conductive carbon nanotube reinforced polycaprolactone-collagen scaffold by applying direct coupling electrical stimulation

3. Prof. Manoj Komath, SCTIMST (14:50-15:15)

Title: Challenges in Translation of Biomaterials-Based Products

Invited Lectures

1. Prof. Devendra Verma, NIT Rkl (15:15-15:30)

Title: Biomimetic Nanofibrous Aggregates for Tissue Engineering and Hemostatic Applications

2. Prof. Shiny Velayudhan, SCTIMST (15:30-15:45)

Title: Tissue Engineered Full Thickness Skin Construct having Arrayed Micropits enriched with Hair Follicle Stem Cells

Student Oral Talks

1. Megha (15:45-15:55)

Title: Aloe vera and Honey loaded bi-layered nanofibrous scaffold for scar-free diabetic wound healing

2. Rohin Shyam (15:55-16:05)

Title: Rapid Riboflavin mediated crosslinking of cell-laden Silk Fibroin-Gelatin Bioink for 3D bioprinting of engineered tissues

3. Krishna Pradeep Kumar (16:05-16:15)

Title: An electrospun nanoimplant for sustained intraperitoneal delivery of VEGF inhibitor Bevacizumab to address malignant ascites in ovarian cancer

4. Kaushal Shakya (16:15-16:25)

Title: Natural Polymer based hemostatic wound dressing

Graduate Student Rapporteur:
Nilotpal Majumdar & Harshdeep Kaur

Parallel Session X
(Venue: 6LT-2)

Futuristic Technologies for Tissue and Organ Regeneration

Chairs: Prof. DS Katti, Prof. Yashveer Singh

Industry Lecture

Ms. Tomoko Bylund (14:00-14:25)

Keynote Speakers

1. Prof. Balakumar S, Madras University (14:25-14:50)

Title: Innovative Nano-bioactive materials for Dental and Orthopaedic applications

2. Prof. Anil Kumar Pr., SCTIMST (14:50-15:15)

Title: Developing Strategies for In vitro and In vivo Evaluation of 3D Bioprinted Liver Constructs for Transplantation

Invited Lectures

1. Prof. Sunil Kumar Boda, IIT Indore (15:15-15:30)

Title: Bioadhesives for soft tissue attachment to percutaneous bone-anchored titanium prosthesis

2. Prof. Savneet Kaur, ILBS (15:30-15:45)

Title: Unlocking the Potential of Liver Organoids

Student Oral Talks

1. Hridhya K. Sidharthan (15:45-15:55)

Title: Bioengineered embryonic bone marrow niche sustain the stemness and proliferation potential of hematopoietic stem cells ex-vivo

2. Priyanshu Shukla (15:55-16:05)

Title: High throughput 3D bioprinted breast cancer model as drug screening platform using decellularized adipose tissue-based hydrogel

3. Ayushi Mairal (16:05-16:15)

Title: Hyaluronic acid conjugated thermoresponsive bioformulation enhanced the regeneration of TNBS-induced impaired colonic epithelium in a dynamic perfusion based ex-vivo model system

4. Preeti Sati (16:15-16:25)

Title: Membrane-free Liver on a chip model for Drug Screening

Graduate Student Rapporteur:
Priya Gupta & Simran Kaur

Parallel Session XI
(Venue: 4LT-2)

Innovations in Therapeutics and Medicine

Chairs: Prof. Harpal Singh, Prof. Naveen Kumar

Keynote Speakers

1. Prof. Arabinda Chaudhuri, IISER Kol (14:00-14:25)

Title: Dendritic Cell based cancer immunotherapy in combination with tumor-selective chemotherapy eradicates established mouse melanoma

2. Prof. Sri Sivakumar, IIT Kanpur (14:25-14:50)

Title: Soft Materials for Biological Applications

3. Prof. Prakriti Tayalia, IIT Bombay (14:50-15:15)

Title: Disease modelling via in vitro platforms using semi-synthetic matrices

Invited Lectures

1. Prof. Santosh Kumar Misra, IITK (15:15-15:30)

Title: Polymer-carbon composites for 3D-printed, Personalized, Biodegradable, Drug-delivery Grafts and Devices

2. Prof. Mamoni Dash, ILS Bhubaneswar (15:30-15:45)

Title: Harnessing the therapeutic potential of exosomes for management of bone diseases

3. Prof. V Badireenath Konkimalla, NISER (15:45-16:00)

Title: Development of Smart Codelivery Nano-hydrogel System to Synergistically Suppress Inflammatory Synovial Microenvironment in Rheumatoid Arthritis

4. Dr. Dipti Kakkar Thukral, INMAS (16:00-16:15)

Title: Injectable, Self-setting and biocompatible antibiotic bone cement for minimally invasive orthopedic applications

Industry Lecture

Dr. Puneet Kumar (16:15-16:30)

Graduate Student Rapporteur:
Maneesha & Gurpreet Singh

Parallel Session XII
(Venue: 3LT-2)

Advancement in Prognosis and Diagnosis

Chairs: Prof. Sharad Gupta, Prof. Rituparna Sinha Roy

Keynote Speakers

1. Prof. Mohd. Mohsin, JAMIA M Islamia (14:00-14:25)

Title: A versatile genetically encoded FRET-based nanosensor for real time monitoring of A549 exosomes: early diagnosis of cancer

Invited Lectures

1. Prof. Durga Karki, VM Medical College (14:25-14:40)

Title: Lipofilling- A Regenerative alternate for remodeling of burn scars

Best PhD Thesis Lecture

Souvik Ghosh (14:40-14:50)

Bajpai Saha award

Lectures by

1. Pearlin Amaan Khan (14:50-15:00)

Title: In vivo assessment of TPMS based gyroid as an implant material in rabbit tibia model

2. Anwesha Mukherjee (15:00-15:10)

Title: Curcumin-PLGA nanoparticle encapsulated double crosslinked biomimetic composite hydrogel for cell delivery in Osteoarthritis

3. Justy N Francis (15:10-15:20)

Title: Understanding the role of particle size of hydroxyapatite on the properties of PEEK-Bioceramic feedstock for FDM

4. L Marini (15:20-15:30)

Title: Harnessing Nature's Rhythms in Developing a Cost-effective Biosensor

5. Manisha Bharti (15:30-15:40)

Title: Genistein-loaded, quaternized dextran/k-carrageenan gels for postmenopausal osteoporosis

6. Nilotpal Majumder (15:40-15:50)

Title: An advanced 3D bioprinting strategy modulating associated cell signaling pathways to develop phenotypically stable articular cartilage under an inflammatory osteoarthritic environment in vitro

7. Antony Vincy Fernando C (15:50-16:00)

Title: A Label-Free and Ultrasensitive Prussian Blue-Based Dipstick Sensor for Bacterial and Biofilm Detection

8. Pratigyan Dash (16:00-16:10)

Title: Polymeric nanoformulation of zoledronic acid rescues osteoblasts from the harmful effect of its native form: An in-vitro investigation of cytotoxic potential on osteoblasts and osteosarcoma cells

9. Saptomee Chakraborty (16:10-16:20)

Title: NFκB/p-JNK inhibition mediated regulation of cartilage homeostasis by doxycycline and IGF-1 synergistically attenuates osteoarthritis

Graduate Student Rapporteur:
Manleen Kaur & Shivani

14:00-16:30

16:30-16:40

TEA

16:40-17:10	<p align="center">Careers in Science & Technology: Beyond Academic Research (Venue: Seminar Hall) Chairs: Prof. Sujata Mohanty, Prof. Abhijit Majumdar Geetanjali Kapoor, One Health Trust (16:50-17:30)</p>
17:10-17:50	<p align="center">A Chat Session with Editors (Venue: Seminar Hall) Barriers in Biomaterial Research and Way Forward: Collaboration and Publishing Prof. Bikramjit Basu, Prof. Biman Mandal, Prof. Ipsita Roy, Prof. Kaushik Chatterjee, Prof. Sourabh Ghosh, Prof. Abhay Pandit, Prof. Devendra K Agarwal, Prof. Vinoy Thomas Moderator: Prof. Biswarup Mukherjee, Prof. Sachin Kumar B</p>
17:50-18:30	<p align="center">Rendezvous session with stalwarts of Indian Biomedical Research Distilled Experience of Indian Healthcare-A Personal Memoir (Venue: Seminar Hall) Chairs: Dr. Anurag Srivastava Panelist: Prof. T.P. Singh, Prof. Sujoy Guha, Prof. C.P. Sharma, Prof. Y. K. Gupta Moderator: Prof. Neetu Singh, Prof. Arnab Chanda</p>
18:30-19:30	<p align="center">POSTER SESSION (Venue: Lawns 6LT1) Chairs: Prof. Mamoni Dash, Prof. Gowri Balachander Graduate Student Rapporteur: Harshdeep and Shivani</p>

09:30–10:30

PLENARY SESSION (Venue: Seminar Hall)

Chairs: Prof. Veena Koul, Prof. Christian Demitri

PL-VIII: Prof. Dirk Kuckling (09:30-10:00)

Title: Stimuli-degradable polymers for triggered drug release

PL-IX: Prof. Dulal Panda (10:00-10:30)

Title: Nanoformulation of microtubule-targeted anticancer drugs: opportunities and challenges in cancer chemotherapy

10:30-10:45

TEA

Parallel Session XIII

(Venue: 6LT-1)

Pioneering Biomaterials Technology

Chairs: Prof. Balamurugan M, Prof. Siddharth Jhunjhunwala

Keynote Speakers

1. Prof. Aasheesh Srivastava, IISERB (10:45-11:10)

Title: Multi-Enzyme Loaded Self-Assembled Nanoparticles for Detecting Salivary Glucose Levels

2. Prof. Balamurugan A, Bharathiar University (11:10-11:35)

Invited Lectures

1. Prof. Jitendra Sharan, AIIMS B (11:35-11:50)

Title: Biochemical Surface Modification of Gallium Nitride for Dental Implant: An Innovative concept

2. Prof. Bodhisatwa Das, IIT Ropar (11:50-12:05)

Title: Multiphasic polymeric composites for soft tissue regeneration

3. Prof. Ramya R., Saveetha Dental College (12:05-12:20)

Title: Challenges & Opportunities to target the Myriad interfaces of the Craniofacial region

Student Oral Talks

1. Soham Ghosh (12:20-12:30)

Title: Natural biopolymer-based green scaffold promoting enhanced cell-scaffold interactions

2. T. Shalini (12:30-12:40)

Title: Transfiguration of 2D Nanofibrous Mat to 3D Scaffold: A Promising Bioactive Shape Memory Cotton for Rapid Hemostasis and Bone Regeneration

3. Linju M C (12:40-12:50)

Title: In vitro wound healing effect of chitosan-proline scaffolds on keratinocytes and fibroblast cells

4. Devika S L (12:50-13:00)

Title: In-vitro characterization and thromboresistance evaluation of parylene-C coated decellularized bovine pericardium for the fabrication of blood-contacting implants

5. Saroj Kumar (13:00-13:10)

Title: Alternation of cortical bone properties under chronic kidney disease (CKD) induced rat model

Graduate Student Rapporteur:

Nilotpal Majumdar & Harshdeep Kaur

Parallel Session XIV

(Venue: 6LT-2)

Futuristic Technologies for Tissue and Organ Regeneration

Chairs: Prof. Maya Nandakumar, Prof. Ashutosh Kumar Dubey

Keynote Speakers

1. Prof. Willi Paul, SCTIMST (10:45-11:10)

Title: Lanthanides-substituted Calcium Phosphate Nanoparticles for Theranostic Applications

2. Prof. Sujata Mohanty, AIIMS D (11:10-11:35)

Title: Innovations in Tissue Regeneration: Uniting Stem Cells with Advanced Biomaterials

Invited Lectures

1. Prof. Sumit Murab, IIT Mandi (11:35-11:50)

Title: Direct 3D Printing of Decellularized Matrix with Thermoplastics for Osteochondral Regeneration

2. Prof. Prakrathi S, Ramaiah Institute of Technology (11:50-12:05)

Title: Carbonate coatings from carbonated water containing calcium carbonate on Magnesium alloys for bone fracture fixation implants: in vitro biodegradation performance studies

Student Oral Talks

1. S Manoj Kumar (12:05-12:15)

Title: Cartilage – inspired liposome based lubricated self – healing injectable hydrogels based on recombinant hyaluronic acid

2. Triya Saha (12:15-12:25)

Title: Digital Light Processing Based 3D Bioprinted Off-The-Shelf Exosome Laden Scaffolds to Alleviate Non-Alcoholic Fatty Liver Disease in Animals

3. Eshita Mukherjee (12:25-12:35)

Title: A pH-modulated polymeric drug-release system simultaneously combats biofilms and planktonic bacteria to eliminate bacterial biofilm

4. Ankita Negi (12:35-12:45)

Title: Self-assembled Floral-patterned Hydroxyapatite Crystals Coating on 3D Printed PLA Scaffolds for Bone Regeneration

5. Arabinda Majhi (12:45-12:55)

Title: Functionalized Scaffold for Peripheral Nerve and Guided Motor Neuron Regeneration

Graduate Student Rapporteur:

Priya Gupta & Simran Kaur

Parallel Session XV

(Venue: 4LT-2)

Innovations in Therapeutics and Medicine

Chairs: Prof. Ipsita Roy, Prof. Balakumar S

Keynote Speakers

1. Prof. Amit Dutt, ACTREC (10:45-11:10)

Title: Frequent inactivation of tumor suppressor genes is associated with early acquired resistance to EGFR inhibitors in lung adenocarcinoma

2. Prof. Rituparna Sinha Roy, IISER K (11:10-11:35)

Title: Emerging therapeutic peptide engineering strategies for efficient wound care treatment

3. Dr. Sumit Madan, Sun Pharma (11:35-12:00)

Invited Lectures

1. Prof. Ritika Gautam, IIT Kanpur (12:00-12:15)

Title: Deciphering the Redox Tapestry: Navigating the prospects of Inorganic Chemistry in Shaping Health and Disease for Translational Medicine Advancements

2. Prof. Bharath Rajaguru, MIT Manipal (12:15-12:30)

Title: Controlled and Sustained Drug Delivery to the Anterior and Posterior part of the Eye

3. Prof. Pijus Kumar Sasmal, JNU (12:30-12:45)

Title: Combating Antimicrobial Resistance Using AIE-Active Iridium(III) Complexes

Student Oral Talks

1. Sameer Kumar Jagirdar (12:45-12:55)

Title: Immune cell surveillance of and death on silicone catheter surfaces leads to greater biofilm formation on the surface upon infection

2. Sushil Patel (12:55-13:05)

Title: Effect of MgO addition on in-vitro bioactivity and drug release efficacy of ibuprofen loaded borophosphate glasses bone cement for bone filling applications

3. Reshma Murali (13:05-13:15)

Title: Platelet – Mesenchymal Stem Cells interaction promotes wound healing through secretome

Graduate Student Rapporteur:

Maneesha & Gurpreet Singh

Parallel Session XVI

(Venue: 3LT-2)

Advancement in Prognosis and Diagnosis

Chairs: Prof. Kaladhar K, Prof. Sandeep Jha

Keynote Speakers

1. Prof. Sharad Gupta, IITI (10:45-11:10)

Title: Silk Fibroin Nanoparticles for Near Infrared Imaging and Therapy

2. Prof. Anita Verma, DU (11:10-11:35)

Title: Regulation of bone remodelling by osteoporotic biomarker miR 214a encapsulated Lipid nanoparticles: crosstalk modulation between osteoblast/osteoclasts

3. Prof. Shilpee Dutt, TMC-ACTREC (11:35-12:00)

Title: Extracellular Matrix in Glioblastoma: Key to recurrence and discovery of therapeutic targets

Invited Lectures

1. Prof. Anil Chandra, Jain University (12:00-12:15)

Title: Progress in Microscale Technologies: pH-Sensing Enhancements for Biomedical Applications

2. Prof. Arunkumar Palaniappan, VIT (12:15-12:30)

Title: Nano-engineered 3D printed hydrogel patch as a potential combinational therapeutic platform against triple negative breast cancer cells

3. Prof. Divya BS, Ramaiah Institute of Technology (12:30-12:45)

Title: Automating the recurrence prediction of Odontogenic keratocytes on whole slide images using a Deep Learning Technique

Student Oral Talks

1. Samahit Mohanty (12:45-12:55)

Title: Automating the recurrence prediction of Odontogenic keratocytes on whole slide images using a Deep Learning Technique

2. Netra Hiremath (12:55-13:05)

Title: Near Infrared Light Activatable Niosomes Loaded with Indocyanine Green and Plasmonic Gold Nanorods for Theranostic Applications

3. Divya M.R (13:05-13:15)

Title: Stimuli sensitive chitosan based scaffold for localized drug delivery in wound healing applications

Graduate Student Rapporteur:

Manleen Kaur & Shivani

13:15-14:00

VALEDICTORY SESSION & AWARD FUNCTION (Venue: 6LT-2)

CONVENORS



NEETU SINGH
Biomaterials



SACHIN KUMAR B
Biofabrication



ARNAB CHANDA
Biomechanics



JAYANTA BHATTACHARYA
Disease Biology



BISWARUP MUKHERJEE
Bioelectronics

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