



30th SBAOI Annual Meeting,
12th STERMI Annual Meeting &
International Virtual Conference
on
**Biomedical Materials
Innovation**

06th to 09th DECEMBER 2020

PROGRAMME

Organised by
Department of Nanoscience and Technology
Bharathiar University
Coimbatore - 641 046
Tamilnadu, India

DAY-1 (06.12.2020)

Inaugural Function BU & UOM (Host)

6.00 pm
to
6.47 pm

C.P. Sharma Award Announcement
by
Prof. Veena Koul

6.50 pm
to
6.55 pm

Session -1 Regenerative Medicine

Chair - Prof. C.P. Sharma / Co-Chair - Prof. Veena Koul

Cato T. Laurencin
University of Connecticut
USA

C.P. Sharma Award Plenary Lecture
Regenerative engineering biomaterials : Convergence and
grand challenges

7.00 pm
to
8.00 pm

DAY-2 (07.12.2020)

Session - 2 Materials in Medicine

Chair - Prof. Bikramjit Basu / Co-Chair - Prof. N. Rajendran and Prof. Geetha Manivasagam

Raja Sabapathy
Ganga Hospital & Research Centre
Tamilnadu, India

Plenary Lecture
Tissue engineering in reconstructive surgery and
what is in the horizon ?

10.00 am
to
10.45 am

Ashok Kumar
IIT - Kanpur
India

Keynote Address
Exosomes functionalised biomaterials: A promising therapeutic
tool for diabetic secondary complications

10.50 am
to
11.20 am

Rajasekaran
Ganga Orthopaedic Res. & Edu. Found.
Tamilnadu, India

Plenary Lecture
The science of metallurgy regarding implants in
orthopaedic surgery

11.25 am
to
12.10 pm

Anna Tampieri
ISTEC-CNR
Italy

Plenary Lecture
Nature inspired smart device for regenerative
medicine and nanomedicine

12.15 pm
to
1.00 pm

Lunch Break

Session - 3 Drug Delivery and Wound Care

Chair - Dr. T. Anoop Kumar / Co-Chair - Dr. Neetu Singh and Dr. Maya Nandkumar

Aravind Sinha
CSIR-NML, Jamshedpur
India

Keynote Address
Biomaterials: An ongoing journey from biomimetics to
biodegradable alloys

1.30 pm
to
2.00 pm

Venugopal

Universiti Malaysia Pahang,
Malaysia

Invited Talk

Nanofibrous structured porous biomaterials scaffolds to mimic native ECM for regenerative medicine

2.10 pm
to
2.30 pm

Annabel Braem

KU Leuven
Belgium

Keynote Address

Anti-infective strategies for next generation dental implants

2.40 pm
to
3.10 pm

Prakriti Tayalia

IIT - Bombay
India

Invited Talk

Biomaterial-based bioactive dermal patch for wound healing and platform for cancer immunotherapy

3.20 pm
to
3.40 pm

Samir Mitragotri

Harvard University
USA

Plenary Lecture

Cellular hitchhiking for targeted drug delivery

3.50 pm
to
4.35 pm

Rohit Srivastava

IIT - Bombay
India

Keynote Address

Affordable healthcare technologies in sensing, drug delivery and therapy

4.45 pm
to
5.15 pm

Praveen Raj

GEM Obesity & Diabetes Surgery Centre
India

Invited Talk

Science behind surgical cure for diabetes

5.20 pm
to
5.50 pm

Shamik Sen

IIT - Bombay
India

Invited Talk

Targeting the glycocalyx for diabetic wound healing

5.55 pm
to
6.15 pm

Maya Nandkumar

Sree Chitra Tirunal Inst. Med. Sci. & Tech.
Kerala, India

Invited Talk

Nanoparticles and vaccine delivery

6.20 pm
to
6.40 pm

Lorenzo Moroni

Maastricht University
Netherlands

Plenary Lecture

Biofabrication technologies to control cell fate

6.45 pm
to
7.30 pm

Prasad Shastri

University of Freiburg
Germany

Plenary Lecture

3D-Bioprinting - Challenges and the Future

7.40 pm
to
8.25 pm

Session -4 Nanobiotechnology in Healthcare

Chair - Prof. Biman B. Mandal / Co-Chair - Dr. Gnanamani and Dr. Deepa P. Nambiar

Tejal Desai University of California USA	Plenary Lecture Therapeutic biomaterials: engineering material "Structure" to modulate biologic delivery	9.00 am to 9.45 am
B.D. Malhotra Delhi Technological University India	Keynote Address Nanostructured metal oxides-enabled biosensors for oral cancer detection	9.55 am to 10.25 am
Padmanabhan Nanyang Technological University Malasiya	Keynote Address Nano-technological approach for the early detection of Alzheimer's disease	10.35 am to 11.05 am
Atsushi Suzuki Yokohama National University Japan	Plenary Lecture Recent advances in gelation techniques of PVA gels for medical applications	11.15 am to 12.00 noon
Yashveer Singh IIT - Ropar India	Invited Talk Diphenylalanine-based self-assembled peptide gels for biomaterial-associated infections	12.05 pm to 12.25 pm
Arulselvan Royal Care Super Speciality Hospital India	Keynote Address Brain & Nanotechnology	12.30 pm to 1.00 pm

Lunch Break

Session-5 Bioactive Ceramics and Glasses

Chair - Dr. H.K. Varma / Co-Chair - Dr.T.M. Sridhar and Dr. Sasikumar

Ashutosh Kumar Dubey IIT (BHU), Varanasi India	Invited Talk Piezobiomaterials: New generation prosthetic orthopedic implants	1.30 pm to 1.50 pm
Artemis Stamboulis University of Birmingham UK	Keynote Address Antimicrobial methodology for orthopaedic applications	2.00 pm to 2.30 pm
Aldo R. Boccaccini Univ. of Erlangen-Nuremberg Germany	Plenary Lecture Bioactive glasses and biofabrication in tissue engineering: Achievements and new developments	2.40 pm to 3.25 pm

Rupak Dua

Hampton University
USA

Invited Talk

Novel approaches to develop and evaluate biomimetics surfaces on orthopedic implants to provide inherent anti-bacterial and enhanced osseointegration properties

3.35 pm
to
3.55 pm

Pamela Habibovic

Maastricht University
Netherlands

Plenary Lecture

Applying novel design- and screening tools to advance the field of organ and tissue regeneration

4.05 pm
to
4.50 pm

SBAOI-MAHE YOUNG SCIENTIST AWARD CONTEST

5.00 pm
to
6.00 pm

Session-6 Biomedical Implants in Healthcare

Chair - Prof. Dhirendra S. Katti / Co-Chair - Dr. A.M. Ballamurugan and Dr. S. Kannan

Jayakumar

Amrita Vishwa Vidyapeetham
Kerala, India

Invited Talk

Vasoconstrictor and coagulation activator incorporated chitosan hydrogel for rapid and effective hemostasis

6.05 pm
to
6.25 pm

Suresh S. Pillai

Baby Memorial Hospital
India

Invited Talk

Evolution and present status of implants in spine surgery

6.30 pm
to
6.50 pm

Subrata Saha

University of Washington
USA

Keynote Address

Ethical challenges in biomaterials research & practice

7.00 pm
to
7.30 pm

Khalil El Mabrouk

Euromed University
Morocco

Invited Talk

3D metallic porous structure coated with bioactive glass for orthopaedic application

7.40 pm
to
8.00 pm

SBAOI-AGM Meeting

8.00 pm

Day-4 (09.12.2020)

Session-7 Regenerative approaches in Healthcare

Chair - Dr. Santanu Dhara / Co-Chair - Prof. Kanagaraj and Prof. Kavitha

Ravi Selvaganapathy

McMaster University
Canada

Keynote Address

Biofabrication techniques for tissue engineering and cultivated meat

9.30 am
to
10.00 am

Kaushik Chatterjee IISc, Bangalore India	Invited Talk Nanoscale surface engineering of metallic biomaterials for orthopedic applications	10.05 am to 10.25 am
Nathaniel S. Hwang Seoul National University South Korea	Keynote Address Injectable and anti-inflammatory hydrogel for tissue repair	10.35 am to 11.05 am
Abhijit Chakraborty Guru Nanak Institute of Dental Sc. & Res. India	Invited Talk Journey of nanobioceramics in functional and aesthetic dentistry	11.15 am to 11.35 am
Harikrishna Varma Sree Chitra Tirunal Insti. Med. Sc. and Tech. Kerala, India	Keynote Address In search of ideal biomaterials	11.40 am to 12.10 pm
Subhadip Bodhak CSIR-CGCRI, Kolkata India	Invited Talk Functional biomaterials for spinal reconstruction applications	12.15 pm to 12.35 pm
Anuya Nisal CSIR-NCL-Pune India	Invited Talk Comparative studies of silk fibroin and calcium ceramic in bone void filling	12.40 pm to 1.00 pm

Lunch Break

Session-8 Additive Manufacturing of Biomaterials & Metallic Implants Chair - Dr. D.S. Nagesh / Co-Chair - Dr. Naresh Kasoju and Prof. C. Viswanathan

Santanu Dhara IIT - Kharagpur India	Keynote Address Design, development and validation of customized Implants using ethically sourced material	1.30 pm to 2.00 pm
Mauro Petretta Regen HU Switzerland	Invited Talk The 3D bioprinting revolution – expanding the horizons of biomedical science	2.10 pm to 2.30 pm
Joseph Buhagiar University of Malta Malta	Invited Talk A paradigm shift: A low-wearing novel hip joint prosthesis	2.40 pm to 3.00 pm
Bharath Raja Guru Manipal Institute of Technology India	Invited Talk Targeting cancer cells for their over expressed receptors using biodegradable nanoparticles for the therapy	3.10 pm to 3.30pm

Debrupa Lahiri

IIT - Roorkee
India

Invited Talk

Bioengineered smart trilayer skin tissue substitute for efficient deep wound healing

3.40 pm
to
4.00 pm

Sumant Bhutoria

Alfatek Systems
India

Invited Talk

3D bioprinting - revolutionizing healthcare and medicine

4.10 pm
to
4.30 pm

Bala Vaidhyanathan

Loughborough University
UK

Plenary Lecture

Additive manufacturing of nanostructured bioceramic implants

4.40 pm
to
5.25 pm

SBAOI-BAJPAI-SAHA STUDENT AWARD CONTEST

5.30 pm
to
6.30 pm

Session-9 Organoids and Bio-Engineering

Chair - Prof. N. Ponpandian / Co-Chair - Prof. Ravichandran and Prof. D. Gopi

Ipsita Banerjee

University of Pittsburgh
USA

Keynote Address

Bioengineering pancreatic islet organoids from HPSCs for regenerative therapy and disease modeling applications

6.35 pm
to
7.05 pm

Francis B. Fernandez

Sree Chitra Tirunal Inst. Medical Sci. & Tech.
Kerala, India

Invited Talk

Engineered bioceramic matrices for sustained active factor delivery

7.15 pm
to
7.35 pm

Aline Miller

BIOGEL, UK

Invited Talk

Tuneable Peptide Hydrogels for 3D cell culture and 3D bioprinting

7.40 pm
to
8.00 pm

Valediction & Announcement of Awards [IISc, IIT-D & IIT-G (Host)]

8.05 pm
to
8.35 pm





PROGRAMME



Chair / Co-chair

HONARARY CHAIR: PROF. C.P. SHARMA, PROF. VEENA KOUL & PROF. BIKRAMJIT BASU

DATE	SESSION NO.	SESSION CHAIR DETAILS		TIME (IST)	
				FROM	TO
06.12.2020	Session-1 Regenerative Medicine	Chair	Prof. C.P. Sharma	6.50PM	8.00PM
		Co-chair	Prof. Veena Koul		
07.12.2020	Session-2 Materials in Medicine	Chair	Prof. Bikramjit Basu	10.00AM	1.00PM
		Co-chair	Prof. N. Rajendran & Prof. Geetha Manivasagam		
07.12.2020	Session-3 Drug Delivery and Wound Care	Chair	Dr. T. Anoop Kumar	1.30PM	8.25PM
		Co-chair	Dr. Neetu Singh, Dr. Maya Nandkumr		
08.12.2020	Session-4 Nanobiotechnology in Health Care	Chair	Prof. Biman B. Mandal	9.00AM	1.00PM
		Co-chair	Dr. Gnanamani & Dr. Deepa P. Nambiyar		
08.12.2020	Session-5 Bioactive Ceramics and Glasses	Chair	Dr. H.K. Varma	1.30PM	4.50PM
		Co-chair	Dr. T.M. Sridhar & Dr. Sasikumar		
08.12.2020	Session-6 Biomedical Implants in Health Care	Chair	Prof. Dharendra S. Katti	6.05PM	8.00PM
		Co-chair	Dr. A.M. Ballamurugan & Dr. S. Kannan		
09.12.2020	Session-7 Regenerative Approaches in Health Care	Chair	Dr. Santanu Dhara	9.30AM	1.00PM
		Co-chair	Prof. S. Kanagaraj & Prof. Kavitha		
09.12.2020	Session-8 Additive Manufacturing of Biomaterials & Metallic Implants	Chair	Dr. D.S. Nagesh	1.30PM	5.25PM
		Co-chair	Dr. Naresh Kasoju & Prof. C. Viswanathan		
09.12.2020	Session-9 Organoids and Bioengineering	Chair	Prof. N. Ponpandian	6.35PM	8.00PM
		Co-chair	Prof. Ravichandran & Prof. D. Gopi		



Organised by
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