

# Global Congress on **BIOMEDICAL ENGINEERING & BIOENGINEERING INNOVATIONS**

March 23–25, 2026 | Boston, MA

## Sponsors



[AIIMSEI.org](http://AIIMSEI.org)



Sunday, March 22, 2026

17:00–19:00: On-site Registration / Badge Pickup @Atrium Foyer

**DAY-1**

Monday, March 23, 2026

Charles River Ballroom

8:30–9:00

**Opening Message**

**Welcome by BEBI-2026 Chair on behalf of the IOC, and Conference Manager**

**Anthony Guiseppi-Elie**, ScD, Sr. Fellow and President, AIIMSEI and Sr. Dresden Fellow  
TU Dresden



9:00–9:45 **Plenary**

**Samir Mitragotri**, PhD, Wyss Institute, Harvard University, MA, USA

**A Hitchhiker's and Backpacker's Guide to Drug Delivery and Biomaterials**

9:45–10:45

**Bio-Innovation Plenary Panel**

A moderated plenary session exploring key lab-to-fab and bench-to-bedside challenges in translating biomedical innovations to market. The panel brings together an academic entrepreneur, technology transfer executives, and an industry consultant to share insights on successful commercialization pathways.

**Moderator**



**Cecilia Zapata-Harms**, MS, MHA

CEO, Palmetto InnovaSphere, Inc.

COO, AtlantisVR

Managing Partner/ Advisor, 3rdEyeBio, LLC

**Panelists**



**Samir Mitragotri**, PhD

Wyss Institute, Harvard University, MA, USA



**Tong Sun**, MS, MBA

Executive Director, Institute of Translational Health Sciences (ITHS) and Assistant Dean  
School of Medicine, University of Washington, WA, USA

10:45–11:00

**Break & Networking**

@Atrium Foyer

**Chair: Frank Alexis**, Universidad San Francisco de Quito, Ecuador

11:00–11:45

**Plenary**



**Gianarelio Cuniberti**, PhD, Institute for Materials Science and Nanotechnology and  
Max Bergmann Center of Biomaterials, TU Dresden, Germany

**AI-Powered Neuromorphic Sensors for Medical Diagnostics**

**Nano Bioengineering and Smart Drug Delivery Systems**

11:45–12:15

**Keynote**



**Gianni Ciofani**, PhD, Istituto Italiano di Tecnologia, Italy

**Ultrasound-Responsive Piezoelectric Biodegradable Nanoparticles for Drug-Free  
Anticancer Therapy**

12:15–12:35

**Featured**



**Mark Byrne**, PhD, Rowan College of Engineering & Cooper Medical School of Rowan  
University; OcuMedic, Inc., Mullica Hill, NJ, USA

**New Ocular Biomaterials Utilizing Biomimetic Complexation for Controlled and  
Sustained Drug Delivery**



12:35–12:55 **Featured**

**John G. Hardy**, *PhD, Lancaster University, United Kingdom*  
Stimuli-Responsive Polymers for Biomedical Technologies



12:55–13:15 **Invited**

**Marwa Sallam**, *PhD, Brown University, RI, USA*  
Precise Functionalization of DNA Scaffold Particles for Enhanced NK Cell Antitumor Efficacy

13:15–14:00

Lunch & Networking

@Roosevelt Room

### Biomaterials and Tissue Engineering

Chair: **John G. Hardy**, *Lancaster University, United Kingdom*



14:00–14:30 **Keynote**

**Erik Reimhult**, *PhD, BOKU University, Austria*  
Revealing Novel Structures and Benefits of *Pseudomonas aeruginosa* Biofilms through Bioprinted Models



14:30–14:50 **Invited**

**Prabir Patra**, *PhD, Marshall University, WV, USA*  
Functional Nanobiomaterials in Tissue Engineering



14:50–15:10

**Misba Majood**, *Johns Hopkins University, MD, USA*  
Integrating Organoid Models and Milk Fat Globule Proteomics to Study Transporter Biology in Human Lactation



15:10–15:30

**Madison Deeson**, *Houston Methodist Research Institute, TX, USA*  
Engineering an Artificial Lymph Node for Antigen-Specific Immunomodulation in Type I Diabetes

15:30–15:45

Break & Networking

@Atrium Foyer

### Sensors and Wearable Technologies

Chair: **Prabir Patra**, *Marshall University, WV, USA*



15:45–16:15 **Keynote**

**Shekhar Bhansali**, *PhD, Vanderbilt University, TN, USA*  
Leveraging Sensors and AI for Wound Healing: Opportunities and Challenges



16:15–16:35 **Featured**

**Rossana Madrid**, *PhD, National University of Tucumán-INSIBIO/CONICET, Argentina*  
Nanostructured Biosensor for the Dual Detection of Glucose and Ascorbic Acid



16:35–16:55 **Featured**

**Hana Lisalova**, *PhD, Institute of Physics of the Czech Academy of Sciences, Czech Republic*  
Antifouling Polymer Brush-Based Biosensors for Rapid and Reusable On-Site Diagnostics

17:15–18:15

Networking & Drinks

@Atrium Foyer

8:45–9:00

**Welcome Note by BEBI–2026 Chair**

**Anthony Guiseppi-Elie, ScD, Sr. Fellow and President, AIIMSEI and Sr. Dresden Fellow TU Dresden**



9:00–9:45

**Plenary**

**Frank Alexis, PhD, Universidad San Francisco de Quito, Ecuador**

**Shaping Surfaces: How Polymer Patterns Affect Early Bacterial Adhesion**

9:45–10:45

**Biomedical Engineering Education Plenary Panel**

A moderated plenary discussion on the evolution of convergent academic programs centered on the life sciences, including Engineering–Medicine, Sustainability, and Genome Engineering. The panel brings together academic leaders who have successfully launched such programs and navigated the associated administrative and accreditation pathways.

**Moderator**



**Anthony Guiseppi-Elie, ScD**

*Sr. Fellow and President, AIIMSEI and Sr. Dresden Fellow, TU Dresden*

**Panelists**



**Eric L. Miller, PhD**

*Director, Division of Engineering Education and Centers (EEC), National Science Foundation, VA, USA*



**Youseph Yazdi, PhD**

*Executive Director, Center for Bioengineering Innovation and Design (CBID), The Johns Hopkins University School of Medicine, MD, USA*



**Lance Black, MD, MBID**

*Senior Associate Dean of Innovation & Strategic Projects, School of Engineering Medicine, Texas A&M University, TX, USA*

10:45–11:00

**Break & Networking**

**@Atrium Foyer**

**Chair: Hana Lisalova, Institute of Physics of the Czech Academy of Sciences Czech Republic**



11:00–11:45

**Plenary**

**Anthony Guiseppi-Elie, ScD, Sr. Fellow and President, AIIMSEI and Sr. Dresden Fellow TU Dresden**

**Electroconductive Hydrogels for Cardiovascular and Neuronal Tissue Regenerative Engineering**

**Biomedical Engineering & Bioinstrumentation**



11:45–12:05

**Invited**

**Chase Cornelison, PhD, University of Massachusetts Amherst, MA, USA**

**Fluid Dynamics and Biomechanics After Traumatic Neural Injury**



12:05-12:25 **Featured**

**Stelios Andreadis, PhD**, University at Buffalo, The State University of New York NY, USA

Cyclic Nanog Induction Reverses Senescence, Restores Metabolism and Improves the Function of Aged Skeletal Muscle through Partial Reprogramming



12:25-12:45 **Invited**

**Jongmin Kim, PhD**, Pohang University of Science and Technology, South Korea

Ribocomputing: Leveraging RNA for Computation in the Cell

12:45-13:45

Lunch & Networking

@Roosevelt Room

## Nano Bioengineering and Smart Drug Delivery Systems

Chair: **Rossana Madrid**, National University of Tucumán-INSIBIO/CONICET, Argentina



13:45-14:05

**Devjoy Dev, PhD**, Museum of Science Boston, MA, USA

Gut Gelectrode: Drug Delivery and Stimulation to the Gut via Conductive Hydrogel



14:05-14:25

**Louis Pruvost**, University of Lorraine, France

Formulation of Nanoliposomes Encapsulating Natural Bioactive Molecules Extracted by Enzymatic Hydrolysis



14:25-14:45

**Paula Maria Pincela Lins, PhD**, Hasselt University, Belgium

Cell-Derived Nanoparticles as Next-Generation Therapeutics: From Biomimetic Coatings to Scalable EV Platforms



14:45-15:05

**Jingyi Wang**, Houston Methodist Research Institute, TX, USA

A Biodegradable Nanofluidic Platform for Sustained Multidrug Cancer Immunotherapy



15:05-15:25

**Francesco Manfredi**, Houston Methodist Research Institute, TX, USA

Biodegradable Nanofluidic Drug-Eluting Seed for Sustained Intratumoral Drug Delivery of Immunotherapeutic Agents



15:25-15:45

**Danilo Settis**, Houston Methodist Research Institute, TX, USA

NanoLymph: An Implantable Immune-Engineering Platform for Transplantation Tolerance and Autoimmune Modulation

15:45-16:00

Break & Networking

@ Atrium Foyer

## Artificial Intelligence in Health and Medicine

Chair: Gianni Ciofani, *Istituto Italiano di Tecnologia, Italy*



16:00-16:30 **Keynote**

**Rose Faghih**, *PhD, New York University Tandon School of Engineering, NY, USA*  
**Computational Medicine for Sensing Health**



16:30-16:50 **Invited**

**Kayhan Batmanghelich**, *PhD, Boston University, MA, USA*  
**Domain-Specific Foundational Models for Trustworthy Medical Imaging**



16:50-17:10 **Invited**

**Theresa M. Raimondo**, *PhD, Brown University, RI, USA*  
**Machine Learning Driven Optimization of Lipid Nanoparticles and RNA-based Cancer Therapeutics**



17:10-17:30

**Tamara Lambert**, *PhD, MPH, MEng, Ann & Robert H. Lurie Children's Hospital of Chicago, IL, USA*  
**Rapid Detection of Deterioration in Pediatric Oncology Patients for Sepsis Prevention**

17:30-18:00 **Meet the Editors – Special Issue**

**Sara Ceci**, *Senior Publisher, Springer Nature*

**John G. Hardy**, *PhD, Lancaster University, United Kingdom*

**Anthony Guiseppi-Elie**, *ScD, Sr. Fellow and President, AIIMSEI and Sr. Dresden Fellow TU Dresden*

**Gianni Ciofani**, *PhD, EIC, BMC Biomedical Materials Science, Senior Researcher Istituto Italiano di Tecnologia, Italy*

Wednesday, March 25, 2026

8:45-9:00 **Welcome Note by BEBI-2026 Chair**

**Anthony Guiseppi-Elie**, ScD, Sr. Fellow and President, AIIMSEI and Sr. Dresden Fellow  
TU Dresden

## Biomaterials and Tissue Engineering



9:00-9:30 **Keynote**

**Monalisa Mukherjee**, PhD, Amity University, India

Biogetic Carbon Quantum Dots as a Neoteric Inducer in the Game of Directing Chondrogenesis



9:30-9:50

**Nouf Al Saleh**, King Abdullah University of Science and Technology, Saudi Arabia  
A Smart and Highly Porous Hydrogel for Diabetic Wound Healing

## Poster Podium Presentations I

### Poster Review Panel

**Gianaurelio Cuniberti**, PhD, TU Dresden, Germany

**Anthony Guiseppi-Elie**, ScD, AIIMSEI, USA

**Monalisa Mukherjee**, PhD, Amity University, India

9:50-10:05 **Erica Jung**, University of Illinois at Chicago, IL, USA  
Agarose Stamped Device for Standardized Zebrafish Larvae Immobilization

10:05-10:20 **Judita Anthi**, Czech Academy of Sciences, Czech Republic  
Polydopamine and Antifouling Polymer Brushes: Toward a Substrate-Independent Coating Strategy

10:20-10:35 **Veronika Hovanova**, Czech Academy of Sciences, Czech Republic  
DNA-Based Biosensors for the Detection of miRNA Cancer Biomarkers

10:35-10:50 **Michala Forinova**, Czech Academy of Sciences, Czech Republic  
Polymer Brush-Engineered Upconversion Nanoparticles as Next-Generation Labels for Biomarker and Pathogen Detection

10:50-11:05

Break & Networking

@Atrium Foyer

## Poster Podium Presentations II

### Poster Review Panel

**Rose Faghif**, PhD, New York University, USA

**Gianni Ciofani**, PhD, Istituto Italiano di Tecnologia, Italy

**Anthony Guiseppi-Elie**, ScD, AIIMSEI, USA

11:05-11:20 **Ana Calvopiña & Renatta Dávalos Iñiguez**, Universidad San Francisco de Quito Ecuador  
Effect of Membrane Polymer Surface Patterns on Initial Bacterial Adhesion

11:20-11:35 **Oluwatomi Idowu**, Massachusetts Institute of Technology, MA, USA  
Dual-Targeted Antibody-Drug Conjugate for Improved Treatment of Colorectal Cancer

11:35-11:50 **Nichcha Subdee**, Columbia University, NY, USA  
EMR-Based Machine Learning Prediction of Cholangiocarcinoma in Northeast Thailand

11:50-12:20

Convening Chair's Closing Remarks and Awards

12:20-13:20

Lunch

@Roosevelt Room

Organized By



**IRC**

Impact Research Communications

 **Impact Research Communications**

#3, Bonaire Drive, Dix Hills, NY, 11746

 +1 929 999 7374

 [bebi@ircconferences.net](mailto:bebi@ircconferences.net)

 [www.bebi2026.org](http://www.bebi2026.org)