

POSTER SESSION

- P1** Licia Chiudaro (Politecnico di Milano) – Design and Fabrication of Personalized Multi-Material FDM Scaffolds for External Ear Reconstruction
- P2** Stefania Villani (Università del Salento) – Evaluation of Lignin-Cobalt-Cyanine Nanoparticles in Galleria mellonella Burn Wound Model for Photodynamic Therapy and Antibacterial Efficacy
- P3** Maria Isabela Vargas Ovalle (Università del Salento) – Quantification and Surface Characterization of Activated Carboxyl Handles on Decellularized Plant Matrices for Directed Protein Grafting
- P4** Alessandra Soriente (CNR-IPCB) – Bioactive Glass-Based Antibiotic Delivery Systems for Enhanced Wound Healing
- P5** Annalia Masi (Università del Salento) – Development of silver-treated silk fibroin films as antibacterial wound dressings
- P6** Viola Sgarminato (Politecnico di Torino) – Light-Activated Hydrogel Systems for Engineering Perfusable Renal Models
- P7** Francesco Schiavone (Politecnico di Torino) – Indocyanine Green-Associated Cationic Liposomes for Potential Phototherapeutic Applications
- P8** Saniya Salathia (Università di Camerino) – Advanced Optimisation of Polymeric Nanoparticles for Drug Delivery with Microfluidics
- P9** Divishth Gupta (Università di Camerino) – Formulation and efficacy of 3D-printed bio-ink scaffolds co-loading nanoparticles and antibiotics for infection control in healthcare setting
- P10** Giacomo di Giambattista (Università di Camerino) – Synthesis of PLGA and PLGA-PEG Copolymers via Cerium Catalysis for Advanced Nanoparticle Design
- P11** Alice Piccinini (Università di Camerino) – Library of Gene Delivery Systems: Delivery of Genetic Material via Polyplexes Embedded in Thermosensitive Hydrogels
- P12** Dawid Rossino (CNR-IPCF) – Biodegradable Molecularly Imprinted Nano-in-Micro Polymeric Systems for Pulmonary Anti-Inflammatory Treatment of Cystic Fibrosis
- P13** Caterina Cristallini (CNR-IPCF) – The BRAVEHEART Project: Biomaterial Engineering and Preclinical Assessment of an Epicardial Therapeutic Patch



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5 – 7 October 2026

Park Hotel Marinetta, Via dei Cavalleggeri Nord, 3
57020 Marina di Bibbona (LI)

Scientific Program

Day 1 – Monday, October 5, 2026

13:00 – 14:30 Registration & Welcome buffet
14:30 – 15:00 Opening Remarks (Caterina Cristallini, Gianluca Ciardelli) & Saluti istituzionali (Silvia Farè, Simona Bronco)
15:00 – 16:30 Session 1: Advanced Bio-Interfaces & Responsive Materials (Chairpersons: Lina Altomare, Giuseppe Cutietta)
15:00 – 15:30 Keynote (Invited): Dr. Carlos Franco Pujante (ETH Zurich) – Engineering Therapeutic Function Through Materials
15:30 – 15:40 Margherita Montorsi (CNR-IPCF) – Exploring Piezoelectricity in Chitosan Films
15:40 – 15:50 Tiziana Brosio (Università del Piemonte Orientale) – Magnetic Stimulation Modality and Nanoparticle Composition Differentially Regulate Osteogenic Maturation of hMSCs on PAN Nanocomposite Scaffolds
15:50 – 16:00 Michela Carlin (Università di Trieste) – Differentiation Properties of 3D PDMS Scaffolds Nanostructured with Multi-Walled Carbon Nanotubes on Human Induced Pluripotent Stem Cells
16:00 – 16:10 Annabelle Fricker (Azienda Ospedaliera Universitaria Pisana, AOUP) – 3D bioprinted cellular constructs as middle ear substitutes
16:10 – 16:20 Anna Fathi (Università del Piemonte Orientale) – Synthesis and Characterization of Injectable Self-Healing Conductive Hydrogels for Cardiac and Wound Regeneration
16:20 – 16:30 Monica Boffito (Politecnico di Torino) – Engineering supramolecular biomaterials through host–guest assembly of α -cyclodextrin and custom-synthesized poly(urethane)s
16:30 – 17:00 Coffee Break and Poster Session

17:00– 18:40 Session 2: Hydrogels, Polymeric Networks & Antimicrobial Wound Healing (Chairpersons: Maria Grazia Raucci, Beatrice Sottini)
17:00 – 17:30 Keynote (Invited): Prof. Elvira De Giglio (University of Bari “Aldo Moro”) – Gellan Gum-based hydrogels loaded with bioactive compounds for tissue engineering applications: formulation, analytical characterization and biological assessment
17:30 – 17:40 Martina Peletto (Politecnico di Torino) – Composite chitosan-based hydrogels for bone regeneration via thermal and photo-crosslinking methods
17:40 – 17:50 Elisa Passaglia (CNR-ICCOM) – Aqueous-Phase Exfoliated Phosphorene as a Multifunctional Nanoplatfrom for Amyloid Disaggregation and Photodynamic Antimicrobial Therapy
17:50 – 18:00 Giuseppe Cutietta (Politecnico di Torino) – Bio-based injectable self-healing hydrogel from modified pectin and gelatin for chronic wound treatment
18:00 – 18:10 Federica Ferla (Università Del Piemonte Orientale) – Anti-oxidant, antibacterial and pro-regenerative bioactive wound dressings obtained by keratin nanofibers functionalized with polyphenols from industrial by-products
18:10 – 18:20 Serena Danti (INSTM) – Poly(alkylene furanoate) electrospun fibers for sustainable and antibacterial air filters
18:20 – 18:30 Lorenzo Sardelli (Università di Torino) – Innovation by bioinspiration: mucus-like nanocoatings for translating antibacterial protection onto artificial surfaces
18:30 – 18:40 Stefania Villani (Università del Salento) – In vitro and in vivo Characterization of Electrospun Chitosan/Hydroxyethyl Cellulose Membranes for Wound Healing

18:40 – 19:30 Session 3: Special Session – BRAVEHEART Project (Chairpersons: Caterina Cristallini, Assunta Borzacchiello, Marco Barretta)
18:40 – 18:50 Giulia Sucameli (UO1 ISMETT Palermo) – Experimental method overview: a new versatile technological Bioartificial drug eluting caRdiac pATch to preVEnt HEART failure (BRAVEHEART)
18:50 – 19:00 Cheherazade Trouki (UO3 CNR-IPCF Pisa) – Development and optimization of a bioartificial epicardial patch for in vivo implantation
19:00 – 19:10 Nourhan Al-Mawed, Roberto Vanni (UO2 Università di Torino) – Regulatory framework, sterilization strategy and biological characterization of a bioartificial epicardial patch
19:10 – 19:20 Dawid Rossino (UO3 CNR-IPCF Pisa) – Implementation of an electrospun membrane in a multi-layered cardiac patch: effects on the mechanical, biodegradative and physical-chemical properties
19:20 – 19:30 Consiglio direttivo SIB | 20:45 Welcome Dinner

Day 2 – Tuesday, October 6, 2026

08:30 – 09:00 Invited Lecture: Prof. Luigi Ambrosio (CNR-IPCB) – Advancing Biomaterials Science through Internationalization and Science Diplomacy (Presenter: Silvia Farè)
09:00 – 10:20 Session 4: 3D Models, Biofabrication & Advanced In Vitro Platforms (Chairpersons: Christian Demitri, Dalila Di Francesco)
09:00 – 09:10 Maria Grazia Raucci (CNR-IPCB) – Theragenerative Black Phosphorus Quantum Dots: Antitumor Activity and Neural Cell Maturation
09:10 – 09:20 Aida Cavallo (CNR-IFC) – 3D bioprinted melanoma model for anticancer therapy screening
09:20 – 09:30 Emanuela Beneduce (Politecnico di Milano) – Compartmentalized Multicellular Hydrogel Scaffolds by WetSpinning for Tumor Microenvironment Modelling
09:30 – 09:40 Lorenzo Bonetti (Università di Pavia) – Tailoring 4D Printed PCL-based scaffolds performance: the impact of NaOH surface modification
09:40 – 09:50 Alexa Pigliafreddo – (Università del Piemonte Orientale) - Decellularized bovine pericardium (dBP)-derived hydrogel and Matrix-Bound Nanovesicles (MBVs) regenerative potential as Intrauterine adhesions (IUAs) treatment
09:50 – 10:00 Licia Chiudaroli (Politecnico di Milano) – Development of a 3D In Vitro Lung Model to Investigate the Biological Effects of Microplastics
10:00 – 10:10 Giulia Mesiano (Politecnico di Torino) – Development and Optimization of a Tunable GelMA-Based Hydrogel for 3D Cell Culture Applications
10:10 – 10:20 Claudio Ricci (Università di Pisa) – A Biomaterial-Based 3D Primary Tumor Model for Investigating FLASH Radiotherapy in Sinonasal Cancer
10:20 – 10:50 Coffee Break and Poster Session

10:50 – 12:10 Session 5: Cardiovascular & Soft Tissue Regeneration: Clinical Needs and Advanced Biomaterials (Chairpersons: Monica Mattioli Belmonte, Stefania Villani)
10:50 – 11:20 Keynote (Invited) Prof. Giuseppe Vergaro (Scuola Superiore Sant’Anna / Fondazione G. Monasterio) – Perspectives in Cardiovascular translational research
11:20 – 11:30 Marco Pelin (Università di Trieste) – 2D materials at the bio-interface with the skin: characterization and safety assessment
11:30 – 11:40 Irene Regano (Università del Piemonte Orientale) – Decellularized Bovine Pericardium-derived hydrogel (dBP) attenuates injury progression in a mouse model of Traumatic Brain Injury (TBI)
11:40 – 11:50 Antonio de Nigris (Università del Molise) – Physico-chemical and thermo-mechanical analyses of conductive alginate/gelatin/carbon-nanotubes bioprinted scaffolds for tissue engineering
11:50 – 12:00 Carolina Di Varsavia (Università del Piemonte Orientale) – Innovative decellularized extracellular matrix biomaterials for corneal regeneration
12:00 – 12:10 Nourhan Al-Mawed (Università di Torino) – Spatial Metabolomics as a Powerful Approach to Investigate Biomaterial-Mediated Therapeutic Effects in Cardiac Repair
12:10 – 13:00 SIB General Assembly
13:00 – 14:30 Lunch Break

14:30 – 16:30 Session 6: Biosensors & Smart Delivery (Chairpersons: Roberta Censi, Dawid Rossino, Francesco Busto)
14:30 – 15:00 Keynote (Invited): Prof. Giuseppe Barillaro (Università di Pisa) – Implantable and bioresorbable Optical Sensors for Precision Diagnostics: from Analog to Digital Sensing
15:00 – 15:10 Elena Bellotti (Università di Pisa) – Injectable HSA-agarose fiber-optic biosensors for localized monitoring of chemotherapeutic drug
15:10 – 15:20 Tania Mariastella Caputo (Università del Sannio) – Smart Delivery Systems Integrated with Fiber-Optic Technologies for Precision Oncology
15:20 – 15:30 Marco Barretta (CNR-IPCB) – Chitosan-hyaluronic acid nanoparticles with time-dependent mucoadhesive and mucus penetrating behavior to overcome pathological lung mucus
15:30 – 15:40 Hina Inam (CNR-ISSMC) – Bioactive superparamagnetic apatitic phases as a novel nanoplatfrom for nucleic acid delivery and cell therapy
15:40 – 15:50 Roberta Pappalardo (Politecnico di Torino) – From GelMA to nanoGelMA: A novel desolvation-photopolymerization approach towards drug delivery applications
15:50 – 16:00 Erica Locatelli (Università di Bologna) – Bifunctional nanocellulose hydrogels platforms for loco-regional treatment of glioblastoma
16:00 – 16:10 Zahra Rajabimashhadi (Università del Salento) – Ionic Crosslinking with TPP as a Key Determinant of Structure, Mechanical Properties, and Protein Release Behavior in Chitosan Microparticles
16:10 – 16:20 Bahareh Azimi (UNIPi) – Al-assisted electrosprayed PLGA nanoparticles for lung cancer therapy
16:20 – 16:30 Laura Russo (Università degli Studi di Milano-Bicocca) – 3D Bioprinted Models: AI-Driven Design and Collaborative Robotic Synthesis
16:30 – 17:00 Coffee Break and Poster Session

7:00 – 19:30 Session 7: Bridging Academia and Industry: Innovations, Technologies & Translation (Chairpersons: Francesca Boccafoschi, Cheherazade Trouki)
17:00 – 17:10 PoliRNA (Giovanni Paolo Stola, Valeria Chiono)
17:10 – 17:20 Tissuegraft (Dalila Di Francesco, Francesca Boccafoschi)
17:20 – 17:30 Impavid (Roberto Vanni, Niccoletta Barbani)
17:30 – 17:40 Nanomug (Lorenzo Sardelli)
17:40 – 17:50 Planet Bioplastics (Andrea Lazzeri)
17:50 – 18:00 Onaya (Serena Danti)
18:00 – 18:10 Schaefer SEE (Maira Bacchiega, Giedre Astrauskaite)
18:10 – 18:20 IVtech (Tommaso Sbrana)
18:20 – 18:30 MP Strumenti (Mauro Petretta)

18:30 – 19:30 Roundtable & Panel Discussion – Technological Transfer in Biomaterials: Challenges, Funding, Regulatory Pathways & Opportunities. Chiara Galletti (UNIPi), Monia Gentile (SSA), Daniela La Noce (CNR, online), Francesca Boccafoschi (UPO, Chairperson)
20:45 Social Dinner

Day 3 – Wednesday, October 7, 2026

09:00 – 10:10 Session 8: Surgical & Interventional Biomaterials: Bioactive Systems and Clinical Translation (Chairpersons: Elvira De Giglio, Alice Piccinini)
09:00 – 09:30 Keynote (Invited): Prof. Luca Morelli (Azienda Ospedaliera Universitaria Pisana AOUP) – How biomaterials may transform the future of surgical oncology: a surgeon's perspective on unmet clinical needs and translational opportunities
09:30 – 09:40 Chiara Ingresso (CNR-IPCF) – Histidine-functionalized reduced graphene oxide/silver nanocomposite coating with antibacterial activity for biomedical textiles in abdominal surgery
09:40 – 09:50 Assunta Borzacchiello (CNR-IPCB) – An Injectable Hyaluronic Acid-Extracellular Vesicle Hybrid Promotes Lung Repair and Reduces Inflammation in an Animal Model of Acute Lung Injury
09:50 – 10:00 Teresa Vicidomini (Università di Parma) – Bioactive and biomimetic biomaterials able of combining regenerative medicine and on-site therapy in oral environment
10:00 – 10:10 Gianni Virgili (Università Politecnica delle Marche) – Innovative Support Technology to Improve Scaffold Handling for In Vitro Biomaterial Evaluation
10:10 – 10:20 Viola Sgarminato (Politecnico di Torino) – Geometry-driven epithelial organization in 3D bioprinted models
10:20 – 10:50 Coffee Break and Poster Session

10:50 – 12:40 Session 9: Sustainability, Circular Economy & Bio-Based Materials (Chairpersons: Gianluca Ciardelli, Hina Inam)
10:50 – 11:20 Keynote (Invited): Prof. Andrea Lazzeri (Università di Pisa) – Bio-based Materials for Biomedical Packaging: Beyond Biodegradability
11:20 – 11:30 Riccardo Gallorini (Università di Pisa) – Preserving Barrier and Mechanical Performance: Sterilization-Resistant Furan-Based Films for Advanced Packaging
11:30 – 11:40 Beatrice Sottini (Politecnico di Milano) – Design and characterization of animal-free chitosan based scaffolds for cultured meat applications
11:40 – 11:50 Miriam Cappello (Università di Pisa) – Interactions in Citric Acid-Crosslinked Chitosan Matrices Incorporating Curcumin: Impact on Material Performance
11:50 – 12:00 Francesco Busto (Università di Bari “A. Moro”) – Pomegranate Pectin/Gellan Gum Film: a promising strategy against Melanoma Cells
12:00 – 12:10 Bianca Dal Pont (Università di Pisa) – Bio-Based Functional Coatings for Sustainable Packaging to Improve Blueberry Shelf Life within the EXTRAFRESCO Project
12:10 – 12:20 Chiara Pedrotti (University of Pisa) – Development and Characterization of Sustainable Biochar/Poly(butylene succinate-co-butylene adipate) Composite Films
12:20 – 12:30 Maria Isabela Vargas Ovalle (Università del Salento) – Characterization of Hydrophobic and Hydrophilic Cargo Release Kinetics via Chemical Oxidation of Plant-Based Scaffolds
12:30 – 12:40 Elisa Batoni (Centro Piaggio, Università di Pisa) – Towards Sustainable Biomaterials and Biofabrication for Tissue Engineering: Valorisation of Industrial Waste and Renewable Resources
12:40 – 13:40 Awards & Closing Remarks
14:00 Lunch Box Pick-up