



Inaugural event SEMIT 2025

Thursday 02/10/2025

8:00 - 8:30	Registration and accreditation
8:30 - 8:45	Opening and welcome
8:45 - 9:45	Plenary: Abhay Pandit - <i>Engineering Biomaterial-Driven Regeneration: Uncovering the Impact of Glycosylation</i> . Chair(s): Sergio Martín Saldaña
9:45 - 11:00	Session 1: Biofabrication and bioprinting for regenerative medicine. Chair(s): María Puertas Bartolomé
9:45 - 10:10	Keynote: Nadina Usseglio - <i>Cutting-Edge Light-Based Bioprinting for Tissue Engineering and Regenerative Therapies</i>
10:10 - 10:22	Oral: Manuel Mazo - <i>Biologically-inspired melt electrowriting for the generation of highly biomimetic functional myocardium</i>
10:22 - 10:34	Oral: David Durán-Rey - <i>Pre-clinical study and follow-up of a new tissue engineered vascular graft</i>
10:34 - 10:46	Oral: Maria Alejandra Rodríguez Pardo - <i>Electrical Pacing in a Custom Bioreactor Accelerates Maturation of MEW-Scaffolded hiPSC Cardiac Tissues</i>
10:46 - 10:58	Oral: Maria Pita-Vilar - <i>Osteoinductive scaffolds based on α-tricalcium phosphate and carboxymethylcellulose for enhanced bone tissue engineering</i>
11:00 - 11:30	Coffee + poster session
11:30 - 12:45	Session 2: Mechanobiology in tissue engineering and flash presentations. Chair(s): Sandra Camarero Espinosa

11:30 - 11:55	Keynote: Marc Fernandez - <i>Biomaterials-based Tools to Steer Cellular Mechanotransduction</i>
11:55 - 12:07	Oral: George Altankov - <i>Stem Cells in Motion & Stillness: Adhesion to Glycated Collagen Under Dynamic and Static Conditions</i>
12:07 - 12:19	Oral: Sara Pionato - <i>Modular ELR hydrogels with independently tunable elasticity and viscosity for mechanobiology studies</i>
12:19 - 12:23	Flash: Ester Planas-Rigol - <i>Microphysiological system for osteoarticular disease modeling</i>
12:23 - 12:27	Flash: Irati Valdivielso Dorronsoro - <i>Volumetric biofabrication and 3D printing for the design and fabrication of a human biological ventricular assist device</i>
12:27 - 12:31	Flash: Laura Perez Sánchez - <i>Automated design strategy for 3D-printed vasculature: fractal and randomized vessel structures</i>
12:31 - 12:35	Flash: Raúl Escribano - <i>Design of resorbable basement membrane based on recombinant bioactive elastin-like polymers for skin regeneration</i>
12:35 - 12:39	Flash: Rachel LeBlanc - <i>Cold atmospheric plasma-treated bioink for tissue regeneration</i>
12:39 - 12:43	Flash: Jan Grzelak - <i>Tailoring antimicrobial calcium phosphate nanotopographies for bone regeneration</i>
12:45 - 14:00	Lunch + poster session
14:00 - 15:15	Session 3: Drug delivery in tissue engineering and flash presentations. Chair(s): Luis Rojo del Olmo
14:00 - 14:25	Keynote: Maria Rosa Aguilar - <i>Polymeric biomaterials: advancing drug delivery for tissue engineering</i>
14:25 - 14:37	Oral: Nuria Vilaboa - <i>Bone regeneration induced by transient delivery of bone morphogenetic protein 2 from pro-angiogenic hydrogels</i>

14:37 - 14:49	Oral: Sofia Mares-Bou - <i>Advanced Nanobiomaterials from biomass residues for PTSD therapy: a sustainable approach to miRNA Delivery</i>
14:49 - 14:53	Flash: Jesús Chato-Astrain - <i>Development of a novel therapeutic product for a regenerative treatment of severely burned patients</i>
14:53 - 14:57	Flash: Fernando Campos - <i>Clinical translation of the Biocleft artificial human palate mucosa in children with cleft palate</i>
14:57 - 15:01	Flash: Irene Bertolo - <i>A multi-cellular bio-fabricated 3D glioblastoma model for efficient drug screening and tumor microenvironment studies</i>
15:01 - 15:05	Flash: Rita Araújo - <i>The bitter truth of sweet bone: hyperglycemia disrupts bone bioenergetics in an embryonic ex vivo chick femur model</i>
15:05 - 15:09	Flash: Darío Castellana - <i>Local drug delivery system as platform to promote radioprotection and tissue regeneration in head and neck squamous cell carcinoma</i>
15:09 - 15:13	Flash: Uxia Gato Díaz - <i>Replicating breast cancer matrix: a core-shell model for drug screening</i>
15:15 - 15:45	Coffee + poster session
15:45 - 16:45	Plenary: Maria Pau Ginebra - Engineering bioceramics for bone regeneration: Innovations at the interface of biology and materials. Chair(s): Carles Mas Moruno
16:45 - 18:00	Session 4: 3D In vitro models, organoids, and disease modeling. Chair: Jesús Ordoño Fernández & Mariana Azevedo Gonzalez Oliva
16:45 - 17:10	Keynote: Amaia Cipitria - <i>Biomaterials in bone regeneration, cancer dormancy and early bone metastasis</i>
17:10 - 17:22	Oral: Eva Paz Jimenez - <i>Preliminary study of a ceramic-loaded scaffold for passive monitoring of bone regeneration</i>
17:22 - 17:34	Oral: José Pérez-Rigueiro - <i>The THOR European Project: building vascular networks and blood-brain-barriers through a biomimetic manufacturing Technology for the fabrication of Human tissues and Organs</i>

17:34 - 17:46	Oral: Anna Vilche Mariscal - <i>A human-microphysiological platform for modeling CNS trauma and evaluating targeted nanoparticle therapies</i>
17:46 - 17:58	Oral: Agnieszka Nikitiuk - <i>Development for head and neck 3D tumor tissue engineered construct as experimental platform for assessing therapeutic interventions</i>
18:00 - 19:00	General Assembly SEMIT
21:30	Gala dinner

Friday 03/10/2025

8:00 - 8:45	Registration and accreditation
8:45 - 9:45	Plenary: Manuel Salmerón - Engineered biomaterials for regeneration and mechanobiology. Chair(s): Zaida Álvarez Pinto
9:45 - 11:00	Session 5: 4D biomaterials, metamaterials, and smart responsive systems. Chair(s): Pedro J. Díaz-Payno & Sara López de Armentia Hernández
9:45 - 10:10	Keynote: Andres Díaz Lantada - Trends in bioinspired, smart and living materials: from design and manufacturing methods to ethical and societal challenges
10:10 - 10:22	Oral: Dorleta Jiménez de Aberasturi - <i>Hybrid plasmonic bioresins and dECM-based materials for volumetric bioprinting of vascular-inspired architectures</i>
10:22 - 10:34	Oral: Sandra Ramos-Díez: <i>Inclusion of cell-cleavable peptides in multilayer scaffolds mimicking the cartilage temporal events enable controlled stem cell differentiation</i>
10:34 - 10:46	Oral: Mariola Cano-Morenilla - <i>Design and 3D-printing of bioresorbable shape memory stents for pediatric aortic coarctation repair</i>

10:46 - 10:58	Oral: Ángel Viteri - <i>Magnetically responsive gelatine-chitosan hydrogels for the modulation of fibroblast behaviour in tissue engineering</i>
11:00 - 11:30	Coffee + poster session
11:30 - 12:45	Session 6: Advanced biomaterials: design, functionalization and surface engineering. Chair(s): Sergio Acosta Rodríguez & Sara Pionato
11:30 - 11:55	Keynote: Carlos Rodriguez Cabello - <i>Smart Hydrogels Based on Elastin-like Recombinamers: Synergistic Design for Cell-Instructive Scaffolds in Tissue Regeneration</i>
11:55 - 12:07	Oral: Ane Lluçia Salvador - <i>Development of tissue-engineered substitutes for full-thickness tendon ruptures</i>
12:07 - 12:19	Oral: Shana Jin - <i>Biofunctionalisation of calcium phosphate nanotopographies for antimicrobial applications in bone regeneration</i>
12:19 - 12:31	Oral: Palash Chandravanshi - <i>Supramolecular BDNF-mimetic hydrogel for promoting functional recovery after spinal cord injury</i>
12:31 - 12:43	Oral: Manuel Gómez Florit - <i>Engineering extracellular vesicles for tendon tissue engineering and regenerative medicine</i>
12:45 - 14:00	Lunch + poster session
14:00-15:00	Plenary: Aitziber L. Cortajarena - Engineering Functional Protein-Based Biomaterials via Self-Assembly for Bioactive and Bioelectronic Applications. Chair(s): Luis Díaz Gómez
15:00-16:00	Session 7: Round table with Pedro Bernáldez, Patricia Díaz Rodríguez, Begoña Castro, Manuel Gómez Florit - <i>Bridging Research and Practice: Clinical Challenges in Translational TERM</i> . Chair: Zaida Álvarez Pinto
16:00-16:30	Closing ceremony