

Thirteenth Symposium on Biologic Scaffolds for Regenerative Medicine

Day 1: May 1, 2025 (Thursday)

1:00 – 8:30 pm	Registration	Silverado East Foyer
5:30 – 6:30 pm	Keynote: Laura E. Niklason, MD, PhD <i>CEO, Humacyte</i>	Silverado East
6:30 – 8:30 pm	Reception	Fairway Deck

Day 2: May 2, 2025 (Friday)

7:00 – 8:00 am	Breakfast	Fairway Deck
Welcome		
8:00 – 8:05 am	Stephen F. Badylak, DVM, PhD, MD <i>University of Pittsburgh</i>	Silverado East
Plenary Session:		
8:05 – 8:40 am	Robert Mecham, PhD <i>Washington University, St. Louis, MO</i>	The Extracellular Matrix: The Good, the Bad, and the Surprises
Session I: <i>The Extracellular Matrix: Structure – Function Relationships</i> Session Chair: John DeFord, PhD; Retired CTO Becton Dickenson		
8:40 – 9:05 am	Kirk Hansen, PhD <i>University of Colorado</i>	Comparative Atlas of Extracellular Matrix Protein Composition Across 20 Tissues from <i>Mus Musculus</i> and the Regenerative Spiny Mouse <i>Acomys Cahirinus</i>
9:05 – 9:30 am	Gavin Arteel, PhD <i>University of Pittsburgh</i>	Hepatic-Specific CAPN4 Modulation as a Novel Therapeutic Approach for Metabolic Associated Steatotic Hepatitis
9:30 – 9:50 am	Paolo De Coppi, MD, PhD, FMedSci <i>University College London</i>	From Bench to Body: The Role of ECM in Regenerative Medicine
9:50 – 10:10 am	George Hussey, PhD <i>University of Pittsburgh</i>	Matrix Bound Nanovesicles: From Basic Research to Therapeutic Applications
10:10 – 10:35 am	Break	Fairway Deck
Session II: <i>Next Generation Bioscaffolds: Clinical Applications</i> Session Chair: George Hussey, PhD; University of Pittsburgh		
10:35 – 10:55 am	J. Scott Roth, MD, FACS <i>University of Kentucky</i>	Requisite Repair for Abdominal Wall Defects: Science and Surgery for Reconstruction
10:55 – 11:15 am	David Medich, MD <i>University of Pittsburgh</i>	Anastomotic Leaks in Colon and Rectal Surgery

11:15 – 11:35 am	William Fodor, PhD <i>Harvard Apparatus Regenerative Technology, Inc.</i>	The Development of a Decellularized Retrievable Internal Wound Healing Device
11:35 – 11:55 am	Vincent Antonelli, MD <i>University of Pittsburgh</i>	Intraluminal Extracellular Matrix Therapy for Anastomotic Leak: A Novel Solution to a Persistent Challenge
11:55 – 1:15 pm	Lunch	Fairway Deck
Session III:	<i>Naturally Occurring Bioscaffolds in “Hard to Heal” Wounds</i> Session Chair: Gavin Arteel, PhD; University of Pittsburgh	
1:15 – 1:35 pm	Joseph A Molnar, MD, PhD, FACS, <i>Wake Health</i>	A History of Skin Substitutes
1:35 – 1:55 pm	Andrew Rader, DPM <i>Indiana Foot & Ankle, Jasper, In</i>	Transforming Wound Healing: Decellularized Matrices and Their Role in Minimizing Scar Tissue Formation
1:55 – 2:15 pm	Jimmie Lang <i>MiMedX Group, Inc.</i>	Bovine Extracellular Matrix Particulate Modulates Fibroblast Cellular Activities Supportive of Wound Management
2:15 – 2:35 pm	Yulia Sapir-Lekhovitser, PhD <i>Fesarius Therapeutics</i>	Understanding the Kinetics of Rapidly Vascularizing Composite Collagen Dermal Templates
2:35 – 2:50 pm	Gustavo Henrique Almeida <i>University of Sao Paulo</i>	Acellular Porcine Placental Membranes as a Promising Biomaterial for Tissue Engineering Applications
2:50 – 3:05 pm	Michael Hiles, PhD <i>Cook Biotech Inc.</i>	Anti-fibrotic Properties of a Decellularized Extracellular Matrix Scaffold from Porcine Small Intestinal Submucosa are Evident in Human Normal and Keloid Fibroblasts
3:05 – 3:25 pm	Break	Fairway Deck
Session IV:	<i>Bone and Cartilage Repair with ECM</i> Session Chair: Matthew Wolf, PhD; NIH	
3:25 – 3:45 pm	Luai Huleheil, PhD <i>Smith & Nephew Plc.</i>	Marine Coral Exoskeleton as a Tissue Engineering Scaffold for Cartilage Repair
3:45 – 4:05 pm	Anna Gosiewska, PhD <i>Cellularity Inc.</i>	Novel Decellularized Human Placental Extracellular Matrix (ECM) Mineral Composite for Bone Applications
4:05 – 4:25 pm	Derek Dasthi, MS, PhD, MBA <i>Pinnacle Transplant Technologies LLC</i>	The Biomechanical Composition and Osteoinductive Potential of Evoke Demineralized Bone Matrix (DBM) Putty
4:25 – 4:45 pm	Michael Floren, PhD <i>AlloSource Innovation Center</i>	Towards a Physeal Allograft for Pediatric Growth Plate Repair: From Benchtop to Preclinical Feasibility in Domestic Swine
4:45 – 4:50 pm	Stephen F. Badylak, DVM, PhD, MD <i>University of Pittsburgh</i>	Closing Remarks
6:00 – 8:00 pm	Poster Session and Wine Reception	Fairway Deck

Day 3: May 3, 2025 (Saturday)

7:00 – 8:00 am	Breakfast	Fairway Deck
Welcome 8:00 – 8:05 am	Stephen F. Badylak, DVM, PhD, MD <i>University of Pittsburgh</i>	Silverado East
Plenary Session: 8:05 – 8:40 am	<i>Alberto Mantovani, MD</i> <i>Humanitas University</i>	Macrophage plasticity and the orchestration of tissue repair: old and new molecular players
Session V:	Matrix Building Blocks for Normal vs. Neoplastic Tissue <i>Session Chair: Vincent Antonelli, MD; University of Pittsburgh</i>	
8:40 – 9:05 am	Catalina Pineda Molina, PhD <i>University of Pittsburgh</i>	Exploring Matrix-Bound Nanovesicles from Joint Tissues: Emerging Diagnostic and Therapeutic Applications
9:05 – 9:20 am	Matthew Wolf, PhD <i>National Institute of Health</i>	Biologic Mesh Implantation Following Tumor Resection: Characterizing Mesh-Tumor Interactions and Feasibility for Perioperative Immunotherapy Delivery
9:20 – 9:35 am	Jason Spector, MD <i>Weill Cornell Medicine</i>	A Novel Injectable Composite Collagen Hydrogel for Long-Lasting Tissue Regeneration
9:35 – 9:50 am	Joan Nichols, PhD <i>Houston Methodist Research Institute</i>	Use of Layer-by-Layer Deposition of Growth Factors, Hydrogels, and Microparticles to Overcome the Hurdle of Dimensionality in Tissue Engineering
9:50 – 10:05 am	Dalia Di Francesco <i>Laval University, Québec</i>	Bioactive Matrix Bound Nanovesicles from Decellularized Bovine Pericardium for Tissue Regeneration
10:05 – 10:20 am	Break	
Session VI:	<i>ECM Bioscaffolds for the Heart, Airway, and Nerves</i> <i>Session Chair: Catalina Pineda Molina, PhD; University of Pittsburgh</i>	Fairway Deck
10:25 – 10:40 am	Riccardo Gottardi <i>University of Pennsylvania</i>	A Decellularized Cartilage Biomaterials Approach to Pediatric Airway Reconstruction
10:40 – 11:00 am	Paul Fedak, MD, PhD <i>University of Calgary</i>	Pericardial Delivery of Micronized Matrix Biomaterial Enhances Post-Infarct Cardiac Repair
11:00 – 11:15 am	Marissa Behun, PhD <i>University of Pittsburgh</i>	Acellular Porcine Sciatic Nerve-Derived Hydrogel Improves Functional Outcomes Following Direct Muscle Neurotization in a Rat Model
11:15 – 11:35 am	Robert Matheny, MD <i>CorMatrix Cardiovascular</i>	Regenerative Heart Valve; Update on the Development and Pivotal Trial for the Corvivo ECM Tricuspid Valve

11:35 – 11:50 am	John Konhilas, PhD <i>University of Arizona</i>	Clinical Experience of Human Placental Materials for Post-Operative Atrial Fibrillation Following Coronary Artery Bypass Surgery
11:50 – 1:00 pm	Lunch <i>Factors Contributing to “Constructive Tissue Remodeling”</i> <i>Session Chair: Robert Matheny, MD; Corvivo Cardiovascular</i>	
		Fairway Deck
1:00 – 1:20pm	Michael Hiles, PhD <i>N-Able Consulting LLC</i>	An Atemporal Model of Wound Healing Provides a Figure of Merit for Tissue Repair Using Extracellular Matrix
1:20 – 1:40 pm	Adam Young, PhD <i>Aroa Biosurgery Limited</i>	From Concept to Clinical Translation: A Commercialization Case Study of Ovine Forestomach Matrix
1:40 – 2:00 pm	Elizabeth Cosgriff-Hernandez, PhD <i>The University of Texas at Austin</i>	Harnessing Suspension for the Creation of Decellularized Tissue Scaffolds
2:00 – 2:20 pm	Kavita Parekh <i>University of California Berkeley</i>	Hyaluronic Acid-based Cryogel Scaffolds Promote Muscle Regeneration
2:20 – 2:40 pm	Break <i>Bioscaffold-Mediated Muscle Regeneration</i> <i>Session Chair: Stephen F. Badylak, DVM, PhD, M; University of Pittsburgh</i>	
		Fairway Deck
2:40 – 3:00 pm	Karen Christman, PhD <i>University of California</i>	Injectable Extracellular Matrix Hydrogels for Women's Health
3:00 – 3:20 pm	Sydney Shriver <i>University of Virginia</i>	Evaluation of Hyaluronic Acid-Based Hydrogels for Treatment of Extremity Volumetric Muscle Loss Injuries
3:20 – 3:40 pm	TBD	TBD
3:40 – 4:00 pm	Morgan Pfaff <i>University of California Berkeley</i>	Viscoelastic HyA Hydrogel Promotes Recovery of Muscle Quality and Vascularization in a Murine Model of Delayed Rotator Cuff Repair
4:00 – 4:15 pm	Stephen F. Badylak, DVM, PhD, MD <i>University of Pittsburgh</i>	Closing Remarks

