Twelfth Symposium on Biologic Scaffolds for Regenerative Medicine

Day 1: May 18, 2023 (Thursday)

1:00 – 8:00 pm	Registration	Silverado East Foyer
5:00 – 6:00 pm	**Keynote: Robert Mecham, PhD** *Washington University, St. Louis*	The extracellular matrix in tissue engineering: Rebuild it or reuse it?
6:00 – 8:00 pm	**Wine and Cheese Reception**	**Silverado East**

Day 2: May 19, 2023 (Friday)

7:00 – 8:00 am	**Breakfast**	**Fairway Deck**
Welcome		
8:00 – 8:05 am	Stephen F. Badylak, DVM, PhD, MD *University of Pittsburgh*	Silverado East
Session I:	**The ECM: Immune System Interface** *Session Chair: George Hussey, PhD, University of Pittsburgh*	
Plenary Session: 8:05 – 8:40 am	Featured Presentation: Alberto Mantovani, MD, *Humanitas University, Italy*	Macrophage plasticity and the orchestration of tissue repair
8:40 – 9:05 am	Benjamin G. Keselowsky, PhD *University of Florida*	Tissue-Anchored and Circulating Indoleamine 2,3-Dioxygenase for Immunometabolic Suppression of Inflammation
9:05 – 9:30 am	Matthew Wolf, PhD *National Cancer Institute, NIH*	Inducing antigen specific tumor regression with a biologic scaffold assisted therapeutic cancer vaccine
9:30 – 9:50 am	Hector Capella Monsonis, PhD *University of Pittsburgh*	Immunomodulatory effect of matrix bound nanovesicles (MBV) upon myeloid precursor cells
9:50 – 10:10 am	Milos Marinkovic, PhD *University of Texas Health Science Center at San Antonio*	Depletion of Cyr61/CCN1 from the bone marrow stromal niche is a potential mechanism contributing to the dysregulation of MSCs in aging skeletal tissue
10:10 – 10:35 am	**Break**	**Silverado East**
Session II:	**Composition and Biologic Activity of the ECM** *Session Chair: Kevin E. Healy, PhD, University of California, Berkeley*	
10:35 – 10:55 am	Maxwell McCabe, PhD *University of Colorado*	A mass spectrometry-based atlas of extracellular matrix proteins across 25 mouse organs
10:55 – 11:15 am	Michel Modo, PhD *University of Pittsburgh*	Establishing the mechanistic role of matrix metalloproteinase (MMP) in ECM hydrogel degradation

11:15 – 11:35 am	Kirsi Rilla, PhD University of Eastern Finland	Hyaluronan and its role in EV biology
11:35 – 12:00 pm	John P Fischer, MD, MPH, FACS *University of Pennsylvania*	Re-imaging hernia repair with absorbable synthetic material
12:00 – 1:15pm	**Lunch**	**Fairway Deck**
Session III:	**Basic Science meets Clinical Applications** *Session Chair: Robert G. Matheny, MD, CorMatrix Cardiovascular*	
1:15 – 1:35 pm	Karen Christman, PhD *University of California San Diego*	Infusible extracellular matrix for treating inflamed tissues
1:35 – 1:55 pm	Paul W. M Fedak, MD, PhD *University of Calgary, Canada*	Pericardial delivery of micronized matrix biomaterial enhances post-infarct cardiac repair
1:55 – 2:10 pm	William Fodor, PhD *Biostage, Inc.*	Esophageal Regeneration following surgical implantation of a tissue engineered esophageal implant: Understanding the regeneration time course and translation to the clinic
2:10 – 2:25 pm	Vince Anto, MD *University of Pittsburgh Medical Center*	Extracellular Matrix Adjuncts in a Rat Model of a High-Risk Colorectal Anastomosis
2:25 – 2:50 pm	Peter Jones, PhD University of Nevada	MBV for FSHD: Effect of Matrix-Bound Nanovesicles on a Dystrophic Environment
2:50 – 3:05 pm	**Break**	**Silverado East**
Session IV:	**ECM Formulations, Sourcing and Concepts** *Session Chair: Marley Dewey, PhD, University of Pittsburgh*	
3:05 – 3:25 pm	Dennis Orgill, MD, PhD *Brigham and Women's Hospital/Harvard University*	Xenogenic induction of adipose tissue and maintenance through pre- and post-conditioning using external volume expansion
3:25 – 3:50 pm	Joana Calderia, PhD *i3S, Universidade do Porto, Portugal*	Fetal-inspired scaffolds for intervertebral disc regeneration
3:50 – 4:15 pm	Joshua Jones, PhD *University of Nottingham, UK*	Engineered neural tissue from decellularized biomaterials for peripheral nerve repair
4:15 – 4:35 pm	Roche de Guzman, PhD *Hofstra University, Hempstead, NY*	Mitigation of fibrosis response using biologic SIS-ECM envelopes with implantable electronic devices
4:35 – 4:40 pm	Stephen F. Badylak, DVM, PhD, MD *University of Pittsburgh*	Closing Remarks
6:00 – 8:00 pm	**Poster Session and Wine Reception**	**Silverado East**

Day 3: May 20, 2023 (Saturday)

7:00 – 8:00 am	**Breakfast**	**Fairway Deck**
Welcome		
8:00 – 8:05 am	Stephen F. Badylak, DVM, PhD, MD *University of Pittsburgh*	Silverado East
Plenary Session: 8:05 – 8:40 am	**Keynote Address: Harald C. Ott, MD** *Harvard Medical School*	Engineered Organ Therapeutics - How Close Are We in 2023?
Session V:	**General and Reconstructive Surgical Applications of Naturally Occurring Bioscaffolds** *Session Chair: John A. DeFord, PhD (retired) former BD Exec Vice President and CTO*	
8:40 – 9:05 am	Robert Rehnke, MD *The Center for Surgical Excellence, Tampa, FL*	Total Breast Reconstruction with Autologous Fat Grafting and P4HB Absorbable Mesh - an Eight Year Experience: lessons learned and theories on the self-organizing regenerative superficial fascia.
9:05 – 9:30 am	Kevin E. Healy, PhD *University of California, Berkeley*	4D Hyaluronic Acid-Based Hydrogels for Cell Transplantation and Tissue Regeneration
1:15 – 1:40 pm	Gaetan Roudier *University of Bordeaux, France*	Development of a vascular graft woven from extracellular matrix yarn and first use as an arteriovenous shunt in sheep
9:55 – 10:20 am	Stephen Badylak, DVM, PhD, MD *University of Pittsburgh*	The Effects of ECM Hydrogel on the Wound Microenvironment
10:20 – 10:45 am	**Break**	**Silverado East**
Session VI:	**ECM: Structure/Function** *Session Chair: John Harper, PhD, Sr. VP R&D, Chief Technology Officer, Mimedx Group, Inc.*	
10:45 – 11:10 am	Kirk Hansen, PhD *University of Colorado Anschutz Medical Campus*	Extracellular matrix remodeling in acomys cahirinus skin regeneration
11:10 – 11:35 am	Carlos Sonnenschein, MD *Tufts University*	Cancer is a developmental disease
11:35 – 11:55 am	Gavin Arteel, PhD *University of Pittsburgh*	Therapeutic matrix-bound nanovesicles (MBV) protect against experiment alcohol-associated liver disease in mice
11:55 – 12:15 pm	Sarah Moreno *MiMedx Group, Inc*	Human placental extracellular matrix particulate supports fibroblast cellular activities: Therapeutic potential for would applications
12:15 – 1:15pm	**Lunch**	**Fairway Deck**
Session VII:	**Effects of Manufacturing upon ECM Bioactivity** *Session Chair:* Kirk Hansen, PhD, *University of Colorado Anschutz Medical Campus*	
1:15 – 1:40 pm	Kara Spiller, PhD *Drexel University*	Controlled release of immunomodulatory factors for regenerative medicine
1:40 – 2:00 pm	Michael Hiles, PhD *Cook Biotech, Inc*	The case for inflammation B?

2:00 – 2:25 pm	Lisa White, PhD *University of Nottingham, UK*	Supercritical Carbon Dioxide Decellularization – Hope vs Hype?
2:25 – 2:50 pm	Jin Han, PhD *Johns Hopkins University*	Age-associated senescent-T Cell signaling promotes type 3 immunity that inhibits regenerative response
2:50 – 3:10 pm	**Break**	**Silverado East**
Session VIII:	**Next Generation ECM Products** *Session Chair: Matthew T Wolf, PhD, Center for Cancer Research, NIH*	
3:10 – 3:35 pm	Roseanne Frederick, PhD Smith & Nephew, Inc	Clostridium collagenase impact on zone of stasis stabilization and transition to healthy tissue in burns
3:35 – 3:55 pm	Michael Buckenmeyer, PhD *National Cancer Institute*	Self-assembling extracellular matrix tumor spheroids: A 3D in vitro model of dynamic reciprocity
3:55 – 4:15 pm	Jason Spector, MD, FACS *Weill Cornell Medicine and co-founder and Chief Medical Officer of Fesarius Therapeutics.*	Dermisphere™: Harnessing Microstructural Cues in a Collagen Hydrogel to Optimize Vascular Invasion
4:15 – 4:40 pm	George Hussey, PhD *University of Pittsburgh*	Title: TBD
4:40 – 4:50 pm	Stephen F. Badylak, DVM, PhD, MD *University of Pittsburgh*	Closing Remarks