

8th Symposium on Biologic Scaffolds for Regenerative Medicine

Day 1: April 24, 2014 (Thursday)

6:00 – 8:00 pm Registration Silverado East Foyer

Reception Fairway Deck

Day 2: April 25, 2014 (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

Keynote Address

8:05 – 8:40 am Joseph P. Vacanti, MD
Massachusetts General Hospital Tissue Engineered Organs: More than One Way to the End Zone

8:40 – 8:50 am Discussion

Session I: Whole Organ Engineering with Biologic Scaffold Materials Chair: Gordana Vunjak-Novakovic, PhD *Columbia University*

8:50 – 9:15 am Martin Birchall, MD, FRCS
University College London Breathing Life into Airway Tissue Engineering

9:15 – 9:40 am Laura E. Niklason, MD, PhD
Yale University Scaffolds for Lung and Vascular Regeneration

9:40 – 10:00 am Angela Panoskaltsis-Mortari, PhD,
D (ABMLI)
University of Minnesota Automated Decellularization of Whole Organs for Tissue Engineering

10:00 – 10:20 am Darcy E. Wagner, PhD
University of Vermont Development of Three-Dimensional Scaffolds of Acellular Human and Porcine Lungs for High Throughput Studies

10:20 – 10:40 am Break Fairway Deck

Session II: Bone, Blood Vessels, and Cardiac Reconstruction Chair: Christopher L. Dearth, PhD *University of Pittsburgh*

10:40 – 11:05 am Karen L. Christman, PhD
University of California, San Diego Translation of an Injectable ECM Derived Hydrogel for Treating Myocardial Infarction

11:05 – 11:25 am Lisa J. White, PhD
University of Nottingham Hydrogels from Demineralized and Decellularized Bone Extracellular Matrix for Bone Regeneration

11:25 – 11:45 am Dennis P. Orgill, MD, PhD
Brigham and Women's Hospital Collagen-GAG Scaffolds Provide Stable, Regenerative and Aesthetic results for Facial and Calvarial Defects

11:45 – 12:10 pm Christopher Breuer, MD
The Ohio State University Neotissue Formation in Tissue Engineered Vascular Grafts

12:10 – 12:30 pm **PANEL DISCUSSION All Morning Speakers**

12:30 – 1:45 pm Lunch Fairway Deck

Session III:	Variables that Affect Clinical Performance of Biologic Scaffold Materials	
	Chair: Buddy D. Ratner, PhD <i>University of Washington</i>	
1:45 – 2:10 pm	Michael Hiles, PhD <i>Cook Biotech, Incorporated</i>	Toward a Purer and Better Performing Medical-Grade Extracellular Matrix
2:10 – 2:30 pm	Thomas N. Wight, PhD <i>Benaroya Research Institute</i>	Controlling Inflammation in Tissue Engineering: A Role for Proteoglycans
2:30 – 2:50 pm	Thomas W. Gilbert, PhD <i>ACell, Incorporated</i>	On Processing of Tracheal Extracellular Matrix and the Impacts on Remodeling and Functionality
2:50 – 3:10 pm	Uri Galili, PhD <i>UMass Medical School</i>	The Immune Response to Porcine Implants in Humans
3:10 – 3:35 pm	Break	Fairway Deck
Session IV:	General Surgery Applications	
	Chair: Martin Birchall, MD, FRCS <i>University College London</i>	
3:35 – 3:55 pm	Patrick De Deyne, PhD <i>LifeCell Corporation</i>	Introducing ECM-based Technologies in the Marketplace and in Patient Care: Lessons Learned
3:55 – 4:15 pm	Gregory J. Mancini, MD <i>University of Tennessee Graduate School of Medicine</i>	Biologic Scaffolds in Complex Hernia Repair; Lessons Learned and Problems to Solve
4:15 – 4:35 pm	Jennifer Southgate, PhD <i>University of York</i>	The Pioneering of Natural Biomaterials by Macrophages: Factors Regulating the M2 Phenotype
4:35 – 4:55 pm	Bryan N. Brown, PhD <i>University of Pittsburgh</i>	Reconstruction Of The TMJ Disc Using An ECM Device
4:55 – 5:20 pm	PANEL DISCUSSION All Afternoon Speakers	
5:20 pm	Adjourn	
6:30 – 7:15 pm	Poster Session & Wine Reception	Fairway Deck
7:15 – 8:00 pm	Entertainment	Fairway Deck
	Michael Shermer, PhD <i>Claremont Graduate University and Chapman University</i>	Why People Believe Weird Things

Day 3: April 26, 2014 (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
Keynote Address		
8:05 – 8:40 am	Alberto Mantovani, MD <i>University of Milan</i>	Macrophage Polarization in Tissue Remodeling and Repair
8:40 – 8:50 am	Discussion	
Session V:	Role of the Innate Immune Response in Constructive Remodeling and Regeneration	
	Chair: Bryan N. Brown, PhD <i>University of Pittsburgh</i>	

8:50 – 9:15 am	Nadia Rosenthal, PhD Monash University	Macrophages to the Rescue in Tissue Regeneration
9:15 – 9:35 am	Brian M. Sicari, PhD <i>University of Pittsburgh</i>	Biologic Scaffolds Composed of Extracellular Matrix Induce Distinctive Macrophage Phenotype
9:35 – 10:00 am	Peter F. Slivka, PhD <i>University of Pittsburgh</i>	Characterizing the Innate Immune Response to Biologic Scaffolds: A Macrophage Study
10:00 – 10:30 am	Break	Fairway Deck
Session VI:	Cell-Matrix Interaction and Clinical Applications	
	Chair: Christopher Breuer, MD <i>The Ohio State University</i>	
10:30 – 10:50 am	Buddy D. Ratner, PhD <i>University of Washington</i>	Sphere-Templated Porous Scaffolds and Matrigel Compared: Angiogenesis, Macrophage Invasion and Prostate Cancer Tumor Cells
10:50 – 11:10 am	Gordana Vunjak-Novakovic, PhD <i>Columbia University</i>	Tissue Regeneration by Human Stem Cells on Extracellular Matrix Scaffolds
11:10 – 11:30 am	Alejandro Nieponice, MD, PhD <i>Hospital Universitario Fundación Favaloro</i>	Regenerative Medicine and Esophageal Surgery
11:30 – 11:50 am	Anders Sandin, MD <i>Gothenburg Sweden</i>	Staged Repair of Giant Omphaloceles Using a 6-Ply Biodesign-Mesh
11:50 – 12:15 pm	PANEL DISCUSSION All Morning Speakers	
12:15 – 1:45 pm	Lunch	Fairway Deck
Session VII:	Clinical Applications of Biologic Scaffolds	
	Chair: Karen L. Christman, PhD <i>University of California, San Diego</i>	
1:45 – 2:05 pm	Joaquin Cortiella, MD <i>University of Texas Medical Branch</i>	Engineering The Lung: From A Clinical Perspective
2:05 – 2:25 pm	Pamela A. Moalli, MD, PhD <i>University of Pittsburgh</i>	Exposing the Science of Synthetic Prolapse Meshes: A Foundation for the Development of Regenerative Materials
2:25 – 2:45 pm	Jason A. Spector, MD, FACS <i>Weill Cornell Medical College</i>	The Quest for the Tissue Engineering Grail: Vascularized Tissue Scaffolds
2:45 – 3:05 pm	Rebecca Ann Wachs, PhD <i>RTI Surgical</i>	Comparison of Bacterial Clearance with Contaminated Biologic and Synthetic Mesh Implants in a Rat Abdominal Hernia Model
3:05 – 3:25 pm	Eileen Ingham, BSc, PhD <i>University of Leeds</i>	Low Concentration SDS Decellularised Biological Scaffolds in Cardiovascular Applications
3:25 – 3:45 pm	Adam W. Feinberg, PhD <i>Carnegie Mellon University</i>	Bottom-Up Engineering of the ECM: From Nanofabricated Basement Membranes to 3D Printed Protein Scaffolds
3:45 – 4:10 pm	Break	Fairway Deck
Session VIII:	Key Concepts and Applications of ECM Scaffolds	
	Chair: Thomas N. Wight, PhD <i>Benaroya Research Institute</i>	
4:10 – 4:30 pm	Todd D. Johnson, MS <i>University of California, San Diego</i>	Tissue Sourcing for an Injectable Myocardial Matrix Hydrogel for Cardiac Repair: Human compared to Porcine
4:30 – 4:50 pm	CDR Mark E. Fleming, MC, USN <i>Walter Reed National Military Medical Center</i>	The Use of Urinary Bladder Matrix in the Reconstruction of Traumatic Extremity Injuries

4:50 – 5:15 pm

PANEL DISCUSSION All Afternoon Speakers

5:15 – 5:25 pm

Stephen F. Badylak, DVM, PhD, MD
University of Pittsburgh

Closing Remarks & Adjourn

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