

ASMB Biennial Meeting ♦ November 8-11, 2020
Hyatt Regency St. Louis Arch
St. Louis, MO

**“The Matrix in Focus:
Matrix, Cells, and Interactions in Health, Disease, Aging, and Regeneration”**

Meeting Chair: Jeffrey Miner, *Washington University in St. Louis*

Sunday, November 8th

9:00am - 6:00pm Registration

Location: Grand Foyer

10:00am - 12:00pm Guest Symposia I & II

Location: Grand ABC, Grand D

**Guest Symposium I: The Eyes Have It:
Glaucoma and the Influence of ECM**

**Guest Symposium II: The Histochemical
Society: GIS for ECM: Mapping Quantitative
Data into an Anatomical Context**

10:00am - 12:00pm Poster Flash Talks

Location: Grand E

Highly recognized abstracts that were not selected for a concurrent session will be presented in this fast-paced forum.

12:00-6:00pm Exhibits

Location: Grand Foyer

12:00-1:00pm Break – Lunch on Your Own

12:00-1:00pm Networking Brown Bag

Bring your own lunch and join an informal discussion group!

1:00-2:30pm Concurrent Sessions

Concurrent 1: Fibroblasts & ECM Remodeling

Cardiac Fibroblasts: Purveyors of Ventricular Stiffness, Amy Bradshaw, *Medical University of South Carolina*

Plus 4 selected talks from abstracts

Concurrent 2: Game of Bones: ECM & Skeletal Biology

Global Knockout Mouse Models Reveal Cooperative Effects of Thrombospondins 1 and 2 on Bone Cell Physiology, Andrea Alford, *University of Michigan*
Plus 4 selected talks from abstracts

Concurrent 3: Basement Membranes and Disease

Therapeutic Implications of Mechanistic Heterogeneity in Patients with COL4A1 and COL4A2 Mutations, Douglas Gould, *University of California, San Francisco*

Plus 4 selected talks from abstracts

2:30-2:45pm Break

Location: Grand Foyer

2:45-4:15pm Concurrent Sessions

Special Interest Session 1 - TBA

Concurrent 4: Elastic Fibers

Elastic Fibers and Arterial Mechanics, Jessica Wagenseil, *Washington University in St. Louis*

Plus 4 selected talks from abstracts

Concurrent 5: Mechanisms of Fibrosis

Cellular and Molecular Regulation of Matrix Protein Production, Valerie Horsley, *Yale University*

Plus 4 selected talks from abstracts

4:15-4:30pm Break

Location: Grand Foyer

4:30-6:00pm President's Welcome & Award Talks

Location: Grand D-F

Junior Investigator Awardee, Iozzo Award Winner, Senior Investigator Awardee

6:00-7:00pm Welcome Reception

Location: Grand Foyer

7:00-7:15pm Founders Award Talk

Location: Grand D-F

7:15-8:00pm Keynote Lecture

Location: Grand D-F

Creating a State Space of Human Stem Cell Signatures, Rick Horwitz, *Allen Institute for Cell Science*

Injectable ECM Hydrogels for Regenerative Engineering, Karen L. Christman, *University of California, San Diego*

10:00-10:30am Coffee Break

Location: Grand Foyer

10:30-12:00pm Plenary II: Let's Not Forget the Microenvironment

Human Kidney Organoids for Unravelling the Drivers of Early Kidney Development and Disease, Sue Kimber, *University of Manchester*

Multiple Roles of Tenascin-C in Cancer Progression, Gertraud Orend, *INSERM, Strasbourg*

Tumor ECM Remodeling to Facilitate Metastasis, Greg Longmore, *Washington University in St. Louis*

Monday, November 9th

7:15-8:30am Career Mentoring Breakfast

Discussion begins at 7:30am

Location: Mills Room TBD

7:30am-5:30pm Registration and Exhibits

Location: Grand Foyer

7:30-8:30am Breakfast

Location: Grand Foyer

8:30-10:00am Plenary I: Stem Cells, Organogenesis, and Regeneration

Skeletal Stem Cells in the Growth Plate: Deeply Embedded in the Niche, Noriaki Ono, *University of Michigan*

Adventures in Asymmetry: Transcriptional Control and ECM Interactions During Gut Morphogenesis, Natasza Kurpios, *Cornell University (invited)*

12:00-12:30pm ASMB Business Meeting

12:30-2:30pm Poster Session I

Location: Grand FGH and Park View

Odd Number Boards Present

2:30-4:00pm

Concurrent Sessions

Concurrent 6: Matricellular Proteins

At the Nexus of Contraction and Matrix Synthesis: Periostin as a Modulator of Soft Tissue Repair, Douglas Hamilton, *University of Western Ontario*

Plus 4 selected talks from abstracts

Concurrent 7: Genetics of Connective Tissue Disorders

Genetic Variants, Aortic Dissection, and Receptor-Matrix Interactions, Dianna M. Milewicz, *The University of Texas Health*

Science Center at Houston, McGovern Medical School

Plus 4 selected talks from abstracts

Concurrent 8: Mechanobiology

Biochemical and Biophysical Regulation of Integrin-mediated Adhesion Initiation to Fibronectin, Nico Strohmeyer, *ETH Zurich*

Plus 4 selected talks from abstracts

4:00-4:30pm Coffee Break

Location: Grand Foyer

4:30-6:00pm Concurrent Sessions

Concurrent 9: Therapeutic Targeting of Matrix

Talk Title TBA, Jacqueline Hecht, *The University of Texas Health Science Center at Houston, McGovern Medical School*

Plus 4 selected talks from abstracts

Concurrent 10: Cardiovascular Biology & ECM Remodeling

Role of Disintegrin and Metalloproteinases (ADAMs) in Fibroblast Function and Fibrosis in Heart Disease, Zamaneh Kassiri, *University of Alberta*

Plus 4 selected talks from abstracts

SIS 2
TBA

Tuesday, November 10th

7:15-8:30am Women Mentoring Women Breakfast Discussion begins at 7:30am

Location: Mills Room TBD

7:30am-5:30pm Registration and Exhibits

Location: Grand Foyer

7:30-8:30am Breakfast

Location: Grand Foyer

8:30-9:30am Plenary III:
Matrix, Infection, & Metabolism

Anne Woods Memorial: Joanne Murphy-Ullrich, *ASMB Past-President*

Syndecan Interactions in Innate Immunity and Gram+ Infections, Pyong Woo Park, *Boston Children's Hospital and Harvard Medical School*

Cell-mediated Collagen Degradation in Homeostasis and Disease, Kamran Atabai, *University of California, San Francisco*

9:30-10:15am ISMB Distinguished Investigator Award Presentation

Location: Grand D-F

All Matrix Is Local: Why Cells Make What They Do, Robert Mecham, *Washington University School of Medicine*

10:15-10:30am Coffee Break

Location: Grand Foyer

10:30-12:00pm Plenary IV: Little Guys, Big Questions- Matrix in Model Organisms

Location: Grand D-F

Basement Membrane Dynamics in Homeostasis and Repair, Andrea Page-McCaw, *Vanderbilt University*

A Basement Membrane Toolkit in the Worm: Formation, Growth, and Moving Matrix Components Revealed, David Sherwood, *Duke University*

Lizard Tail Regeneration As an Instructive Model of Enhanced Healing Capabilities in an Adult Amniote, Thomas Lozito, *University of Southern California Keck School of Medicine*

12:00-2:00pm Poster Session II

Location: Grand FGH and Park View

Even Number Boards Present

2:00-3:30pm Concurrent Sessions

Concurrent 11: ECM Changes with Aging

Catching Pressure: Collagen and Glaucoma,
Ian Sigal, *University of Pittsburgh School of
Medicine*

Plus 4 selected talks from abstracts

**Concurrent 12: Structural Aspects of ECM,
Receptors, & Adhesion**

**Structural Mechanism of Laminin
Recognition by Integrins,** Junichi Takagi,
Osaka University

Plus 4 selected talks from abstracts

**Guest Symposium III: Tissue Engineering
International and Regenerative Medicine
Society (TERMIS) Americas**

3:30-4:00pm Coffee Break

Location: Grand Foyer

4:00-5:30pm Concurrent Sessions

Concurrent 13: Proteoglycans & Glycobiology

**Cell Surface Hyaluronan Degradation and
Cell Behavior,** Yu Yamaguchi, *Scripps Institute*

Plus 4 selected talks from abstracts

**Concurrent 14: Home is Where the Matrix is:
Stem Cell Niches**

**Controlling the Cytoskeleton to Build a Better
Pancreas,** Jeffrey Millman, *Washington
University in St. Louis*

Plus 4 selected talks from abstracts

Concurrent 15: Cell Migration through ECM

**Live Imaging of the Inflammatory Response
and Its Consequences in Wound Repair and
Cancer,** Paul Martin, *University of Bristol*

Plus 4 selected talks from abstracts

7:00-11:00pm Social Event – City Museum,
750 North 16th Street
(All are invited!)

Wednesday, November 11th

8:00am-12:00pm Registration

Location: Grand Foyer

8:00am-11:00am Exhibits

Location: Grand Foyer

7:30-8:30am Breakfast

Location: Grand Foyer

8:30-9:30am New: Iozzo Award
Presentations

3-6 awardee talks from selected abstracts

9:30-9:45am Break

9:45-11:15am Plenary V:
Mechanotransduction: Biology Meets
Engineering

**Three-dimensional Tunable Collagen-
fibronectin Scaffolds for Cancer Research,**
Delphine Gourdon, *University of Ottawa*

**Myofibroblast Matrix – Memory, Mechanics,
and Mechanisms,** Boris Hinz, *University of
Toronto*

Matrix Mechanics in Cancer Progression,
Cynthia Reinhart-King, *Vanderbilt University*

Announcement of Iozzo Trainee Awards

11:15-11:30am Coffee Break

Location: Grand Foyer

11:30am -1:00pm Concurrent Sessions

Concurrent 16: Collagens & Friends

Quantifying 3D Collagen-fiber Organization,
Kimani Toussaint, *Brown University*

Plus 4 selected talks from abstracts

**Concurrent 17: Matrix Proteases: Chop ‘til
They Drop**

**Membrane-Anchored Matrix
Metalloproteinases & the Pathophysiologic
Remodeling of the Extracellular Matrix,**
Stephen Weiss, *University of Michigan*

Plus 4 selected talks from abstracts

Special Interest Session 3

TBA