

2002 ASMB Meeting

Houston

## PROGRAM

### THE AMERICAN SOCIETY FOR MATRIX BIOLOGY NATIONAL MEETING

November 6 – 9, 2002

#### WEDNESDAY AFTERNOON (12:00 P.M. TO 5:00 PM)

*Special Interest Group Meetings*

#### WEDNESDAY EVENING, NOVEMBER 6<sup>TH</sup>

##### Keynote Address:

Speaker: PHILIP BEACHY

*“Hedgehog signaling in development and disease”*

Reception following opening session at JW Marriott Hotel

#### THURSDAY MORNING, NOVEMBER 7<sup>TH</sup> PLENARY SESSION

##### Assembly and Remodeling

Speaker: ERHARD HONENESTER

*“Collagen NCI domains in bone mineralization and tumor angiogenesis”*

Speaker: ZENA WERB

*“Matrix metalloproteinases: positive and negative regulators of the extracellular matrix”*

Speaker: KEVIN P. CAMPBELL

*“Role of dystroglycan in matrix assembly”*

Speaker: JOUNI UITTO

*“Perturbed assembly of the cutaneous basement membrane zone in heritable skin diseases: Genotype/Phenotype correlations”*

Speaker: CRAIG C. GARNER

*“Quantal assembly of CNS glutamatergic synapses”*

#### THURSDAY AFTERNOON, NOVEMBER 7<sup>TH</sup> BREAKOUT-SESSIONS

##### Structural Biology of ECM Components

Speaker: TIMOTHY SPRINGER

Speaker: IAIN CAMPBELL

*“Structure and interactions of modular matrix proteins.”*

Speaker: WOLFRAM BODE

*“Structure-function relationship of matrix metalloproteinases”*

## ECM, Infection and Host Defense

Speaker: RALPH ISBERG

*“Integrin-mediated uptake of an enteric pathogen: analysis of Rac1 and Arf6 modeling of the cytoskeleton”*

Speaker: DAVID T. DENHARDT

*“The multiple functions of osteopontin”*

Speaker: CHRISTOPHER OVERALL

*“Processing functions of MMPs: Chemokine cleavage regulates HIV, inflammatory and immune responses”*

## Cell Adhesion Mechanisms

Speaker: IVAN STAMENKOVIC

*“Mechanisms of cell surface anchoring of MMPs”*

Speaker: REINHARD FASSLER

*“Role of cell adhesion for differentiation and morphogenesis”*

Speaker: JOSHUA SANES

*“Adhesive interactions in the synaptic cleft”*

## FRIDAY MORNING, NOVEMBER 8<sup>TH</sup> PLENARY SESSION

### ECM and Signaling

Speaker: ERNESTINA SCHIAPANI

*“The role of HIF-1 $\alpha$  and VHL in endochondral bone development”*

Speaker: FILIPPO G. GIANCOTTI

*“Integrin signaling and tumor progression”*

Speaker: ERKKI ROUSLAHTI

*“Molecular markers of tumor blood vessels and lymphatics”*

Speaker: ERIC J. BROWN

*“Cytoskeleton and signal transduction in adherent phagocytes”*

Speaker: JOAN BRUGGE

*“Morphogenesis and oncogenesis in 3D mammary epithelial cultures”*

## FRIDAY AFTERNOON, NOVEMBER 8<sup>TH</sup> BREAK-OUT SESSIONS

### ECM and Vascular Biology

Speaker: M. LUISA IRUELA-ARISPE

*“Modulation of the angiogenic response by selective cleavage of cell surface proteoglycans”*

Speaker: ALAN C. RAPRAEGER

*“Tissue-specific heparan sulfates regulate receptor recognition of FGFs”*

Speaker: DAVID CHERESH

*“Role of integrins and growth factor receptors in angiogenesis”*

## ECM and Skeletal Development

Speaker: MATTHEW L. WARMAN

*“Regulation of skeletal homeostasis by secreted growth factors”*

Speaker: STEFAN MUNDLOS

*“The role of tyrosine kinase receptor Ror2 in skeletal development”*

Speaker: ANDREW P. MCMAHON

*“Hedgehog signaling in the co-ordination of skeletal development”*

## Degenerative and Chronic Diseases Involving ECM

Speaker: DANIEL B. RIFKIN

*“Control of TGF- $\beta$  formation by the ECM; Mechanisms and consequences in normal and pathological development”*

Speaker: HARRY DIETZ

*“Regulatory and morphogenetic roles of fibrillin-1: Not just another pretty structural matrix element”*

Speaker: RIKARD HOLMDAHL

*“Genetic control of chronic arthritis”*

## SATURDAY MORNING, NOVEMBER 9<sup>TH</sup>

### Migration and Motility

Speaker: PETER FRIEDL

*“Diversity and adaptation: the biology of cell migration within extracellular matrix”*

Speaker: RUTH LEHMANN

*“Attractant and repellent cues guide migrating primordial germ cells in drosophila”*

Speaker: DOUGLAS LAUFFENBURGER

*“TBA”*

## SATURDAY AFTERNOON, NOVEMBER 9<sup>TH</sup>

### Cell Differentiation and Cell Fate

Speaker: FRANCESCO RAMIREZ

*“Insoluble matrix influence on cell differentiation”*

Speaker: CHARLES P. EMERSON

*“Role of extracellular sulfatases in HSP-mediated signaling and cell fate specification”*

Speaker: JAMES KRAMER

*“Matrix molecule functions in C. elegans development”*

**SPECIAL INTEREST SESSIONS**  
**(Organized by Society members)**  
**Wednesday, November 6<sup>th</sup>**

**Session 1: 12:00-2:30 p.m. (J.W. Marriott Hotel)**

<p><b>MATRILINS AND RELATED MATRIX AND CELL ADHESION MOLECULES</b></p> <p>DISCUSSION LEADER: QIAN CHEN</p> <p>Introduction QIAN CHEN, Penn State University <i>"Matrilin filamentous networks: transducers of mechanical signals in cartilage"</i></p> <p>MICHAEL BRIGGS, University of Manchester, UK <i>"Matrilins and human bone diseases; genotypes and phenotypes"</i></p> <p>JIANN-JIU WU, University of Washington <i>"Assembly and properties of matrilin-3 in cartilage"</i></p> <p>SABINE FRANK, University of Basel, Switzerland <i>"Characterization of novel matrilin isoforms"</i></p> <p>ATTILA ASZODI, Max-Planck Institute for Biochemistry, Germany <i>"Analyses of the function of matrilins in knockout mice"</i></p> <p>RICHARD MAYNE, University of Alabama at Birmingham <i>"Vitrin and cochlin: vWF A domain containing molecules related to matrilins"</i></p>	<p><b>FROM DISCOVERY TO APPLICATION: PONDERING THE INTERFACE BETWEEN RESEARCH AND CLINICAL CARE</b></p> <p>DISCUSSION LEADER: SHARON TERRY, Coalition of Heritable Disorders of Connective Tissue</p> <p>PETER BYERS, University of Washington <i>"Implications of molecular diagnosis for management and patient care in osteogenesis imperfecta and forms of Ehlers-Danlos syndrome"</i></p> <p>DIANA MILEWICZ, University of Texas Medical School, Houston <i>"Update on the Genetic Basis of Marfan syndrome and Related Disorders"</i></p> <p>BRENDAN LEE, Baylor College of Medicine <i>"Transcriptional dysregulation of matrix components: translational and clinical studies in nail patella syndrome and cleidocranial dysplasia"</i></p> <p>BETH KOZEL, Washington University School of Medicine <i>"Domains in Tropoelastin Important for Association with microfibrils and their Relationship to Human Disease"</i></p> <p>JOUNI UITTO, Jefferson University School of Medicine <i>"Clinical Implications of Basic Research on Epidermolysis Bullosa"</i></p>	<p><b>PROTEOMIC APPROACHES TO DISCOVER COMPONENTS AND MECHANISMS OF MATRIX RECEPTOR SIGNALING COMPLEXES AND PATHWAYS</b></p> <p>DISCUSSION LEADER: WILLIAM FRAZIER, Washington University School of Medicine <i>"What a tangled web..."</i></p> <p>HEBA BARAZI, National Institutes of Health, <i>"Proteins associating with <math>\alpha 3 \beta 1</math> integrin".</i></p> <p>RENATA PASQUALINI, M.D. Anderson, Houston, TX. <i>"Phage display approaches to discover receptor interacting sequences."</i></p> <p>JOHN McDONALD, Washington University School of Medicine <i>"Identification of proteins interacting with integrin-CD47 complexes"</i></p> <p>Additional SHORT TALKS to be selected from meeting attendees. Please contact the discussion leader at: Frazier@biochem.wustl.edu</p>
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## Session 2: 2:30-5:00 p.m. (J.W. Marriott Hotel)

<p><b>MECHANISMS OF EXTRACELLULAR MATRIX REGULATION OF GROWTH FACTOR ACTIVITY</b></p> <p>DISCUSSION LEADERS: SARAH E. DUNSMORE DANIEL B. RIFKIN</p> <p>Introduction DANIEL B. RIFKIN, New York University <i>"Latent TGF-<math>\beta</math> as a sensor: coordinating cell behavior and the extracellular matrix"</i></p> <p>THOMAS MARIANI, Brigham and Women's Hospital <i>"Functional genomics reveals new roles for fibroblast growth factors in extracellular matrix driven morphogenesis"</i></p> <p>JORMA KESKI-OJA, University of Helsinki <i>"Latent TGF-<math>\beta</math> binding proteins in the targeting of TGF-<math>\beta</math> activity"</i></p> <p>FELIX CHUA, Centre for Respiratory Research at University College London <i>"The Liberator: neutrophil elastase modulates TGF-<math>\beta</math> bioactivity in pulmonary fibrosis"</i></p> <p>JOANNE MURPHY-ULLRICH, University of Alabama at Birmingham <i>"Regulation of TGF-<math>\beta</math> activation by thrombospondin: mechanisms and implications for fibrotic disease"</i></p> <p>RENATO IOZZO, Thomas Jefferson University <i>"The Odd Couple: decorin and EGF bind in close quarters on the EGF receptor and induce diverse signaling"</i></p>	<p><b>MATRICELLULAR PROTEINS: EXTRACELLULAR MODULATORS OF CELL FUNCTION</b></p> <p>DISCUSSION LEADER: PAUL BORNSTEIN</p> <p>Introduction PAUL BORNSTEIN, University of Washington</p> <p>DAVID D. ROBERTS, National Institutes of Health <i>"Two proteins with many receptors: understanding responses of cells to thrombospondin-1 and thrombospondin-2"</i></p> <p>THEMIS KYRIAKIDES, University of Washington <i>"Modulation of inflammation, matrix deposition, and angiogenesis by matricellular proteins in healing wounds"</i></p> <p>E. HELENE SAGE, The Hope Heart Institute <i>"Collagen, cataracts, and corpulence: fundamental responses in mice lacking the matricellular protein, SPARC"</i></p> <p>CECILIA GIACHELLI, University of Washington <i>"Regulation of matrix mineralization: common mechanisms involved in bone and vascular calcification"</i></p> <p>LESTER F. LAU, University of Illinois, Chicago <i>"CCN proteins in vascular development and function"</i></p>	<p><b>ELASTIC FIBER PROTEINS: STRUCTURE AND ASSEMBLY</b></p> <p>DISCUSSION LEADER: ELAINE C. DAVIS</p> <p>Introduction ELAINE C. DAVIS, McGill University, Montreal</p> <p>HIROMI YANAGISAWA, University of Texas Southwestern Medical Center <i>"Fibulin-5 in elastic fiber development and vascular disease"</i></p> <p>DIETER P. REINHARDT, University of Luebeck, Germany <i>"Potential roles of proteoglycans in microfibrils and the assembly of fibrillins"</i></p> <p>THOMAS N. WIGHT, The Hope Heart Institute, Seattle, WA <i>"The importance of proteoglycans in elastic fiber assembly"</i></p> <p>FRED W. KEELEY, The Hospital for Sick Children, Toronto, <i>"Sequence and self-assembly properties of model elastin polypeptides"</i></p> <p>ADDITIONAL TALK(S) – SPEAKER(S) TO BE ANNOUNCED <i>"Late breaking data"</i></p>
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