POSTER SET-UP DETAILS:

Poster Set-up: Monday, October 23
(beginning at 7:30 am)

Poster Removal: Wednesday, October 25
(beginning at 12:30 pm)

All posters will remain on display throughout the entire meeting. The poster number is the poster board number.

POSTER SESSIONS:

Session 1: Monday, October 23
12:00-2:00pm
ODD number posters present

Session 2: Tuesday, October 24
12:00-2:00pm
EVEN number posters present

The poster number determines your session presentation day (ODD/EVEN), not the abstract number. Please affix your poster to the board which corresponds with your poster number.

Basement Membranes

Poster 1 - Abstract 071
Cryo-EM Reveals the Molecular Basis of Laminin Polymerization and LN-lamininopathies
Arkadiusz W. Kulczyk1*, Karen K. McKee2, Ximo Zhang3, Iwona Bizukojc3,4, Ying Q. Yu3, and Peter D. Yurchenco2
1Institute for Quantitative Biomedicine, Department of Biochemistry and Microbiology, Rutgers University, Piscataway, NJ; 2Department of Pathology and Laboratory Medicine, Rutgers University - Robert Wood Johnson Medical School, Piscataway, NJ; 3Waters Corporation, Milford, MA; 4Cryo-EMcorp, Bridgewater, NJ

Poster 2 - Abstract 126
Laminin α5_CD239_Spectrin Is a Compensatory Linkage between Basement Membrane and Cytoskeleton in Skeletal Muscle Fibers
Yamato Kikkawa1, Masumi Matsunuma1, Ryuji Kan1, Yuji Yamada1, Keisuke Hamada1, Motoyoshi Nomizu1, Yoichi Negishi2, Shushi Nagamori3, Tatsushi Toda4, Minoru Tanaka5, Motoi Kanagawa6
1Department of Clinical Biochemistry, Tokyo University of Pharmacy and Life Sciences, Tokyo, Japan; 2Department of Drug Delivery and Molecular Biopharmaceutics, Tokyo University of Pharmacy and Life Sciences, Tokyo, Japan; 3Department of Laboratory Medicine, The Jikei University School of Medicine, Tokyo, Japan; 4Department of Neurology, Graduate School of Medicine, The University of Tokyo, Tokyo, Japan; 5Department of Regenerative Medicine, Research Institute, National Center for Global Health and Medicine, Tokyo, Japan; 6Department of Cell Biology and Molecular Medicine, Ehime University Graduate School of Medicine, Toon, Ehime, Japan

Poster 3 - Abstract 127
Factors Involved in the Biosynthesis of Type IV Collagen (α1α1α2) in CHO cells
Kazunori Mizuno and Tomonori Ueno
Nippi Research Institute of Biomatrix, Ibaraki, Japan

Poster 4 - Abstract 128
Strategy for Making Functional Collagen Fragments: A Window into Collagen Biology and Therapy
Sergei P. Boudko1,2,3, Elizabeth H. Konopka4, Woojin Kim4, Yuki Taga5, Kazunori Mizuno5, Timothy A. Springer6, Billy G. Hudson1,2,3,7,10, Terence I. Moy8, and Fu-Yang Lin4
1Department of Medicine, Division of Nephrology and Hypertension, Vanderbilt University Medical Center, Nashville, TN; 2Center for Matrix Biology, Vanderbilt University Medical Center, Nashville, TN; 3Department of Biochemistry, Vanderbilt University, Nashville, TN; 4Morphic Therapeutics, Inc., Waltham, MA; 5Nippi Research Institute of Biomatrix, Toride, Ibaraki, Japan; 6Department of Biological Chemistry and Molecular Pharmacology, Program in Cellular and Molecular Medicine, Boston Children's Hospital, Harvard Medical School, Boston, MA; 7Department of Pathology, Microbiology, and Immunology, Vanderbilt University Medical Center, Nashville, TN; 8Department of Cell and Developmental Biology, Vanderbilt University
**Poster 5 - Abstract 129**
Compression Regulates Molecular Permeability of the Glomerular Basement Membrane
Nicholas Ferrell and Dan Wang,
*Department of Internal Medicine, Division of Nephrology, Ohio State University Wexner Medical Center, Columbus, OH*

**Poster 6 - Abstract 130**
Using Zebrafish as a Novel Model for COL4A1-associated Cerebral Small Vessel Disease
Daisy Flatman, Siobhan Crilly, Richard Naylor, Emmanuel Pintaux, Stuart Allan, Rachel Lennon, and Paul Kasher
*Division of Neuroscience, University of Manchester, Manchester, United Kingdom*

**Poster 7 - Abstract 131**
Determining the Collagen IV Biosynthetic Interactome and the Differential Roles of Collagen Modifying Enzymes
Yoshihiro Ishikawa1, Seán Gorman1, Carlie Abdala1, Yuki Taga2, Mohamed Rafi3, Kazunori Mizuno2, Cassandre Labelle-Dumais1, Roberto M. Vanacore3, and Douglas B. Gould1,4
1Department of Qophthology, University of California San Francisco, School of Medicine, CA; 2Nippi Research Institute of Biomatrix, Ibaraki, Japan; 3Division of Nephrology and Hypertension, Vanderbilt University Medical Center, Nashville, TN; 4Department Anatomy, Cardiovascular Research Institute, Bakar Aging Research Institute, and Institute for Human Genetics, University of California, San Francisco, CA

**Poster 8 - Abstract 132**
The Laminin β2 Chain Regulates the Selective Routing of Retinal Ganglion Cell Axons
Reyna I. Martínez-De Luna1, Madeline Turo1, and Adam Robinson1
1Department of Ophthalmology & Visual Sciences, Upstate Medical University, Syracuse, NY; 2Pennsylvania College of Optometry - Salus University

**Poster 9 - Abstract 133**
Proteomics Analysis of the Pkd1nl/nl Mouse at P28 Identifies Novel Insights into Matrix Pathology Associated with ADPKD
Richard W. Naylor1, Ambra Pozzi2, and Rachel Lennon1
1University of Manchester, Manchester, United Kingdom; 2Vanderbilt University, Nashville, TN

**Cancer Pathobiology – Poster Session**

**Poster 10 - Abstract 015**
Shuhui Chen, August Estabrook, and Erika Leonard
*Vector Labs, Newark, CA*

**Poster 11 - Abstract 020**
Modeling the Influence of Stroma in Ovarian Cancer Drug Resistance in a Microvascularized Multiniche Tumor-On-a-Chip
Simona Plesselova1, and Pilar de la Puente1,2
1Cancer Biology and Immunotherapies Group, Sanford Research, Sioux Falls, SD; 2Department of Obstetrics and Gynecology, University of South Dakota Sanford School of Medicine, Sioux Falls, SD

**Poster 12 - Abstract 029**
Fluorescence Resonance Energy Transfer Based Molecular Beacon Probe for *in situ* Hybridization
Narantsog Choijookhuu1, Yasuaki Shibata2, Takumi Ishizuka1, Yan Xu3, Takehiko Koji2, and Yoshitaka Hishikawa1
1Department of Anatomy, Histochemistry and Cell Biology, Faculty of Medicine, University of Miyazaki, Kiyotake, Miyazaki, Japan; 2Department of Histology and Cell Biology, Nagasaki University Graduate School of Biomedical Sciences, Nagasaki, Japan; 3Division of Chemistry, Department of Medical Sciences, Faculty of Medicine, University of Miyazaki, Kiyotake, Miyazaki, Japan
Poster 13 - Abstract 134
PEGylated Functional Upstream Domain (PEG-FUD): An Anti-cancer Therapy for Breast Cancer
Metti K. Gari1, Hye Jin Lee2, David R. Inman1, Brian M. Burkel1, Glen S. Kwon2, and Suzanne M. Ponik1
1Department of Cell and Regenerative Biology, University of Wisconsin - Madison, Madison, WI; 2Pharmaceutical Sciences Division, School of Pharmacy, University of Wisconsin - Madison, Madison, WI

Poster 14 - Abstract 135
Effects of Biological Sex on Tumor-Mediated Muscle Dysfunction and Wasting
Traci L. Parry, Louisa Tichy, Jason T. Brantley, Zachary Swan, and George Blackburn
Department of Kinesiology, University of North Carolina Greensboro, Greensboro, NC

Poster 15 - Abstract 136
Tumor Bearing Results in Metabolic Dysfunction and Skeletal Muscle Wasting in Apc(min/+) Mice
Louisa Tichy and Traci L. Parry
Department of Kinesiology, The University of North Carolina at Greensboro, Greensboro, NC

Poster 16 - Abstract 137
Identification of the Roles of ADAMTS12 Secreted by Stellate Cells during Tumor Progression in Cholangiocarcinoma
Esther Arpigny1, Fátima Manzano Núñez2, Vincent Legagneux3, Nathalie Théret3, Frédéric Lemaigre2, and Alain Colige1
1Laboratory of Connective Tissues Biology, GIGA-Cancer, University of Liège, Liège, Belgium; 2Liver and Pancreas Differentiation Unit, de Duve Institute, Université Catholique de Louvain, Brussels, Belgium; 3INSERM, EHESP, Irset (Institut de Recherche en santé, Environnement et Travail), University of Rennes, France

Poster 17 - Abstract 138
Dissecting the Role of miR-146a in Metabolic Dysfunction-Associated Steatohepatitis and Hepatocellular Carcinoma
Chad VanSant-Webb, Morgan Nelson, Rich Smith, Ryan O’Connell, and Kimberley Evason
Department of Pathology, Huntsman Cancer Institute, University of Utah, Salt Lake City, UT

Poster 18 - Abstract 139
Gp78 Expression Activates Breast Cancer Tumor Growth Through Immunogenetic, Lipogenetic, and Endoplasmic Reticulum Stress Relief Pathways
Joy R. Winfield, Myles Ellis, and Kevin L. Gardner
Department of Pathology and Cell Biology, Columbia University, New York, NY

Poster 19 - Abstract 140
P120 Expression Mitigates Kaiso Expression-Associated Survival Risk in Breast Cancer Patients of African Ancestry
Joy R. Winfield, Myles Ellis, and Kevin L. Gardner
Department of Pathology and Cell Biology, Columbia University, New York, NY

Poster 20 - Abstract 141
Inhibiting Melanoma-Associated Axonogenesis Using Semaphorin-3F
Amara Nnawuchi, Annika Kamath, Abdulrahman Nakshabandi, Yao Gao, and Diane R. Bielenberg
Vascular Biology Program, Boston Children’s Hospital, Boston, MA

Poster 21 - Abstract 142
Exploring the Role of Obesity-Induced Extracellular Matrix Remodeling in the Progression of Breast Cancer
Malika A. Sekhri, Stevi Johnson-Murguia, Queen M. Pierre, Michael Kinter, Rebecca L. Scalzo, Bethany N. Hannafon, and Elizabeth A. Wellberg
Department of Pathology, University of Oklahoma Health Science Center, Oklahoma City, OK
**Poster 22 - Abstract 143**

**Novel Multianalyte Biomarker Panel for Early Detection of Ovarian Cancer Leveraging the Matrisome**

Amrita Bhagia$^{1,2}$, Megan Jorgensen$^{1,2}$, Maria Bell$^{3}$, and Pilar de la Puente$^{1,3,4}$

$^1$Cancer Biology and Immunotherapies, Sanford Research, Sioux Falls, SD; $^2$MD PhD Program, University of South Dakota Sanford School of Medicine, Sioux Falls, SD; $^3$Department of Obstetrics and Gynecology, University of South Dakota Sanford School of Medicine, Sioux Falls, SD; $^4$Department of Surgery, University of South Dakota Sanford School of Medicine, Sioux Falls, SD

**Poster 23 - Abstract 144**

**Unraveling the Molecular Basis of SNED1-Mediated Cell Adhesion**

Dharma Pally$^1$, Nandini Kapoor$^1$, and Alexandra Naba$^{1,2}$

$^1$Department of Physiology and Biophysics, University of Illinois Chicago, Chicago, IL; $^2$University of Illinois Cancer Center, Chicago, IL

**Poster 24 - Abstract 145**

**TIMP2 as an Anti-tumor Homeostatic Regulator in a Lewis Lung Carcinoma Mouse Model**

Yueqin Liu, David Peeney, Sarvesh Kumar, Sandra M. Jensen, Alex Kuznetsov, Dillion Richardson, Sadeechya Gurung, Carolyn Lazaroff, Sasha Coates-Park, Joshua Rich, and William Stetler-Stevenson

Laboratory of Pathology, National Cancer Institute, National Institutes of Health, Bethesda, MD

**Poster 25 - Abstract 146**

**Integrin α3β1 Regulates Mmp9 mRNA Alternative Polyadenylation in Skin Tumors and Wounds**

Giesse Albeche Duarte$^1$, Whitney Longmate$^2$, Wu, Lei Wu$^2$, and C. Michael DiPersio$^{1,2}$

$^1$Department of Molecular and Cellular Physiology, Albany Medical College, Albany, NY; $^2$Department of Surgery, Albany Medical College, Albany, NY

**Poster 26 - Abstract 147**

**β-catenin Negatively Influences B Cell Recruitment to the β-catenin-mutated Hepatocellular Carcinoma Microenvironment Correlating to Patient Outcomes**

Brandon M. Lehrich$^1$, Junyan Tao$^1$, Evan R. Delgado$^1$, Aatur D. Singhi$^{1,2}$, Silvia Liu$^{1,2}$, and Satdarshan P. Monga$^{1,2,3}$

$^1$Department of Pathology, University of Pittsburgh, School of Medicine and University of Pittsburgh Medical Center, Pittsburgh, PA; $^2$Pittsburgh Liver Research Center, University of Pittsburgh, School of Medicine and University of Pittsburgh Medical Center, Pittsburgh, PA; $^3$Department of Medicine, University of Pittsburgh, School of Medicine and University of Pittsburgh Medical Center, Pittsburgh, PA

**Poster 27 - Abstract 148**

**Evidence that Tumor/Fibroblast Crosstalk Potentiates ESR1 Mutant BC Cell Malignancy**

Luca Gelsomino$^{1,2}$, Amanda Caruso$^1$, Rocco Malivindi$^1$, Adele Elisabetta Leonetti$^1$, Emine Tasan$^1$, Giuseppina Daniela Naimo$^1$, Ines Barone$^{1,2}$, Cinzia Giordano$^{1,2}$, Daniela Bonofiglio$^{1,2}$, Loredana Mauro$^1$, Guowei Gu$^3$, Suzanne A.W. Fuqua$^3$, Stefania Catalano$^{1,2}$, and Sebastiano Andò$^{1,2}$

$^1$Department of Pharmacy and Health and Nutritional Sciences, University of Calabria, Rende, Italy; $^2$Centro Sanitario, University of Calabria, Via P. Bucci, Rende, Italy; $^3$Lester & Sue Smith Breast Center, Baylor College of Medicine, Houston, TX

**Poster 28 - Abstract 149**

**ARF6 Dictates the Size and Quantity of Small and Intermediate-Large Extracellular Vesicles in Melanoma**

Emre Dal$^{1,3}$, Yinshen Wee$^{2,3}$, Emily C. Wilson$^{2,3}$, Coulson P. Rich$^{2,3}$, Aaron Rogers$^{2,3}$, Joshua Tay$^{2,3}$, Sheri L. Holmen$^{2,4}$, Roger K. Wolff$^{2,3}$, Allie H. Grossmann$^{2,3}$

$^1$Department of Oncological Sciences, University of Utah, Salt Lake City, UT; $^2$Department of Pathology, University of Utah, Salt Lake City, UT; $^3$Huntsman Cancer Institute, Salt Lake City, UT; $^4$Department of Surgery, University of Utah, Salt Lake City, UT
**Poster 29 - Abstract 150**

**The Small GTPase ADP-Ribosylation Factor 6 (ARF6) Alters the Intratumoral Metabolic Landscape**

Joshua K.H. Tay1,2, Kyle Dunlap3, Emily C. Wilson1,2, Coulson P. Rich1,2, Aaron Rogers1,2, Junhua Wang1,2, Sheri Holmen2,4, Roger K. Wolff1,2, Gregory S. Ducker3, Allie H. Grossmann1,2

1Department of Pathology, University of Utah, Salt Lake City, UT; 2Huntsman Cancer Institute, Salt Lake City, UT; 3Department of Biochemistry, University of Utah, Salt Lake City, UT; 4Department of Surgery, University of Utah, Salt Lake City, UT

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**Poster 30 - Abstract 151**

**Developing Animal Models to Study the Impacts of Bone Microenvironment on Cancer Bone Metastasis**

Yang Yang1,2, Chao Zhang1, Xiaoxiao Hao1, Pramod S. Gowda1, and Timothy N. Trotter1

1Department of Pathology, University of Alabama at Birmingham, Birmingham, AL; 2O’Neal Comprehensive Cancer Center, University of Alabama at Birmingham, Birmingham, AL

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**Poster 31 - Abstract 152**

**The Use of the Three-Dimensional Spherical Invasion Assay to Measure the Invasive Activity of Human Cancer Cells**

Stephen D. Richbart, Emily G. Moles, Kathleen C. Brown, Adeoluwa A. Adeluola, and Piyali Dasgupta

Department of Biomedical Sciences, Joan C. Edwards School of Medicine, Marshall University, Huntington, WV

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**Poster 32 - Abstract 153**

**Overall Survival and Epithelial-Mesenchymal Transition (EMT) Genes Enrichment Analysis in Renal Papillary Carcinoma**

Waleed Ali1 and André Kajdacsy-Balla2

1Albert Einstein College of Medicine, The Bronx, NY; 2University of Illinois at Chicago, Chicago, IL

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**Poster 33 - Abstract 263**

**Impact of Intraductal Ablation of Mammary Epithelium by 70% Ethanol in MNU Rat Models for Breast Cancer Prevention**

Elizabeth G. Phelps1, Erin Zaluzec1,3, Mohamed Ashry1,2, Elizabeth Kenyon1,2, Katarzyna Kempinska1,2, Legend Kenny7, Katherine Powell1,2, Jeremy M.L. Hix2,5, Christiane Mallett2,5, Matti Kiupel6, Erik Shapiro2,7, and Lorenzo F. Sempere1,2

1Precision Health Program, Michigan State University, East Lansing, MI; 2Department of Radiology, Michigan State University, East Lansing, MI; 3Department of Pharmacology and Toxicology, Michigan State University, East Lansing, MI; 4College of Osteopathic Medicine, East Lansing, MI; 5IQ Advanced Molecular Imaging Facility, Michigan State University, East Lansing, MI; 6Veterinary Diagnostic Laboratory, College of Veterinary Medicine, East Lansing, MI; 7Department of Biomedical Engineering, Michigan State University, East Lansing, MI

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**Cardiovascular Biology – Poster Session**

**Poster 34 - Abstract 039**

**Magnetic Extracellular Vesicle Delivery System for Matrix Synthesis for Abdominal Aortic Aneurysm Repair**

Ande X. Marini, Golnaz N. Tomaraei, Justin S. Weinbaum, Mostafa Bedewy, and David A. Vorp

Department of Bioengineering, University of Pittsburgh, Pittsburgh, PA

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**Poster 35 - Abstract 093**

**Cardiac Fibroblast-MHCII Contributes to Cardiac Pathophysiology in Doxorubicin-Induced Cardiomyopathy**

Maria Antonia Zambrano, Abraham L. Bayer, Kuljeet Kaur, and Pilar Alcaide

Department of Immunology, Tufts University School of Medicine, Boston, MA
Poster 36 - Abstract 112
Novel Role of Endothelial Cell Stimulator of Interferon Genes (STING) in Systolic Dysfunction and Adverse Cardiac Remodeling Induced by Cardiac Pressure Overload
Erin Sanders1,2, Noah Wagner1,3, Abraham L. Bayer1,3, Sasha Smolgovsky1,3, Brandon Theall1,3, Mark Aronovitz1,4, Kuljeet Kaur1,3, Pilar Alcaide1,3
1Tufts Graduate School of Biomedical Sciences, Tufts University, Boston, MA; 2Department of Genetics, Molecular, and Cellular Biology, Tufts University School of Medicine, Boston, MA; 3Department of Immunology, Tufts University School of Medicine, Boston, MA; 4Molecular Cardiology Research Institute, Tufts Medical Center, Tufts University School of Medicine, Boston, MA

Poster 37 - Abstract 154
Duration of SARS-CoV-2 mRNA Vaccine Persistence in Recently Vaccinated Patients and Factors Associated with Involvement of the Myocardium
Aram J. Krauson, Faye Victoria C. Casimero, Zakir Siddiquee, and James R. Stone
Department of Pathology, Massachusetts General Hospital, Boston, MA

Poster 38 - Abstract 155
Myocardial CD34+ Stromal Cells/Telocytes and CD68+ Macrophages Reveal a Dynamic Pattern of Interactions During Development of Post-Myocardial Infarction Scar
Daniel Schneider and Eduard I. Dedkov
Department of Biomedical Sciences, Cooper Medical School of Rowan University, Camden, NJ

Cardiovascular Biology and the Extracellular Matrix – Poster Session

Poster 39 - Abstract 156
Collagen Fibril Structure, Surface Charge and Vascular Calcification
Aratrika Pan, Naseem Story, Stevan Glisic, Michael Go, and Gunjan Agarwal
Department of Mechanical and Aerospace Engineering, The Ohio State University College of Engineering, Columbus, OH

Poster 40 - Abstract 157
Type XXVIII Collagen Formation as a Prognostic Marker of Mortality Risk in Patients with Atherosclerosis
Elisavet Angeli1, Annelie Shami2, Chrysostomi Gialeli2, Morten Kardsal1, Andreas Edsfeldt3, Federica Genovese1, and Isabel Gonçalves3
1Nordic Bioscience A/S, Herlev, Denmark; 2Clinical Sciences Malmö, Lund University, Sweden; 3Clinical Sciences Malmö, Lund University and Cardiology, Skåne University Hospital, Sweden

Poster 41 - Abstract 158
Long-Read Transcriptomics Reveals Tissue- and Age-Specific Differences in Elastin Isoform Expression
Likitha Nimmagadda1, Kit Man Tsang, 1 Natalia Kim1, Neelam Redeka2, Russell H. Knutsen1, Teresa R. Luperchio1, and Beth A. Kozel1
1Laboratory of Vascular and Matrix Genetics, National Heart, Lung, and Blood Institute, National Institutes of Health, Bethesda, MD; 2Integrated Data Sciences Section, Research Technologies Branch, National Institute of Allergy and Infectious Diseases, NIH, Bethesda, MD

Poster 42 - Abstract 159
Fibulin-4 and LTBP-4 Interact with Syndecans to Regulate Elastogenesis
Hana Hakami1, Neha Dinesh1, Valentin Nelea1,2, Natalie Lamarche Vane1, Sylvie Ricard Blum3, and Dieter P. Reinhardt1,2
1Faculty of Medicine and Health Sciences, Department of Anatomy and Cell Biology, McGill University, Montreal, Canada; 2Faculty of Faculty of Dental Medicine and Oral Health Sciences, McGill University, Montreal, Canada; 3Université de Lyon 1, Institute of Molecular and Supramolecular Chemistry and Biochemistry, Villeurbanne, France
Poster 43 - Abstract 160
Inhibition of the Histone Methyltransferase EZH2 with GSK126 Induces Vascular Stiffness in Mouse Aorta and Human Aortic Smooth Muscle Cells
Jaime Ibarrola1, Rachel Xiang1, Qing Lu1, Zhe Sun2, Michael A Hill2, and Iris Z. Jaffe1
1Molecular Cardiology Research Institute, Tufts Medical Center, Boston, MA; 2Dalton Cardiovascular Research Center, Department of Medical Pharmacology and Physiology, University of Missouri, Columbia, MO

Poster 44 - Abstract 161
Investigating the Impact of Near Complete Estrogen Deprivation on Cardiac Remodeling in Preclinical Models
Joshua D. Abrams, Valerie Payne, Adam Wilson, Alexandra Thomas, and Katherine L. Cook
Department of Surgery, Wake Forest University School of Medicine, Winston-Salem, NC

Collagens – Poster Session

Poster 45 - Abstract 016
Collagen Distribution in Mouse Embryo Abdominal Wall
Kentaro Ikemura, Gabriel Opoku, Ren Takashita, Saeko Hirabayashi, Farhana Hasib, Nodoka Iguchi, Ikumi Sato, Eri Katsuyama, Shogo Watanabe, and Satoshi Hirohata
Department of Medical Technology, Graduate School of Health Science, Okayama University, Okayama, Japan

Poster 46 - Abstract 024
Investigating the Regulatory Impact of Collagen Type XI N-terminus Domain (NTD) Variants on Collagen Self-assembly Kinetics and Insights on the Molecular Interactions
Abu Sayeed Chowdhury, Stephanie Tuft, and Julia T. Oxford
Biomolecular Sciences, Boise State University, Boise, ID

Poster 47 - Abstract 056
The Role of Microvilli in the Organization of Apical Extracellular Matrix
Ava Niazi, Ju Ang Kim, Joosang Park, Dong-Kyu Kim, Di Lu, and Sungjin Park
Department of Neurobiology, University of Utah, Salt Lake City, UT

Poster 48 - Abstract 058
A Bidirectional Cross-talk Between the Adherens Junction-associated RNAi Machinery and the Extracellular Matrix Regulates Colon Epithelial Cell Behavior
Amanda Daulagala1, Metin Cetin2, Douglas W. Jimenez3, Mary Catherine Bridges1, Joyce Nair-Menon1, Amy Bradshaw3, Jeffrey Jones4, Ozgur Sahin2, and Antonis Kourtidis1
1Department of Regenerative Medicine and Cell Biology, Medical University South Carolina, Charleston, SC; 2Department of Biochemistry and Molecular Biology, Medical University South Carolina, Charleston, SC; 3Division of Cardiology, Collage of Medicine, Medical University South Carolina, Charleston, SC; 4Department of Surgery, Collage of Medicine, Medical University South Carolina, Charleston, SC

Poster 49 - Abstract 067
Temporally-Restricted Patterns of Endothelial Cell Collagen IV Expression Determined With a Novel Knockin Col4a1-GFP Mouse Line
Nathaniel L. Lartey, Martijn van der Ent, Roxann Alonzo, and Philip D. King
Department of Microbiology and Immunology, University of Michigan, Ann Arbor, MI

Poster 50 - Abstract 162
Molecular Magnetic Resonance Imaging of Prostate Cancer with a Collagen-specific Probe
Avan Kader1,2,3, Jan O. Kaufmann1,2,3, Dilyana B. Mangarova1,3, Jana Moeckel1, Lisa C. Adams1, Julia Brangsch1,3, Jennifer Lilly Heyl1, Jing Zhao1, Christine Verleman4, Uwe Karst4, Federico Colletini1,5, Timo A. Auer1,5, Bernd Hamm1, and Marcus R. Makowsk1,3,6
1Charité – Universitätsmedizin Berlin, corporate member of Freie Universität Berlin, Humboldt-Universität zu Berlin, and Berlin Institute of Health, Berlin, Germany; 2Department of Biology, Chemistry and Pharmacy, Institute of Biology, Freie Universität Berlin, Berlin, Germany; 3Technical University of Munich, Department of Diagnostic and Interventional Radiology, Munich, Germany; 4Institute of Inorganic and Analytical Chemistry, University of Münster, Münster, Germany; 5Berlin Institute of Health, Berlin, Germany; 6King’s
Poster 51 - Abstract 163
Collagen Optical Characteristics Vary Between Low Stage and Muscle-invasive Bladder Cancers
Soheila Borhani1, Virgilia Macias2, Waleed Ali3, Michael Abern4, Daniel Moreira4, Andre Kajdacsy-Balla1
1School of Biomedical Informatics, University of Texas Health Science Center, Houston, TX; 2Department of Pathology, University of Illinois at Chicago, Chicago, IL; 3Albert Einstein College of Medicine, Bronx, NY; 4Department of Urology, Duke University, Durham, NC

Poster 52 - Abstract 164
Long-term Exposure to Organic Dust Promotes Inflammation, Oxidative Stress and Collagen Deposition in the Airways
Jenora Waterman, Simone Smith, Rohit Ranabhat, and Kristen Foust
Department of Biology, North Carolina Agricultural and Technical State University, Greensboro, NC

Poster 53 - Abstract 165
Insights into the Genetic and Molecular Mechanisms of Hypermobile Ehlers Danlos Syndrome
Department of Regenerative Medicine and Cell Biology, Medical University of South Carolina, Charleston, SC

Poster 54 - Abstract 166
Impairment in Processing of Collagen I in a Novel Murine Model of Dermatosporaxis Ehlers Danlos Syndrome
Department of Regenerative Medicine and Cell Biology, Medical University of South Carolina, Charleston, SC

Poster 55 - Abstract 167
Interactions Between ECM Proteins Reveal Insights into the Mechanism Behind Hypermobile Ehlers-Danlos Syndrome
Taylor Petrucci, Lilong Guo, Cortney Gensemer, Jordan E. Morningstar, Kathryn Byerly, Erika Bistran, Emily Fleck, Tyler Beck, Victoria Daylor, Russell Norris
Department of Regenerative Medicine and Cell Biology, Medical University of South Carolina, Charleston, SC

Poster 56 - Abstract 168
Evaluation of Fibrosis Phenotypes with Novel Digital Pathology Methods in the NOD/ShiLtj Mouse Model of Sjögren’s Disease Following Treatment with Nintedanib
Jennifer M. Morrissey1,2, Li Chen3, Nathan Aist3, Deirdre A. Nelson1, Mathieu Petitjean3, and Melinda Larsen1,2
1Department of Biological Science, University at Albany, SUNY, Albany, NY; 2The RNA Institute, University at Albany, SUNY, Albany, NY; 3PharmaNest Inc., Princeton, NJ

Poster 57 - Abstract 169
Dissecting Collagen Type I Regulation by the RNA-Binding Protein Larp6
Eric L. Baggs1, Steve Broyles1, Cayla Meredith1, Clariza Arteaga1, Karen A. Lewis2, and Lisa R. Warner1
1Department of Chemistry and Biochemistry, Boise State University, Boise, ID; 2Department of Chemistry and Biochemistry, Texas State University, San Marcos, TX
Poster 58 - Abstract 170
MUSC Ehlers Danlos Syndrome Biorepository: A Gateway to Understanding Genetic Connective Tissue Diseases
Russell Norris, Fu-Lei Tang, Jan Guz, Kristi Helke, Alexander Awgulewitsch, Taylor Petrucci, Lilong Guo, and Cortney Gensemer
Department of Regenerative Medicine and Cell Biology, Medical University of South Carolina, Charleston, SC

Poster 59 - Abstract 171
LaRP-6 Post Transcriptional Regulation of Fibrosis
Clariza Arteaga, Steve Broyles, Lisa Rose Warner, and Eric L. Baggs
Biomolecular Program, Boise State University, Boise, ID

Poster 60 - Abstract 172
Comparison of Vitreous Collagen Fiber Network between Humans, Marmosets, Pigs, and Rabbits
Eileen S. Hwang and Denise J. Morgan
Department of Ophthalmology and Visual Sciences, University of Utah, Salt Lake City, UT

Poster 61 - Abstract 173
Effect of the Ratio of Type I to Type III Collagen on Cell Behavior in Three-dimensional Culture
Kazumasa Fujita, Yuki Kumazawa, Yusuke Murasawa, and Kazunori Mizuno
Research Institute of Biomatrix, Nippi Inc., Ibaraki, Japan

Extracellular Matrix Biology – Poster Session

Poster 62 - Abstract 026
Multi-omics Characterization of Matrisome Dynamics During IPF Pathogenesis
Sarah Lloyd¹, Xue Wang², Liang Jin², Fei Wang², Kenneth Ruterbories¹, Cassandre Coles¹, Lisa Hazelwood¹, Qin Ji¹, Yu Tian², and Yupeng He¹
¹AbbVie Inc., North Chicago, IL; ²AbbVie Bioresearch Center, Worcester, MA

Poster 63 - Abstract 027
MatrisomeDB: An ECM Proteomics Tool to Facilitate Biomarker Discovery
Nandini Kapoor¹, James Considine¹, Clarissa Gomez¹, Xinhao Shao¹, Yu Gao²,³, and Alexandra Naba¹,³
¹Department of Physiology and Biophysics, University of Illinois Chicago, Chicago, IL; ²Department of Pharmaceutical Science, University of Illinois Chicago, Chicago, IL; ³University of Illinois Cancer Center, Chicago, IL

Poster 64 - Abstract 034
Versican Mediates the Crosstalk between Keratinocytes and Dermal Papilla Cells in Hair Follicles
Xi Chen and Jiang Chen
Departments of Dermatology, Stony Brook University, Stony Brook, NY

Poster 65 - Abstract 063
MFAP4 Forms Octamers Required for Functional Interactions with Elastogenic Proteins
Michael R. Wozny¹, Valentín Nelea¹,²,³, Mike Strauss¹,⁴, and Dieter P. Reinhardt¹,²,⁴
¹Faculty of Medicine and Health Sciences, McGill University, Montreal, QC, Canada; ²Faculty of Dentistry and Oral Health Sciences, McGill University, Montreal, QC, Canada

Poster 66 - Abstract 064
Multiple Cell Types Influence Extracellular Matrix Dynamics During Planarian Regeneration
Ekasit K. Sonpho¹, Carlos Guerrero-Hernández¹, Charles A. S. Banks¹, Eric J. Ross¹,², Carolyn Brewster¹, Sean McKinney¹, Frederick G. Mann Jr.¹,², Stephanie Nowotarski¹, Mol Mir¹, Melainia McClain¹, Laurence Flores¹, and Alejandro Sánchez Alvarado¹,²
¹Stowers Institute for Medical Research, Kansas City, MO; ²Howard Hughes Medical Institute, Kansas City, MO
Poster 67 - Abstract 065
Delineating the Timeline of SNED1 Fibrillogenesis and Assembly in the Extracellular Matrix
Leanna Leverton¹, Dharma Pally¹, and Alexandra Naba¹,²
¹Department of Physiology and Biophysics, University of Illinois at Chicago, Chicago, IL; ²University of Illinois Cancer Center, Chicago, IL

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Neha Dinesh¹, Justine Rousseau², Philippe Campeau³, and Dieter P. Reinhardt¹,³
¹Faculty of Medicine and Health Sciences, McGill University, Montreal, QC, Canada; ²CHU Sainte-Justine Research Center, Montreal, QC, Canada; ³Faculty of Dental Medicine and Oral Health Sciences, McGill University, Montreal, QC, Canada.

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Ryan M. Friedman¹,², Elizabeth A. Brown¹,², Arielle S. Bruening¹, Matthew R. Aronson¹,², Karen B. Zur², and Riccardo Gottardi¹,²,³
¹Department of Bioengineering, School of Engineering and Applied Sciences, University of Pennsylvania, Philadelphia, PA; ²Department of Surgery, Division of Otolaryngology, Children’s Hospital of Philadelphia, Philadelphia, PA; ³Department of Pediatrics, Division of Pulmonary Medicine, University of Pennsylvania, Philadelphia, PA

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Department of Chemical and Biological Engineering, Iowa State University, Ames, IA

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Department of Biomedical Engineering, Michigan Technological University, Houghton, MI

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Department of Neurobiology, University of Utah School of Medicine, Salt Lake City, UT

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Department of Mechanical Engineering, College of Engineering and Applied Science, University of Colorado Boulder, Boulder, CO

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ASM Sakhawat Hossain¹, Maria Thea Rane Dela Cruz², Koichiro Uto³, Eri Motoyama³, Sumio Ohtsuki³, Keiichi Asano³, Kenichi Kimura³, Sachiko Kanki³, Erna Raja³, and Hiromi Yanagisawa³
¹Graduate School of Comprehensive Human Sciences, Tsukuba Advanced Research Alliance (TARA), University of Tsukuba, Japan; ²School of Integrative and Global Major, Tsukuba Advanced Research Alliance (TARA), University of Tsukuba, Japan; ³Life Science Center for Survival Dynamics, Tsukuba Advanced Research Alliance (TARA), University of Tsukuba, Japan; ⁴National Institute for Material Science, Tsukuba, Japan, Department of Pharmaceutical Microbiology, Kumamoto University, Japan; ⁵Osaka Medical and Pharmaceutical University, Osaka, Japan
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Matthew R. Aronson1, Ryan M. Friedman1, Amrita Mehta1, Kendra S. McDaid2, Ryan C. Borek2, Connor N. Devine2, Terri Giordano2, Ian N. Jacobs2, and Riccardo Gottardi2
1Department of Bioengineering, University of Pennsylvania, Philadelphia, PA; 2Division of Otolaryngology, Department of Surgery, Children’s Hospital of Philadelphia, PA

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Sarita Mishra1, Mary E. Stack2, Haoyu Wang2, Matangi Parimala Chelvi Ratnamani2, Hongjum Wang2, and Leslie I. Gold1
1Departments of Medicine and Pathology, Division of Precision Medicine, New York University School of Medicine, New York, NY; 2Department of Biomedical Engineering and Innovation Health, Stevens Institute of Technology, Hoboken, NJ

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Department of Life Science and Technology, Tokyo Institute of Technology, Yokohama, Japan

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1Chemistry and Biochemistry Department, Brigham Young University, Provo, UT; 2Center for Interstitial Lung Disease, University of Washington, Seattle, WA; 3University of Utah, Pulmonary Fibrosis Center, Salt Lake City, UT; 4University of Washington, Seattle, WA

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Kristin Calar1, and Pilar de la Puente1,2
1Cancer Biology and Immunotherapies Group, Sanford Research, Sioux Falls, SD; 2Department of Obstetrics and Gynecology, University of South Dakota Sanford School of Medicine, Sioux Falls, SD

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Department of Molecular Biology, Princeton University, Princeton, NJ

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1Department of Medical Technology, Graduate School of Health Sciences, Okayama University, Okayama, Japan; 2Department of Pharmacology, Faculty of Medicine, Kindai University, Osaka, Japan

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Michelle Lin1, Robyn A. Roth1, Hiromi Yanagisawa2, and Carmen M. Halabi1
1Department of Pediatrics, Division of Nephrology, Washington University School of Medicine, Saint Louis, MO; 2Life Science Center for Survival Dynamics, Tsukuba Advanced Research Alliance, University of Tsukuba, Ibaraki, Japan

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1Department of Ophthalmology, Duke University School of Medicine, Durham, NC; 2Perfuse Therapeutics Inc., Durham, NC

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1College of Dentistry, University of Saskatchewan, Saskatoon, SK, Canada; 2UCL Division of Medicine, London, UK; 3Faculty of Veterinary Medicine, University of Calgary, Calgary, AB, Canada

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Kate E. Keller1, Ying Ying Sun1, Paul Holden1, Joanne E. Murphy-Ullrich2, and Yong-feng Yang1
1Casey Eye Institute, Oregon Health & Science University, Portland, OR; 2Departments of Pathology, Cell Developmental and Integrative Biology, and Ophthalmology and Visual Sciences, University of Alabama at Birmingham, Birmingham, AL
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Megan Jorgensen1,2, Kristin Calar1, Maria Bell3, and Pilar de la Puente1,3,4#
1Cancer Biology and Immunotherapies Group, Sanford Research, Sioux Falls, SD; 2MD/PhD Program, University of South Dakota Sanford School of Medicine, Sioux Falls, SD; 3Department of Obstetrics/Gynecology, University of South Dakota Sanford School of Medicine, Sioux Falls, SD; 4Department of Surgery, University of South Dakota Sanford School of Medicine, Sioux Falls, SD

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Tania Sharmin and Colleen M. McDowell
Department of Ophthalmology and Visual Sciences, University of Wisconsin - Madison, Madison, WI

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Naohiko Koshikawa, Ryo Kaneko, and Nobuaki Funahashi
School of Life Science and Technology, Tokyo Institute of Technology, Yokohama, Japan

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Sukhbir Kaur1, Lisa M. Jenkins2, and David D. Roberts1
1Laboratory of Pathology, Center for Cancer Research, National Cancer Institute, National Institutes of Health, Bethesda, MD; 2Laboratory of Cell Biology, Center for Cancer Research, National Cancer Institute, National Institutes of Health, Bethesda, MD

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Department of Ophthalmology and Visual Sciences, University of Wisconsin - Madison, Madison, WI

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Department of Medicine, University of Wisconsin-Madison, Madison, WI

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Ramon Bossardi Ramos1, Nina Martin1, Shuhan Lu2, Iria Di John Portela1, Peter A. Vincent1, and Alejandro P. Adam1
1Department of Molecular and Cellular Physiology, Albany Medical College, Albany, NY; 2Department of Molecular and Cellular Physiology, Albany Medical Center, Albany, NY

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George Maili and Shukti Chakravarti
Department of Ophthalmology, NYU Grossman School of Medicine, New York, NY

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Sumit Bhutada and Suneel S. Apte
Department of Biomedical Engineering, Cleveland Clinic – Lerner Research Institute, Cleveland, OH
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Extracellular Matrix Pathology Section, Laboratory of Pathology, National Cancer Institute, National Institute of Health, Bethesda, Maryland

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Ikram Isa1, James Considine1, Adriana Duraki1, Alexandra Naba1,2
1Department of Physiology and Biophysics, University of Illinois Chicago, Chicago, IL; 2University of Illinois Cancer Center, Chicago, IL

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Division of Molecular and Cellular Function, University of Manchester, Manchester, UK

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Daniel D. Ghaderi1, Matthew R. Aronson1, Ryan M. Friedman1, Ryan C. Borek2, Connor M. Devine2, Terri Giordano3, Ian N. Jacobs4, and Riccardo Gottardi5
1Department of Bioengineering, University of Pennsylvania, Philadelphia, PA; 2Division of Otolaryngology, Department of Surgery, Children’s Hospital of Philadelphia, PA

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Conner Patricelli1, Parker Lehmann2, Shin Pu1, and Julia Thom Oxford1
1Biomolecular Sciences, Boise State University, Boise, ID; 2Idaho College of Osteopathic Medicine, Meridian, ID

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Andrew E. Miller1, Ping Hu1, Grace C. Bingham1, Deneen M. Wellik2, Mete Civelek1, Thomas H. Barker1
1Biomedical Engineering, University of Virginia, Charlottesville, VA; 2Department of Cell and Regenerative Biology, University of Wisconsin-Madison, Madison, WI

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Ryan M. Friedman1,2, Matthew R. Aronson1,2, Karen B. Zur2, and Riccardo Gottardi1,2,3
1Department of Bioengineering, School of Engineering and Applied Sciences, University of Pennsylvania, Philadelphia, PA; 2Department of Surgery, Division of Otolaryngology, Children’s Hospital of Philadelphia, Philadelphia, PA; 3Department of Pediatrics, Division of Pulmonary Medicine, University of Pennsylvania, Philadelphia, PA

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Hailey Axemaker1, and Pilar de la Puente1,2
1Cancer Biology and Immunotherapies Group, Sanford Research, Sioux Falls, SD; 2Department of Obstetrics and Gynecology, University of South Dakota Sanford School of Medicine, Sioux Falls, SD

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Lingling Xu and Yao Yao
Department of Molecular Pharmacology and Physiology, University of South Florida, Tampa, FL
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Rachel M. Edens, Hyland Gonzalez, Amy Engevik, and Mindy Engevik
Department of Regenerative Medicine and Cell Biology, Medical University of South Carolina, Charleston, SC

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Department of Molecular and Cellular Physiology, Albany Medical Center, Albany, NY

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Alyssa S. Gutierrez1, Taylor D. Ticer2, Adelaide Horvath1, Janiece S. Glover1, and Melinda A. Engevik1,2
1Department of Regenerative Medicine and Cell Biology, Medical University of South Carolina, Charleston, SC; 2Department of Microbiology and Immunology, Medical University of South Carolina, Charleston, SC

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Kaitlan A. Sullivan1, Janiece S. Glover2, Mindy A. Engevik2, and Jessica H. Hartman1
1Department of Biochemistry, Medical University of South Carolina, Charleston, SC; 2Department of Regenerative Medicine and Cell Biology, Medical University of South Carolina, Charleston, SC

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Shang-Chuen Wu, Connie Arthur, and Sean Stowell
Department of Pathology, Brigham and Women’s Hospital, Harvard Medical School, Boston, MA

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Jesus M. Eraso1, Randall J. Olsen1, S. Wesley Long1, Stephen B. Beres1, Ryan Gadd1, Sarrah Boukthir2, Ahmad Faili2, Samer Kayali2, and James M. Musser1
1Laboratory of Molecular and Translational Human Infectious Disease Research, Center for Infectious Diseases, Department of Pathology and Genomic Medicine, Houston Methodist Research Institute and Houston Methodist Hospital, Houston, TX; 2CHU de Rennes, Service de Bactériologie-Hygiène Hospitalière, Rennes, France

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Stephen B. Beres1, Randall J. Olsen1, S. Wesley Long1, Jesus Eraso1, Sarrah Boukthir2, Ahmad Faili2, Samer Kayali2, and James M. Musser1
1Department of Pathology and Genomic Medicine, Houston Methodist Hospital and Research Institute, Houston, TX; 2Bacteriology and Hygiene Department, Teaching Hospital of Rennes, Rennes, France; 3Université de Rennes, Rennes, France

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Christina Kingsley, Joyce Nair-Menon, Amanda Daulagala, Melinda Engevik, and Antonis Kourtidis
Department of Regenerative Medicine and Cell Biology, Medical University of South Carolina, Charleston, SC
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Vivienne Fang, Jeremy A. Lavine, and William A. Muller
Department of Pathology, Northwestern University Feinberg School of Medicine, Chicago, IL

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Shreya Deb1, Yongguo Zhang1, Yinglin Xia1,2, and Jun Sun1,2,3,4
1Division of Gastroenterology and Hepatology, Department of Medicine, University of Illinois Chicago, Chicago, IL; 2Jesse Brown VA Medical Center, Chicago, IL; 3UIC Cancer Center, University of Illinois Chicago, Chicago, IL; 4Department of Microbiology and Immunology, University of Illinois Chicago, Chicago, IL

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Ankita Srivastava, Alexandra Manchel, John Waters, Manju Ambelil, Jan B. Hoek, and Rajanikanth Vadigepalli
Daniel Baugh Institute for Functional Genomics and Computational Biology, Department of Pathology and Genomic Medicine, Thomas Jefferson University, Philadelphia, PA

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Targeted Hepatocyte-Specific β-catenin Overexpression Facilitates Improved Biliary Repair During Intrahepatic Cholestasis
Chhavi Goel, Qin Li, Pamela Cornuet, and Kari Nejak-Bowen
Department of Pathology, Division of Experimental Pathology, Pittsburgh Liver Research Center, University of Pittsburgh School of Medicine, Pittsburgh, PA

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TET1 antagonizes ferroptosis in alcohol associated liver disease
Sonali Notani1, Muhammad Nisar Azhar1, Hongze Chen1, Eve Elkins1, Shaolei Lu2, and Chiung-Kuei Huang1
1Department of Medicine, Pathology and Laboratory Medicine, Tulane University School of Medicine, New Orleans, LA; 2Department of Pathology Laboratory Medicine, Alpert Medical School of Brown University, Providence, RI

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Gang Liu, Ailar Arastah, and Xiao-Ming Yin
Department of Pathology and Laboratory Medicine, Tulane University School of Medicine, New Orleans, LA

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Chhavi Goel1, Rong Zhang1, Silvia Liu1, Pamela Cornuet1, Xiaochao Ma2, and Kari Nejak-Bowen1,3
1Department of Pathology, University of Pittsburgh School of Medicine, Pittsburgh, PA; 2Department of Pharmaceutical Sciences, University of Pittsburgh School of Medicine, Pittsburgh, PA; 3Pittsburgh Liver Research Center, University of Pittsburgh School of Medicine, Pittsburgh, PA

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Siddhi Jain, Ranjan Mukherjee, Matthew Avery Copeland, John Stoops, Wendy M. Mars and Bharat Bhushan
Department of Pathology, University of Pittsburgh School of Medicine, Pittsburgh Liver Research Center, University of Pittsburgh Medical Center, University of Pittsburgh, Pittsburgh, PA
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Department of Pathology, Division of Experimental Pathology, Pittsburgh Liver Research Center, University of Pittsburgh School of Medicine, Pittsburgh, PA

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Tomoki Yagai
Department of Molecular Medicine and Metabolism, Research Institute of Environmental Medicine, Nagoya University, Nagoya, Japan

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Junyan Tao1, Brandon M. Lehrich1, Silvia Liu1, Evan Delgado1, Minakshi Poddar1, Sucha Singh1, Tulin Dadali-Abel2, Wendy Broom2, Aaron Bell1, and Satdarshan P. Monga1
1Department of Pathology, Division of Experimental Pathology, Pittsburgh Liver Research Center, University of Pittsburgh School of Medicine, Pittsburgh, PA; 2Alnylam Pharmaceuticals, Cambridge, MA

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Lipid Dysregulation in Beta-catenin-driven Hepatocellular Carcinoma
Department of Oncological Sciences, Huntsman Cancer Institute, University of Utah, Salt Lake City, UT

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Naresh Naik Ramavath, Jiansheng Huang, David Rudnick, and Michael D. Thompson
Department of Pediatrics, Washington University School of Medicine, St. Louis, MO

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Kristin Kim and Christopher Lemmon
Department of Biomedical Engineering, Virginia Commonwealth University, Richmond, VA

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Maria Jose Gacha-Garay1,2 and Jichao Chen2
1MD Anderson Cancer Center-University of Texas Health Houston, Graduate School of Biomedical Sciences, Houston, TX; 2Department of Pulmonary Medicine, MD Anderson Cancer Center, Houston, TX

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Nickol Wahby, Niani Bailey, Clifford Nkomo, Adriana Lopez, and Bilon Khambu
Department of Pathology and Laboratory Medicine, Tulane University School of Medicine, New Orleans, LA

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Stephanie Frahs Tuft, Carissa Hale, Abu Sayeed Chowdhury, and Julia Oxford
Biomolecular Research Center, Boise State University, Boise, ID
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Hydrogel-mediated Delivery of Thy-1 to Alleviate Fibrosis
Mathew Kibet and Daniel Abebayehu
Department of Biomedical Engineering, University of Virginia, Charlottesville, VA

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Exercise in Chronic Kidney Disease Patients Does Not Significantly Alter Fibrosis in Quadriceps Muscle
Sarah E. Brashear1, Armin Ahmadi1, Vishal Rao1, Gwenaelle Begue2, Tae Youn Kim1, Jorge Gamboa3, Baback Roshanravan1, and Lucas Smith2
1Department of Neurobiology, Physiology, and Behavior, University of California - Davis, Davis, CA; 2Department of Kinesiology, California State University - Sacramento, Sacramento, CA; 3Department of Medicine, Vanderbilt University Medical Center, Nashville, TN

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Osteopontin and CCR2 Are Involved in the Inflammatory Cells in Non-alcoholic Steatohepatitis Model Rats
Ikumi Sato1, Ryosuke Ando2, Rikuto Someya2, Kurumi Matsuki3, Kentaro Ikemura2, Gabriel Opoku2, Ren Takashita2, Saeko Hirabayashi2, Farhana Hasib2, Nodoka Iguchi2, Eri Katsuyama1, Shusei Yamamoto1, Shogo Watanabe1, Satoshi Hirohata1
1Faculty of Health Sciences, Okayama University, Japan; 2Department of Medical Technology, Graduate School of Health Sciences, Okayama University, Japan; 3Department of Medical Technology, Faculty of Health Sciences, Okayama University, Japan

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Kayla J. Rayford, Ayorinde Cooley, Inmar Osi, Anthony Strode, Destiny Ball, Siddharth Pratap, and Pius N. Nde
Department of Microbiology, Immunology and Physiology Meharry Medical College, Nashville, TN

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Higher Urine LG3 Levels are Associated with Risk of Cardiovascular Events and Chronic Kidney Disease Progression in Individuals with Type 2 Diabetes and Microalbuminuria
Clara F.G. Laursen1, Alexandra Louise Møller1, Daniel G.K. Rassmusen1, Federica Genovese1, Henrik Reinhardt2, Bernt Johan von Scholten2,3, Morten A. Karsdal1, Tine W. Hansen2, and Peter Rossing2,4
1Nordic Bioscience, Denmark; 2Steno Diabetes Center Copenhagen, Denmark; 3Novo Nordisk A/S, Søborg, Denmark; 4Department of Clinical Medicine, University of Copenhagen, Denmark

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Richard W. Naylor and Rachel Lennon
Division of Cell Matrix Biology and Regenerative Medicine, University of Manchester, Manchester, UK

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Gabriel Luis B. Ocampo1, Yao Gao1, Dakshnapiya Balasubramanian1, Vivian Cristofaro2, Karen S. Moulton3, Alexander Bigger-Allen4, Beibei Wang1, Hong Chen1, Rosalyn M. Adam4, Maryrose P. Sullivan2, and Diane R. Bielenberg1
1Vascular Biology Program, Boston Children's Hospital, Boston, MA; 2VA Boston Healthcare System, Boston, MA; 3Department of Medicine, University of Colorado Anschutz Medical Campus, Aurora, CO; 4Urological Diseases Research Center, Boston Children's Hospital, Boston, MA

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Dana R. Julian1, Jr Jiun Liou2, Karl Herrup3, Thomas Pearce1, Howard Aizenstein4, and Julia K. Kofler1
1Department of Pathology, University of Pittsburgh School of Medicine, Pittsburgh, PA; 2Department of Bioengineering, University of Pittsburgh, Pittsburgh, PA; 3Department of Neurobiology, University of
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**Placing Tumor Cells in the Organ-Specific Context: 3D in Vitro Models of Glioblastoma on Acellular Brain Matrices**  
Mahsa Vaezzadeh¹, Umut Rende², Mina Ghanimi Fard¹, Annemarie Nadort¹, Aleksandra Igrunkova¹, Sameera Iqbal¹, Vivienne Lee¹, Lindsay Parker¹, Benjamin Heng¹, Anna Guller¹  
¹Macquarie Medical School, Macquarie University, Macquarie Park, Australia; ²University of New South Wales

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**Role of ICI-182,780 in Antagonize Angiotensin II-Stimulatory Effects in Glioblastoma Stemness**  
Giuseppina Daniela Naimo, Adele Elisabetta Leonetti, Salvatore Panza, Luca Gelsomino, Paola Ruffo, Rocco Malivindi, Loredana Mauro, and Sebastiano Andò  
Department of Pharmacy, Health and Nutritional Sciences, University of Calabria, Cosenza, Italy

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Michele J. Alves, Anika Ayyalaraju, Juliet Torres, and José Javier Otero  
Department of Pathology, The Ohio State University, College of Medicine, Columbus, OH

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**Evaluation of the Alpha-synuclein and Tau Anti-fibrillary Activity of 2-Amino-4-methoxybenzothiazole Derivatives**  
Taiwo Ademoye¹, Ahmed A. Elbatrawy¹, Eduardo Ramirez¹, Ashique Zami², Raluca Ostafe², and Jessica S. Fortin¹  
¹Basic Medical Sciences, College of Veterinary Medicine, Purdue University, West Lafayette, IN; ²Institute of Inflammation, Immunology, and Infectious Disease, Purdue University, West Lafayette, IN

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**A Symmetric Molecule with Anti-oligomer, Anti-seeding, and Disaggregation Activities**  
Jessica S. Fortin¹, Eduardo Ramirez¹, Susanka K. Ganegamage¹, Henika S. Patel², Adedayo Ogunware³, German Plascencia-Villa³, Heba Alhakhal⁴, Arati Tripathi⁴, Naseem H. Alfadhl¹, Ulf Dettmer³, Cristian Lasagna-Reeves², and George Perry³  
¹Department of Basic Medical Sciences, Purdue University, West Lafayette, IN; ²Stark Neurosciences Research Institute, Indiana University School of Medicine, Indianapolis, IN; ³Department of Neuroscience, Developmental and Regenerative Biology, University of Texas at San Antonio, San Antonio, TX; ⁴Ann Romney Center for Neurologic Diseases, Brigham and Women’s Hospital and Harvard Medical School, Boston, MA

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**Exploring the Impact of Signal Peptide Region on Amylin Misfolding as Potential Target for Alzheimer’s Disease Treatment**  
Natalie G. Horgan and Jessica S. Fortin  
Basic Medical Sciences, College of Veterinary Medicine, Purdue University, West Lafayette IN

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**Examination of Autophagy, Vascular Integrity, and Cognitive Decline**  
Elaine L. Bearer, Mohsen Ranjbar, Karen S. SantaCruz, and Gary A. Rosenberg  
Department of Pathology, University of New Mexico Health Sciences Center, Center for Memory and Aging, University of New Mexico Health Sciences Center, Albuquerque, NM

**Nutrition and Disease – Poster Session**

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Abdelouafi Benmouloud  
University of M’hamed Bougara Boumerdes (UMBB), Houari Boumedienne University of Sciences and Technology (LRZA, FSB, USTHB), University of Algiers, Benkhedda, Algiers
Use of Structure-Activity Relationship (SAR) Studies to Design Region B Capsaicin Analogos with Robust Anti-cancer Activity
Reagan Light1, Rama S. Gadapalli2, John M Rimoldi2, Jamie R. Friedman3, Stephen D. Richbart1, Justin C Merritt1, Sarah L. Miles1 and Piyali Dasgupta1
1Department of Biomedical Sciences, Joan C. Edwards School of Medicine, Marshall University, Huntington, WV; 2Department of Biomolecular Sciences, The University of Mississippi, University MS; 3BioAgilitytix Labs, Durham, NC

Anti-cancer Activity of Non-Pungent Region C Capsaicin Analogos
Kushal J. Modi1, Rama S. Gadapalli2, Austin T. Akers1, Nicholas A. Nolan1, Kathleen C. Brown1, Kate W. Colclough1, Sarah L. Miles1, John M. Rimoldi2, Mariusz Madej3, and Piyali Dasgupta1
1Department of Biomedical Sciences, Joan C. Edwards School of Medicine, Marshall University, Huntington, WV; 2Department of Biomolecular Sciences, The University of Mississippi, University, MS; 3Crown Bioscience, San Diego, CA

Insights into the Distribution of P-glycoproteins in Adult Toxocara canis using RNASCOPE
Theresa A. Quintana and Jeba Rose Jesudoss Chelladurai
Department of Diagnostic Medicine/Pathobiology, Kansas State University College of Veterinary Medicine, Manhattan, KS

Clearing the Way: Non-toxic Clearing and Labelling with Fluorescent REAfinity Antibodies for the Enhanced 3D Visualization of Tissues and Organs
Miltenyi Biotec Inc, San Diego, CA

The Histone Modification H3K4me2 and the DNA Demethylase TET2 Coordinately Regulates Microvascular SMC Recruitment and Coverage During Hindlimb Ischemia-induced Angiogenesis
Maryam Alanjawi1, Mingjun Liu1, Cristina Espinosa-Diez1,2, Jianxin Wei1, Shuai Yuan1,3, Panagiotis Koutakis4, Luke Brewster5, Adam Straub1,3, and Delphine Gomez1,2
1Pittsburgh Heart Lung and Blood Vascular Medicine Institute, University of Pittsburgh, Pittsburgh, PA; 2Department of Medicine, Division of Cardiology, University of Pittsburgh, Pittsburgh, PA; 3Department of Pharmacology and Chemical Biology, University of Pittsburgh, Pittsburgh, PA; 4Department of Biology, Baylor University, Houston, TX; 5Division of Vascular Surgery, Emory University School of Medicine, Atlanta, GA

PECAM-1 Blockade Modulates Leukocyte Extravasation into the Subcortex after Ischemic Stroke and Reperfusion
Erika Arias1, Neil A. Nadkarni3, Maureen E. Haynes1, Ayush Batra2, William A. Muller1, and David P. Sullivan1
1Department of Pathology, Northwestern University, Chicago, IL; 2Department of Neurology, Northwestern University, Chicago, IL; 3Department of Neurology, Stony Brook University, Stony Brook, NY
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Characterizing the Relationship Between Hypoxia, Inflammatory Cell Infiltrate, and Angiogenesis in a Murine Model of Type II Diabetic Wound Healing
Michael R. Grynyshyn and Douglas W. Hamilton
Department of Anatomy and Cell Biology, University of Western Ontario, London, Ontario, Canada

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The Inhibition of the Alpha7-nicotinic Acetylcholine Receptor Blocks Retinal Angiogenesis: Potential Applications in ARMD and Diabetic Retinopathy
Justin C. Merritt¹, Aaron M. Dom¹, Adam W. Buckley¹, Kathleen C. Brown¹, Richard D. Egleton¹, Aileen J. Marcelo¹, Nancy A. Proper¹, Donald E. Weller², Yashoni H. Shah³, and Piyali Dasgupta¹
¹Department of Biomedical Sciences, Joan C. Edwards School of Medicine, Marshall University, Huntington, WV; ²Department of Biology, University of Charleston, Charleston, WV; ³Department of Biology, West Virginia University, Morgantown, WV

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Endocrine Disrupting Chemical Bisphenol A Exposure Induced Testicular Toxicity in Gerbils: Histopathological Evaluation
Abdelouafi Benmouloud¹, Lilia Kacimi², Nawel Aknoun-Sail¹, Yamina Zatra²,³, Salima Charallah²,³, and Mounira Khaloud²,³
¹University M'hamed Bougara Boumerdes (UMBB), Boumerdes, Algeria; ²Houari Boumediene University of Sciences and Technology (LRZA, FSB, USTHB), Algiers, Algeria; ³University of Algiers 1 Benyoucef Benkhedda, Algiers, Algeria; ⁴Saad Dahlab university of Blida I, Blida, Algeria

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Dimethyl Fumarate Inhibits VEGF-Driven Angiogenesis of Human Retinal Endothelial Cells
Daisy Y. Shu, Mong Linh Vuong, Alena C. Appiah, Pei Qin Ng, Menglu Yang, Zhengping Hu, Suman Chaudhary, Margarete M. Karg, Anton Lennikov, and Leo A. Kim
Schepens Eye Research Institute of Mass Eye and Ear, Department of Ophthalmology, Harvard Medical School, Boston, MA

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Endomucin Deletion Leads to Reduced Pathological Retinal Neovascularization
Zhengping Hu¹, Issahy Cano¹, Anton Lennikov¹, Melissa Wild¹, Urvi Gupta³, Magali Saint-Geniez⁴, Yin Shan-Eric Ng⁵, and Patricia A. D’Amore¹,²
¹Department of Ophthalmology, Schepens Eye Research Institute of Massachusetts Eye and Ear, Harvard Medical School, Boston, MA; ²Department of Pathology, Schepens Eye Research Institute of Massachusetts Eye and Ear, Harvard Medical School, Boston, MA; ³School of Medicine, Case Western Reserve University, Cleveland, OH; ⁴Novartis Institutes for Biomedical Research, Cambridge, MA; ⁵EyeBio, London, England

Wound Healing – Poster Session

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Increased Wound Healing Rates in P-glycoprotein Deficient Intestinal Cells
Summer Johnson, MaKenna DeYoung, Mikayla Spangler, and Scott Tanner
Department of Natural Sciences and Engineering, USC Upstate, Spartanburg, SC

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The Extracellular Microenvironment Modulates Fibronectin Matrix Formation by Cortical Astrocytes
Yu Sun and Jean E. Schwarzbauer,
Department of Molecular Biology, Princeton University, Princeton, NJ

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Age-related Deterioration of the Dermal Extracellular Matrix Microenvironment Promotes Skin Cancer Development
Taihao Quan, Alexandre Ermilov, John J. Voorhees, Andrzej A. Dlugosz, and Gary J. Fisher
Department of Dermatology, University of Michigan, Ann Arbor, MI
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Investigating Oxidative Stress in Human Chronic Wounds
Dylan Tinney¹, David Keast², and Douglas Hamilton¹
¹Department of Anatomy and Cell Biology, Schulich School of Medicine and Dentistry, Western University, London, Ontario, Canada; ²Parkwood Institute, St. Joseph’s Health Care London, London, Ontario, Canada