

4/09/24

**THOMAS L. PETTY**  
**ASPEN LUNG CONFERENCE**  
**66th Annual Meeting**  
**“Pulmonary Fibrosis – Focusing on the Future”**  
**June 4-7, 2024**

**Monday, June 3, 2024 -- Evening**

5:00-7:00 PM Evening Registration

Gant Conference Center

**Tuesday, June 4, 2024 – Morning**

8:00-8:20 AM Welcome/Introduction

Elizabeth Redente, Ph.D., Chair  
David Schwartz, M.D., Co-Chair

8:20-8:30 AM **The Thomas L. Petty Aspen Lung Conference: A Historical Perspective**

Dennis E. Doherty, M.D., FCCP  
Professor of Medicine/University of Kentucky  
Secretary/Treasurer, National Lung Health Education Program

**Theme 1/Session 1: Common Thread of ILA Relationship to Established Lung Fibrosis**

**Moderators--**

8:30-9:05 AM

**THOMAS L. PETTY LECTURE**  
**“WHAT CAN WE LEARN FROM ILAs AND DISEASE**  
**DIAGNOSIS AND PROGRESSION?”**

**Fernando J. Martinez, M.D., M.S.**  
**Chief, Division of Pulmonary and Critical Care Medicine**  
**Bruce Webster Professor of Medicine**  
**Joan and Sanford I. Weill Department of Medicine**  
**Weill Cornell Medicine in New York**  
**New York, New York**

9:05-9:30 AM **Discussion**

9:30-9:45 AM

**GENOME-WIDE ASSOCIATION STUDY OF IDIOPATHIC PULMONARY FIBROSIS AMONG ASIAN ANCESTRIES.** **Anna L. Peljto<sup>1\*</sup>**, Deepa Puthenvedu<sup>1</sup>, Haruhiko Furusawa<sup>2</sup>, Jonathan Cardwell<sup>1</sup>, Masaki Hirose<sup>3</sup>, Yoshikazu Inoue<sup>3</sup>, Dong Soon Kim<sup>4</sup>, Yasunari Miyazaki<sup>2</sup>, Ken Ohta<sup>5</sup>, Shin Ohta<sup>6</sup>, Tsukasa Okamoto<sup>2</sup>, Jong Sun Park<sup>7</sup>, Moo Suk Park<sup>8</sup>, Jin Woo Song<sup>4</sup>, Ivana V. Yang<sup>1</sup>, Tasha E. Fingerlin<sup>9</sup>, David A. Schwartz<sup>1</sup>, <sup>1</sup>University of Colorado Anschutz Medical Campus, Aurora, CO; <sup>2</sup>Tokyo Medical and Dental University, Tokyo, Japan; <sup>3</sup>NHO Kinki Chuo Chest Medical Center, Osaka, Japan; <sup>4</sup>Asan Medical Center, University of Ulsan, Seoul, Republic of Korea; <sup>5</sup>National Hospital Organization Tokyo National Hospital, Tokyo, Japan; <sup>6</sup>Showa University, Tokyo, Japan; <sup>7</sup>Seoul National University College of Medicine, Seoul National University Bundang Hospital, Seongnam, Republic of Korea; <sup>8</sup>Severance Hospital, Yonsei University College of Medicine, Seoul, Republic of Korea; <sup>9</sup>National Jewish Health, Denver, CO.

9:45-9:10:00 AM

**CELL SPECIFIC MOLECULAR PROFILING OF SCLERODERMA ASSOCIATED INTERSTITIAL LUNG DISEASE SUBTYPES.** **Monica Yang<sup>1\*</sup>**, Fred Deiter<sup>2</sup>, Emily Flynn<sup>1</sup>, Jessica Neely<sup>3</sup>, Seoyeon Lee<sup>2</sup>, John Greenland<sup>2</sup>, Marina Sirota<sup>4</sup>, Paul Wolters<sup>2</sup>, <sup>1</sup>Division of Rheumatology, Department of Medicine, University of California, San Francisco; <sup>2</sup>Division of Pulmonary, Critical Care, Allergy and Sleep Medicine, Department of Medicine, University of California San Francisco; <sup>3</sup>Division of Pediatric Rheumatology, Department of Pediatrics, University of California, San Francisco; <sup>4</sup>Bakar Computational Health Sciences Institute, University of California, San Francisco.

10:00-10:30 AM

.....Coffee Break **MEET THE PROFESSOR SESSION (by Registration table)**  
**(Refreshments for conference participants only)**

**Tuesday, June 4, 2024 -- Morning**

**Theme 2: Exploring the Dynamic Cellular and Structural Biology of Lung Fibrosis**

**Session 2: Biological Interface and Interaction in Interstitial Lung Disease**

**Moderators--**

**10:30-11:05 AM**

**PARKER B. FRANCIS LECTURESHIP**

**“DEVELOPMENT OF LUNG FIBROSIS:  
HOW CELLS SIGNAL, CHANGE AND EMERGE”**

**Harold A. Chapman, M.D.**

**Professor of Medicine**

**Department of Pulmonary and Critical Care Medicine**

**University of California San Francisco**

**San Francisco, California**

**11:05-11:30 AM Discussion**

**11:30-11:45 AM** *ELUCIDATING THE FUNCTIONAL ROLE OF FIBROBLAST PROLIFERATION IN LUNG FIBROSIS VIA MURINE MODELS AND PRECISION-CUT HUMAN LUNG SLICES.*

*Christopher Molina\**, Dean Sheppard, Department of Pulmonary and Critical Care Medicine, University of California San Francisco, CA.

**11:45-12:00 Noon** *ROLE OF GATA6 IN ALVEOLAR FIBROBLAST FUNCTION.* J. Green, M.G. Ushakumary, C. Na, *Anna-Karina Perl\**, Division of Pulmonary. Biology, Cincinnati Children's Hospital; Department of Pediatrics, Univ. of Cincinnati College of Medicine, Cincinnati, OH.

**12:00-1:30 PM** .....Lunch (lunch not provided by conference)

## Tuesday, June 4, 2024 -- Afternoon

### Session 3: Biological Interface and Interaction in Interstitial Lung Disease – Re-Building the Matrix

#### Moderators--

#### 1:30-2:05 PM STATE OF THE ART

**Kristi S. Anseth, Ph.D.**

*University of Colorado at Boulder, Boulder, Colorado*

**“The Development of Biomaterials to Serve as Synthetic Extracellular Matrix (ECM) to Rebuild the Lung”**

#### 2:05-2:30 PM Discussion

2:30-2:45 PM *TRPV4 IS A KEY MECHANOSENSOR IN MACROPHAGES THAT DRIVES MYOFIBROBLAST DIFFERENTIATION THROUGH THE SECRETION OF ACTIVE TGF- $\beta$ . Rachel G. Scheraga<sup>1,2\*</sup>, L.M. Grove<sup>2</sup>, S. Abraham<sup>2</sup>, B.D. Southern<sup>1,2</sup>, A. Reinhardt<sup>2</sup>, E.M. Orsini<sup>1</sup>, M.A. Olman<sup>1,2</sup>, <sup>1</sup>Departments of Pulmonary and Critical Care and <sup>2</sup>Inflammation and Immunity, Cleveland Clinic, Cleveland, OH.*

2:45-3:00 PM *PIEZO2 IS AN IMPORTANT MECHANO-RECEPTOR IN PULMONARY FIBROSIS. Margaret A.T. Freeberg\*, S.V. Camus, T.H. Thatcher, P.J. Sime Department of Internal Medicine, Virginia Commonwealth University, Richmond, VA.*

3:00-3:30 PM .....Break (Refreshments for conference participants only)

### Session 4: Biological Interface and Interaction in Interstitial Lung Disease – Re-Building the Endothelium

#### Moderators--

#### 3:30-4:05 PM STATE OF THE ART

**Tatiana V. Kalin, M.D., Ph.D.**

*Phoenix Children’s Center for Cancer and Blood Disorders*

*University of Arizona College of Medicine – Phoenix, Arizona*

**“Regeneration of the Vascular Niche During Fibrosis Repair”**

#### 4:05-4:30 PM Discussion

4:30-4:45 PM *THE ROLE OF ENDOTHELIAL MECHANOTRANSDUCTION IN PULMONARY FIBROSIS. Patricia Brazeo\*, Shatruhan Rajput, Ilyaas Sugal, Trong Nguyen, Katharine Ference, Rachel Knipe, Division of Pulmonary and Critical Care Medicine, Center for Immunology and Inflammatory Diseases, Massachusetts General Hospital, Boston, MA.*

4:45-5:00 PM *VASCULAR BED TRANSCRIPTIONAL ACTIVATION CHARACTERIZES RAPID PROGRESSORS IN IDIOPATHIC PULMONARY FIBROSIS. Sari Ezgi<sup>1\*</sup>, N.S. Sharma<sup>2,3</sup>, K. Patel<sup>4</sup>, S. Shankar<sup>4</sup>, M.G. Gastanadui<sup>5</sup>, D. Moncada Giraldo<sup>6</sup>, Y. Soto-Vazquez<sup>5</sup>, D. Stacks<sup>1</sup>, L. Hecker<sup>7</sup>, K. Dsouza<sup>4</sup>, M. Bandy<sup>2</sup>, E. O’Neill<sup>4</sup>, P. Benson<sup>1</sup>, G. Payne<sup>5,8</sup>, A. Gaggar<sup>5,8</sup>, C. Margaroli<sup>1</sup>, <sup>1</sup>Department of Pathology, University of Alabama at Birmingham, Birmingham, Alabama; <sup>2</sup>Department of Medicine, Brigham and Women’s Hospital, Boston, Massachusetts; <sup>3</sup>West Roxbury VA Medical Center, Boston, Massachusetts; <sup>4</sup>Department of Medicine, University of South Florida, Tampa, Florida; <sup>5</sup>Department of Medicine, University of Alabama at Birmingham, Birmingham, Alabama; <sup>6</sup>Department of Pediatrics, Emory University, Atlanta, Georgia; <sup>7</sup>Department of Medicine, Emory University, Atlanta, Georgia; <sup>8</sup>Birmingham VA Medical Center, Birmingham, Alabama.*

5:00-7:00 PM POSTER VIEWING (Refreshments for conference participants only)

**Wednesday, June 5, 2024 -- Morning**

**Session 5: Biological Interface and Interaction in Interstitial Lung Disease – Re-Building Stem Cell Niches**  
**Moderators--**

**8:00-8:35 AM**

**ROGER S. MITCHELL LECTURE**  
**“REGENERATION OF THE STEM CELL**  
**NICHE TO DRIVE REPAIR”**

*Xin Sun, Ph.D.*

*Professor of Pediatrics*

*Department of Cell and Development Biology*

*School of Biological Sciences*

*University of California San Diego*

*San Diego, California*

**8:35-9:00 AM Discussion**

9:00-9:15 AM *TYPE 2 INNATE IMMUNITY PROMOTES THE DEVELOPMENT OF PULMONARY FIBROSIS IN HERMANSKY-PUDLAK SYNDROME. Parand Sorkhdini<sup>1</sup>, Kiran Klubock-Shukla<sup>1</sup>, Dongqin Yang<sup>1</sup>, Alina Xiaoyu Yang<sup>1</sup>, Carmelissa Norbrun<sup>1</sup>, Wendy J. Introne<sup>2</sup>, Bernadette R. Gochuico<sup>2</sup>, Yang Zhou<sup>1\*</sup>,<sup>1</sup>Department of Molecular Microbiology and Immunology, Brown University, Providence, R.I. <sup>2</sup>Medical Genetics Branch, National Human Genome Research Institute, Bethesda, Maryland.*

9:15-9:30 AM *MOVEMENT OF EPITHELIAL CELLS IS ASSOCIATED WITH THE EXTENT OF LUNG FIBROSIS IN IDIOPATHIC PULMONARY FIBROSIS (IPF) Andrey Krivoy<sup>1\*</sup>, Evgenia Dobrinskikh<sup>1</sup>, Seyedeh Zahra Fotook Kiaei<sup>1</sup>, Ian Stancil<sup>1,2</sup>, Janna Brancato<sup>1</sup>, Ivana V. Yang<sup>1</sup>, David A. Schwartz<sup>1</sup>,<sup>1</sup>Division of Pulmonary Sciences and Critical Care Medicine; University of Colorado, Denver, CO; <sup>2</sup>Division of Pulmonary and Critical Care Medicine, Stanford University, Palo Alto, CA.*

**9:30-10:00 AM .....Coffee Break MEET THE PROFESSOR SESSION (by Registration table)**  
**(Refreshments for conference participants only)**

**Wednesday, June 5, 2024 -- Morning**

**Theme 3: Diagnostic Challenges and Novel Approaches – The Road to Understanding Interstitial Lung Abnormalities, UIPs and Disease Progression**

**Session 6: AI Integration to Enhance Early Detection Using Integrated Omics**

**Moderators--**

**10:00-10:35 AM STATE OF THE ART**

**Casey S. Greene, Ph.D.**

*University of Colorado School of Medicine, Aurora, Colorado*

**“The Integration of Omics Data to Model and Understand the Biology of ILDs”**

**10:35-11:00 AM Discussion**

11:00-11:15 AM *SKIN TRANSCRIPTOMICS ARE ASSOCIATED WITH LUNG FUNCTION IMPAIRMENT AND DISTINCT CELL TYPE ENRICHMENT IN SYSTEMIC SCLEROSIS-RELATED LUNG DISEASE. Jana Zielonka\**, Ningshan Li, Zuoheng Wang, Xiting Yan, Jose L. Gomez, Yale University School of Medicine, Division of Pulmonary, Critical Care & Sleep Medicine, New Haven, CT.

11:15-11:30 AM *LRP1 DEFICIENCY CHANGES LIPID METABOLISM AND AGGRAVATES LUNG FIBROSIS. F. Schramm<sup>1</sup>, L. Wujak<sup>2</sup>, S. Hadzic<sup>3</sup>, K. Rubio<sup>4</sup>, T.O. Eichmann<sup>5</sup>, W. Sattler<sup>5</sup>, S. Günther<sup>6</sup>, J. Wilhelm<sup>1,7</sup>, I. Alexopoulos<sup>1,7</sup>, B. Kojonazarov<sup>3</sup>, G. Barreto<sup>4</sup>, Malgorzata Wygrecka<sup>1,7\*</sup>, <sup>1</sup>Center for Infections and Genomics of the Lung, German Center for Lung Research, Justus Liebig University, Giessen, Germany; <sup>2</sup>MedComms Warsaw, Warsaw, Poland; <sup>3</sup>Excellence-Cluster Cardio-Pulmonary Institute, Justus Liebig University, Giessen, Germany; <sup>4</sup>Universite de Lorraine, Nancy, France. <sup>5</sup>Medizinische Universität Graz, Graz, Austria; <sup>6</sup>German Centre for Cardiovascular Research, Bad Nauheim, Germany; <sup>7</sup>Institute for Lung Health, Justus Liebig University, Giessen, Germany.*

**12:00-3:00 PM Picnic – T Lazy 7 - The Ranch (for conference participants and their family)**

**Thursday, June 6, 2024 -- Morning**

**Session 7: Common Threads to Usual Interstitial Pneumonitis: Tying it All Together**

**Moderators--**

**8:00-8:35 AM**

**MARVIN I. SCHWARZ LECTURE  
“ROLE OF TRANSITIONAL EPITHELIAL CELLS  
IN LUNG REGENERATION AND FIBROSIS”**

*Rachel L. Zemans, M.D.*

*Henry Sewall Research Professor of  
Pulmonary and Critical Care Medicine*

*Professor of Internal Medicine and  
Cellular & Molecular Biology*

*University of Michigan  
Ann Arbor, Michigan*

**8:35-9:00 AM Discussion**

**9:00-9:15 AM**

*HOW SHOULD PATIENTS WITH PROGRESSIVE PULMONARY FIBROSIS BE IDENTIFIED? CONSENSUS FINDINGS FROM A MODIFIED DELPHI STUDY. Athol U Wells<sup>1,2\*</sup> Simon LF Walsh,<sup>2</sup> Ayodeji Adegunsoye,<sup>3</sup> Vincent Cottin,<sup>4</sup> Sonye Danoff,<sup>5</sup> Anand Devaraj,<sup>1,2</sup> Kevin R Flaherty,<sup>6</sup> Peter M George,<sup>1,2</sup> Martin Kolb,<sup>7</sup> Yasuhiro Kondoh,<sup>8</sup> Andrew G Nicholson,<sup>1</sup> Sara Tomassetti,<sup>9</sup> Elizabeth R Volkmann,<sup>10</sup> Kevin K Brown<sup>11</sup>, <sup>1</sup>Royal Brompton and Harefield Hospitals, London, UK; <sup>2</sup>National Heart and Lung Institute, Imperial College London, London, UK; <sup>3</sup>University of Chicago, Chicago; <sup>4</sup>National Reference Center for Rare Pulmonary Diseases, Louis Pradel Hospital, Claude Bernard University Lyon 1, Lyon, France; <sup>5</sup>Johns Hopkins Medicine, Baltimore; <sup>6</sup>University of Michigan, Ann Arbor; <sup>7</sup>McMaster University and St. Joseph's Healthcare, Hamilton, Canada; <sup>8</sup>Tosei General Hospital, Aichi, Japan; <sup>9</sup>Florence University, Florence, Italy; <sup>10</sup>University of California, David Geffen School of Medicine, Los Angeles; <sup>11</sup>National Jewish Health, Denver.*

**9:15-9:30 AM**

*LUNG MICROENVIRONMENT LABEL-FREE QUANTITATIVE PROTEOMICS IDENTIFIES DISTINCT ENDOPHENOTYPES IN IDIOPATHIC PULMONARY FIBROSIS. L. T. Ngo<sup>1</sup>, M. Rekowski<sup>2</sup>, D. Koestler<sup>3</sup>, I. Azeem<sup>1</sup>, A. Harrison<sup>1</sup>, M.K. Demoruelle<sup>4</sup>, J. Boomer<sup>1</sup>, B.R. England<sup>5</sup>, P. Wolters<sup>6</sup>, P. Molyneux<sup>7</sup>, M. Castro<sup>1</sup>, J.S. Lee<sup>8</sup>, J.J. Solomon<sup>9</sup>, K. Koronuma<sup>10</sup>, M.P. Washburn<sup>2</sup>, Scott M. Matson<sup>1\*</sup>, <sup>1</sup>Division of Pulmonary, Critical Care and Sleep Medicine, University of Kansas School of Medicine; <sup>2</sup>Department of Cancer Biology, KUMC; <sup>3</sup>Department of Biostatistics KUMC; <sup>4</sup>Division of Rheumatology, University of Colorado; <sup>5</sup>Division of Rheumatology & Immunology, University of Nebraska Medical Center; <sup>6</sup>Division of Pulmonary and Critical Care Medicine, UCSF; <sup>7</sup>National Heart and Lung Institute, Imperial College London; <sup>8</sup>Division of Pulmonary Sciences and Critical Care Medicine, University of Colorado; <sup>9</sup>National Jewish Health Hospital; <sup>10</sup>Department of Respiratory, Sapporo Medical University School of Medicine, Sapporo, Japan.*

**9:30-10:00 AM .....Coffee Break MEET THE PROFESSOR SESSION (by Registration table)  
(Refreshments for conference participants only)**

## Thursday, June 6, 2024 -- Morning

### Session 8: Non-Invasive Molecular Imaging and Quantifying Lung Fibrosis

#### Moderators--

#### **10:00-10:35 AM STATE OF THE ART**

**Sydney B. Montesi, M.D.**

*Massachusetts General Research Institute, Harvard Medical School, Boston, Massachusetts*

**“Harnessing the Power of Early Detection Through Molecular Imaging  
by PET/CT and PET/MRI”**

#### **10:35-11:00 AM Discussion**

11:00-11:15 AM

*QUANTIFYING AND EVALUATING TGFβ1 NON-INVASIVELY USING THE NOVEL <sup>89</sup>Zr DFO-TGFβRII PET IMAGING. Yujun Zhang<sup>1,2\*</sup>, Jessy Deshane<sup>3</sup>, Tejaswini Kulkarni<sup>3</sup>, Benjamin Larimer<sup>1,4</sup>, <sup>1</sup>Graduate Biomedical Sciences, The University of Alabama at Birmingham, AL; <sup>2</sup>Department of Radiology, The University of Alabama at Birmingham, AL; <sup>3</sup>Division of Pulmonary, Allergy and Critical Care Medicine, The University of Alabama at Birmingham, AL; <sup>4</sup>O’Neal Cancer Center, AL.*

11:15-11:30 AM

*DATA-DRIVEN TEXTURAL ANALYSIS (DTA) FIBROSIS SCORES FROM BASELINE TO 1-YEAR HRCT PREDICT SUBSEQUENT DISEASE PROGRESSION. Matthew Koslow<sup>1\*</sup>, J.J. Swigris<sup>1</sup>, D. Baraghoshi<sup>3</sup>, M. Strand<sup>3</sup>, J. Solomon<sup>1</sup>, E. Fernandez Perez<sup>1</sup>, Z.X. Yunt<sup>1</sup>, R. Keith<sup>1</sup>, M.P. Mohning<sup>1</sup>, T.J. Huie<sup>1</sup>, K.K. Brown<sup>1</sup>, D.A. Lynch<sup>2</sup>, S.M. Humphries<sup>2</sup>, <sup>1</sup>Center for Interstitial Lung Disease, Division of Pulmonary, Critical Care and Sleep Medicine; National Jewish Health, Denver, CO, <sup>2</sup>Department of Radiology, National Jewish Health, Denver, CO, <sup>3</sup> Division of Biostatistics and Bioinformatics, National Jewish Health, Denver CO.*

**11:30-1:30 PM .....Lunch (lunch not provided by conference)**

## **Thursday, June 6, 2024 -- Afternoon**

### **Theme 4: Transformational Interventions for Lung Fibrosis**

#### **Session 9: Regenerative Capacity and Scar Removal in the Lungs**

##### **Moderators-**

#### **1:30-2:05 PM STATE OF THE ART**

**Kamran Atabai, M.D.**

*University of California San Francisco, San Francisco, California*

**“Age-Dependent Regulation of Cell-Mediated Collagen Turnover”**

#### **2:05-2:30 PM Discussion**

2:30-2:45 PM

*DEXTROMETHORPHAN INHIBITS SECRETION OF PRO-FIBROTIC CARGOES ELICITING AN ANTI-FIBROTIC RESPONSE IN IN-VIVO, EX-VIVO AND IN-VITRO MODELS OF PULMONARY FIBROSIS. Muzamil M Khan<sup>1,2\*</sup>, Joanna Zukowska<sup>1</sup>, Juan Jung<sup>1</sup>, George Galea<sup>1</sup>, Nadine Tuechler<sup>1</sup>, Aliaksandr Halavatyi<sup>1</sup>, Beate Neumann<sup>1</sup>, Thomas Muley<sup>2</sup>, Hauke Winter<sup>2</sup>, Julia Duerr<sup>3</sup>, Marcus A Mall<sup>3</sup>, Ernesto de la Cueva<sup>1</sup>, Mikhail Savitski<sup>1</sup>, Rainer Pepperkok<sup>1,2</sup>, <sup>1</sup>Cell Biology and Biophysics Unit, European Molecular Biology Laboratory, Heidelberg, Germany; <sup>2</sup>Translational Lung Research Center Heidelberg, German Center for Lung Research (DZL), Heidelberg, Germany; <sup>3</sup>Department of Pediatric Respiratory Medicine, Immunology and Critical Care Medicine, Charité-Universitätsmedizin Berlin, Germany.*

2:45-3:00 PM

*COLLAGEN PROLYL-3-HYDROXYLASE 1 IS INCREASED IN IDIOPATHIC PULMONARY FIBROSIS AND CONTROLS COLLAGEN QUALITY AND COMPOSITION. Claudia A. Staab-Weijnitz<sup>1\*</sup>, Juliane Merl-Pham<sup>2</sup>, Vivek Sarohi<sup>3</sup>, Rachel Z. Blumhagen<sup>4</sup>, Leonhard Binzenhöfer<sup>1</sup>, Karolina Pijadina<sup>1</sup>, Marleen Stremmlau<sup>1</sup>, Elisabeth Hennen<sup>1</sup>, Natalia Cabeza-Boeddinghaus<sup>1</sup>, Ceylan Onursal<sup>1</sup>, Jürgen Behr<sup>5</sup>, Anne Hilgendorff<sup>1</sup>, Hans Peter Bächinger<sup>6</sup>, David A. Schwartz<sup>7</sup>, Ivana Yang<sup>7</sup>, Naftali Kaminski<sup>8</sup>, Stefanie M. Hauck<sup>2</sup>, Oliver Eickelberg<sup>1</sup>, Roberto Vanacore<sup>9</sup>, Trayambak Basak<sup>3</sup>, <sup>1</sup>Comprehensive Pneumology Center, Institute of Lung Health and Immunity, Helmholtz Munich, Germany; <sup>2</sup>Metabolomics and Proteomics Core, Helmholtz Munich, Germany; <sup>3</sup>School of Biosciences and Bioengineering (SBB), Indian Institute of Technology (IIT), Mandi, Mandi, India; <sup>4</sup>Center for Genes, Environment and Health, National Jewish Health, Denver, CO; <sup>5</sup>University Hospital of the LMU, Munich, Germany; <sup>6</sup>Department of Biochemistry and Molecular Biology, Oregon Health & Science University, Portland, OR; <sup>7</sup>Department of Medicine, University of Colorado Anschutz Medical Campus, Aurora, CO; <sup>8</sup>Pulmonary, Critical Care and Sleep Medicine, Yale School of Medicine, New Haven, CT; <sup>9</sup>Division of Nephrology and Hypertension, Department of Medicine, Vanderbilt University Medical Center, Nashville, TN.*

**3:00-3:30 PM**

**.....Break (Refreshments for conference participants only)**



**Thursday, June 6, 2024 -- Afternoon**

**Session 10: Regenerative Capacity and Scar Removal in the Lung**

**Moderators--**

**3:30-4:05 PM**

**THOMAS A. NEFF LECTURE  
“CELLULAR SENSING AND REMODELING OF THE  
LUNG MATRIX ENVIRONMENT”**

***Daniel J. Tschumperlin, Ph.D.***

***Professor and Vice Chair***

***Department of Physiology and Biomedical Engineering***

***Mayo Clinic***

***Rochester, Minnesota***

**4:05-4:30 PM Discussion**

**4:30-4:45 PM**

***MECHANOSENSORY PRIMARY CILIA REWIRE LUNG FIBROBLAST METABOLISM TO PROMOTE FIBROSIS. G.S. Ozcebe<sup>#1</sup>, C.S. Trempus<sup>#1</sup>, B. Papas<sup>1</sup>, J.L. Li<sup>1</sup>, M. Prates Mori<sup>1</sup>, R. Snyder<sup>1</sup>, R. Vancini<sup>1</sup>, J. Watts<sup>1</sup>, J. Santos<sup>1</sup>, C.M. Hogaboam<sup>2</sup>, D.A. Schwartz<sup>3</sup>, A. Mora<sup>4</sup>, M. Rojas<sup>4</sup>, Stavros Garantziotis<sup>1\*</sup>, <sup>1</sup>National Institute of Environmental Health Sciences; <sup>2</sup>Cedars Sinai Medical Center; <sup>3</sup>University of Colorado; <sup>4</sup>Ohio State University. #equal contribution as first authors***

**4:45-5:00 PM**

***RECOGNITION OF CELL DEATH METABOLICALLY PRIMES LUNG FIBROBLASTS FOR COLLAGEN SYNTHESIS AND PROLIFERATION. Hope Chatwin, Shannon McManus, Elizabeth Redente, Alexandra McCubbrey\*, Department of Medicine, National Jewish Health, Denver CO.***

**5:00-7:00 PM POSTER VIEWING (*Refreshments for conference participants only*)**

**Friday, June 7, 2024 -- Morning**

**Session 11: Pharmacologic Targets Lead to Cures**

**Moderators--**

**8:00-8:35 AM**

**REUBEN M. CHERNIACK LECTURE**  
**“LESSONS FROM CF: GENETIC TARGETING FOR**  
**SUCCESSFUL PHARMACOLOGIC INTERVENTION**  
**AND PARALLELS TO ILD DRUG DEVELOPMENT”**

**Paul A. Negulescu, Ph.D.**  
**Senior Vice President, Research**  
**Vertex Pharmaceuticals, Incorporated**  
**San Diego, California**

**8:35-9:00 AM Discussion**

**9:00-9:15 AM**

*ELEVATED SINE OCULIS HOMEBOX HOMOLOG 1 (SIX1) IN FIBROTIC LUNG DISEASES, A POTENTIAL TARGET FOR GENE SILENCING? Cory Wilson<sup>1</sup>, Sarah Shin<sup>2</sup>, Scott Collum<sup>2</sup>, Nancy Wareing<sup>3</sup>, Howard J Huang<sup>4</sup>, Bindu Akkanti<sup>5</sup>; Bela Patel<sup>5</sup>, **Harry Karmouty-Quintana<sup>2,5\*</sup>**,<sup>1</sup>Department of Internal Medicine, University of Iowa; Iowa City, Iowa; <sup>2</sup>Department of Biochemistry and Molecular Biology, UTHealth, Houston, TX; <sup>3</sup>Department of Internal Medicine, Emory University, Atlanta, GA; <sup>4</sup>Department of Pulmonary Critical Care, Houston Methodist, Houston TX; <sup>5</sup>Divisions of Critical Care, Pulmonary and Sleep Medicine, Department of Internal Medicine, UTHealth, Houston, TX.*

**9:15-9:30 AM**

*SYNERGISTIC EFFECTS OF NINTEDANIB AND ABT-199 ON FIBROBLAST APOPTOSIS. **Joseph Cooley<sup>1\*</sup>**, J. Wilson<sup>2</sup>, N. Javkhlan<sup>2</sup>, D. A. Schwartz<sup>3</sup>, D. W. Riches<sup>2</sup>, E. F. Redente<sup>2</sup>,<sup>1</sup>Pulmonary and Critical Care, National Jewish Health, Denver, CO; <sup>2</sup>Pediatrics, National Jewish Health, Denver, CO, United States; <sup>3</sup>Dept of Med, Univ of Colorado, Aurora, CO.*

**9:30-10:00 AM .....Coffee Break (Refreshments for conference participants only)**

**Friday, June 7, 2027 – Morning**

**Session 12: Cures Tissue Repair Through Rebuilding the Lung**

**Moderators:**

**10:00-10:35 AM**

**GILES F. FILLEY LECTURE  
“THE FUTURE OF LUNG REGENERATION  
AND TRANSPLANTATION”  
Thomas Petersen, M.D., Ph.D.  
Vice President, Regenerative Medicine  
United Therapeutics  
Durham, North Carolina**

**10:35-11:00 AM Discussion**

**11:00-11:15 AM**

*MUC5B SUPPRESSES ALVEOLAR REGENERATION. Yan Hu<sup>1\*</sup>, Naoko Liu<sup>1</sup>, James Needell<sup>1</sup>, Melanie Königshoff<sup>2</sup>, Christopher Evans<sup>1</sup>, <sup>1</sup>Division of Pulmonary Sciences and Critical Care Medicine, University of Colorado School of Medicine, Aurora, CO, <sup>2</sup>Division of Pulmonary, Allergy, and Critical Care Medicine; Department of Medicine, University of Pittsburgh, Pittsburgh, PA.*

**11:15-11:30 AM**

*LUNG CELL TRANSPLANTATION FOR PULMONARY FIBROSIS. Irit Milman Krentsis<sup>1\*</sup>, Yangxi Zheng<sup>1</sup>, Christa Blagdon<sup>1</sup>, Sarah Y. Shin<sup>3</sup>, Sandeep K. Yadav<sup>1</sup>, Esther Bachar Lustig<sup>1</sup>, Chava Rosen<sup>1,2</sup>, Eli Shezen<sup>1</sup>, Einav Shoshan<sup>1</sup>, Burton F. Dickey<sup>4</sup>, Harry Karmouty-Quintana<sup>3</sup>, Yair Reisner<sup>1</sup>, <sup>1</sup>Department of Stem Cell Transplantation and Cell Therapy, MD Anderson Cancer Center, Houston, TX; <sup>2</sup>Department of Neonatology, Children’s Hospital, Sheba Medical Center, Tal Hashomer, Israel; <sup>3</sup>Department of Internal Medicine, The University of Texas Health Science Center, Houston, TX; <sup>4</sup>Department of Pulmonary Medicine, MD Anderson Cancer Center, Houston, TX.*

**11:30-12:30 PM**

**CONFERENCE SUMMARY  
Patricia J. Sime, M.D.  
Chair, Department of Internal Medicine  
William Branch Porter Professor of Medicine  
Division of Pulmonary Diseases and Critical Care Medicine  
Virginia Commonwealth University  
Richmond, Virginia**

**12:30-1:00 PM**

**Discussion and Adjourn**

**POSTER VIEWING**  
**Tuesday, June 4, 2024**  
**5:00-7:00 PM**

**POSTERS**

*ALDEHYDE DEHYDROGENASE 2 MITIGATES LUNG FIBROSIS AFTER INJURY. Yael Aschner<sup>1\*</sup>, Elisabeth Murphy<sup>2</sup>, Kelly A Correll<sup>2</sup>, Keriann Beke<sup>2</sup>, Paul R Reynolds<sup>2</sup>, Gregory P Downey<sup>1,2</sup>, <sup>1</sup>Dept of Medicine, University of Colorado Anschutz Medical Campus, Aurora, CO, <sup>2</sup>Dept of Academic Affairs, National Jewish Health, Denver, CO.*

*DEVELOPMENT OF NOVEL TECHNOLOGY FOR THE VISUALIZATION AND QUANTITATION OF MICROVASCULAR PROGENITOR DRIVEN ADAPTIVE ANGIOGENESIS DURING CHRONIC LUNG DISEASE. Hannah Thorndyke<sup>1\*</sup>, Evan Lundberg<sup>1</sup>, Maggie Dawson<sup>1</sup>, Edwin Ortiz Gaxon<sup>2</sup>, Emma Mason<sup>1</sup>, Eszter Vladar<sup>3</sup>, David Coronado Escobar<sup>4</sup>, and Susan Majka<sup>1,3</sup>, <sup>1</sup>Department of Medicine, Division of Pulmonary & Critical Care Medicine, National Jewish Health, Denver CO; <sup>2</sup>Cell Biology, Stem Cells & Development Graduate Program, University of Colorado Anschutz Medical Campus; <sup>3</sup>Department of Medicine, Division of Pulmonary & Critical Care Medicine, University of Colorado Anschutz Medical Campus; <sup>4</sup>Onimaging Technologies SCA, Cordoba, Spain.*

*PGK1 MEDIATES DEFICIENT PYRUVATE UTILIZATION AND BIOENERGETIC COMPROMISE IN LUNG FIBROBLASTS IN AGE-RELATED LUNG FIBROSIS. Pilar Londono, Emily Turner, Gavriel Roda, Christopher M. Evans and Sunad Rangarajan\*, Division of Pulmonary Sciences and Critical Care, University of Colorado Anschutz Medical Campus, Aurora, CO.*

*LONG NON-CODING RNA IN IPF: REGULATORY PLAYERS IN LUNG FIBROSIS. Aileen C. Button<sup>1\*</sup>, I. V. Yang<sup>1</sup>, D. A. Schwartz<sup>1</sup>; <sup>1</sup>Department of Medicine, University of Colorado, Aurora, CO.*

*TARGETING A NOVEL TRPV4-PI3K $\gamma$  INTERACTION BLOCKS FIBROGENIC MYOFIBROBLAST DIFFERENTIATION. Lisa M. Grove<sup>1</sup>, M.L. Mohan<sup>2</sup>, K.D. Singh<sup>2</sup>, S. Abraham<sup>1</sup>, A. Reinhardt<sup>1</sup>, H. Mao<sup>1</sup>, R.G. Scheraga<sup>1,3</sup>, B.D. Southern<sup>1,3</sup>, S.V. Naga Prasad<sup>2</sup>, S.S. Karnik<sup>2</sup>, and Mitch A. Olman<sup>1,3\*</sup>, <sup>1</sup>Departments of Inflammation and Immunity and <sup>2</sup>Cardiovascular and Metabolic Sciences of Lerner Research Institute and <sup>3</sup>Respiratory Institute, Cleveland Clinic, Cleveland, Ohio.*

*CELL-CELL AND CELL-MATRIX INTERACTIONS IN BIOENGINEERED 3D MODELS OF LUNG FIBROSIS. Rachel Blomberg<sup>1\*</sup>, Mikala C. Mueller<sup>1</sup>, David W.H. Riches<sup>2,3,4,5</sup>, and Chelsea M. Magin<sup>1,3,6</sup>, <sup>1</sup>Department of Bioengineering, University of Colorado Denver | Anschutz, <sup>2</sup>Program in Cell Biology, Department of Pediatrics, National Jewish Health, <sup>3</sup>Division of Pulmonary Sciences and Critical Care Medicine, Department of Medicine, University of Colorado Anschutz, <sup>4</sup>Department of Research, Veterans Affairs Eastern Colorado Health Care System, <sup>5</sup>Department of Immunology and Microbiology, University of Colorado Anschutz, <sup>6</sup>Department of Pediatrics, University of Colorado Anschutz, Aurora, CO.*

*ENGINEERING TUNABLE STIFFNESS HYDROGELS TO MODEL FIBROTIC ALVEOLAR TRANSITIONAL CELLS AND STUDY HUMAN PULMONARY FIBROSIS. Alicia E. Tanneberger<sup>1\*</sup>, Rachel Blomberg<sup>1</sup>, Amy L. Ryan<sup>2</sup>, Chelsea M. Magin<sup>1,3,4</sup>. <sup>1</sup>Department of Bioengineering, University of Colorado Denver Anschutz; <sup>2</sup>Department of Anatomy and Cell Biology, Carver College of Medicine, University of Iowa, Iowa City, IA; <sup>3</sup>Department of Pediatrics, University of Colorado, Anschutz Medical Campus, Aurora, CO; <sup>4</sup>Division of Pulmonary Sciences & Critical Care Medicine, Department of Medicine, University of Colorado, Anschutz Medical Campus, Aurora, CO.*

**POSTERS – Tuesday, June 4, 2024 – continued**

*REPETITIVE O<sub>3</sub> EXPOSURE IN HYPERGLYCEMIC INSULIN RESISTANT MICE EXACERBATES LUNG INJURY AND FIBROSIS.* **Robert M. Tighe**<sup>1\*</sup>, A.V. Vose<sup>1</sup>, J.G. Wagner<sup>2</sup> and J.R. Harkema<sup>2</sup>, <sup>1</sup>Duke University, Durham, NC <sup>2</sup>Michigan State University, East Lansing, MI.

*DEFINING THE EFFECT OF PDGFR $\alpha$  LUNG FIBROBLASTS ON ALVEOLAR EPITHELIAL CELLS USING TRANSCRIPTOMIC PROFILING.* **Carol S. Trempus**<sup>1\*</sup>, Brian N. Papas<sup>2</sup>, Erica Scappini<sup>3</sup>, Charles J. Tucker<sup>3</sup>, Deloris Sutton<sup>4</sup>, and Stavros Garantziotis<sup>1</sup>, <sup>1</sup>Immunity, Inflammation, and Disease Laboratory, NIEHS, Research Triangle Park, NC; <sup>2</sup>Biostatistics & Computational Biology Branch, NIEHS, Research Triangle Park, NC; <sup>3</sup>Signal Transduction Branch, NIEHS, Research Triangle Park, NC; <sup>4</sup>Comparative & Molecular Pathogenesis Branch, NIEHS, Research Triangle Park, NC.

*SOX9 UPREGULATION IN THE PATHOGENESIS OF SEVERE FIBROTIC LUNG DISEASE.* **Priyanka Singh**<sup>1\*</sup>, P. R. Gajjala<sup>1</sup>, H. H. Ediga<sup>1</sup>, V. Sontake<sup>2</sup>, C. P. Vemulapalli<sup>1</sup>, P.K. Patel<sup>1</sup>, H. Miyazaki<sup>2</sup>, D. Popov<sup>2</sup>, S. Alisher<sup>1</sup>, S. K. Huang<sup>3</sup>, M. S. Walters<sup>4</sup>, and S. K. Madala<sup>1</sup>, <sup>1</sup>Division of Pulmonary, Critical Care and Sleep Medicine, University of Cincinnati, Cincinnati, OH; <sup>2</sup>Gordian Biotechnology, South San Francisco; <sup>3</sup>Division of Pulmonary and Critical Care Medicine, University of Michigan Medical School, Ann Arbor; <sup>4</sup>Department of Medicine, Section of Pulmonary, Critical Care and Sleep Medicine, University of Oklahoma Health Sciences Center, Oklahoma.

*CELL COMPETITION DRIVES BRONCHIOLIZATION AND PULMONARY FIBROSIS.* Rachel Warren<sup>1</sup>, Kylie Klinkhammer<sup>1</sup>, Handeng Lyu<sup>1</sup>, Changfu Yao<sup>2</sup>, Barry Stripp<sup>2</sup> and **Stijn P. De Langhe**<sup>1\*</sup>, <sup>1</sup>Department of Medicine, Division of Pulmonary and Critical Care Medicine, Mayo Clinic, Rochester, MN; <sup>2</sup>Women's Guild Lung Institute, Department of Medicine, Cedars-Sinai Medical Center, Los Angeles, CA.

*GENETIC LOCUS ASSOCIATED WITH BLEOMYCIN INDUCED LUNG INJURY IN MICE.* **Yingping Wang**<sup>1\*</sup>, Corinne Hennessy<sup>1</sup>, Kristina Hatakka<sup>1</sup>, Stephen Humphries<sup>2</sup>, Evgenia Dobrinskikh<sup>2</sup>, David Clouthier<sup>3†</sup>, Ivana V. Yang<sup>1†</sup>, David A. Schwartz<sup>1†</sup>, <sup>1</sup> Department of Medicine, University of Colorado School of Medicine, Aurora, Colorado; <sup>2</sup> Department of Radiology, National Jewish Health, Denver, Colorado; <sup>3</sup> Department of Craniofacial Biology, University of Colorado School of Medicine, Aurora, Colorado. <sup>†</sup>Authors contributed equally.

*'SILICOSARCOIDOSIS': IMPORTANCE OF SILICA IN GRANULOMATOUS LUNG FIBROSIS.* **Jeremy T. Hua**<sup>1\*</sup>, Carlyne D. Cool<sup>2</sup>, Einat Fireman Klein<sup>4</sup>, Lukas J. Lee<sup>5</sup>, Lauren M. Zell-Baran<sup>1</sup>, Robert A. Cohen<sup>6</sup>, Richard Kraus<sup>1</sup>, Charles Van Hook<sup>3</sup>, Cecile S. Rose<sup>1</sup>, <sup>1</sup>Division of Environmental and Occupational Health Sciences, National Jewish Health, CO; <sup>2</sup>Department of Pathology and <sup>3</sup>Department of Medicine, University of Colorado, CO; <sup>4</sup>Pulmonary Division, Lady Davis Carmel Medical Center, Faculty of Medicine Technion Institute of Technology, Haifa, Israel, <sup>5</sup>Tao-Yuan General Hospital, Taiwan; <sup>6</sup>Environmental and Occupational Health Sciences, School of Public Health, University of Illinois Chicago, IL.

*ROLE OF  $\alpha$ TAT1 IN THE MECHANOBIOLOGY OF LUNG FIBROSIS.* **Ingo Ganzleben**<sup>1,2,3\*</sup>, Alyce Segal<sup>1,3</sup>, Benjamin D. Medoff<sup>1,2,3</sup>, <sup>1</sup>Division of Pulmonary and Critical Care Medicine – Massachusetts General Hospital; <sup>2</sup>Center for Immunology and Inflammatory Diseases – Massachusetts General Hospital; <sup>3</sup>Harvard Medical School, Boston, Massachusetts.

*APOPTOTIC RESISTENCE IN COLLAGENIA1-EXPRESSING FIBROBLASTS DRIVES SILICA-INDUCED PULMONARY FIBROSIS.* **Daniel G. Foster**<sup>\*</sup>, N. Javkhlan, J. Wilson, B. L. Edelman, D. W. H. Riches, E. F. Redente; Pediatrics, National Jewish Health, Denver, CO.

**POSTERS – Tuesday, June 4, 2024 – continued**

*ENDOTHELIAL SIPRI SUPPORTS ALVEOLAR EPITHELIAL REPAIR. Patricia L Brazeel<sup>1\*</sup>, K.G. Ference<sup>1</sup>, A. Pickering<sup>2</sup>, T.G. Kooistra<sup>1</sup>, T. Hla<sup>3</sup>, B.D. Medoff<sup>1</sup>, R.S. Knipe<sup>1</sup>, <sup>1</sup>Massachusetts General Hospital, Division of Pulmonary and Critical Care Medicine, Boston, MA; <sup>2</sup>Harvard Medical School, Department of Biomedical Informatics; <sup>3</sup>Boston Childrens Hospital, Department of Surgery, Boston, MA.*

*SPATIAL AND TRANSCRIPTIONAL FEATURES IN IDIOPATHIC PULMONARY FIBROSIS (IPF) ASSOCIATED WITH THE MUC5B PROMOTER VARIANT. Rachel Z. Blumhagen<sup>1\*</sup>, Jonathan S. Kurche<sup>2,3</sup>, Carlyne D. Cool<sup>4,5</sup>, David Heinz<sup>5</sup>, David A. Schwartz<sup>2,\*\*</sup>, Ivana V. Yang<sup>6,\*\*</sup>, <sup>1</sup>Center for Genes, Environment and Health, National Jewish Health, <sup>2</sup>Rocky Mountain Regional Veteran's Administration Medical Center, <sup>3</sup>Division of Pulmonary Sciences and Critical Care Medicine, University of Colorado Anschutz Medical Campus, <sup>4</sup>Department of Pathology, University of Colorado Anschutz Medical Campus, <sup>5</sup>Pathology Laboratory, National Jewish Health, <sup>6</sup>Department of Biomedical Informatics, University of Colorado Anschutz Medical Campus  
**\*\*authors contributed equally***

*REDOX HETEROGENEITY IN FIBROBLASTS DURING FIBROSIS PROGRESSION. Patrick A. Link<sup>1\*</sup>, Jeffrey A. Meridew<sup>1</sup>, Nunzia Caporarello<sup>2</sup>, Ashley Y. Gao<sup>1</sup>, Victor Peters<sup>3</sup>, Mauricio Rojas<sup>3</sup>, Daniel J. Tschumperlin<sup>1</sup>, <sup>1</sup>Department of Physiology and Biomedical Engineering, Mayo Clinic, Rochester, MN; <sup>2</sup>Department of Medicine, Loyola University, Chicago, IL; <sup>3</sup>Department of Internal Medicine, Ohio State University, Columbus, OH.*

*SIGLECF KNOCKOUT MICE ARE PROTECTED FROM DEVELOPMENT OF LUNG FIBROSIS. Marika Orlov<sup>1\*</sup>, Naoko Liu<sup>1</sup>, Kenny Ngo<sup>1</sup>, James Needell<sup>1</sup>, Fan Jia<sup>2</sup>, Brian Vestal<sup>2</sup>, Rachel Blumhagen<sup>2</sup>, Jazalle McClendon<sup>3</sup>, William Janssen<sup>3</sup>, and Christopher Evans<sup>1</sup>, <sup>1</sup>Division of Pulmonary Science and Critical Care Medicine, University of Colorado, Aurora, CO, <sup>2</sup>Center for Genes, Environment and Health, National Jewish Health, Denver, CO <sup>3</sup>Department of Medicine, National Jewish Health, Denver, CO.*

*UPREGULATION OF MARCKS ACTIVITY IN MACROPHAGE REPROGRAMMING AND ITS POTENTIAL AS A THERAPEUTIC TARGET IN PULMONARY FIBROSIS. Ching-Hsien Chen<sup>\*</sup>, So-Yi Chang, Wen-Hsien Chang, Angela Linderholm, David C. Yang, Ssu-Wei Hsu, Reen Wu, Division of Pulmonary, Critical Care, and Sleep Medicine, Department of Internal Medicine, University of California Davis, Davis, CA.*

**POSTER VIEWING**  
**Thursday, June 6, 2024**  
**5:00-7:00 PM**

**POSTERS**

*BOOKMARKING DYSPNEA IN FIBROTIC INTERSTITIAL LUNG DISEASE. **Jeff Swigris\***, Kerri Aronson, Michelle Kam, National Jewish Health, Center for Interstitial Lung Disease, Denver, CO.*

*WNT SIGNALING IN PULMONARY MICROVASCULAR PROGENITOR CELLS (MVPC) DRIVES ADAPTIVE ANGIOGENESIS DURING FIBROSIS AND REGULATES REPAIR OF THE ALVEOLAR-CAPILLARY UNIT. **Emma C Mason<sup>1\*</sup>**, Benjamin R. Schneider<sup>1</sup>, Maggie Dawson<sup>1</sup>, Evan Lundberg<sup>1</sup>, David Cingel<sup>1</sup>, Peter Kim<sup>1</sup>, Kevin Kim<sup>1</sup>, Edwin Ortiz Gaxon<sup>1</sup>, Hannah Thorndyke<sup>1</sup>, Elizabeth Redente<sup>2</sup>, Patrick Geraghty<sup>3</sup>, M. Mark Taketo<sup>4</sup> and Susan M Majka<sup>1,5</sup>, <sup>1</sup>Department of Medicine, National Jewish Health, Denver, CO; <sup>2</sup>Division of Cell Biology and Department of Pediatrics, National Jewish Health, Denver, CO; <sup>3</sup>State University of New York, Downstate Health Science University, Brooklyn, New York; <sup>4</sup>Kyoto University, Sakyo, Kyoto, Japan; <sup>5</sup>Gates Center for Regenerative Medicine & Stem Cell Biology, University of Colorado, Aurora, CO.*

*PATIENT'S VIEWS ON THE ASSESSMENT OF INTERSTITIAL LUNG DISEASE-RELATED DYSPNEA. **Joseph B. Pryor<sup>1\*</sup>**, Dolly Kervitsky<sup>2</sup>, Jeffrey J. Swigris<sup>3</sup>, <sup>1</sup>Division of Pulmonary and Critical Care, University of Colorado, Denver, CO; <sup>2</sup>PFWarriors, <sup>3</sup>Center for Interstitial Lung Disease, National Jewish health, Denver, CO.*

*INTERSTITIAL LUNG DISEASE EDUCATION IN PULMONARY FELLOWSHIP: SUPPORTING PATIENTS THROUGH THEIR ILLNESS JOURNEY. **Samantha King<sup>1\*</sup>**; Anna Neumeier<sup>1,2</sup>; Bridget Graney<sup>1,2</sup>; Tristan Huie<sup>1,3</sup>, <sup>1</sup>Department of Medicine, University of Colorado School of Medicine, Aurora, CO; <sup>2</sup>Department of Medicine, Denver Health Medical Center, Denver, CO; <sup>3</sup>Department of Medicine, National Jewish Health, Denver, CO.*

*CIRCULATING BIOMARKERS IN CHILDREN AND ADOLESCENTS WITH FIBROSING INTERSTITIAL LUNG DISEASE (ILD). **Robin Deterding<sup>1\*</sup>**, Kevin K. Brown<sup>2</sup>, Steven Cunningham<sup>3</sup>, Emily M. DeBoer<sup>1</sup>, Matthias Griese<sup>4</sup>, Nicolaus Schwerk<sup>5</sup>, Lisa R. Young<sup>6</sup>, Carina Ittrich<sup>7</sup>, Thomas Schlange<sup>7</sup>, Martina Gahlemann<sup>8</sup>, David Warburton<sup>9</sup>, <sup>1</sup>Section of Pediatric Pulmonary and Sleep Medicine, Department of Pediatrics, University of Colorado Denver, Denver, CO and The Children's Hospital Colorado, Aurora, CO; <sup>2</sup>Department of Medicine, National Jewish Health, Denver, CO; <sup>3</sup>Centre for Inflammation Research, University of Edinburgh, Edinburgh, United Kingdom; <sup>4</sup>Hauner Children's Hospital Ludwig Maximilians University, German Center for Lung Research (DZL), Munich Germany; <sup>5</sup>Clinic for Pediatric Pulmonology, Allergology and Neonatology, Hannover Medical School, Hannover, Germany; <sup>6</sup>Division of Pulmonary and Sleep Medicine, The Children's Hospital of Philadelphia, Philadelphia, PA; <sup>7</sup>Boehringer Ingelheim Pharma GmbH & Co. KG, Biberach an der Riss, Germany; <sup>8</sup>Boehringer Ingelheim (Schweiz) GmbH, Basel Switzerland; <sup>9</sup>Children's Hospital Los Angeles, Los Angeles, CA and Keck School of Medicine, University of Southern California, Los Angeles, CA.*

*MUC5B PROMOTER VARIANT IS ASSOCIATED WITH A UNIQUE PROTEIN SIGNATURE IN EARLY LUNG FIBROSIS. **Jeremy A. Herrera<sup>1\*</sup>**, Mark Maslanka<sup>2</sup>, Rachel Blumhagen<sup>1</sup>, Janna Brancato<sup>1</sup>, Jonathan Huber<sup>1</sup>, Carlyne Cool<sup>1</sup>, Kirk C. Hansen<sup>2</sup>, Ivana V. Yang<sup>1</sup>, David A. Schwartz<sup>1</sup>, <sup>1</sup>Division of Pulmonary Sciences and Critical Care Medicine; <sup>2</sup>Department of Biochemistry and Molecular Genetics; University of Colorado Denver.*

**POSTERS – Thursday, June 6, 2024 – continued**

*WILMS TUMOR 1 IMPAIRS FIBROBLAST CLEARANCE IN SEVERE FIBROTIC LUNG DISEASE.* **Harshavardhana H. Ediga<sup>1\*</sup>**, C. P. Vemulapalli<sup>1</sup>, V. Sontake<sup>3</sup>, H. Miyazaki<sup>3</sup>, D Popov<sup>3</sup>, P.K. Patel<sup>1</sup>, S. Paranthaman<sup>1</sup>, S. K. Huang<sup>2</sup> and S. K. Madala<sup>1</sup>, <sup>1</sup>Division of Pulmonary, Critical Care and Sleep Medicine, Department of Internal Medicine, University of Cincinnati, Cincinnati, OH; <sup>2</sup>Division of Pulmonary and Critical Care Medicine, University of Michigan Medical School, Ann Arbor; <sup>3</sup>Gordian Biotechnology, South San Francisco, CA.

*NON-TYPICAL LUNG FIBROSIS: IMAGING PREDICTS SURVIVAL.* **David A Lynch<sup>\*</sup>**, Stephen M Humphries, Department of Radiology, National Jewish Health, Denver, CO.

*SPUTUM LEVELS OF EXTRACELLULAR DNA ARE INCREASED IN RHEUMATOID ARTHRITIS-ASSOCIATED INTERSTITIAL LUNG DISEASE.* **M. Kristen Demoruelle<sup>1\*</sup>**, Melissa Griffith<sup>1</sup>, Timothy M. Wilson<sup>2</sup>, Marie L. Feser<sup>1</sup>, Kevin D. Deane<sup>1</sup>, Stephen Humphries<sup>3</sup>, Joshua J. Solomon<sup>4</sup>, <sup>1</sup>University of Colorado Denver, Division of Rheumatology, Aurora, CO; <sup>2</sup>Thomas Jefferson University, Division of Rheumatology, Philadelphia, PA; <sup>3</sup>National Jewish Health, Department of Radiology, Denver, CO; <sup>4</sup>National Jewish Health, Division of Pulmonary, Critical Care and Sleep Medicine, Denver, CO.

*PCSK6 AND RESPIRATORY-RELATED OUTCOMES IN PATIENTS WITH PULMONARY FIBROSIS ENROLLED IN THE PULMONARY FIBROSIS FOUNDATION PATIENT REGISTRY.* **Kristin N. Berger<sup>1\*</sup>**, Will Whalen<sup>1</sup>, Will Simmons<sup>1</sup>, John S. Kim<sup>2</sup>, Imre Noth<sup>2</sup>, Justin M. Oldham<sup>3</sup>, Anna J. Podolanczuk<sup>1</sup>, <sup>1</sup>Department of Medicine at <sup>1</sup>Weill Cornell Medicine, New York, NY; <sup>2</sup>University of Virginia, Charlottesville; <sup>3</sup>University of Michigan, Ann Arbor, MI.

*CT FINDINGS ASSOCIATED WITH MYOSITIS RELATED INTERSTITIAL DISEASE.* **Joseph B Pryor<sup>1\*</sup>**, Joshua Solomon<sup>2</sup>, Jeffrey Swigris<sup>2</sup>, Rebecca Keith<sup>2</sup>, Tami Bang<sup>3</sup>, Andrea Fuentealba<sup>3</sup>, David A Lynch<sup>3</sup>, Liudmila Kastianok<sup>4</sup>, Zulma Yun<sup>2</sup>, <sup>1</sup>Division of Pulmonary and Critical Care, University of Colorado, Denver, CO; <sup>2</sup>Center for Interstitial Lung Disease, National Jewish Health, Denver, CO; <sup>3</sup>Department of Radiology, National Jewish Health, Denver, CO; <sup>4</sup>Division of Rheumatology, National Jewish Health, Denver, CO.

*EFFICACY OF ENSIFENTRINE, A DUAL PDE3/PDE4 INHIBITOR, IN THE RAT MODEL OF BLEOMYCIN INDUCED PULMONARY FIBROSIS.* **Margot MacDonald-Berko<sup>\*</sup>**, Verona Pharma plc, NC; Joanne Kilgour, Regulatory Science Associates, Inverkip, UK; Tara Rheault, Verona Pharma plc, NC. Lab work was completed at Labcorp Early Development Laboratories Ltd, UK.

*RECRUITED MACROPHAGES PRODUCE COAGULATION FACTOR XIII-A WHICH ENHANCES COLLAGEN DEPOSITION AFTER BLEOMYCIN.* **Peter Moore<sup>\*</sup>**, Raleigh Garner, Emily King, Shannon Hott, Katrina Kopf, William Janssen, Alexandra McCubbrey. Departments of Medicine, University of Colorado Anschutz, Aurora, CO and National Jewish Health, Denver, CO.

*UNIQUE PHOSPHOPROTEINS TRIGGER SENESENCE IN RADIATION-INDUCED PULMONARY FIBROSIS (RIPF).* **Sadiya Bi Shaikh<sup>1\*</sup>**, Eric Hernady<sup>2</sup>, Brian Marples<sup>2</sup> and Irfan Rahman<sup>1</sup>, <sup>1</sup>Department of Environmental Medicine, University of Rochester Medical Center, Rochester, NY; <sup>2</sup>Department of Radiation Oncology, University of Rochester Medical Center, Rochester, NY.

*LUNG TRANSPLANT OUTCOMES FOR PATIENTS WITH CONNECTIVE TISSUE DISEASE-RELATED INTERSTITIAL LUNG DISEASE.* **Sarah L. Khan<sup>1\*</sup>**, Samuel J. Minkove<sup>2</sup>, Kevin J. Psoter<sup>3</sup>, Sonye K. Danoff<sup>1</sup>, Pali D. Shah<sup>1</sup>, <sup>1</sup>Division of Pulmonary and Critical Care Medicine, Johns Hopkins University School of Medicine, Baltimore, MD; <sup>2</sup>Pulmonary Care and Sleep Medicine, St. Joseph's Medical Center, Towson, MD; <sup>3</sup>Division of General Pediatrics and Adolescent Medicine, Johns Hopkins University School of Medicine, Baltimore, MD.



**POSTERS – Thursday, June 6, 2024 – continued**

*APPLICATION OF IN VIVO ORGANELLAR IMMUNOPURIFICATION TO REVEAL MECHANISMS UNDERLYING GENETIC INTERSTITIAL LUNG DISEASE. David Ziehr<sup>1,2,3\*</sup>, Jason Yang<sup>1</sup>, Jack Bush<sup>1</sup>, Raghu Chivukula<sup>1,2,3</sup>, <sup>1</sup>Center for Genomic Medicine, Massachusetts General Hospital; <sup>2</sup>Division of Pulmonary and Critical Care Medicine, Massachusetts General Hospital; <sup>3</sup>Harvard Medical School, Boston, MA.*

*THE IPF-ASSOCIATED GENETIC VARIANT rs12417955 RESIDES IN A NOVEL 3' REGULATORY REGION FOR MUC5B THAT RESPONDS TO AIRWAY EPITHELIAL DIFFERENTIATION SIGNALS AND ENVIRONMENTAL CUES. Sarah K. Sasse<sup>1\*</sup>, Arnav Gupta<sup>1,2</sup>, Anna Peljto<sup>2</sup>, Rachel Blumhagen<sup>1</sup>, Fabienne Gally<sup>1</sup>, Evgenia Dobrinskikh<sup>2</sup>, Michael R. Weaver<sup>1</sup>, Robin D. Dowell<sup>3,4,5</sup>, Ivana V. Yang<sup>2</sup>, David A. Schwartz<sup>2</sup> and Anthony N. Gerber<sup>1,2</sup>, <sup>1</sup>Department of Medicine, National Jewish Health, Denver, CO; <sup>2</sup>Department of Medicine, University of Colorado, Aurora, CO; <sup>3</sup>BioFrontiers Institute, <sup>4</sup>Molecular, Cellular and Developmental Biology, <sup>5</sup>Computer Science, University of Colorado, Boulder, CO.*

*AUTOMATED CLASSIFICATION OF USUAL INTERSTITIAL PNEUMONIA ON COMPUTED TOMOGRAPHY IS ASSOCIATED WITH PROGRESSION OF INTERSTITIAL LUNG ABNORMALITIES IN THE COPDGENE STUDY. Stephen Humphries<sup>1\*</sup>, Devlin Thieke<sup>1</sup>, Samuel Ash<sup>2</sup>, Hiroto Hatabu<sup>3</sup>, Gary M. Hunninghake<sup>4</sup>, David Lynch<sup>1</sup>, <sup>1</sup>Department of Radiology, National Jewish Health, Denver, CO; <sup>2</sup>Critical Care, South Shore Hospital, South Weymouth, MA; <sup>3</sup>Department of Radiology and <sup>4</sup>Department of Pulmonary and Critical Care Medicine, Brigham and Women's Hospital, Harvard Medical School, Boston, MA.*

*CLINICAL AND GENETIC BIOMARKERS OF PULMONARY FIBROSIS AMONG GULLAH SYSTEMIC LUPUS ERYTHEMATOSUS PATIENTS. Robert Campbell, Jr.\* – NHLBI PRIDE AGOLD Scholar, Julius Nyalwidhe, - Leroy T. Canoles Jr. Cancer Research Center, Eastern Virginia Medical School, Norfolk, VA; Christopher Gignoux, - Colorado Center for Personalized Medicine, University of Colorado - Anschutz Medical Campus, Aurora, CO.*

*FUNCTIONALIZING HUMAN DECM FOR INCORPORATION INTO 3D PULMONARY FIBROSIS MODELS. Haley Noelle<sup>1\*</sup>, Mikala C. Mueller<sup>1</sup>, Dema H. Essmaeil<sup>2</sup>, Rachel Blomberg<sup>1</sup>, Chelsea M. Magin<sup>1,3,4</sup>, <sup>1</sup>Department of Bioengineering, University of Colorado, Denver | Anschutz Medical Campus; <sup>2</sup>Department of Biology, University of Colorado, Denver; <sup>3</sup>Department of Pediatrics, University of Colorado Anschutz Medical Campus; <sup>4</sup>Division of Pulmonary Sciences & Critical Care Medicine, Department of Medicine, University of Colorado, Anschutz Medical Campus, Aurora, CO.*