



**2025 GROVER CONFERENCE**  
**on Vascular Aging and Regeneration in Pulmonary Hypertension**  
**September 3-7, 2025**

**COURSE SCHEDULE**

**Wednesday, September 3, 2025**

- 12:00 pm Arrivals**
- 6:00 pm Welcome Reception and Dinner**  
Harry Karmouty-Quintana, PhD  
Grazyna Kwapiszewska, PhD  
Vladimir Kalinichenko, MD, PhD
- 7:00 pm Keynote Address: Vascular Aging in Pulmonary Hypertension: Emerging Therapies and New Frontiers**  
Stephen Y. Chan, MD, PhD, University of Pittsburgh

**Thursday, September 4, 2025 – Morning Sessions**

**Session I: Vascular Cells Throughout the Human Lifespan**  
**Moderator: Andrew Bryant, MD (University of Florida)**  
**& Aleksandra Babicheva, PhD (University of Minnesota)**

- 7:00-8:00 am Breakfast**
- 8:05 am Welcome and Introduction**  
Harry Karmouty-Quintana, PhD, University of Texas Health Science Center at Houston  
Grazyna Kwapiszewska, PhD, Medical University of Graz  
Vladimir Kalinichenko, MD, PhD, University of Arizona
- 8:15 am Terry Wagner Memorial Lecture: Impact of age on Endothelial Heterogeneity in the Pulmonary Vasculature**  
Troy Stevens, PhD, University of South Alabama
- 8:45 am Abstract Presentation:**  
**The Two Faces of B-Catenin in the Distal Lung Endothelium: Homeostasis, Injury and Regeneration**  
Courtney A. Stockman, PhD, Cincinnati Children's Hospital Medical Center
- 9:00 am Endothelial Cells in Lung Development**  
Krithika Lingappan, MD, University of Pennsylvania
- 9:30 am Novel Insights into Endothelial Turnover and Repair in PAH**  
Wolfgang Kubler, MD, Charité - University Medicine Berlin, Institute of Physiology
- 10:00 am The Aging Endothelial Cell in Lung Disease**  
Giovanni Ligresti, PhD, Boston University

<b>10:30 am</b>	<b>Break (15 min)</b>
<b>10:45 am</b>	<b>Transcriptional Regulation of Lung Endothelial Cells in Vascular Aging and Lung Fibrosis</b> Tanya Kalin, MD, PhD, Pirogov National Medical University
<b>11:15 am</b>	<b>Targeting the Senescent Endothelium, A Question of Timing?</b> Duncan Stewart, MD, Ottawa Hospital Research Institute
<b>11:45 am</b>	<b>Regional Differences in the Distal and Proximal Pulmonary Artery, Implications for the Aging Vasculature</b> Lavannya Pandit, MD, PhD, Baylor College of Medicine
<b>12:30 pm</b>	<b>Lunch</b>

**Thursday, September 4, 2025 - Optional Lunch & Learn - 1:30 – 2:30 PM - Registration Required**

**Career Development 1: How to keep Reviewer 2 Engaged, Tips for Grant Writing**  
**Moderators: Vladimir Kalinichenko, MD, PhD (University of Arizona), Corey Ventetuolo, MD (Brown University) and Elena Goncharova, PhD (University of California, Davies)**

**Thursday, September 4, 2025 – Afternoon Sessions**

**Session II: Endothelial Dynamics in Health, Disease and Regeneration**  
**Moderators: Nunzia Caporarello, PhD (Loyola University Chicago)**  
**& Daniels Konja, PhD (National Institutes of Health)**

<b>3:00 pm</b>	<b>Endothelial Fates in Health and Disease</b> Terren Niethamer, PhD, National Cancer Institute
<b>3:30 pm</b>	<b>Mechanistic Conflation of Pulmonary Vascular Disease and COPD/Emphysema: Value of Experimental Models</b> Enid Neptune MD, ATSF, Johns Hopkins School of Medicine
<b>4:00 pm</b>	<b>Endothelial Cell Aging and Lung Regeneration</b> Youyang Zhao PhD, Northwestern University Feinberg School of Medicine
<b>4:30 pm</b>	<b>Break (15 min)</b>
<b>4:45 pm</b>	<b>Estelle B. Grover Memorial Lecture: Aging Impacts the Heterogeneity of Adult Pulmonary Vascular Progenitors &amp; Angiogenesis in CLD</b> Susan Majka, PhD, National Jewish Health
<b>5:15 pm</b>	<b>Targeting Endothelial Transcription Factors in Neonatal Pulmonary Hypertension</b> Vladimir Kalinichenko, MD, PhD, University of Arizona
<b>5:45 pm</b>	<b>Abstract Presentation:</b> <b>The Role of Endothelial TBX3 in the Pathogenesis of Pulmonary Arterial Hypertension</b> Alexandra C. Racanelli, MD, PhD, Albert Einstein College of Medicine

**6:00 pm**      **Abstract Presentation:**  
**Targeting 14-3-3 Protein Mediated Endothelial-Pericyte Crosstalk as a Therapeutic Strategy in Pulmonary Hypertension**  
Joel James, PhD, Indiana University

**6:30 pm**      **Dinner**

**Friday, September 5, 2025 – Morning Sessions**

**Session III: Pulmonary Hypertension in Aging-Related Lung Diseases:**  
**Moderators: Ke Yuan, PhD (Harvard University)**  
**& Christine Farrell, MD (University of Colorado)**

**7:00-8:00 am Breakfast**

**8:05 am**      **John T. Reeves Memorial Lecture: Oxidative Stress, Mitochondrial Dysregulation, and the Challenge of Vascular Aging**  
Norbert F. Voelkel, MD, Amsterdam Medical Center, The Netherlands

**8:35 am**      **United Therapeutics: Treprostinil and ILD**  
Franck F. Rahaghi, MD, MHS, Executive Director, Cardiopulmonary Global Medical Affairs

**9:05 am**      **Age-Associated Challenges in Pulmonary Veno-Occlusive Disease**  
Akiko Hata, PhD, University of California San Francisco

**9:35 am**      **Extracellular Matrix Dysregulation in the Aging Vasculature: A Focus on Group 3 PH**  
Harry Karmouty-Quintana, PhD, University of Texas Health Science Center at Houston

**10:05 am**      **Abstract Presentation:**  
**Association of RV Endocardial Radiomics with Age in Patients with Pulmonary Hypertension**  
Rebecca Vanderpool, PhD, The Ohio State University

**10:20 am**      **Break (20 min)**

**10:40 am**      **Breakdown of the Endothelial Barrier Impacts the Development of Fibrosis**  
Rachel Knipe, MD, Harvard Medical School

**11:10 am**      **Abstract Presentation:**  
**Determining Distinct Pulmonary Artery Endothelial Cell Phenotypes in PAH and COPD-PH**  
Karina M. Massad, MD, National Jewish Health

**11:25 am**      **The Extracellular Matrix in Group 3 Pulmonary Hypertension: Mechanisms and Implications**  
Yang Zhou, PhD, Brown University

**11:55 am**      **Abstract Presentation:**  
**CD301b<sup>+</sup> cDC2s, but not Batf3<sup>+</sup> cDC1s, Mediate Hypoxia-Induced Pulmonary Hypertension Via Subset-Specific Activation Programs**  
Claudia Mickael, PhD, University of Colorado

**12:30 pm**      **Lunch**

## Friday, September 5, 2025 – Afternoon Sessions

### Session IV: Intercellular Crosstalk in Vascular Aging Moderators: Anne-Karina Perl PhD (Cincinnati Children's Hospital Medical Center) & Kel Vin Woo, MD, PhD (Washington University St. Louis)

- 3:00 pm**      **Pericytes Function Along the Vascular Tree: From Oxygen Sensing to Inflammation**  
Natascha Sommer, MD, Justus Liebig University Giessen
- 3:30 pm**      **Smooth Muscle Cell in Vascular Remodeling in SSc-PAH**  
Markella Ponticos, MD, University College London
- 4:00 pm**      **Immune Mechanisms of Occlusive Vascular Remodeling**  
Maya Kumar, PhD, Stanford University
- 4:30 pm**      **Break (15 min)**
- 4:45 pm**      **Defining a Multipotent Vascular & Epithelial Progenitor in Adult Lungs**  
Yair Reisner, PhD, MD, University of Texas, MD Anderson Center
- 5:15 pm**      **Robyn J. Barst Memorial Lecture: The Aging Pulmonary Vasculature: Intersection of Inflammation and Injury in CLD**  
Sharon I.S. Rounds, MD, ATSF, Brown University
- 5:45 pm**      **Sex and Age Differences in the Right Ventricle, Additional Hurdles to Overcome?**  
Su Gu, MD, University of Colorado, Anschutz Medical Campus
- 6:30 pm**      **Dinner**

## Saturday, September 6, 2025 – Morning Sessions

### Session V: Aging, Cell Interactions and Chromatin Remodeling: Moderators: Elena Goncharova, PhD (University of California, Davis) & Jason Hong MD, PhD (UCLA)

- 7:00-8:00 am** **Breakfast**
- 8:05 am**      **Aging and Genetic Susceptibility in PAH: Targeting the BMP/TGF- $\beta$  Pathway for Therapeutic Innovation**  
Christophe Guignabert, PhD, INSERM, Université Paris-Saclay, France
- 8:35 am**      **Abstract Presentation:**  
**Lyve1<sup>+</sup> Interstitial Macrophages Undergo Hypoxia-Induced Reprogramming to Promote Vascular Remodeling and Pulmonary Hypertension**  
Caitlin V. Lewis, PhD, University of Colorado Anschutz Medical Center
- 8:50 am**      **RNA Editing, a Driver of Pulmonary Hypertension**  
Ke Yuan, PhD, Boston Children's Hospital and Harvard Medical School

- 9:20 am      Aging Myeloid Cells as Modulators of Vascular Remodeling in Pulmonary Hypertension**  
James D. West, PhD, Vanderbilt University
- 9:50 am      Abstract Presentation:**  
**Vascular Smooth Muscle Cell-Derived Osteoprotegerin Drives Pulmonary Vascular Remodeling in an Experimental Model of Pulmonary Arterial Hypertension**  
Merve Keles, PhD, Imperial College London
- 10:05 am      Break (30 min)**
- 10:35 am      Abstract Presentation:**  
**Fibroblast Growth Factor Signaling Modulates Vascular Smooth Muscle Plasticity and Protects Against Hypoxia-Induced Pulmonary Hypertension**  
Kel Vin Woo, MD, PhD, Washington University St Louis
- 10:50 am      A Question of Age: Chromatin Remodeling in PAH**  
Lahouaria Hadri, PhD, Icahn School of Medicine at Mount Sinai
- 11:20 am      Abstract Presentation:**  
**IL-17 Signaling in Human and a Rodent Model of Chronic Thromboembolic Pulmonary Hypertension (CTEPH)**  
Yen-Rei Yu, PhD, University of Colorado, Anschutz Medical Campus
- 11:35 am      Time Matters: Circadian Regulation of Vascular Aging and PH Progression**  
Andrew J. Bryant, MD, University of Florida
- 11:50 am      Abstract Presentation:**  
**The Loss of miR-153 Induces Endothelial-to-Mesenchymal Transition to Compromise Vascular Integrity**  
Aleksandra Babicheva, PhD, University of Minnesota
- 12:30 pm      Lunch**

#### **Saturday, September 6, 2025 – Afternoon Sessions**

**Session VI: Mechanics, Biophysics and Energetics:**  
**Moderators: Zhiyu Dai, PhD (Washington University Medical Center)**  
**& Yen-Rei A. Yu MD, PhD (University of Colorado Anschutz Medical Campus)**

- 3:00 pm      Proximal Pulmonary Artery Stiffening as a Biomarker of Cardiopulmonary Aging**  
Edward P. Manning, MD, PhD, VA, Yale University
- 3:30 pm      mTOR Signaling and Smooth Muscle Cell Senescence in Pulmonary Vascular Aging**  
Elena Goncharova, PhD, University of California, Davis
- 4:00 pm      Energetic Stress and Vascular Remodeling in Aging-Associated Pulmonary Hypertension**  
Brian Graham, MD, University of California, San Francisco
- 4:30 pm      Break (15 min)**
- 4:45 pm      How Mechanical Forces in the RV Impact Resident Endothelial cells**  
Andrea Frump, PhD, Indiana University

- 5:15 pm**      **Creating Hydrogels for the Vascular Adventitia**  
Chelsea Magin, PhD, University of Colorado
- 5:45 pm**      **Bioenergetic Failure and Mitochondrial Stress in Pulmonary Vascular Disease: Lessons from Early Life**  
Girija G. Konduri, MD, MS, Medical College of Wisconsin
- 6:30 pm**      **Dinner**
- 7:30 pm**      **Evening Poster Session – Andrew J. Bryant, MD**

**Sunday, September 7, 2025 – Morning Sessions**

**Session VII: Emerging Therapeutics and Translational Science**  
**Moderators: Brian Graham, MD, PhD (UCSF)**  
**and Caitlin V. Lewis, PhD (University of Colorado Anschutz Medical Campus)**

- 7:00-8 am**    **Breakfast**
- 8:05 am**      **Estrogen Signaling and Metabolic Modulation as Therapeutic Targets in Pulmonary Hypertension and Aging**  
Tim Lahm, MD, National Jewish Health, University of Colorado
- 8:35 am**      **Abstract Presentation:**  
**Targeting Notch4 Signaling in Pulmonary Arterial Hypertension**  
Bin Liu, PhD, Washington University in St. Louis
- 8:50 am**      **DHEA as an Anti-Aging Pill in Pulmonary Arterial Hypertension: Potential Therapeutic Frontier**  
Corey E. Ventetuolo, MD, Brown University
- 9:20 am**      **Targeting Endosomal Dysfunction and Endothelial Senescence: RAB7 Activation as a Novel Therapeutic Strategy for Pulmonary Hypertension**  
Laszlo Farkas, MD, The Ohio State University
- 9:50 am**      **Abstract Presentation:**  
**A Single-cell atlas of the Human PAH Lung Identifies ITGA9 as a Candidate Regulator of Fibroblast Activation and Vascular Remodeling**  
Jason Hong, MD, PhD, University of California, Los Angeles
- 10:05 am**    **Break (10 min)**
- 10:15 am**    **Aging, Algorithms, and Arteries: Using Technology to Predict and Track Pulmonary Hypertension**  
Allan Lawrie, PhD, Imperial College London
- 10:45 am**    **Closing Summary**  
Sharon I.S. Rounds, MD, ATSF, Brown University  
Troy Stevens, PhD, University of South Alabama