2023 GROVER CONFERENCE on Precision Medicine for Pulmonary Vascular Disease: The Future is Now

COURSE SCHEDULE

Monday, October 16, 2023

12:00 pm Arrivals

6:00 pm Welcome Reception and Dinner

7:00 pm Beyond Genotype and Phenotype: Has Omics Changed Pulmonary Medicine?
Naftali Kaminski, MD, ATSF, Yale School of Medicine

Tuesday, October 17, 2023

Session I: Clinical Phenotypes of Pulmonary Vascular Disorders - What we Know and What we Don’t Know
Moderators: Katherine R. Clapham, MD University of Utah
Olga Rafikova, MD, PhD, Indiana University

7:00-8:00 am Breakfast

8:05 am Welcome and Introduction
Anna Hemnes, MD, ATSF, Vanderbilt University
Vinicio de Jesus Perez, MD, ATSF, Stanford University
Prof. Martin R. Wilkins, Imperial College of London

8:15 am Pulmonary Arterial Hypertension: One disease, Different Phenotypes
Bradley Maron, MD, BWH

8:45 am The Continuum of Vascular Remodeling in Heart Failure
Marc Simon, MD, MS, UCSF

9:15 am Comorbidity-Driven Taxonomy of Pediatric Pulmonary Hypertension
Rachel K. Hopper, MD, Stanford University

9:45 am Break (10 min)

9:55 am Pulmonary Embolism and CTEPH: One Disease with Different Phenotypes?
Gustavo A. Heresi, MD, MSci, Cleveland Clinic

10:25 am ALI, ARDS, and Bronchopulmonary Dysplasia: A Spectrum of Phenotypes
Rebecca F. Hough, MD, PhD, Columbia University

10:55 am John T. Reeves Memorial Lecture: Pulmonary Vascular Disorders Related to Scleroderma and Connective Tissue Diseases: is Autoimmunity the Only Phenotype?
Paul M. Hassoun, MD, Johns Hopkins

11:25 am Open Discussion

12:00 pm Lunch
Session II: Genetics of Pulmonary Vascular Disorders: From Family Studies to Population Studies
Moderators: Sasha Z. Prisco, MD, PhD, University of Minnesota Jair A. Tenorio, MSc, PhD, Institute of Medical and Molecular Geneticist

3:00 pm Diagnosis and Management of Genetic Diseases in the Era of Next Generation Sequencing
Jair Antonio Tenorio, MSc, PhD, Institute of Medical and Molecular Geneticist

3:30 pm Overview of Genetics of PAH
Carrie Welch, PhD, Columbia University

4:00 pm Next Steps for the UK Cohort Study
Allan Lawrie, PhD, Imperial College London

4:30 pm Unlocking the Potential-Novel Insights in Smooth Muscle Cells and Fibroblasts Heterogeneity
Grazyna Kwapiszewska-Marsh, DrMed, Ludwig Boltzmann Institute for Lung Vascular Research

5:00 pm Open Discussion

5:15 pm Abstract Presentation: ATP Citrate Lyase (ACLY): a Promising Target Against Vascular Remodeling Development
Yann Grobs, MSc, Laval University | ULAVAL, Department of Medicine

5:30 pm Abstract Presentation: Hypusine Signaling: A Novel Pathway Driving Vascular Remodeling in Pulmonary Arterial Hypertension
Sarah-Eve Lemay, MSc, Laval University | ULAVAL, Department of Medicine

6:00 pm Dinner

8:00 pm Career Development Session: How to Obtain your First Job in Academia or Industry
Julie A. Bastarache, MD, Vanderbilt University
Olga Rafikova, MD, PhD, Indiana University

Wednesday, October 18, 2023

Session III: Biomarker Discovery and Cell Therapy for Pulmonary Vascular Disorders in the Era of Precision Medicine
Moderators: James R. Klinger, MD, ATSF, Rhode Island Hospital William M. Oldham, MD, PhD, Harvard University

7:00-8:00 am Breakfast

8:05 am Epigenetics, Metabolomics and Proteomics As Tools For Precision Medicine In Pulmonary Vascular Medicine
Stefan Gräf, PhD, University of Cambridge Medicine

8:35 am Using Platform Omic Technologies to Probe Blood in Pulmonary Vascular Disease
Christopher J. Rhodes, PhD, Imperial College London
9:05 am  Proteomics and Machine Learning for Discovery of Biomarkers in Pulmonary Vascular Disorders  
Andrew J. Sweatt, MD, Stanford University

9:35 am  Exosomes and Microparticles: Biomarkers, Therapeutic Vectors or Both?  
Natalie N. Bauer, PhD, University of South Alabama

10:05 am  Break (10 min)

10:15 am  Single Cell ‘Omics, Circulating Cells and Genetic Engineering To Accelerate Biomarker Discovery And Cell Therapy  
Duncan J. Stewart, MD, Ottawa Hospital Research Institute

10:45 am  Novel Sub-populations of Lung Capillary Endothelial Cells and Their Functional Significance  
Ruslan Rafikov, PhD, University of Arizona

11:05 am  Robyn J. Barst Memorial Lecture: Bronchopulmonary Dysplasia and ALI/ARDS In Pediatrics: New Biomarkers and Role of Cell Therapy  
Kara N. Goss, MD, University of Texas Southwestern Medicine

11:35 am  Abstract Presentation: Association of Right Ventricular Diastolic Stiffness and RV Ejection Fraction with Mortality In Patients With Pulmonary Hypertension  
Rebecca R. Vanderpool, PhD, Ohio State University

12:00 pm  Lunch

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Session IV: From Precision Biology to Clinical Trials: Examples for how Basic Research Accelerates Clinical Trials in Pulmonary Vascular Diseases

Moderators: Ke Yuan, PhD, Boston Children’s Hospital  
Corey E. Ventetuolo, MD, MS, Brown

3:00 pm  Sotatercept for Treatment of PAH: The PULSAR and STELLAR Data (15’)
David B. Badesch, MD, University of Colorado

3:40 pm  Biological Role of Tyrosine Kinase receptors in PAH (15’)
Bradley Maron, MD, BWH  
Positioning Imatinib for PAH (PIPAH study) (15’)
Prof. Martin R. Wilkins, Imperial College London

4:20 pm  Rituximab for Scleroderma-PAH Targeting B Cells in PAH  
Mark R. Nicolls, MD, Stanford  
Clinical Trial of Rituximab in PAH (15’)
Roham Zamanian, MD, FCCP, Stanford University

5:00 pm  Targeting Bromodomain Proteins with Apabetalone  
Bromodomain Protein Biology and Rationale for Therapy (15’)
Sebastien Bonnet, PhD, MSc, Inst of Cardiology & Pulmonary of Quebec

6:00 pm  Dinner

8:00 pm  After Dinner Talk: Estelle B. Grover Memorial Lecture  
The “Interactome” and the Repurposing of Medicines for Cardiopulmonary Diseases: Big Data in Precision Medicine  
Stephen Y. Chan, MD, PhD, University of Pittsburgh
Thursday, October 19, 2023

Session V: The Right Ventricle: A Phenotype of its Own
Moderators: Rebecca R. Vanderpool, PhD, Ohio State

7:00-8:00 am Breakfast

8:05 am Deep-Phenotyping the Heart
Kurt Prins, MD, PhD, University of Minnesota

8:35 am Genomic and Proteomic Studies in the RV: Therapeutic Possibilities
Tim Lahm, MD, ATS, University of Colorado

9:05 am Metabolomics of the RV: What We Have Learned and What We Need to Know
Jane Leopold, MD, BWH

9:35 am The Transition from Acute to Chronic PE – Insights from Single Cell RNA Sequencing
Sudarshan Rajagopal, MD, PhD, Duke

10:05 am Break (10 min)

10:15 am Cardiac Imaging, Radiometrics and their Role in Precision Medicine
Harm Bogaard, MD, PhD, Amsterdam UMC

10:45 am Intravascular Hidden Threats: Reshaping the Pulmonary Vasculature and the Right Ventricle
Suellen D’Arc Dos Santos Oliveira, PhD, MSci, University of Illinois at Chicago

11:15 am Cluster Analysis to Define Right Heart Failure Phenotypes in Pulmonary Vascular Diseases
Rebecca R. Vanderpool, PhD, Ohio State University

11:45 am Abstract Presentation: Pathogenic Role for RUNX1 in Pulmonary Arterial Hypertension
James R. Klinger, MD, ATS, Rhode Island Hospital

12:00 pm Lunch

Session VI: Understanding Epigenetics and their Role in Precision Medicine: A New Frontier?
Moderators: Tatiana Kudryashova, PhD, UC Davis
Grazyna Kwapiszewska - Marsh, DrMed, ILH of JLU

3:00 pm Terry Wagner Memorial Lecture: Epigenetics for Gene Discovery and Phenotyping of Pulmonary Vascular Disorders
Kurt R. Stenmark, MD, University of Colorado Denver

3:30 pm HIF and Epigenetics in the Pathogenesis of PAH
Zhiyu Dai, PhD, University of Arizona
Friday, October 20, 2023

Session VII: Integrating Precision Medicine to Clinical Care
Moderators: Peter Leary, MD, PhD, UW Medical Center
            Vineet Agrawal, MD, Vanderbilt

7:00-8:00 am Breakfast

8:05 am  Risk Stratification for PAH, Acute PE and CTEPH: Role of Precision Medicine
         Olivier Sitbon, MD, PhD, INSERM

8:35 am  Hemodynamics and Vasoreactivity - Can they Help us Phenotype PAH Patients? - YES
         Roham Zamanian, MD, FCCP, Stanford University

8:45 am  Hemodynamics and Vasoreactivity - Can they Help us Phenotype PAH Patients? - NO
         Brian Houston, MD

8:55 am  Rebuttals and discussion

9:05 am  The Discovery of Sotatercept and the Future of Drug Discovery on PH
         Paul B. Yu, MD, PhD, Harvard University

9:35 am  Break (10 min)

9:45 am  Using Wearables to Monitor Patients with Pulmonary Vascular Diseases
         Raymond L. Benza, MD, Ohio State Medical Center

10:15 am Ethical Issues Surrounding Precision Medicine
         Daphne O. Martschenko, BA, MPhil, PhD, Stanford University
11:45 am  Role of a Comprehensive Electronic Medical Record in Precision Medicine - What is Needed
Evan Brittain, MD, Vanderbilt University

12:15 pm  Closing Summary
Anna Hemnes, MD, ATSF, Vanderbilt University
Vinicio de Jesus Perez, MD, ATSF, Stanford University
Prof. Martin R. Wilkins, Imperial College of London

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