AGENDA
(All times given are EDT)

MONDAY, JULY 12

10:00-10:10 AM Opening Remarks
Suresh V. Garimella, PhD, President
University of Vermont

Session I: Technological Advances for in situ Analysis of Tissues
Moderators:
Ruben Dries, PhD ~ Boston University
Mattias Magnusson, PhD ~ Lund University

10:10-10:40 Featured Presentation: High-Spatial-Resolution Multi-Omics Atlas Sequencing
Yang Liu, PhD ~ Yale University

10:40-11:10 Featured Presentation: Live-cell Single Particle Imaging
Timothée Lionnet, PhD ~ New York University Langone Medical Center

11:10-11:40 Featured Presentation: Multimodal Imaging of Subcellular Structures in the Mouse Lung
Vera Hutchison, BA ~ MD Anderson Cancer Center

11:40-12:00 Panel Discussion

Session II: Therapeutic Immunomodulation of the Lung
Moderator:
Erica Herzog, MD, PhD ~ Yale School of Medicine

1:00-1:30 PM Featured Presentation: Inhalation of Lung Spheroid Cell Secretome and Exosomes Promotes Lung Repair in Pulmonary Fibrosis
Ke Cheng, PhD ~ University of North Carolina Chapel Hill

1:30-2:00 Featured Presentation: Alveolar Macrophages: Roles in Therapeutic Intervention and Disease Pathogenesis
Bruce Trapnell, MD ~ Cincinnati Children’s Hospital Medical Center

2:00-2:30 Featured Presentation: Localization of Macrophages in the Human Lung via Design-based Stereology
Patrick Hume, MD, PhD ~ National Jewish Health

2:30-2:45 Outstanding Abstract Achievement Award Presentation: Mesenchymal Stromal Cells Reduce Lung Endothelial Injury and Protein Permeability in Patients with ARDS
Katherine D. Wick, MD ~ University of California, San Francisco

2:45-3:05 Panel Discussion

3:15-4:30 PM TRAINEE NETWORKING EVENT
TUESDAY, JULY 13

9:45-10:00 AM  Welcome and Introduction
Richard L. Page, MD, Dean ~
The Larner College of Medicine at the University of Vermont

Session III: New Insights into Cellular Plasticity in the Lung
Moderator: Robert Hynds, PhD ~ University College London

10:00-10:30 AM  Featured Presentation: Organoid Modeling of Lung Disease and Lung Cancer
Carla Kim, PhD ~ Children’s Hospital Boston

10:30-11:00 AM  Featured Presentation: Role of CLDN18 in Cellular Plasticity in the Lung
Zea Borok, MD ~ University of Southern California

11:00-11:15 AM  Outstanding Abstract Achievement Award Presentation: Newly Emergent Apelin Expressing Endothelial Stem-like Cells Orchestrate Lung Microvascular Regeneration
Liyuan Wang, PhD ~ Ottawa Hospital Research Institute

11:15-11:35 AM  Panel Discussion

11:45-12:30 PM  “Minute to Win It” Competition – Commercialize Your Research for Industry Sponsorship or SBIR/STTR Collaboration
Moderators: Ben Calvert, PhD ~ University of Southern California
Thomas Lynch, PhD ~ University of Iowa

Introductory Remarks
Kirk Dombrowski, PhD, Vice President for Research ~
The Larner College of Medicine at the University of Vermont

Panel of Senior Investigator Judges:
Erik Monsen, PhD, MBA ~ Grossman School of Business, University of Vermont
Kirk Dombrowski, PhD ~ University of Vermont
Enid Neptune, MD ~ Johns Hopkins
Angela Panoskaltsis-Mortari, PhD ~ University of Minnesota
Kathryn Doyle, PhD, JD ~ Saul Ewing Arnstein & Lehr LLP

One Minute Elevator Pitch Competition for Junior Trainees.
1 slide allowed: 1-minute buzzer. Two prizes awarded.

12:30-1:30  MENTORING/MEET THE FACULTY
Session IV: Stem Cell Signaling in Lung Remodeling
Moderator:
Naftali Kaminski, MD ~ Yale University School of Medicine

1:30-2:00 PM  Featured Presentation: Of Mice and Men: The Role of the Niche in Driving Basal Cell Metaplasia in Lung Fibrosis
Tien Peng, MD ~ University of California San Francisco

2:00-2:30  Featured Presentation: Lung Epithelial Repair in Pulmonary Fibrosis: Insights from Single-Cell Biology
Jonathan Kropski, MD ~ Vanderbilt University Medical Center

2:30-2:45  Outstanding Abstract Achievement Award Presentation: Dual Isolation of Proximal and Distal Lung Epithelial Progenitor Cells and Their Distribution in Intact Murine Lungs Visualized Using Light Sheet Microscopy
Hani N. Alsafadi, BSc ~ Lund University

2:45-3:00  Panel Discussion

3:00-4:15  Thematic Poster Session #1
Poster Discussion Facilitators:
Mareike Lehmann, PhD ~ University of Munich
Darcy Wagner, PhD ~ Lund University
Poster Discussion Judges:
Deniz Bölükbaş, PhD ~ Lund University
Ben Calvert, PhD ~ University of Southern California
Sara Rolandsson Enes, PhD ~ Lund University
Allison Greaney, PhD ~ Yale University
Claudia Loebel, MD, PhD ~ University of Pennsylvania
Franziska Olm, PhD ~ Lund University
Sinem Tas, PhD ~ Lund University

Session V: Careers in Stem Cells, Cell Therapies, and Lung Bioengineering  – Part I
Moderator:
Zea Borok, MD ~ University of Southern California

4:15 PM  Welcome - Gordon L. Jensen, MD, PhD, Senior Associate Dean for Research ~ The Larner College of Medicine at the University of Vermont

4:20-4:50  Featured Presentation: Pursuing Translational Biomedical Science in an Academic Lab
Gordana Vunjak-Novakovic, PhD ~ Columbia University

5:00-6:00  WOMEN AND DIVERSITY PANEL AND NETWORKING
Sarah Mojarad, MS ~ University of Southern California
Zea Borok, MD ~ University of Southern California
Anne Dixon, BM BCh ~ University of Vermont Medical Center
Patricia Sime, MD, FRCP ~ Virginia Commonwealth University
Patricia Rieken Macêdo Rocco, MD, PhD ~ Federal University of Rio de Janeiro
Aina Martin-Medina, PhD ~ Balearic Islands Health Research Institute (IdISBa)
WEDNESDAY, JULY 14

Session VI: Careers in Stem Cells, Cell Therapies, and Lung Bioengineering – Part II

Breakfast Sessions - Concurrent
9.30-10:30 Finding a Position and Starting Your Own Lab – Panel Discussion
Panel
Jaime Hook, MD ~ Icahn School of Medicine at Mount Sinai
Marko Nikolić, MD, PhD ~ University College London
Gregg Duncan, PhD ~ University of Maryland

9.30-10:30 Funding and Financial Management of Your Lab – Panel Discussion
Panel
Brian Cunniff, PhD ~ University of Vermont
Dimitry Krementsov, PhD ~ University of Vermont
Bridget Carney, BS ~ Grant Proposal Manager, University of Vermont

Session VII: Matrix Biomechanics and Stem Cell Dynamics in Lung Health and Disease
Moderators:
Jin-Ah Park, PhD ~ Harvard University
Darcy Wagner, PhD ~ Lund University, University of Vermont

10:30-11:00 Featured Presentation: Dysregulation of Alveolar Type 2 Cells by Aberrant Cell Quality Control and ER Stress in IPF
Mike Beers, MD ~ University of Pennsylvania

11:00-11:30 Featured Presentation: Advances in 3D Bioprinting and Cellularization of Functional Lung Scaffolds for Transplantation
Sarah Gilpin, PhD ~ United Therapeutics

11:30-11:45 Outstanding Abstract Achievement Award Presentation: Lung MSC from Idiopathic Pulmonary Fibrosis Patients Present Signs of Mitochondrial Dysfunction and an Attenuated TGFβ Response on Mitochondrial and Extracellular Matrix
Aina Martin-Medina, PhD ~ Balearic Islands Health Research Institute (IdISBa)

11:45-12:05 PM Panel Discussion

12:15-1:30 Thematic Poster Session #2
Poster Discussion Facilitators:
Mareike Lehmann, PhD ~ University of Munich
Darcy Wagner, PhD ~ Lund University

Poster Judges:
Johnatas Dutra Silva, PhD ~ Queen’s University Belfast
Renata Jurkowska, PhD ~ Cardiff University
Mareike Lehmann, PhD ~ University of Munich
Aina Martin-Medina, PhD ~ Balearic Islands Health Research Institute (IdISBa)
Charlie Ren, PhD ~ Carnegie Mellon University
John Stegmayr, PhD ~ Lund University
Jennifer Sucre, PhD ~ Vanderbilt University Medical Center
Session VIII: Dame Julia Polak Memorial Bioengineering Session

**Engineering Models of Lung Disease and Regeneration**

*Moderators:*
Steven Skolasinski, MD ~ University of Minnesota
Janette Burgess, PhD ~ University Medical Center Groningen

1:30-2:00 PM  *Featured Presentation: Engineering Hybrid-Hydrogels to Model Chronic Pulmonary Diseases In Vitro*
Chelsea M. Magin, PhD ~ University of Colorado, Denver|Anschutz

2:00-2:30  *Featured Presentation: Modelling Hyperoxia Induced Lung Injury*
Jennifer Sucre, MD ~ Vanderbilt University Medical Center

2:30-3:00  *Featured Junior Presentation: Lung-Chip Models of Airway Disease*
Janna Nawroth, PhD ~ University of Southern California

3:00-3:15  *Outstanding Abstract Achievement Award Presentation: Development and Characterization of Bioengineered Lung Organoid to Model Small Cell Lung Cancer*
Chandani Sen, PhD ~ University of California, Los Angeles

3:15-3:35  *Panel Discussion*

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Session IX: Direct-to-Consumer Cell-based Interventions for Respiratory Diseases: Stratagems and Countermeasures

*Moderators:*
Leigh Turner, PhD ~ University of Minnesota
Sarah Mojarad, MS ~ University of Southern California

3:45-4:05 PM  *Featured Presentation: The Evolving Global Landscape of Unproven Cell-based Products and Services*
Laertis Ikonomou, PhD ~ State University of New York at Buffalo

4:05-4:25  *Featured Presentation: Non-trial Pre-Approval Access for Cell-based Interventions: Regulatory and Ethical Considerations*
Patti Zettler, JD ~ The Ohio State University

4:25-4:45  *Featured Presentation: Physician Perspectives on Unproven Stem Cell and Regenerative Therapies and Their Approaches to Consult Patients*
Zubin Master, PhD ~ Mayo Clinic

4:45-5:15  *Panel Discussion*
THURSDAY, JULY 15

Session X: Careers in Stem Cells, Cell Therapies, and Lung Bioengineering – Part III

Breakfast Sessions - Concurrent
9:30-10:30 AM Meet the Editors – Panel Discussion
Panel
Graham Parker, PhD ~ Stem Cells and Development
Donald Phinney, PhD ~ Cytotherapy
Prithi Rajan, PhD ~ Cell Stem Cell

9:30-10:30 AM Navigating Funding Mechanisms – Panel Discussion
Panel
Laurel Kuxhaus, PhD ~ National Science Foundation
John Sheridan, PhD ~ Cystic Fibrosis Foundation
Sara Lin, PhD ~ NIH, National Heart, Lung and Blood Institute
Sandy Snyder, RN, MSN ~ Congressionally Directed Medical Research Programs, US Army, Department of Defense

9:30-10:30 AM Alternative Careers to Academic Science – Panel Discussion
Panel
Tushar Menon, PhD ~ Associate Director, Vertex Pharmaceuticals
Christine Gould, PhD ~ Scientific Director, Health Interactions
Aaron Parker, JD, PhD ~ Director, Intellectual Property and Transactions, Artiva

Session XI: Differentiating and Delivering Stem Cell Therapeutics to the Lung
Moderators:
John Mahoney, PhD ~ Cystic Fibrosis Foundation Therapeutics
Thomas Lynch, PhD ~ University of Iowa

10:30-11:00 AM Featured Presentation: In vivo Differentiation of Respiratory Cell Lineages from Embryonic Stem Cells via Blastocyst Complementation
Vlad Kalinichenko, MD, PhD ~ Cincinnati Children’s Hospital Medical Center

11:00 -11:30 AM Featured Presentation: Matrix-directed Paracrine Modulation by Mesenchymal Stromal Cells to Treat Lung Injury
Jae-Won Shin, PhD ~ University of Illinois at Chicago

11:30-12:00 PM Featured Junior Presentation: Hybrid Hydrogels for Lung Stem Cell Regeneration
Deniz Bölükbaş, PhD ~ Lund University

12:00-12:20 PM Panel Discussion
Session XII: **Aging Lung**

*Moderators:*
- Mareike Lehmann, PhD ~ University of Munich
- Victor Thannickal, MD ~ Tulane University School of Medicine

12:30-1:00 PM  *Featured Presentation: ER Stress and Aging of the Lung*
- Mauricio Rojas, MD ~ The Ohio State University

1:00-1:30 PM  *Featured Presentation: Impact of Vascular Aging on Lung Fibrosis Resolution*
- Giovanni Ligresti, PhD ~ Boston University

1:30-1:45 PM  *Outstanding Abstract Achievement Award Presentation: High-resolution Genome-wide Transcriptomic and Epigenetic Profiling across Disease Stages Identifies Novel Regulators of COPD*
- Renata Jurkowska, PhD ~ Cardiff University

1:45-2:05 PM  *Panel Discussion*

Session XIII: **Regeneration in Response to Viral Infection**

*Moderators:*
- Jaime Hook, MD ~ Icahn School of Medicine at Mount Sinai
- Andrew Vaughan, PhD ~ University of Pennsylvania School of Veterinary Medicine

2:15-2:45 PM  *Featured Presentation: Pluripotent Stem Cells to Model Lung Development and Disease*
- Darrell Kotton, MD ~ Center for Regenerative Medicine (CReM) at Boston University and Boston Medical Center

2:45-3:15 PM  *Featured Presentation: COVID/ARDS Trial*
- Silviu Itescu, MBBS FRACP ~ mesoblast

3:15-3:30 PM  *Outstanding Abstract Achievement Award Presentation: Pro-inflammatory Neutrophils Impair Barrier Integrity and Increase SARS-CoV-2 Viral Load in Proximal Airway Epithelial Cells*
- Ben Calvert, PhD ~ University of Southern California

3:30-3:50 PM  *Panel Discussion*

Session XIV: **Concluding Discussion**

*Moderator:*
- Daniel J. Weiss, MD, PhD ~ University of Vermont

4:00-5:30 PM  *Open Discussion - Setting Priorities and Recommendations to the NIH and Other Organizations Regarding Future Research Opportunities*