# CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Workshop information</td>
<td>1</td>
</tr>
<tr>
<td>Organizing Committee</td>
<td>2</td>
</tr>
<tr>
<td>Workshop Agenda</td>
<td>3</td>
</tr>
<tr>
<td>Speaker Information</td>
<td>9</td>
</tr>
<tr>
<td>Speaker and Planning Committee Roster</td>
<td>26</td>
</tr>
</tbody>
</table>
WORKSHOP INFORMATION

This National Institutes of Health (NIH) workshop, hosted by the National Heart, Lung, and Blood Institute (NHLBI), brings together basic, pre-clinical, translational, clinical, and population scientists to review the state of the science in sex/gender differences in COVID-19 outcomes relevant to heart, lung, blood, and sleep (HLBS) disorders. Specifically, the workshop aims to identify key knowledge gaps and explore research opportunities to improve our understanding of these differences in COVID-19 outcomes. This knowledge may improve our ability to tailor prevention, intervention, and implementation strategies for COVID-19-related HLBS disorders. This enhanced understanding also could enable novel approaches to facilitate translation of basic biological discoveries into safe and effective clinical applications.

Scientific collaborators from the NIH Office of Research on Women’s Health, the Eunice Kennedy Shriver National Institute of Child Health and Human Development, the National Institute on Minority Health and Health Disparities, and National Institute of Allergy and Infectious Diseases will complement the NHLBI perspective on the research landscape.

This virtual event is free and open to the public through the NIH videocast system.

Highlights

David Goff, Jr., M.D., Ph.D., F.A.C.P., F.A.H.A, NHLBI Director of the Division of Cardiovascular Sciences, and Janine Austin Clayton, M.D., NIH Associate Director for Research on Women’s Health and Director of the NIH Office of Research on Women’s Health (ORWH), will provide opening remarks.

Community members will share their personal experiences with COVID-19.

Keynote

Sabine Oertelt-Prigione, M.D., Ph.D., MScPH, of Radboud University in the Netherlands will give the keynote talk on the epidemiology of COVID-19 focusing on sex and gender. A leader in the field of sex/ gender-sensitive research, she currently is examining ways to investigate gender in medical research and implement sex- and gender-sensitive research into practice.

Sessions Topics

- Mechanisms of sex disparities in COVID-19 outcomes
- Impact of social determinants of health on gender-related COVID-19 HLBS outcomes
- Pregnancy and other conditions that affect susceptibility to SARS-CoV-2
- Cardiovascular and metabolic aspects of COVID-19: sex and gender considerations
- Sex and gender-related mechanisms underlying blood disease in COVID-19
- Sex and gender differences in COVID-19 related to lung disease and sleep disorders
ORGANIZING COMMITTEE

Chair: Jasmina Varagic, M.D., Ph.D., F.A.H.A.
National Heart, Lung, and Blood Institute/NIH

Nahed El Kassar M.D., M.Sc., Ph.D.
National Heart, Lung, and Blood Institute/NIH

W. Patricia Ingkanisorn Bandettini, M.D.
National Heart, Lung, and Blood Institute/NIH

Patrice Desvigne-Nickens, M.D.
National Heart, Lung, and Blood Institute/NIH

Ilsa I. Rovira, M.S.
National Heart, Lung, and Blood Institute

Marrah Lachowicz-Scroggins, Ph.D.
National Heart, Lung, and Blood Institute/NIH

Rejeev Agarwal, Ph.D.
Office of Research on Women’s Health/NIH

Shilpa H. Amin, M.D., M.Bs.Sc, M.J., C.A.Q., F.A.A.F.P.
Office of Research on Women’s Health/NIH

Juliane Caviston, Ph.D.
Office of Research on Women’s Health/NIH

Monica Longo, M.D., Ph.D.
Eunice Kennedy Shriver National Institute of Child Health and Human Development/NIH

Larissa Avilés-Santa, M.D., M.P.H.
National Institute on Minority Health and Health Disparities/NIH

Jessica Drew
National Institute of Allergy and Infectious Diseases/NIH

Mercy Prabhudas, Ph.D., M.B.A.
National Institute of Allergy and Infectious Diseases/NIH
WORKSHOP AGENDA

Co-Chairs:

- Kathryn Sandberg, Ph.D. (Georgetown University)
- Yogen Kanthi, M.D., F.S.V.M., F.A.H.A (NHLBI, Division of Intramural Research)

Objectives: This workshop will bring together basic, pre-clinical, translational, clinical, and population scientists to review the current knowledge and identify key knowledge gaps in understanding sex/gender differences of COVID-19 outcomes relevant to heart, lung, blood, and sleep (HLBS) disorders. The goal is to explore strategies to facilitate translation of basic pre-clinical discoveries into clinical applications to improve our ability to develop sex/gender-specific prevention, intervention, and implementation strategies for COVID-19-related HLBS disorders.

DAY 1: JUNE 16, 2022 (ALL TIMES ARE EASTERN TIME)

11:00 a.m.  Workshop Goals and Expectations

Jasmina Varagic, M.D., Ph.D., F.A.H.A
NHLBI

11:05 a.m.  Opening Remarks

David Goff, Jr., M.D., Ph.D., F.A.C.P., F.A.H.A
Director, Division of Cardiovascular Sciences
NHLBI, NIH

11:10 a.m.  Opening Remarks

Janine Austin Clayton, M.D.
NIH Associate Director for Research on Women’s Health
Director, NIH Office of Research on Women’s Health

11:15 a.m.  Opening Remarks

Kathryn Sandberg, Ph.D.
Georgetown University

Yogen Kanthi, M.D., F.S.V.M., F.A.H.A
NHLBI/NIH

11:25 a.m.  Keynote Lecture: Overview of the Epidemiology of COVID-19 Focusing on Sex and Gender

Sabine Oertelt-Prigione, M.D., Ph.D., MScPH
Radboud University

Keynote Lecture Discussion
Sadiya S. Khan, M.D., M.Sc.
Northwestern University
11:55 a.m. The Community’s Perspective: Personal Experiences with COVID-19

Michael Sieverts, M.P.P.

12:05 p.m. Session 1: Mechanisms of Sex Disparities in COVID-19 Outcomes

Introduction/Session Goals
Moderator: Mark C. Chappell, Ph.D., F.A.H.A
Wake Forest School of Medicine

12:10 p.m. Sex Differences in Signaling for SARS-CoV-2 Virus Entry and Replication
Mark C. Chappell, Ph.D., F.A.H.A
Wake Forest School of Medicine

12:20 p.m. Animal Models for COVID-19
Stanley Perlman, M.D., Ph.D.
University of Iowa

12:30 p.m. Sex Differences in Response to COVID-19 Vaccines
Daniel Barouch, M.D., Ph.D.
Center for Virology and Vaccine Research, Barouch Laboratory

12:40 p.m. Sex Differences in Immune Response to COVID-19
Eileen Scully, M.D., Ph.D.
Johns Hopkins University

12:50 p.m. Multiomics and Single Cell Dissection of Influenza Vaccination Reveal Sex-dependent Immune Imprints After Recovery from Mild COVID-19
John S. Tsang, Ph.D.
National Institute of Allergy and Infectious Diseases, Division of Intramural Research

1:00 p.m. Session 1 Moderated Discussion
Mark C. Chappell, Ph.D., F.A.H.A
Wake Forest School of Medicine

1:25 p.m. MEAL BREAK

1:55 p.m. The Community’s Perspective: Personal Experiences with COVID-19

Donna McKusick, Ed.D.

2:05 p.m. Session 2: Social Determinants of Health Impacts on Gender-Related COVID-19 HLBS Outcomes

Introduction/Session Goals
Moderator: Heather Shattuck-Heidorn, Ph.D.
University of Southern Maine
2:10 p.m. Sex and Gender Impact on Human Health Outcomes
Kristen Springer, Ph.D.
Rutgers University

2:20 p.m. Understanding Sex Differences in COVID-19 Mortality
Heather Shattuck-Heidorn, Ph.D.
University of Southern Maine

2:30 p.m. The Role of Gender and Race on Psychosocial Stress Pathways in Health
Cindy H. Liu, Ph.D.
Harvard Medical School

2:40 p.m. Social Determinants of Health in COVID-19 and Cardiovascular Outcomes
Sadiya S. Khan, M.D., M.Sc.
Northwestern University

2:50 p.m. Social and Structural COVID-19 Disparities in Transgender Communities
Gregory Phillips II, Ph.D.
Northwestern University

3:00 p.m. Session 2 Moderated Discussion
Heather Shattuck-Heidorn, Ph.D.
University of Southern Maine

3:25 p.m. The Community’s Perspective: Personal Experiences with COVID-19
Ms. Heather Yates
Mr. JD Davids

3:45 p.m. Session 3: Pregnancy and Other Conditions Affecting Susceptibility to SARS-CoV-2

Introduction/Session Goals
Moderator: Vesna D. Garovic, M.D., Ph.D.
Mayo Clinic

3:50 p.m. Hormones in Pregnancy and Sex-Specific COVID-19 Outcomes
University of Cincinnati

4:00 p.m. Preeclampsia-Like Presentation in Pregnant COVID-19 Patients
Babbette LaMarca, Ph.D.
University of Mississippi Medical Center

4:10 p.m. Polycystic Ovary Syndrome (PCOS) and COVID-19
Licy L. Yanes Cardozo, M.D.
University of Mississippi Medical Center
4:20 p.m.  Hormone Replacement Therapy and COVID-19  
Franck Mauvais-Jarvis, M.D., Ph.D.  
Tulane University School of Medicine

4:30 p.m.  Gender Affirming Hormone Therapy and Susceptibility to COVID-19  
John F. Randolph, M.D.  
University of Michigan Medicine

4:40 p.m.  Session 3 Moderated Discussion  
Vesna D. Garovic, M.D., Ph.D.  
Mayo Clinic

5:05 p.m.  Announcement of Day 2  
Rajeev Agarwal, Ph.D.  
Office of Research on Women’s Health

5:20 p.m.  Adjourn

**DAY 2: JUNE 17, 2022 (ALL TIMES ARE EASTERN TIME)**

11:00 a.m.  Summary of Day 1  
Kathryn Sandberg, Ph.D.  
Georgetown University

11:15 a.m.  Session 4: Cardiovascular and Metabolic Aspects of COVID-19: Sex and Gender Considerations  
Introduction/Session Goals  
Moderator: DeLisa Fairweather, Ph.D.  
Mayo Clinic

11:20 a.m.  Overview of Sex Differences in COVID-19 Cardiovascular Outcomes  
Noel Bairey-Merz, M.D.  
Cedars-Sinai Medical Center

11:30 a.m.  Sex Differences in Mitochondria During Viral Myocarditis and COVID-19 Vaccine-induced Myocarditis  
DeLisa Fairweather, Ph.D.  
Mayo Clinic

11:40 a.m.  Long-COVID Orthostatic Intolerance and Postural Orthostatic Tachycardia Syndrome (POTS): Sex & Gender Considerations  
Satish Raj, M.D., MSci  
University of Calgary

11:50 a.m.  Cardiovascular Imaging Biomarkers for COVID-19  
James Moon, M.D.  
Barts Heart Centre and UCL, London
12:00 p.m.  Session 4 Moderated Discussion  
Delisa Fairweather, Ph.D.  
Mayo Clinic

12:20 p.m.  Session 5: Sex/Gender-Related Mechanisms Underlying Blood Disease in COVID-19

Introduction/Session Goals  
Moderator: Yogen Kanthi, M.D., F.S.V.M., F.A.H.A  
NHLBI

12:25 p.m.  Modulation of Platelet Function and Interaction With Estrogens  
E. Dale Abel, M.D., Ph.D.  
UCLA Department of Medicine

12:35 p.m.  Convalescent Plasma in Outpatients With COVID-19  
Zubaid Rafique, M.D.  
Baylor College of Medicine

12:55 p.m.  COVID-19 Thrombotic Complications and ACTIV 4a  
Matthew D. Neal, M.D., F.A.C.S.  
University of Pittsburgh Medical Center

12:55 p.m.  Electronic Health Records, Skin, and Blood Studies in COVID-19 Infection  
Alex Tsoi, Ph.D.  
University of Michigan

1:05 p.m.  Session 5 Moderated Discussion  
Yogen Kanthi, M.D., F.S.V.M., F.A.H.A  
NHLBI

1:25 p.m.  MEAL BREAK

1:55 p.m.  Session 6: Sex/Gender Differences in COVID-19 Related to Sleep and Lung Disease

Introduction/Session Goals  
Moderator: Patricia Silveyra, Ph.D.  
Indiana University Bloomington, School of Public Health

2:00 p.m.  COVID-19 Lung Infection Immune Mediators  
Charles S. Dela Cruz, M.D., Ph.D.  
Yale School of Medicine

2:10 p.m.  COVID-19-Related Lung Microvascular and Parenchymal Sequelae  
Elizabeth Oelsner, M.D., M.P.H.  
Columbia University Irving Medical Center

2:20 p.m.  Lung Pathology in a Mouse Model of the Post-acute Sequelae of SARS-CoV-2 (PASC)  
Kenichi Okuda, M.D., Ph.D.  
University of North Carolina at Chapel Hill
2:30 p.m.  Sex/Gender Differences in COVID/PASC Related to Issues in Sleep and Circadian Biology
Janet Mullington, Ph.D.
Beth Israel Deaconess Medical Center

2:40 p.m.  Session 6 Moderated Discussion
Patricia Silveyra, Ph.D.
Indiana University Bloomington, School of Public Health

3:00 p.m.  Transition to Breakout Rooms

3:05 p.m.  Session 7: Breakout Rooms

Group Leads will chair two separate concurrent sessions. Both sessions will discuss implications for future research and stimulation of collaborations. The sessions will then explore next steps in facilitating sex/gender context in collecting, analyzing, and interpreting COVID-19 HLBS disorders to address identified research gaps.

**Breakout Room 1: Mechanistic (pre-clinical, clinical) and translational science**
Moderators: Kathryn Sandberg, Ph.D. and Marc C. Chappell, Ph.D., F.A.H.A

**Breakout Room 2: Population/clinical science**
Moderators: Yogen Kanthi, M.D., F.S.V.M., F.A.H.A and Sabine Oertelt-Prigione, M.D., Ph.D., MScPH

3:50 p.m.  Break

4:00 p.m.  Reports From Breakout Rooms and Discussion (Moderators)

4:45 p.m.  Summary of Day 2

Yogen Kanthi, M.D., F.S.V.M., F.A.H.A
NHLBI, Division of Intramural Research

5:00 p.m.  Future Directions

Jasmina Varagic, M.D., Ph.D., F.A.H.A
NHLBI

5:05 p.m.  Adjourn

Workshop hosted by the National Heart, Lung, and Blood Institute, Office of Research on Women’s Health, the Eunice Kennedy Shriver National Institute of Child Health and Human Development, the National Institute on Minority Health and Health Disparities, and National Institute of Allergy and Infectious Diseases.

**DISCLAIMER:** This content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health.
SPEAKER INFORMATION

E. Dale Abel, M.D., Ph.D.

E. Dale Abel, MD, PhD., is the William S. Adams Distinguished Professor of Medicine, Chair and Executive Medical Director of the Department of Medicine in the David Geffen School of Medicine and UCLA Health. He was formerly a Professor of Medicine, Biochemistry and Biomedical Engineering, Chair of the Department of Medicine and Director of the Fraternal Order of Eagles Diabetes Research Center at the University of Iowa where he held the John B. Stokes III Chair in Diabetes Research and the François M. Abboud Chair in Internal Medicine.

Dr. Abel has had a distinguished career in endocrine and metabolism research. His pioneering work on glucose transport and mitochondrial metabolism in the heart guides his current research interests: molecular mechanisms responsible for cardiovascular complications of diabetes. His laboratory has provided important insights into the contribution of mitochondrial dysfunction and aberrant insulin signaling to heart failure risk in diabetes. Recent work has focused on mitochondrial mechanisms that mediate inter-organ crosstalk that may influence the pathophysiology of insulin resistance and mitochondrial pathways linking metabolism with increased risk for atherothrombosis.

Dr. Abel’s research program has been continually funded by the National Institutes of Health since 1995, and by the American Heart Association, the American Diabetes Association, and the Juvenile Diabetes Research Foundation. Dr. Abel is the recipient of numerous awards for scholarship and mentorship. Most recently, he was elected to the National Academy of Sciences (NAS). He is an elected member of the American Association of Physicians (AAP), the American Society for Clinical Investigation (ASCI), National Academy of Medicine (NAM), and the American Clinical and Climatological Association (ACCA). Dr. Abel is a past President of the Endocrine Society and is currently President of the Association of Professors of Medicine (APM).

C. Noel Bairey Merz, M.D.

C. Noel Bairey Merz, MD, holds the Irwin and Sheila Allen Chair in Women’s Heart Research, and is Director of the Barbra Streisand Women's Heart Center, the Linda Joy Pollin Women’s Heart Health Program, the Erika J Glazer Women’s Heart Research Initiative, and the Preventive Cardiac Center at the Cedars-Sinai Heart Institute. She also is Professor of Medicine at Cedars-Sinai Medical Center.

Dr. Bairey Merz's research interests include women and cardiovascular disease, mental stress and heart disease, and the role of exercise and stress management in reversing disease.

A prolific lecturer and member of many professional organizations, Dr. Bairey Merz, has received numerous investigational grants and chairs the National Institutes of Health (NIH)-sponsored WISE (Women's Ischemic Syndrome Evaluation) initiative.

Dr. Bairey Merz has received numerous awards and honors, and her extensive scientific publication record spans 425+ scientific papers, 315+ abstracts, myriad book chapters, and countless peer-reviewed journals.

Dr. Bairey Merz earned her bachelor's degree at the University of Chicago, her medical degree at Harvard University, and completed her residency at the University of California, San Francisco, where she served as Chief
Medical Resident before completing fellowships in clinical cardiology and nuclear cardiology at Cedars-Sinai Medical Center.

Dan Barouch, Ph.D.

Dr. Dan Barouch received his Ph.D. in immunology from Oxford University and his M.D. from Harvard Medical School. He is currently the William Bosworth Castle Professor of Medicine and Professor of Immunology at Harvard Medical School, Director of the Center for Virology and Vaccine Research at Beth Israel Deaconess Medical Center, a member of the Ragon Institute of MGH, MIT, and Harvard, and part of the Bill & Melinda Gates Foundation Collaboration for AIDS Vaccine Discovery. His laboratory focuses on studying the immunology and pathogenesis of viral infections and developing novel vaccine and treatment strategies. His group has led the development of vaccine candidates for multiple pathogens of global significance, including HIV, Zika virus, tuberculosis, and most recently SARS-CoV-2. His recent work contributed to the development of the Johnson & Johnson COVID-19 vaccine and the evaluation of multiple COVID-19 vaccines and monoclonal antibody therapeutics. He was elected to the National Academy of Medicine in 2020.

Mark C. Chappell, Ph.D., F.A.H.A.

Dr. Chappell’s education and training began with a STRIDE scholarship from the National Institutes of Health (NIH) in the laboratory of Dr. David Jacobowitz with a degree in Chemistry/Biochemistry from American University, a Ph.D. in Regulatory Biology from Cleveland State/Cleveland Clinic and post-doctoral work at Wake Forest University School of Medicine (WFUSM). His research has identified both the processing and metabolism pathways involving the Renin-Angiotensin System (RAS), specifically the non-classical and intracellular components of the RAS that comprise the ACE2-Angiotensin-(1-7)-Mas receptor axis in the brain, heart, circulation, pancreas and kidney as related to cardiometabolic disease in hypertension, aging, sex differences, salt-sensitivity and fetal programmed adult cardiovascular disease in experimental models and in human subjects. His current research efforts have focused on understanding the impact of SARS-Cov-2 on the circulating RAS in COVID-19 patients, as well as the effects of RAS agonists and antagonists as potential therapies. He has 200+ publications and has maintained funding from the NIH, AHA and donors over the years, including funding on two different Program Project grants and the Chronic Disease Research Fund in addition to collaborative efforts on basic and clinical research grants. In 2003, he received the New Investigator Award in Basic Sciences from the Consortium for Southeastern Hypertension Control (COSEHC), is a long-time member of the American Physiological Society (APS), a Fellow of the American Heart Association, and serves on the editorial board of Hypertension, Journal of Hypertension, American Journal of Hypertension, American Journal of Physiology – Heart & Circulation and Peptides. He is a member of the NIH Reviewers Reserve following regular membership on several review committees including Hypertension and Ruth L. Kirschstein training awards. Dr. Chappell is committed to research training at the undergraduate, graduate and post-doctoral level, nationally and through prior international exchange programs as director of Science Without Borders, as well as to increasing diversity training through NIH-funded Excellence in Cardiovascular Sciences Summer (EICS), Post-baccalaureate Research Education (PBRE) and Postdoctoral Research, Instruction and Mentoring Experience (PRIME) programs at WFUSM.
Janine Austin Clayton, M.D.

Janine Austin Clayton, M.D., Associate Director for Research on Women’s Health and Director of the Office of Research on Women’s Health (ORWH) at the National Institutes of Health (NIH), is the architect of the NIH policy requiring scientists to consider sex as a biological variable across the research spectrum. This policy is part of NIH’s initiative to enhance reproducibility through rigor and transparency. As co-chair of the NIH Working Group on Women in Biomedical Careers with NIH Director Dr. Francis Collins, Dr. Clayton also leads NIH’s efforts to advance women in science careers. In 2021, Dr. Clayton was elected to the Board of Directors of the American Association for the Advancement of Science (AAAS).

Prior to joining the ORWH, Dr. Clayton was the Deputy Clinical Director of the National Eye Institute (NEI) for seven years. A board-certified ophthalmologist, Dr. Clayton’s research interests include autoimmune ocular diseases and the role of sex and gender in health and disease. She is the author of more than 120 scientific publications, journal articles, and book chapters.

Dr. Clayton, a native Washingtonian, received her undergraduate degree with honors from Johns Hopkins University and her medical degree from Howard University College of Medicine. She completed a residency in ophthalmology at the Medical College of Virginia. Dr. Clayton completed fellowship training in cornea and external disease at the Wilmer Eye Institute at Johns Hopkins Hospital and in uveitis and ocular immunology at NEI.

Dr. Clayton has received numerous awards, including the Senior Achievement Award from the Board of Trustees of the American Academy of Ophthalmology in 2008 and the European Uveitis Patient Interest Association Clinical Uveitis Research Award in 2010. She was selected as a 2010 Silver Fellow by the Association for Research in Vision and Ophthalmology. In 2015, she was awarded the American Medical Women’s Association Lila A. Wallis Women’s Health Award and the Wenger Award for Excellence in Public Service. Dr. Clayton was granted the Bernadine Healy Award for Visionary Leadership in Women’s Health in 2016. She was also selected as an honoree for the Woman’s Day Red Dress Awards and the American Medical Association’s Dr. Nathan Davis Awards for Outstanding Government Service in 2017.

JD Davids

JD Davids (he/him), a health justice and communications strategist working with networks of disabled and chronically ill people, co-founded Strategies for High Impact (S4HI) and its Network for Long COVID Justice in 2021. As a queer and trans person living with myalgic encephalomyelitis (ME/CFS), Long COVID, and other complex chronic conditions, he writes and hosts conversations for “The Cranky Queer Guide to Chronic Illness,” sits on the board of #MEAction and is a contributing member of the Patient-Led Research Collaborative. He is the primary author of “Chronic Injustice: Centering Equitable Health Care and Policies for COVID-19 and Other Chronic Conditions,” and coauthor of “No Data No More: Manifesto to Align HIV Prevention Research with Trans and Gender Diverse Realities,” and the recent “Resourcing the HIV Community to Face COVID & Long COVID in 2022.” Davids has been an external expert advisor to the NIH, CDC, and local health departments; he was senior editor and director of strategic communications at TheBody/TheBodyPro; and he has served as a strategist and organizer with many pivotal groups, including ACT UP Philadelphia, AIDS Vaccine Advocacy Coalition, the Coalition for a National HIV/AIDS Strategy, Health GAP,
the HIV Prevention Justice Alliance, Positive Women’s Network – USA, Transgender Strategy Center, and the U.S. People Living with HIV Caucus.

Charles S. Dela Cruz, M.D., Ph.D.

Dr. Charles S. Dela Cruz holds dual appointments as associate professor at Yale University’s School of Medicine in the departments of internal medicine (pulmonary, critical care, and sleep medicine) and microbial pathogenesis. He is vice chief of basic and translational research and founding director for the Center for Pulmonary Infection Research and Treatment (CPIRT). He directs the physician scientist training program in the department of internal medicine.

He completed his education through an MD/PhD program at the and University of Toronto and Yale School of Medicine. He received clinical training at Yale in internal medicine, with a specialization in pulmonary and critical care medicine.

His laboratory studies the role of respiratory viral and bacterial infection in the pathogenesis of acute and chronic lung diseases such as ARDS, COPD, and fibrosis. Using cell-based approaches, animal modeling and human translational studies, his work focuses on the underlying molecular and cellular mechanisms that help explain how lung infections contribute to the unresolved inflammation, persistent injury, and dysregulated tissue repair in the lung. His group has been studying several candidate host mediators, which contribute to lung tissue homeostasis and during infection. He has established a large clinical and biospecimen database of a patient cohort with respiratory infections. Most recently, he has been pursuing basic, translational, and clinical research related to COVID-19, having established the importance of host responses to SARS-CoV-2 on immune phenotypes and multi-omic signatures, eicosanoid mediators, and immune dysfunctions in disease severity and in its treatment. He has been addressing important, clinically relevant questions in respiratory infection biology and has provided insights crucial to explain the lung host and respiratory pathogen interaction as it relates to pneumonia. Specifically, he and his collaborators have been focusing on acute, systemic, and chronic sequelae, a topic that is of significance to COVID-19 clinicians and researchers.

DeLisa Fairweather, Ph.D.

DeLisa Fairweather, PhD, is an Associate Professor of Medicine and Director of Translational Research in the Department of Cardiovascular Medicine at Mayo Clinic in Jacksonville, Florida, USA. Dr. Fairweather’s basic and translational research focuses on sex/gender differences in disease as a tool to discover new therapies for cardiovascular and autoimmune diseases including myocarditis which she has been studying for 25 years. Her research has been funded by the National Institutes of Health (NIH), the American Heart Association (AHA), BARDA and others. She has served on NIH study sections since 2008 including as a standing member of the Atherosclerosis and Inflammation of the Cardiovascular System (AICS) study section for 6 years, as chair of two AHA study sections, and a reviewer for EPA and DOD grants. She served for 11 years on the Board of the Myocarditis Foundation. In 2021-2022 she served on a 13-member committee for the National Academies of Sciences, Engineering and Medicine (NASEM) to review the autoimmune disease portfolio of NIH commissioned by Congress and is a leader of the US FDA Mayo-led Expanded Access Program for the use of convalescent plasma for patients with COVID-19 that provided nearly 100,000 patients nationwide with convalescent plasma from April-August 2020. She is also an active member of the Organization for the Study of Sex Differences where she was the Co-Chair of the Program Committee for the 2022 Annual Meeting.
Vesna D. Garovic, M.D., Ph.D.

Dr. Garovic is Professor of Medicine, Division of Nephrology and Hypertension, Mayo Clinic Rochester, Minnesota, and holds joint appointment in Obstetrics & Gynecology. She currently serves as Chair of Division of Nephrology and Hypertension, Vice-Chair for Research, Department of Internal Medicine, and as Director, Clinical Research and Trials Unit, Mayo Clinic Center for Clinical and Translational Science, Mayo Clinic, Rochester, MN. She has been NIH-funded over the course of 15 years, she serves as a chartered member of the NIH Pregnancy/Neonatology study section (2020-2024), and has published over 190 peer-reviewed papers. Her clinical and research interests in hypertensive pregnancy disorders and preeclampsia span several research areas: diagnosis and treatment of hypertension in pregnancy, underlying molecular mechanisms, with the most recent focus on senescence, epigenetics, and epidemiology of long-term cardiovascular and renal effects, with the long-term objective of identifying diagnostic biomarkers and potential new therapeutic targets in order to improve immediate and long-term outcomes of this enigmatic disease.

David Calvin Goff Jr., M.D., Ph.D., F.A.C.P., F.A.H.A.

David C. Goff, Jr., M.D., Ph.D., is Director, Division of Cardiovascular Sciences, National Heart, Lung, and Blood Institute, National Institutes of Health. In this role, he leads a diverse team of scientists and administrators committed to turning discovery into cardiovascular health. Prior to joining the NHLBI, he served as Dean and Professor of Epidemiology in the Colorado School of Public Health and as Chair of the Department of Epidemiology and Prevention at the Wake Forest School of Medicine. He received an MD from the University of North Carolina and a PhD in epidemiology from the University of Texas-Houston School of Public Health. He trained in internal medicine at Baylor College of Medicine in Houston. He is an elected member of the American Epidemiological Society, and a Fellow of the American College of Physicians and the American Heart Association. He has published over 300 manuscripts, book chapters, and other scientific reports. The major focus of his research has been on developing, testing, and implementing better strategies for promoting cardiovascular health and preventing CVD.

Yogen Kanthi, M.D., F.S.V.M., F.A.H.A.

Dr. Yogen Kanthi is a Lasker Investigator, Distinguished Scholar, and Chief of the Vascular Thrombosis and Inflammation Laboratory at the National Heart, Lung, and Blood Institute, National Institutes of Health. Dr. Yogen Kanthi’s basic and translational vascular medicine research program is focused on understanding the molecular signals that integrate innate immunity and coagulation networks, with the goal of developing new treatment approaches for venous thromboinflammation. Dr. Kanthi’s bench-to-bedside research program spans the spectrum of molecular studies, animal models, translational science and clinical trials. Dr. Kanthi’s team, which received an NHLBI Director’s Award for Innovation, has made seminal contributions to the understanding of thromboinflammation in COVID-19 which laid the foundation for many clinical trials.
Sadiya S. Khan, M.D., M.Sc.

Sadiya S. Khan, MD, MSc is a cardiologist at Northwestern Medicine and an assistant professor in the departments of Medicine and Preventive Medicine at Northwestern University Feinberg School of Medicine. Dr. Khan’s clinical expertise and research focus on epidemiology, prevention, and genetics of heart failure with an emphasis on sex-specific risk factors. Dr. Khan’s research spans the research spectrum from preclinical basic research, human clinical trials, and population-based epidemiology studies. Her work on the role of geographic variation and neighborhood factors in health disparities has demonstrated that there are significant geographic differences in a variety of health outcomes, including cardiometabolic diseases, lung disease, and COVID-19. The root causes of these disparities are related to heterogeneity in social vulnerability and include structural and systemic barriers, such as residential segregation. Her research efforts are supported by multiple grants from the National Institutes of Health (R01HL159250; R01HL16154; U01HL160279; U01HL145358).

Dr. Khan has published >180 peer-reviewed scientific research publications in leading medical journals and her work has been cited over 9700 times (Scopus, May 2022). She is an Associate Editor at JAMA Cardiology and serves as the Vice-Chair of the American Heart Association Epidemiology Publications Committee.

Babbette LaMarca, Ph.D.

Dr. LaMarca is the Chair of the Department of Pharmacology and Toxicology at UMMC. She also serves as Thesis Director, Maternal Fetal Medicine Fellowship Program, Dept of Ob/Gyn, and Clinical Research Director, Center for Excellence in Perinatal Research. Her primary research focuses on the interactions between lymphocytes and agonistic autoantibodies to the angiotensin II type I receptor (AT1-AA) in the pathophysiology of hypertension in response to placental ischemia. She received her Ph.D. in Microbiology and Immunology in 2004 and in 2007, she began leading the research in the Master’s program for Maternal Fetal Medicine in OB/Gyn. In this role, she has collaborated and initiated many clinical studies on the role of inflammation during pregnancy and how it impacts hypertension, IUGR and long term health of the mother and the baby. Dr LaMarca has been continuously funded by the NIH since 2005, and has published over 120 peer reviewed articles and presented 150 abstracts at national or international meetings. Dr. LaMarca has received numerous awards, including the Excellence in Research Awards from UMMC (Bronze 2010, Silver 2012, and Gold 2013), and the prestigious Henry Pickering Bowditch Lectureship from the American Physiological Society (APS) (2015) is the 2021 A. Clifford Barger Underrepresented Minority Mentorship Award from the APS. Dr. LaMarca has considerable experience on study sections, in editorial responsibilities, and on society committees. She served as peer reviewer for the AHA/Immunology Section, Preeclampsia Foundation, NIH/NHLBI, and Chair of the AHA Clinical Endothelial Vascular Biology: Clinical from 2014-2017. She is active in the APS where she was the At-Large Councilor for Membership 2012-2016 for the Water and Electrolyte Homeostasis (WEH) Section, has served on Committee on Careers in Physiology, and currently serves on the Awards Committee, 2016-2019. Dr. LaMarca also served as Basic Science Councilor for the prestigious Perinatal Research Society from 2017-2019, and currently serves on the Membership Committee for the Perinatal Research Society Council.
Cindy H. Liu, Ph.D.

Cindy H. Liu, Ph.D. is a licensed clinical psychologist, the Director of the Developmental Risk and Cultural Resilience Program, and an Assistant Professor at Harvard Medical School within the Departments of Pediatric Newborn Medicine and Psychiatry. Her areas of investigation include the measurement and mechanisms of stress and its impact on mental health across key points within the developmental lifespan and implications for women, children, and underrepresented populations. She is currently a principal investigator for several pandemic mental health studies, including the Perinatal Experiences and COVID-19 Effects (PEACE) Study, a longitudinal study that seeks to understand the experiences of pregnant and postpartum women throughout the pandemic and the COVID-19 Adult Resilience Experiences Study (CARES) which focuses on mental health and well-being in diverse young adults. Her work has been funded by the National Institutes of Health and the National Science Foundation and featured in various outlets included the New York Times, USA Today, and CBS News. She received her degree in Clinical Psychology from the University of Oregon, and completed her clinical internship at McLean Hospital and postdoctoral fellowship from Boston Children's Hospital.

Franck Mauvais-Jarvis, M.D., Ph.D.

Dr. Mauvais-Jarvis is Professor of Medicine & Endocrinology at Tulane University School of Medicine, Endocrinologist at the New Orleans VA Medical Center, and Director of the Tulane Center of Excellence in Sex-Based Biology & Medicine. He is a physician-scientist with clinical training in Internal Medicine & Endocrinology, and a PhD in Biochemistry and Molecular Biology from the University of Paris School of Medicine. Dr. Mauvais-Jarvis was a Post-Doctoral Fellow at the Joslin Diabetes Center and Harvard Medical School. He was respectively Assistant Professor of Medicine in the Division of Endocrinology at Baylor College of Medicine and attending physician at Ben Taub General Hospital in Houston, and Associate Professor of Medicine in the Division of Endocrinology & Molecular Medicine at Northwestern University School of Medicine in Chicago. His research encompasses basic, translational, and clinical research on the influence of biological sex in diabetes and obesity, including membrane and nuclear signaling by estrogen, androgen, and progesterone receptors in metabolic homeostasis. Dr. Mauvais-Jarvis is the principal investigator of research grants from the National Institutes of Health (NIH) and the Veterans Health Administration and has received awards from the Juvenile Diabetes Research Foundation, the American Diabetes Association, the American Heart Association, the March of Dimes Research Foundation, the French Diabetes Association, as well as Investigator-Initiated Awards from pharmaceutical companies including Pfizer and Boehringer-Ingelheim. Dr. Mauvais-Jarvis is a permanent member of the NIH study section Basic Mechanisms of Diabetes and Metabolism. He was elected to the American Society for Clinical Investigation.
Donna McKusick, Ed.D.
Dr. Donna McKusick has spent her career as a professor and administrator in higher education. She has authored two textbooks for students and published many professional articles. Currently retired, she consults for Achieving the Dream, a national reform network for community colleges. She contracted Covid-19 in March 2020 and has continued to have symptoms involving her throat, kidneys, and joints to the present.

James Moon, M.D.
James is Professor of Cardiology and leads CMR at Barts Heart Centre and UCL, London. A former BSCMR president and SCMR gold medal winner (H index 89, citations 37,000; 450 pubmed papers), his research focuses on better understanding both rare and common heart muscle diseases. He develops new techniques with the focus on creating the teams needed to deliver robust generalised approaches to point of care globally and to change disease classifications and therapeutics. This includes new sequences (mapping), faster, easier and cheaper protocols, widened access, guideline incorporation and post processing tools – almost all with “baked-in” AI components. In March 2020, he set up COVIDsortium, the world’s most granular immunological study of mild disease with many high impact papers (eg nature, 2xLancet, 2xScience, 15 others) and one of the first case controlled studies using CMR in mild disease. He leads also the analysis of COVID heart, a 23 centre study of troponin positive disease.

Janet Mullington, Ph.D.
Janet Mullington, PhD is Professor of Neurology at the Beth Israel Deaconess Medical Center and Harvard Medical School. Her area of expertise and research is in the area of human sleep deficiency. She studies physiological (inflammatory, autonomic and EEG), cognitive and subjective fatigue, sleepiness, mood and wellbeing response to experimental manipulations of sleep. Highly controlled approaches are used to experimentally produce sleep deficiencies of different durations (doses) to study effects of the build-up of deficiency as well as the recovery process when sleep resumes. In addition, translational work is examining the efficacy of manipulating the timing and duration of sleep in order to improve health outcomes, with a particular interest in sex-differences.
Matthew D. Neal, M.D., F.A.C.S.

Matthew D. Neal, M.D. FACS is the Roberta G. Simmons Associate Professor of Surgery and Associate Professor of Critical Care Medicine and Clinical and Translational Science at the University of Pittsburgh, Pittsburgh, PA, USA. He is an attending trauma surgeon and surgical intensivist at UPMC. He serves as the Director of the Pittsburgh Trauma and Transfusion Medicine Research Center, which is a coordinating center to leverage collaboration and resource in trauma care and transfusion medicine. Dr. Neal also serves as one of the directors of the ACTIV4 Clinical and Data Coordinating Center at the University of Pittsburgh and the co-chair of the ACTIV4a clinical trial. He was one of the organizing and founding members of the multi-platform Randomized Clinical Trial (mpRCT). His lab is funded by the National Institutes of Health, Department of Defense, and private industry. Dr. Neal is the principal investigator or co-investigator on a number of ongoing clinical trials in COVID-19, trauma, and surgical care.

Elizabeth C Oelsner, M.D., M.P.H.

Elizabeth Oelsner is a general internist, respiratory epidemiologist, and Irving Associate Professor of Medicine at Columbia University Irving Medical Center (CUIMC).

Dr Oelsner graduated from Harvard College and worked as a Business Analyst at McKinsey & Company prior to earning her M.D. from the Columbia Vagelos College of Physicians and Surgeons. She completed her residency in Internal Medicine at CUIMC, followed by a fellowship in General Medicine that included a Master's in Public Health from the Mailman School. She joined the CUIMC faculty in 2014 and was named an Irving Scholar in 2018.

Dr Oelsner’s research leverages multi-disciplinary approaches and collaborative studies to identify and understand risk factors for chronic lung diseases. She is currently leading studies that apply quantitative lung imaging to assess the pulmonary parenchymal and microvascular effects of emerging respiratory risk factors including COVID-19 (The COVID-19 Lung-MaPS Study, NHLBI R01-HL157634) and vaping products (The VapeScan Study, NHLBI R01-HL155576). She also leads the NHLBI Pooled Cohorts Study, which has harmonized extensive cardiopulmonary phenotypic data, including lung function and respiratory events, in order to perform large-scale respiratory epidemiologic analyses. Results from the NHLBI Pooled Cohorts Study have been published in JAMA, JAMA Internal Medicine, The Lancet Respiratory Medicine, The American Journal of Respiratory and Critical Care Medicine, and the American Journal of Epidemiology.

Dr Oelsner is currently the Principal Investigator for the Collaborative Cohort of Cohorts for COVID-19 Research (C4R, NHLBI OT2HL156812), which is ascertaining cases of SARS-CoV-2 infection, COVID-19 illness and events, and sequelae, across fourteen NHLBI and NINDS funded studies. These studies are distinguished by the racial, ethnic, socio-economic, and regional diversity of their participants, as well as their long-term follow up with deep and broad pre-pandemic phenotyping that includes imaging, multi-omics, and social determinants of health. C4R thereby aims to provide a collaborative resource to define risk and resilience factors for COVID-19 illness and its long-term sequelae, as well as to study the impact of the pandemic on trajectories of health and disease.
Sabine Oertelt-Prigione M.D., Ph.D., MScPH

Sabine Oertelt-Prigione M.D., Ph.D., MScPH is a physician, researcher, organizational consultant and coach. She is the Chair of gender in primary and transmural care at the Radboud University in Nijmegen in the Netherlands and Professor of sex- and gender-sensitive medicine at the University of Bielefeld in Germany. She was a member of the EU Commission Expert Group “Gendered Innovations 2”, chaired by prof. Londa Schiebinger and is currently the chair of the Expert Group “Gender and COVID-19”.

Her current research focus is on the implementation of sex- and gender-sensitive research through the analysis of practices, development of methods and engagement of stakeholders. She has developed several open access resources for sex- and gender-sensitive research spanning from databases to open access books and methodological toolboxes. In addition to her academic activities, she advises healthcare and research organizations in the implementation of prevention measures against gender discrimination and harassment.

Kenichi Okuda, M.D., Ph.D.

Dr. Okuda obtained his M.D. degree from Yamagata University in Japan, followed by residency training in internal medicine and fellowship in respiratory medicine. Thereafter, he applied for postdoctoral training in Dr. Richard Boucher’s laboratory at University of North Carolina at Chapel Hill to engage in studies of airway and mucus biology. Under Dr. Boucher’s supervision, he successfully characterized the regional expression patterns of major airway secretory mucins, MUC5AC/MUC5B, and CFTR/ionocytes in normal and CF human airways. These investigations have provided the reagents and techniques for his research career. Using these studies, he earned his Ph.D. degree in medicine from The University of Tokyo in Japan. Given the emergent situation caused by SARS-CoV-2 pandemic, Dr. Okuda has been actively engaged in collaborations with Dr. Ralph Baric lab at UNC to utilize his skills and materials for COVID-19 studies, and indeed he successfully characterized the SARS-CoV-2 infectivity gradient observed in the human respiratory tract. In subsequent studies with the Baric lab, he mapped tissue and cellular tropisms of a newly developed mouse-adapted SARS-CoV-2 virus in standard laboratory mice. This mouse model serves as a fundamental basis of the PASC studies. Dr. Okuda is currently a Research Assistant Professor of Department of Medicine, Division of Pulmonary Diseases and Critical Care Medicine at UNC at Chapel Hill.

Dr. Stanley Perlman, M.D., Ph.D.

Dr. Perlman received his Ph.D. in Biophysics from M.I.T., Cambridge, Massachusetts and his M.D. from the University of Miami, Miami, Florida. He was trained in Pediatrics and Pediatric Infectious Diseases at Boston Children’s Hospital, Boston, Massachusetts. He is a member of the VRB PAC of the FDA and the COVID-19 Advisory Committee of the ACIP (Advisory Committee on Immunization Practices).

His current research efforts are focused on coronavirus pathogenesis, including virus-induced demyelination and the Severe Acute Respiratory Syndrome (SARS), the Middle East Respiratory Syndrome (MERS) and COVID-19. His laboratory has developed several novel animal models useful for studying pathogenesis and evaluating vaccines and anti-viral therapies. His studies are directed at understanding why aged patients and mice developed more severe disease
than younger individuals after infection with SARS-CoV or SARS-CoV-2 and also on why there is a male predominance in patients with more severe disease after infection with SARS-CoV, MERS-CoV or SARS-CoV-2. He and his colleagues demonstrated that transduction of mice with an adenovirus expressing the human receptor for MERS-CoV, DPP4, rendered them sensitive to infection, providing the first rodent model useful for studying MERS. Similar approaches have been used to develop several mouse models for COVID-19. Among other topics, his research is now focusing on the loss of sense of smell (anosmia) and taste (ageusia) observed in patients with COVID-19.

Dr. Gregory Phillips II, Ph.D.

Dr. Gregory Phillips II (he/him) is an Assistant Professor in the Departments of Medical Social Sciences and Preventive Medicine at Northwestern University. He received his MS and Ph.D. in epidemiology at The George Washington University and has dedicated his career to studying the factors that disproportionately impact the health of minoritized individuals, particularly those who are sexual and/or gender minorities (SGM). He leads the Chicago Department of Public Health (CDPH) funded Evaluation Center, which oversees evaluation and quality management services for the City’s HIV funding portfolio, and serves as PI or MPI on four R01s and an R34 focused on HIV prevention and SGM health disparities. Dr. Phillips is one of the leaders in studying the disproportionate impact of COVID-19 on SGM populations, as PI on a RADx-UP project focused on SGM youth and young adults and frequent presenter on the topic in venues such as the NIH SGM Research Office Scientific Webinar Series. He is Co-Director of the Ending the HIV Epidemic (EHE) Scientific Working Group (SWG) within the Third Coast Center for AIDS Research (TC CFAR), Co-Chair of the LGBT Topical Interest Group (TIG) within the American Evaluation Association (AEA), and Affiliate Faculty with the Center for Culturally Responsive Evaluation and Assessment (CREA). Dr. Phillips uses a community-led approach for all his work and is proud of his strong partnerships in Chicago and beyond.

Zubaid Rafique, M.D.

Zubaid Rafique is an Associate Professor and Associate Research Director of Emergency Medicine at Baylor College of Medicine and a faculty of the American College of Emergency Physicians (FACEP). His research interests are in hyperkalemia, pain management, kidney biomarkers and traumatic brain injury. During the pandemic he worked on multiple COVID related studies including C3PO and BinaxNOW Ag test. He has been a principal investigator of numerous emergency department-based studies and his experience ranges from device and biomarker testing to building outcome registries and evaluating new drugs in the emergency setting.
Satish R Raj, M.D., MSc

Satish R Raj MD MSCI is the Section Chief of the Adult Cardiac Arrhythmia Group at the University of Calgary (Alberta, Canada). After completing his Internal Medicine and Cardiology, and cardiac electrophysiology training in Canada, he went to Vanderbilt University by for further training in autonomic physiology. He spent 12 years working at the Vanderbilt Autonomic Dysfunction Center in Nashville, TN. He moved back to the University of Calgary in 2014 and founded the Calgary Autonomic Investigation & Management Clinic. He is currently the Director of Education at the Libin Cardiovascular Institute, Director of Knowledge Translation for the Libin Women’s Cardiovascular Initiative, and Professor of Cardiac Science at the University of Calgary’s Cumming School of Medicine.

He runs an active Canadian Institutes of Health Research (CIHR) funded research program in Human Autonomic Physiology. His primary research interests relate to understanding and better treating postural tachycardia syndrome (POTS), vasovagal syncope, orthostatic hypotension, and Initial Orthostatic Hypotension...and now Long COVID.

John Randolph, M.D.

Dr. Randolph has been a member of the University of Michigan Comprehensive Gender Services Program since its inception in 1994, initially as the gynecologic surgeon on the surgical team and, later, taking on the role of primary endocrinologist. He has treated hundreds of both transgender women and transgender men and educated innumerable learners about gender affirming hormone therapy. His research interests include the effects of crossgender hormones on reproductive function. A graduate of Case Western Reserve University, he completed his medical education at the University of Cincinnati in 1980, his residency in Obstetrics and Gynecology at the University of Michigan in 1984, and his fellowship in Reproductive Endocrinology and Infertility at the University of Connecticut in 1986. He has been on the faculty of University of Michigan since completing his training, serving as the Director of the Division of Reproductive Endocrinology and Infertility for 23 years, and establishing and serving as Director of the REI fellowship training program for 19 years. He has a long-standing research interest in the endocrinology of ovarian aging and the menopausal transition, particularly in the biology and natural history of sex steroids. With a joint appointment in the Department of Epidemiology in the School of Public Health, he has been coinvestigator in two large longitudinal observational studies of aging women, the Michigan Bone Health and Metabolism Study and the multiethnic, multisite, national Study of Women’s Health Across the Nation (SWAN), now in its 6th funding cycle.
Kathryn Sandberg, Ph.D.

Dr. Sandberg is the founding director of the Georgetown University Center for the study of Sex Differences in health, aging and disease. She is also a tenured Professor and Vice Chair for Research in the Department of Medicine at Georgetown University and Director of the training program in Translational Biomedical Science at Georgetown-Howard Universities Center for Clinical and Translational Science.

Dr. Sandberg has published extensively on the molecular physiology of the renin angiotensin system, especially regarding the impact of gonadal hormones and sex chromosomes on the pathophysiology of hypertension and associated vascular and renal disease. She has been continuously funded by the National Institutes of Health for more than 22 years and honored for her research with a Distinguished Scientist Award from the Washington Academy of Sciences, an Established Investigator Award and the Harriet Duston Award from the American Heart Association and the Ernest H. Starling Distinguished Lectureship Award from the American Physiological Society. Dr. Sandberg has served in leadership roles in various scientific organizations including as the founding President of the Organization for the Study of Sex Differences, President of Women in Nephrology, President of the Society for Experimental Biology and Medicine, DC Chapter and Director of the National Organization of TL1 Directors from NIH-funded Clinical and Translational Science Institutes and Centers. She chaired the American Physiological Society Awards Committee as well as peer review committees for the American Heart Association, the National Kidney Foundation and the National Institutes of Health. She was the Founding Chair of the Gordon Conference on Ligand Recognition and the elected chair of the 2012 Gordon Research Conference on Angiotensin. Dr. Sandberg served as Associate Editor for Gender Medicine and was the North American Editor for Cell Biology International and Section Editor for Sex-based biology in the Journal of Women’s Health along with serving on numerous editorial boards. She currently serves as the Chair of the Water and Electrolyte Homeostasis Section of the American Physiological Society.

Eileen Scully, M.D., Ph.D.

Dr. Scully is an Assistant Professor of Medicine at Johns Hopkins University in the Division of Infectious Diseases. She obtained her MD and PhD in Immunobiology from the Yale School of Medicine and completed clinical training in internal medicine, infectious disease and HIV at the Mass General-Brigham in Boston. She is an infectious diseases physician specializing in the care of people living with HIV infection and leads a lab investigating the immune response to HIV and HIV curative interventions. Her lab has a specific focus on the impact of biological sex on immune responses, in both HIV and SARS-CoV-2.
Michael Sieverts, M.P.P.

Michael Sieverts is a patient/advocate who has been living with the disabling symptoms of Long COVID (LC) since his acute infection in March 2020. He works closely with groups such as Body Politic, The Patient-Led Research Collaborative, The Long COVID Alliance, and Strategies for High Impact on efforts to advance research on LC and improve patient outcomes. He has a background in science and technology policy, having worked for the National Science Foundation (NSF) for over 30 years. He was the NSF Budget Director from 2010 to 2017, and he has also held senior positions overseeing financial and grants management and legislative and public affairs. He received a Master of Public Policy from UC Berkeley and a BS in Physics from Guilford College (NC). He is participating in this workshop in personal capacity and not as a representative of NSF.

Silvi Shah, M.D., MS, FASN, FAST, FACP, FNKF

Silvi Shah, MD, is an associate professor in the Division of Nephrology and Hypertension at the University of Cincinnati, Ohio. She completed her general nephrology fellowship from the Cleveland Clinic Foundation, Ohio followed by a transplant nephrology fellowship at the University of Alabama in Birmingham.

Dr. Shah is a physician-scientist, and her research focuses on women’s health in kidney disease including pregnancy, sex disparities in kidney disease, and kidney in cardiovascular disease. She is currently supported by the K23 career development award from the National Heart, Lung, and Blood Institute, National Institutes of Health. Dr. Shah has authored several peer-reviewed manuscripts and has presented at various premier international and national meetings. She is an associate editor for Advances in Chronic Kidney Disease journal and serves on the editorial board of Kidney360 and Kidney Medicine journals. Dr. Shah leads the American Society of Nephrology’s “Women’s Health and Research in Nephrology” community and is an executive member of the American Society of Transplantation’s “Women’s Health Community of Practice”.

Heather Shattuck-Heidorn, Ph.D.

Heather Shattuck-Heidorn is a biological anthropologist who works at the intersections of public health, gender theory, and human biology. She uses gender theory to motivate hypothesis-based research examining how our social lives become embodied, reflected in our hormones, immune function, and other biology. Current projects include utilizing large datasets to recover the effects of gender on aspects of immune function, and a community-based research project investigating how gendered experiences influence stress and allostatic load in adolescents.
Dr. Patricia Silveyra, Ph.D.

Dr. Patricia Silveyra is an Associate Professor in the Department of Environmental and Occupational Health at Indiana University Bloomington School of Public Health. Her research focuses on sex differences and the role of sex hormones and steroid hormone receptors in mechanisms of lung inflammation. Dr. Silveyra earned her bachelor’s and master’s degrees in Molecular Biology and Biotechnology, and her PhD in Biochemistry, from the University of Buenos Aires, Argentina and did her postdoctoral training at Penn State College of Medicine. In 2013, she established her independent research program as an Assistant Professor at Penn State with an NIH K12 BIRCWH (Building Interdisciplinary Research Careers on Women’s Health) award. She later received NIH K01 and R03 awards from NHLBI to study mechanisms underlying sex differences in lung inflammatory processes. Dr. Silveyra was promoted to Associate Professor in 2018, prior to joining the School of Nursing at UNC Chapel Hill, where she led the UNC Biobehavioral Laboratory for 2 years. In 2021, she joined Indiana University and received an R01 from NHLBI to study sex and gender differences in asthma. Dr. Silveyra has received numerous awards for her research, mentoring, and efforts to promote diversity in STEM. She is an advocate for underrepresented and international trainees, and she serves in various national organizations and committees, including the Society for the Advancement of Chicanos/Hispanics and Native Americans in Science (SACNAS), and the National Academies of Sciences, Engineering and Medicine (NASEM), where she is a member of the Board on Higher Education and Workforce and co-chair for New Voices in Science, Engineering and Medicine.

Kristen W. Springer, Ph.D.

Kristen W. Springer is Associate Professor of Sociology at Rutgers University, The State University of New Jersey. Her research centers on gender and health inequalities, with a focus on examining the interactive influence of biology and social environment. Some of her recent research explores how masculinity ideals lead to men’s poorer health through avoiding doctor visits and through increased cardiovascular and neuroendocrine stress reactions. She has published over 30 academic articles in a wide range of leading health and gender journals, has co-edited a Special Issue of Social Science and Medicine on gender and health, and has been featured in national and international news sources including ABC News, LA Times, The New York Times, US News & World Report, Wall Street Journal, and USA Today. Her current research explores how parents, children, and providers navigate medical transition services for non-binary youth and examines how these medical decisions have the potential to dramatically (re)shape the meaning of gender.

John S. Tsang, Ph.D.

John Tsang is a systems immunologist, computational biologist, and engineer. He is currently a senior investigator in the NIH Intramural Research Program and leads a laboratory focusing on systems and quantitative immunology at the National Institute of Allergy and Infectious Diseases (NIAID). In addition, he co-directs the Trans-NIH Center for Human Immunology (CHI) and leads its research program in systems human immunology. He is in the process of moving to Yale University as Professor of Immunobiology and the founding Director of the new Yale Center for Systems and Engineering Immunology.
Dr. Tsang earned his PhD in biophysics from Harvard University in 2008 and trained in computer engineering and computer science at the University of Waterloo. He has won several awards for his research, including multiple NIAID Merit Awards recognizing his scientific leadership in systems immunology, COVID-19, and human immunology research. His work on human immune variability and influenza vaccination was selected as a top NIAID Research Advance of 2014. Tsang has served as an advisor on systems immunology and computational biology for a number of programs and organizations, including ImmPort (the clinical and molecular data repository for NIAID), the Committee on Precision Medicine for the World Allergy Organization, the Allen Institute, and the Human Vaccines Project.

**Lam C. Alex Tsoi, Ph.D.**

Dr. Tsoi's research focuses on identifying the genetic and genomic components for psoriasis and understanding their biological effect and contribution to disease heterogeneity. He is currently directing the Center for Cutaneous Bioinformatics at the University of Michigan and is the associate director of the Functional Analytic Core of the P30-funded University of Michigan Skin Biology Disease and Resource Center. Dr. Tsoi has been actively involved in coordinating and conducting different genetic and genomic studies to understand the pathophysiology of different immune-mediated disorders including psoriasis, psoriatic arthritis, atopic dermatitis, and cutaneous lupus. By using systems biology approaches, his group has revealed robust disease associated signals and candidates for downstream functional assays of psoriasis and facilitated the identification of genetic signature for psoriatic arthritis risk. His research also focuses on the development and implementation of computational pipeline for genomic data to identify novel disease-associated transcripts as well as context-specific inflammatory responses for inflammatory disorders.

**Licy L. Yanes Cardozo, M.D.**

Licy L. Yanes Cardozo, M.D., is an Associate Professor in the Departments of Cell and Molecular Biology and Medicine/Endocrinology at the University of Mississippi Medical Center (UMMC).

She earned her Medical Degree and completed her Internal Medicine residency at the National University of Asuncion (Paraguay). Later, as a Postdoctoral Fellow at the Department of Physiology at UMMC, she explored the mechanisms through which androgens regulate blood pressure under the mentorship of Dr. Jane Reckelhoff. She joined the Department of Medicine, where she completed her residency in Internal Medicine and Endocrinology fellowship. As a physician-scientist, she is actively engaged in both basic and clinical research. Her research focuses on mechanisms by which androgens mediate cardiometabolic complications in women. She is the Research Director of The Center for Gender and Sexual Minority Health, the Research Director of the Internal Medicine Residency Program, the Director of the Women’s Health Research Center, and the Director of the PCOS Clinic at UMMC.
Heather Yates

Heather works for West Virginia University as a Case Manager for The Office of Student Conduct and Academic Integrity. Heather is originally from Beaver, Pennsylvania, but currently resides in Morgantown, West Virginia. Heather is a 1995 graduate of Edinboro University of PA. She is the mother of two adult children, ages 22 and 27. Heather worked in social service for over 20 years, 10 of which, she was the Executive Director of CASA of Beaver County, PA. Heather has a passion for advocacy and helping others. Hence, her enthusiasm for her volunteer work within the RECOVER project. As a PASC patient, Heather hopes that her participation in the study will help the medical community better understand why certain individuals are more susceptible to long covid and how to successfully treat the wide range of symptoms. In addition to her participation in the study and NCEG, Heather is also a member of the RECOVER Executive Committee and serves on the RECOVER National Community Advisory Board.
<table>
<thead>
<tr>
<th>Name</th>
<th>Title and Affiliation</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>E. Dale Abel M.D., Ph.D.</td>
<td>Chair and Executive Medical Director, UCLA Department of Medicine, Los Angeles, CA</td>
<td><a href="mailto:DOMChair_DaleAbel@mednet.ucla.edu">DOMChair_DaleAbel@mednet.ucla.edu</a></td>
</tr>
<tr>
<td>Rejeev Agarwal, Ph.D.</td>
<td>Senior Research Program Officer, ORWH, Office of the Director/NIH, Bethesda, MD</td>
<td><a href="mailto:Rajeev.Agarwal@nih.gov">Rajeev.Agarwal@nih.gov</a></td>
</tr>
<tr>
<td>Shilpa H. Amin, M.D., M.Bs.Sc, M.J., C.A.Q., F.A.A.F.P.</td>
<td>Physician, Clinical Research Section, ORWH, Office of the Director/NIH, Bethesda, MD</td>
<td><a href="mailto:shilpa.amin@nih.gov">shilpa.amin@nih.gov</a></td>
</tr>
<tr>
<td>Larissa Avilés-Santa, M.D., M.PH.</td>
<td>Division Director, Division of Clinical and Health Services Research, National Institute on Minority Health and Health Disparities/NIH, Bethesda, MD</td>
<td><a href="mailto:avilessantal@nih.gov">avilessantal@nih.gov</a></td>
</tr>
<tr>
<td>C. Noel Bairey Merz, M.D.</td>
<td>Director, Barbra Streisand Women's Heart Center, Professor, Cardiology, Cedars-Sinai Medical Center, Los Angeles, CA</td>
<td><a href="mailto:merz@cshs.org">merz@cshs.org</a></td>
</tr>
<tr>
<td>W. Patricia Ingkanisorn Bandettini, M.D.</td>
<td>Medical Officer, Heart Failure &amp; Arrhythmias Branch Division of Cardiovascular Sciences, NHLBI/NIH, Bethesda, MD</td>
<td><a href="mailto:ingkanisorn@nih.gov">ingkanisorn@nih.gov</a></td>
</tr>
<tr>
<td>Daniel Barouch, M.D., Ph.D.</td>
<td>Professor of Medicine, Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, MA</td>
<td><a href="mailto:dbarouch@bidmc.harvard.edu">dbarouch@bidmc.harvard.edu</a></td>
</tr>
<tr>
<td>Juliane Caviston, Ph.D.</td>
<td>Health Science Policy Analyst, Science Policy, Planning, and Analysis, ORWH, Office of the Director/NIH, Bethesda, MD</td>
<td><a href="mailto:juliane.caviston@nih.gov">juliane.caviston@nih.gov</a></td>
</tr>
<tr>
<td>Mark Chappell, Ph.D., F.A.H.A.</td>
<td>Professor, Wake Forest School of Medicine, Winston-Salem, NC</td>
<td><a href="mailto:mchappel@wakehealth.edu">mchappel@wakehealth.edu</a></td>
</tr>
<tr>
<td>Janine Clayton, M.D.</td>
<td>Director, ORWH, Office of the Director/NIH, Bethesda, MD</td>
<td><a href="mailto:janine.clayton@nih.gov">janine.clayton@nih.gov</a></td>
</tr>
<tr>
<td>JD Davids</td>
<td>Health Justice and Communications Strategist, Strategies for High Impact (S4HI)</td>
<td><a href="mailto:jdstratcomms@gmail.com">jdstratcomms@gmail.com</a></td>
</tr>
<tr>
<td>Charles Dela Cruz, M.D., Ph.D.</td>
<td>Associate Professor, Vice Chief, Basic and Translational Research Department of Internal Medicine, Director, Center of Pulmonary Infection Research and Treatment (CPIRT), Yale University, New Haven, CT</td>
<td><a href="mailto:charles.delacruz@yale.edu">charles.delacruz@yale.edu</a></td>
</tr>
<tr>
<td>Patrice Desvigne-Nickens, M.D.</td>
<td>Medical Officer, Heart Failure and Arrhythmia Division of Cardiovascular Sciences, NHLBI/NIH, Bethesda, MD</td>
<td><a href="mailto:desvignp@nhlbi.nih.gov">desvignp@nhlbi.nih.gov</a></td>
</tr>
</tbody>
</table>
Jessica Drew  
Scientific Policy Analyst, Policy, Planning, and Evaluation Branch  
Office of Strategic Planning, Initiative Development, and Analysis  
National Institute of Allergy and Infectious Diseases/NIH  
Bethesda, MD  
jessi.drew@nih.gov

Nahed El Kas sar, M.D., M.Sc., Ph.D.  
Medical Officer, Blood Epidemiology and Clinical Therapeutics Branch  
Division of Blood Diseases and Resources  
NHLBI/NIH  
Bethesda, MD  
Email: nahed.elkassar@nih.gov

DeLisa Fairweather, Ph.D.  
Associate Professor  
Mayo Clinic  
Jackson, FL  
Email: Fairweather.DeLisa@mayo.edu

Vesna Garovic, M.D., Ph.D.  
Professor, Division of Nephrology and Hypertension  
Mayo Clinic  
Rochester, MN  
Email: garovic.vesna@mayo.edu

David C. Goff Jr., M.D., Ph.D., F.A.C.P., F.A.H.A.  
Director, Division of Cardiovascular Sciences  
NHLBI/NIH  
Bethesda, MD  
Email: david.goff@nih.gov

Yogen Kan thi, M.D., F.S.V.M., F.A.H.A.  
Lasker Investigator  
Chief, Vascular Thrombosis and Inflammation Laboratory  
Division of Intramural Research  
NHLBI/NIH  
Email: yogen.kan thi@nih.gov

Sadiya Khan M.D., M.Sc.  
Assistant Professor of Medicine (Cardiology) and Preventive Medicine (Epidemiology)  
Northwestern University  
Feinberg School of Medicine  
Chicago, IL  
Email: s-khan-1@northwestern.edu

Marrah Lachowicz-Scroggins, Ph.D.  
Program Director, Airway Biology and Disease Branch  
Division of Lung Diseases  
NHLBI/NIH  
Bethesda, MD  
Email: marrah.lachowicz-scroggins@nih.gov

Babbette LaMarca, Ph.D.  
Professor and Chair Pharmacology and Toxicology  
University of Mississippi Medical Center  
Jackson, MS  
Email: bblamarca@umc.edu

Cindy Liu, Ph.D.  
Assistant Professor Pediatrics  
Brigham and Women's Hospital  
Harvard Medical School  
Boston, MA  
Email: chliu@bwh.harvard.edu

Monica Longo, M.D., Ph.D.  
Medical Officer, Project Scientist, Maternal-Fetal Medicine Units Network  
Pregnancy and Perinatology Branch  
Eunice Kennedy Shriver National Institute of Child Health and Human Development/NIH  
Bethesda, MD  
Email: monica.longo@nih.gov

Franck Mauvais-Jarvis, M.D., Ph.D.  
Professor of Medicine  
Tulane University School of Medicine  
New Orleans, LA  
Email: fmauvais@tulane.edu
Donna McKusick, Ed.D.
Data Coach
Achieving the Dream
Email: dmckusick@icloud.com

James Moon, M.D.
Professor of Cardiology
Barts Heart Centre and UCL
London, United Kingdom
Email: james@moonmail.co.uk

Janet Mullington, Ph.D.
Professor of Neurology
Department of Neurology, Beth Israel Deaconess Medical Center
Harvard Medical School
Boston, MA
Email: jmullling@BIDMC.Harvard.edu

Matthew Neal, M.D., F.A.C.S.
Robert G. Simmons Associate Professor of Surgery
University of Pittsburgh Medical Center
Pittsburgh, PA
Email: nealm2@upmc.edu

Elizabeth Oelsner M.D., M.P.H.
Associate Professor of Medicine
Columbia University Irving Medical Center
New York, NY
Email: eco7@columbia.edu

Sabine Oertelt-Prigione, M.D., Ph.D., MScPH
Chair of Gender in Primary and Transmural Care
Radboud University
Nijmegen, Netherlands
Email: sabine.oertelt-prigione@radboudumc.nl

Kenichi Okuda, M.D., Ph.D.
Research Assistant Professor
Department of Medicine
University of North Carolina at Chapel Hill
Chapel Hill, NC
Email: ken_okuda@med.unc.edu

Stanley Perlman, M.D., Ph.D.
Professor of Microbiology and Immunology
University of Iowa
Carver College of Medicine
Iowa City, IA
Email: stanley-Perlman@uiowa.edu

Gregory Phillips II, Ph.D.
Assistant Professor of Medical Social Sciences and Preventive Medicine (Epidemiology)
Northwestern University
Feinberg School of Medicine
Chicago, IL
Email: glp2@northwestern.edu

Mercy Prabhudas, Ph.D., M.B.A.
Program Officer, Basic Immunology Branch
Division of Allergy, Immunology & Transplantation
National Institute of Allergy and Infectious Diseases/NIH
Bethesda, MD
Email: mprabhudas@niaid.nih.gov

Zubaid Rafique, M.D.
Associate Professor
Research Director Assistant
Baylor College of Medicine
Houston, TX
Email: zubaidrafique@gmail.com

Satish Raj, M.D., MSci
Professor, Cardiac Sciences
Chair, Cardiac Arrhythmia Service; Medical Director
University of Calgary
Calgary Alberta, Canada
Email: satish.raj@ucalgary.ca

John Randolph, M.D.
Professor
University of Michigan Medicine
Ann Arbor, MI
jfrandol@med.umich.edu
Ilsa I. Rovira, M.S.
Scientific Program Specialist, Vascular Biology and Hypertension Branch
Division of Cardiovascular Sciences
NHLBI/NIH
Bethesda, MD
Email: rovirai@nih.gov

Kathryn Sandberg Ph.D.
Professor and Vice Chair for Research
Director, Center for the Study of Sex Differences in Health, Aging & Disease
Georgetown University
Washington, DC
Email: sandberg@georgetown.edu

Eileen Scully M.D., Ph.D.
Assistant Professor
Department of Medicine, Division of Infectious Diseases
Johns Hopkins University
Baltimore, MD
Email: escully1@jhmi.edu

Professor of Microbiology and Immunology
University of Cincinnati
College of Medicine
Cincinnati, OH
Email: shah2sv@ucmail.uc.edu

Heather Shattuck-Heidorn, Ph.D.
Assistant Professor Women and Gender Studies
University of Southern Maine
Portland, ME
Email: heather.shattuckheidorn@maine.edu

Michael Sieverts, M.P.P.
Patient/Advocate
michael.sieverts@mail.com

Patricia Silveyra, Ph.D.
Associate Professor
Indiana University Bloomington, School of Public Health
Bloomington, IN
Email: psilveyr@iu.edu

Kristen Springer, Ph.D.
Associate Professor of Sociology
Rutgers University
New Brunswick, NJ
Email: kspringe@rutgers.edu

John Tsang, Ph.D.
Systems Genomics and Bioinformatics Unit
Division of Intramural Research
National Institute of Allergy and Infectious Diseases/NIH
Email: tsangjs@mail.nih.gov

Alex Tsoi, Ph.D.
Assistant Professor, Dermatology
Assistant Professor, Computational Medicine and Bioinformatics
Research Assistant Professor, Biostatistics
University of Michigan
Ann Arbor, MI
Email: alextsoi@umich.edu

Jasmina Varagic, M.D., Ph.D., F.A.H.A.
Program Director, Vascular Biology and Hypertension Branch
Division of Cardiovascular Sciences,
NHLBI/NIH
Bethesda, MD
Email: jasmina.varagic@nih.gov

Licy Yanes Cardozo, M.D.
Associate Professor
University of Mississippi Medical Center
Jackson, MS
Email: lyanes@umc.edu

Heather Yates
Case Manager, Student Conduct and Academic Integrity
West Virginia University
Email: heather.yates@mail.wvu.edu