

**Weill Cornell  
Medicine**

**WEILL CORNELL MEDICINE  
NEW YORK-PRESBYTERIAN HOSPITAL  
DEPARTMENT OF MEDICINE**

Division of Pulmonary and Critical Care Medicine



**DIVISIONAL PROGRAMS,  
FACULTY AND FELLOW PROFILES  
2023-2024**

WEILL CORNELL MEDICINE  
1300 YORK AVENUE, BOX 96  
NEW YORK, NY 10021  
TELEPHONE: 646-962-2730  
FAX: 646-962-0286

[HTTP://MEDICINE.WEILL.CORNELL.EDU/DIVISIONS-PROGRAMS/PULMONARY-CRITICAL-CARE-MEDICINE](http://medicine.weill.cornell.edu/divisions-programs/pulmonary-critical-care-medicine)

## **TABLE OF CONTENTS**

<b>INTRODUCTION</b>	<b>1</b>
<b>FACULTY AND DIVISIONAL STAFF ROSTER</b>	<b>2-5</b>
<b>FELLOWSHIP TRAINING PROGRAM OVERVIEW</b>	<b>5-11</b>
<b>MISSION, CLINICAL TRAINING &amp; ROTATIONS</b>	<b>5-8</b>
<b>RESEARCH</b>	<b>9-10</b>
<b>SUPPLEMENTAL TRAINING PROGRAMS</b>	<b>10-11</b>
<b>CONFERENCES</b>	<b>11-12</b>
<b>FELLOW ROSTER</b>	<b>12-13</b>
<b>FELLOW PROFILES</b>	<b>14-21</b>
<b>FORMER FELLOWS</b>	<b>21-23</b>
<b>FACULTY PROFILES</b>	<b>24-42</b>
<b>T32 RESEARCH TRAINING FACULTY</b>	<b>43-49</b>
<b>SELECTED DIVISIONAL RESEARCH PROGRAMS</b>	<b>49-52</b>
<b>FACULTY PUBLICATIONS</b>	<b>52</b>

# DIVISION OF PULMONARY AND CRITICAL CARE- INTRODUCTION

The Division of Pulmonary and Critical Care Medicine at Weill Cornell Medicine and NewYork-Presbyterian (NYP)/Weill Cornell Medical Center has a tri-partite mission: to provide outstanding clinical care, to deliver the highest quality training in pulmonary and critical care diseases, and to conduct cutting-edge research in order to develop the future leaders in our field. The Division has 57 full-time, 16 voluntary and 2 adjunct faculty members and includes basic, translational, and clinical research programs as well as Pulmonary and Critical Care clinical services at NYP-Weill Cornell Medicine and the Pulmonary and Critical Care Medicine (PCCM) Fellowship Training Program.



The clinical facilities of the Division serve both outpatients and inpatients from the New York metropolitan area. Weill Cornell Pulmonary Associates, located at 425 East 61<sup>st</sup> Street, includes the pulmonary faculty and fellow outpatient clinics. Inpatients are seen at New York-Presbyterian Hospital, a large 862-bed tertiary hospital, and the Hospital for Special Surgery, a 205-bed rheumatology and orthopedic specialty hospital, co-located on the Upper East Side of Manhattan. In addition, the Division has collaborative relationships for clinical research and programmatic care with the Pulmonary Divisions at our NYP affiliates including Lower Manhattan Hospital, NYP Queens Hospital, and Methodist Hospital in Brooklyn, as well as Houston Methodist.

The PCCM Fellowship Training Program provides clinical and research training aimed at developing physician-scientists, physician investigators, and academic clinicians, with the availability of additional research time through our T32 Training Grant. The tri-institutional setting of Weill Cornell Medicine, Memorial Sloan-Kettering Cancer Center (MSKCC) and Rockefeller University (RU), along with the newly developed WCM PCCM Respiratory Science Center occupy 15,000 square feet of bench research space, 5,000 square feet of office and clinic space, and 3,000 square feet of clinical research space (housing human health services research). This creates an exceptionally ideal local environment for productive scientific collaboration. The PCCM Division continues to recruit talented physician-scientists and graduates from our PCCM program are highly qualified to conduct research, provide clinical care, and/or assume leadership roles in Pulmonary and Critical Care Medicine. Our fellows typically go on to academic faculty appointments.

The PCCM Fellowship Training Program emphasizes both inpatient and ambulatory clinical training during the first year. The second and third years emphasize basic, translational, health service, quality improvement, or clinical research at Weill Cornell Medicine or other affiliated programs. Additional training is available through master's degree programs, including the Clinical and Translational Science Center's (CTSC) Master's in Clinical and Translational Investigation or a Master's in Epidemiology. In addition, our Division offers clinical electives in Pulmonary and Critical Care Medicine for residents and medical students and sponsors educational programs for providers at NYP and from the international community.

**DIVISION OF PULMONARY AND CRITICAL CARE  
MEDICINE EAST CAMPUS FACULTY**

<b>Faculty Name</b>	<b>Position</b>	<b>Clinical/Investigative Specialty</b>
<b>Fernando J. Martinez, M.D., M.S.</b>	Division Chief Bruce Webster Professor of Medicine	Interstitial Lung Disease, COPD
<b>David Berlin, M.D.</b>	Professor of Clinical Medicine, Associate Division Chief, Director of Critical Care Services NYPH, Medical Director of the HSS Pulmonary Function Laboratory	Mechanical Ventilation, Cardiopulmonary Interactions, Respiratory Complications of Neuromuscular Disease
<b>Michael S. Aboodi, M.D., M.S.</b>	Instructor in Medicine	Acute Respiratory Failure, Acute Respiratory Distress Syndrome (ARDS) and Post-intensive Care Syndrome (PICS)
<b>Muhammad Sajawal Ali, M.D., M.S., FCCP</b>	Assistant Professor of Clinical Medicine	Interventional Pulmonary, Pleural Diseases, Advanced Bronchoscopic Therapies for COPD and Asthma
<b>Kerri Aronson, M.D., M.S.</b>	Assistant Professor of Medicine	Patient-Reported Outcomes in Interstitial Lung Disease; Studying the Health-Related Quality of Life and Exposure Assessments in Hypersensitivity Pneumonitis
<b>Srijani Basu, Ph.D.</b>	Postdoctoral Associate in Medicine	Innate Lymphoid Cells in the Context of Inflammation
<b>Kristin N. Berger, M.D.</b>	Instructor in Medicine	Interstitial Lung Disease
<b>Lester Blair, M.D.</b>	Associate Professor of Clinical Medicine	Bronchiectasis, Sarcoidosis, COPD, Asthma
<b>Soo Jung Cho, M.D.</b>	Assistant Professor of Medicine	Aging-related Lung Fibrosis and Pneumonia
<b>Augustine M.K. Choi, M.D.</b>	Professor of Medicine, Senior Vice President and Senior Advisor for Strategic Planning to the President and CEO at NYP	COPD, ARDS, Sepsis, Cytoprotective Molecules in Lung and Vascular Diseases
<b>Samuel J. Chung, M.D.</b>	Instructor in Medicine	Pulmonary Hypertension, Right Ventricular Failure, COPD
<b>Suzanne Cloonan, Ph.D.</b>	Adjunct Assistant Professor of Biochemistry in Medicine	Iron Metabolism, Mitochondrial Biology, COPD, Lung Fibrosis
<b>Joshua Davis, M.D.</b>	Instructor in Medicine	Curriculum Development and Simulation, Cardiopulmonary Physiology, Mechanical Ventilation, Medical Education
<b>Luis Gómez-Escobar, M.D., M.S.</b>	Postdoctoral Associate in Medicine	Molecular Mechanisms of Cell Death, ARDS, Sepsis, Critical Illness, COVID-19

<b>Robert Glennon, M.D.</b>	Assistant Professor of Clinical Medicine	Sepsis, Critical illness
<b>Margaret H. Goldberg, M.D.</b>	Instructor in Medicine	Critical Care Medicine, VV-ECMO, Pulmonary Procedures, Inpatient Pulmonary Medicine, Quality Improvement
<b>Kelly Griffin, M.D.</b>	Associate Professor of Clinical Medicine, Director of Nocturnal Critical Care Services, Director ICU Outreach	Critical Care Medicine, Critical Care of Obstetric Patients, Critical Care of Patients with Hematologic Malignancies, Critical Care of Patients with Severe Covid-19, Disaster Planning and Management, and Medical Education
<b>Kirana Gudi, M.D.</b>	Assistant Professor of Medicine Program Director Internal Medicine Residency Vice Chair of Education	Pulmonary Medicine and Education
<b>Deborah Haisch, M.D.</b>	Assistant Professor of Clinical Medicine	Illness Severity Scoring, Critical Care Medicine, Critical Care in Low-Income Settings
<b>John Harrington, M.D.</b>	Assistant Professor of Clinical Medicine	Sepsis, Biomarker Development
<b>Ben-Gary Harvey, M.D.</b>	Associate Professor of Clinical Medicine Director of Bronchoscopy and Procedure Services	Management of Lung Nodules, Pulmonary Hypertension, COPD, Lung Cancer, Asthma, Bronchitis, Pulmonary Embolism, Mechanical Ventilation, Interventional Pulmonary Medicine
<b>Bradley J. Hayward, M.D.</b>	Assistant Professor of Clinical Medicine Associate Fellowship Program Director	Critical Care, Palliative Care, Dyspnea, Chronic Cough, Advanced Asthma
<b>Robert J. Kaner, M.D.</b>	Professor of Clinical Medicine Associate Fellowship Program Director, Associate Program Director T32 Training Grant	Idiopathic Pulmonary Fibrosis, Interstitial Lung Disease, COPD, Emphysema in HIV
<b>Ana Krieger, M.D.</b>	Professor of Clinical Medicine Medical Director, Center for Sleep Medicine	Apnea, Sleep Apnea, Narcolepsy, Hypersomnia, Parasomnia, Insomnia, Movement Disorders in Sleep
<b>Jamuna Krishnan, M.D., M.B.A.</b>	Assistant Professor of Medicine	COPD, Healthcare Disparities in COPD
<b>Lindsay Lief, M.D.</b>	Associate Professor of Clinical Medicine Medical Director, MICU Abby Joseph Cohen Clinical Scholar	Unrecognized Suffering in the ICU, Pulmonary Embolism, End of Life in the ICU, Post-ICU Syndrome
<b>Joseph Mailman, M.D.</b>	Assistant Professor of Clinical Medicine	Critical Care, Medical Education
<b>Seth Manoach, M.D.</b>	Associate Professor of Clinical Medicine	Airway Management, Mechanical Ventilation, and Hemodynamic Monitoring, Humanism in Medicine

	Director of the Medical ICU at NYP/LMH	
<b>Laurel Anne Monticelli, Ph.D.</b>	Assistant Professor of Immunology in Medicine	Innate Lymphoid Cells in the Context of Allergic Lung Inflammation
<b>Kiichi Nakahira, M.D., Ph.D.</b>	Adjunct Assistant Professor of Medicine	Sepsis, Mitochondrial DNA
<b>Michael S. Niederman, M.D.</b>	Professor of Clinical Medicine Lead Academic and Patient Quality Officer	Pneumonia, COPD, Sepsis, Respiratory Failure, Respiratory Infection
<b>Hasina Outtz Reed, M.D., Ph.D.</b>	Assistant Professor of Medicine James Hilton Manning and Emma Austin Manning Foundation Research Scholar	Lymphatic Vasculature, Pulmonary Vasculature, Murine Modeling, Lung Injury
<b>Clark G. Owyang, M.D.</b>	Assistant Professor of Clinical Medicine	ARDS, ECMO, Resuscitative TEE, Critical Care Echocardiography
<b>Corrina Oxford-Horrey, M.D.</b>	Assistant Professor of Clinical Obstetrics & Gynecology Medical Director, Labor & Delivery Maternal Fetal Medicine/Critical Care	Critical Care in Obstetrics, Trauma in Pregnancy, Severe Maternal Morbidity & Mental Health, Simulation-based education
<b>Di Pan, D.O.</b>	Instructor in Medicine	Clinical/Investigative Specialty to: Critical Illness, ICU survivor outcomes, ICU Complications, Health Services Research, Simulation and Medical Education
<b>Christopher Parkhurst, M.D, Ph.D.</b>	Instructor in Medicine	Critical Illness, Physical and Cognitive Dysfunction
<b>Maria Plataki, M.D., Ph.D.</b>	Assistant Professor of Medicine	ARDS, Sepsis, Lipid Metabolism, Obesity and Acute Lung Injury
<b>Anna J. Podolanczuk, M.D., M.S.</b>	Assistant Professor of Medicine	Early identification of ILD/ILA, Environmental and Cardiovascular Risk Factors for ILD
<b>Michael J. Podolsky, M.D.</b>	Assistant Professor of Medicine	Tissue Fibrosis, Extracellular Matrix Metabolism, Lung Injury and Repair
<b>David R. Price, M.D., M.S.</b>	Assistant Professor of Medicine	Acute Respiratory Distress Syndrome (ARDS), Neutropenic Critical Illness, Coronavirus Disease 2019 (COVID-19) ARDS
<b>Alexandra C. Racanelli, M.D., Ph.D.</b>	Instructor in Medicine	Pulmonary Vascular Disease
<b>Kapil Rajwani, M.D.</b>	Associate Professor of Clinical Medicine Director of Simulation Education Associate Medical Director of the Joint Simulation Center Co-Director for the Critical Care Clerkship Director of Inpatient Clinical	Critical Care, High-Risk Bronchoscopy, Simulation, Percutaneous Tracheostomy, and Pleural Disease

	Operations and Critical Care Education	
<b>Abraham Sanders, M.D.</b>	Associate Professor of Medicine Director of the Pulmonary Function Lab	Asthma, COPD
<b>Edward Schenck, M.D., M.S.</b>	Assistant Professor of Clinical Medicine James P. Smith Clinical Scholar	Sepsis, ARDS Outcomes, Health Services Research
<b>Renat Shaykhiev, M.D., Ph.D.</b>	Associate Professor of Medicine	Biological Mechanisms of Human Lung Aging and Disease (COPD, IPF, Lung Cancer)
<b>Ilias Siempos, M.D., D.Sc.</b>	Adjunct Assistant Professor of Medicine	ARDS, Ventilator-Induced Lung Injury
<b>Heather Stout-Delgado, Ph.D.</b>	Associate Professor of Immunology in Medicine Associate Program Director T32 Training Grant	Aging, Pneumonia, Influenza, Secondary Bacterial Infections, Host Immunological Response, Immunometabolism
<b>Lisa K. Torres, M.D., M.S.</b>	Assistant Professor of Medicine	Sepsis, Host Immunological Response
<b>Meredith Turetz, M.D.</b>	Assistant Professor of Medicine Director of Inpatient Pulmonary Consultative Services Fellowship Program Director	Medical Education, Airways Disease, Pulmonary Mycobacterial Infections, Pulmonary Complications of Stem Cell Transplant, Pulmonary Embolism
<b>David Weir, M.D.</b>	Assistant Professor of Clinical Medicine Site Director of Pulmonary and Critical Care Medicine at NYP/LMH Director for Virtual Critical Care Services	Critical Illness, General Pulmonary Medicine
<b>William Whalen, M.D.</b>	Instructor in Medicine	Inflammation in SARS-CoV-2, Interstitial Lung Disease
<b>Dana Zappetti, M.D.</b>	Assistant Professor of Medicine Vice Chair for Clinical Operations Director, Outpatient Clinical Operations	Pulmonary Complications of HSCT, Lung Cancer, Asthma, COPD
<b>William Zhang, M.D.</b>	Assistant Professor of Medicine	Chronic Obstructive Pulmonary Disease (COPD); Chronic Bronchitis, Emphysema
<b>NURSING STAFF</b>		
<b>Nadine Chahine, R.N.</b>	Registered Nurse	nac4005@med.cornell.edu
<b>Emily Finkelman, N.P.</b>	Nurse Practitioner	emf9029@med.cornell.edu
<b>Kasey Woodin, N.P.</b>	Nurse Practitioner	kcw7001@med.cornell.edu
<b>DIVISIONAL STAFF - ADMINISTRATION</b>		

<b>Staff Member</b>	<b>Position</b>	<b>Email Address</b>
<b>Kathy Rosenberg, M.B.A, M.A.</b>	Divisional Administrator	kar2015@med.cornell.edu
<b>Patrycja Golinska, M.S.</b>	Administrative Manager	pag2028@med.cornell.edu
<b>Giavanna (Gigi) Castro Plewa</b>	Senior Administrative Specialist	gic4006@med.cornell.edu
<b>Su (Emily) Thaw</b>	Administrative Specialist	sut4001@med.cornell.edu
<b>Daisy Yeung</b>	Administrative Specialist	day4007@med.cornell.edu
<b>DIVISIONAL STAFF – GRANTS, FINANCE, RESEARCH</b>		
<b>Stefan Jhagroo</b>	Financial Specialist	scj4002@med.cornell.edu
<b>Michelle Golabek, M.H.A.</b>	Financial Administrator	mil2053@med.cornell.edu
<b>Zulakha Rahman</b>	Senior Finance & Operations Specialist	zur4003@med.cornell.edu
<b>DIVISIONAL STAFF – CLINICAL TRIALS</b>		
<b>Elizabeth (Betsy) Peters, R.N.</b>	Clinical Trials Administrator	elp2018@med.cornell.edu
<b>Kimberly Kerr</b>	Clinical Trials Administrator	kke4001@med.cornell.edu
<b>Alicia Morris</b>	Clinical Trials Administrator	ajm2017@med.cornell.edu
<b>KM Muktasid</b>	Clinical Research Assistant	kmm4010@med.cornell.edu
<b>Yana Rabkova</b>	Clinic Research Assistant	yar4004@med.cornell.edu
<b>Jose Romero</b>	Assistant Research Coordinator	jlr4002@med.cornell.edu
<b>Janina Varadarajan</b>	Clinical Research Assistant	jav4008@med.cornell.edu
<b>Christine Wu</b>	Clinical Research Assistant	chw4019@med.cornell.edu
<b>DIVISIONAL STAFF – OUTPATIENT PRACTICE</b>		
<b>Mariely Taveras, M.B.A.</b>	Practice Manager	mat7025@med.cornell.edu
<b>Gabriel Calderon</b>	Practice Specialist	jee2008@med.cornell.edu
<b>Lisnett Rodriguez</b>	Customer Service Lead	gac4003@med.cornell.edu

## **PULMONARY AND CRITICAL CARE MEDICINE FELLOWSHIP TRAINING PROGRAM**

### **Mission**

The PCCM Fellowship Training Program is an ACGME accredited three-year comprehensive program which provides clinical and research training aimed at developing physician-scientists, physician investigators, and academic clinicians. Our 15 trainees receive robust clinical training in different venues, including: the inpatient



pulmonary consult service, advanced procedure service, critical care triage, medical intensive care unit (MICU) and other specialty ICUs (cardiothoracic and neurologic), weekly outpatient clinic experiences (encompassing general pulmonary diseases and specialty clinics including ILD and Post ICU Recovery Clinic), and clinical elective rotations. In addition to procedural expertise, they develop expertise in simulation and ultrasound. All fellows conduct at least 18 months of research spanning a broad range of expertise (e.g., bench laboratory research, health service and/or patient centered investigation). Additional training is available through master's degree programs and additional research time is available through our T-32 Training Grant. Key investigative areas include cellular biology and molecular immunology, lung and vascular injury, human pathophysiology, and epidemiology and bioinformatics. Faculty mentoring across the tri-institutional setting provides an ideal training environment and promotes scientific collaboration. Graduates from our PCCM program are highly qualified to conduct research, provide clinical care, and/or assume leadership roles in Pulmonary and Critical Care Medicine. Our fellows typically go on to academic faculty appointments. The mission of our training program aligns with the larger mission of Weill Cornell Medicine which aspires to attain the highest levels of excellence in clinical medicine, biomedical research, and education and aims to train the next generation of physicians and scientists who will lead the way in shaping medicine and healthcare for the future.

### **Clinical Training**

All fellows have 18 months of clinical rotations throughout the duration of their training. They also participate in several practical and didactic courses in their first year of fellowship, including the Protected Airway Course, Critical Care Fellows' Ultrasonography Course, Pulmonary Fellows Orientation Boot Camp led by senior fellows and attendings, as well as longitudinal simulation sessions. A list of all core clinical rotations and simulation training courses are listed below.

### **Clinical Rotations**

NewYork-Presbyterian Hospital/Weill Cornell Medicine is the primary institution of our fellowship program. The medical center is located in a large clinical and research complex on the Upper East Side of Manhattan. NewYork-Presbyterian (NYP) is the current name of what were formerly two distinct institutions: Cornell-New York Hospital and the Columbia-Presbyterian Medical Center. A leader in medical education, NewYork-Presbyterian Hospital is the only academic medical center in the nation affiliated with two world-class medical schools, Weill Cornell Medicine and Columbia University Vagelos College of Physicians and Surgeons. This collaboration means patients have access to the country's leading physicians, the full range of medical specialties, latest innovations in care, and research that is developing cures and saving lives. The Greenberg Pavilion of NewYork-Presbyterian Hospital (Cornell campus) is a one million square foot facility with 862 patient beds. Weill Cornell Medical College and Columbia College of Physicians and Surgeons remain independent with separate Pulmonary and Critical Care Fellowship Programs.

### ***Medical Intensive Care Unit***

The medical intensive care unit (MICU) at NewYork-Presbyterian Hospital/Weill Cornell Medicine is a 20-bed, closed unit ICU that treats over 1,200 patients annually. It serves as the tertiary referral center for the Weill Cornell Medicine network, including hospitals in Queens, Lower Manhattan, and Brooklyn. The MICU works closely with other clinical services, including our robust hematology oncology/bone marrow transplant service, liver transplant service, and others to provide the best care possible for our patients.

The unit is divided into two 10-bed groups, each staffed with four residents, led by a fellow, and supervised by an ICU attending. Fellows in the MICU take an active role in the care of critically ill patients by managing daily rounds, performing or supervising procedures, and providing both formal and bedside teaching to residents and medical students. Fellows rotating in the MICU are also part of the cardiac arrest team.

Common procedures performed in the MICU by fellows include endotracheal intubation, bronchoscopy (therapeutic and diagnostic), central venous access, arterial line placement, Swan-Ganz catheter placement, and

chest tube placement (surgical and percutaneous). MICU attendings also perform bedside percutaneous tracheostomies and train fellows in this procedure.

In addition to the MICU, fellows spend 4 weeks on an anesthesia rotation where they learn the fundamentals of airway management, intubation techniques, and management of procedural sedation. They also spend 4 weeks each in the neurological intensive care unit and cardiothoracic intensive care unit.

### ***Pulmonary Consultation Service***

The inpatient pulmonary consultation service covers both NewYork-Presbyterian Hospital/Weill Cornell Medicine and the Hospital for Special Surgery. Fellows on the service are exposed to a wide array of pulmonary pathology and procedures. The consult service is typically staffed by two fellows and supervised by a dedicated pulmonary attending. Fellows on the service are also members of the multidisciplinary Pulmonary Embolism Response Team and participate in the triage and management of patients with high-risk pulmonary emboli. In addition to consulting on patients on the general floors, they consult in the non-medical ICUs as well as the medical step-down units where they assist with ventilator management. On the consultation service, fellows perform bedside procedures such as thoracentesis, percutaneous chest tube placement, and bronchoscopy.

In addition to training on the pulmonary consultation service, fellows do a physiology rotation and radiology/pathology rotations and may rotate through selected clinical electives including Interventional Pulmonary, Sleep Medicine, Lung Transplantation, and Pulmonary Hypertension.

### ***Pulmonary Procedure Service***

The fellow on this service performs procedures in our bronchoscopy suite under the supervision of a dedicated attending and may assist the consult service in performing bedside procedures.

### ***Procedural Exposure:***

- Basic Bronchoscopy
  - Bronchoalveolar lavage
  - Transbronchial biopsy
  - Endobronchial biopsy
- Advanced Bronchoscopy
  - Linear and radial EBUS
  - EM navigation
  - Cryotherapy
  - Argon plasma and direct thermal ablation therapy
  - Endobronchial stent placement and removal
  - Endobronchial valve placement
  - Transbronchial needle aspiration of thoracic masses and lymph nodes (TBNA)
  - Whole lung lavage
- Endotracheal Intubation
  - Direct laryngoscopy
  - Video laryngoscopy
  - Fiberoptic
- Central Venous Access
- Swan Ganz catheterization
- Thoracentesis
- Chest tube placement
  - Seldinger pigtail catheters
  - Surgical large bore chest tubes

- Tunneled pleural catheters
- Percutaneous tracheostomy
- Critical Care ultrasound

### ***ICU Outreach Service***

The ICU Outreach Service serves three important roles. First, it provides critical care triage and consultation for patients in the Emergency Department or on the wards. Second, it provides critical care consultation services to other intensive care units, such as the Cardiac ICU or Neurological ICU. Third, the ICU Outreach service also provides continuity of care for patients recently transferred out of the MICU. The ICU Outreach Service is staffed by an internal medicine resident dedicated to the triage and transfer of critically ill patients from the Emergency Department and wards and is supervised by an attending. Fellows rotate on this service and work with residents throughout the year and are involved with the outreach team on the weekends and nights.

### ***Ambulatory Continuity Clinic***

Through their three years of training, fellows participate in a weekly continuity outpatient clinic that alternates between care for patients with general pulmonary diseases and for patients with interstitial lung diseases. Through the ambulatory care system, fellows build a panel of patients for whom they will follow over the course of the fellowship, with the guidance of a preceptor. Fellows also have the opportunity to see patients in the Post ICU Recovery Clinic. Our practice also offers the use of telemedicine, in which Video Visits enable our patients to have appointments virtually - helping them access care more conveniently.

### ***Simulation Training***

The robust simulation training program includes an airway course held in conjunction with the Division of Emergency Medicine, an ultrasound course that all junior fellows attend, a pulmonary fellow orientation boot camp consisting of didactics and procedural and critical care simulation, and access to a cutting-edge simulation center. Our attendings also facilitate regular simulation sessions throughout training to enhance procedural and clinical competence.

### ***Ultrasound Training***

Fellows attend a dedicated introductory ultrasonography course during the summer of their first year of training. The course provides extensive instruction in image acquisition and optimization using live models. This is followed with virtual classroom learning in advanced cardiac ultrasound pathology, monthly multi-departmental academic case presentations with in-depth literature review, and weekly image review sessions. Ultrasound image portfolios are developed throughout the year and images are reviewed for quality assurance by referees certified by the American Society for Echocardiography. Additional simulation training in surface cardiac ultrasound as well as transesophageal echocardiography are available using advanced trainers through our simulation center.

### ***Fellowship Training Schedule***

A sample schedule of the fellowship years follows:

## **Sample Schedule**

<b>Month</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>
July	Pulmonary - Consult	Elective	Research
August	MICU	Pulmonary - Consult	Research
September	Pulmonary - Procedure	NonMICU[2]	Research
October	MICU	MICU	Research
November	Pulmonary - Consult	NonMICU[3]	Research
December	MICU	MICU	Research
January	Pulmonary - Consult	Research	Research
February	NonMICU[1]	Research	Research
March	Pulmonary Elective	Research	Research
April	MICU	Research	Research
May	Pulmonary - Consult	Research	Research
June	MICU Nights	Research	Research

All rotations with 1 session/wk outpatient ambulatory practice (10%)

[1] Non-Medical Intensive Care Unit/Anesthesiology

[2] Non-Medical Intensive Care Unit/Cardiothoracic [includes 1x/wk Continuity Clinic]

[3] Non-Medical Intensive Care Unit/Neurosurgical Nights: 3-4 wks of MICU night coverage

Vacation: 4 wks taken in 1-4 wk blocks

## **Research**

The academic environment within the Joan & Sanford I. Weill Medical College of Cornell University combines the high clinical volume of its quaternary health care facility with focused clinical, translational, health services, quality improvement and basic science research. The tri-institutional setting of WCM, MSKCC, and RU creates an exceptionally ideal environment for productive scientific collaboration within the formal tri-institutional MD-PhD program, short track medical residency track program, numerous integrated subspecialty fellowship programs, and for our trainees of the T32 training program.

Research training occurs over the majority of the second and third years of the fellowship program. All fellows have the opportunity to spend approximately 18 months conducting research with a broad range of investigational opportunities in basic, translational, clinical or medical education research. All research fellows participate in Pulmonary Fellows Research Orientation Boot Camp led by experienced investigators. Fellows conduct their research within the Division of Pulmonary and Critical Care but are encouraged to seek interdisciplinary support from other Divisions within the Department of Medicine (e.g. Cardiovascular, Genetics, General Medicine), other departments within the Medical College (e.g. Department of Microbiology and Immunology, Population Health Sciences), as well as with mentors from Rockefeller University or Memorial Sloan Kettering Cancer Center. Faculty mentorship from these departments allows a wide diversity of research opportunities.

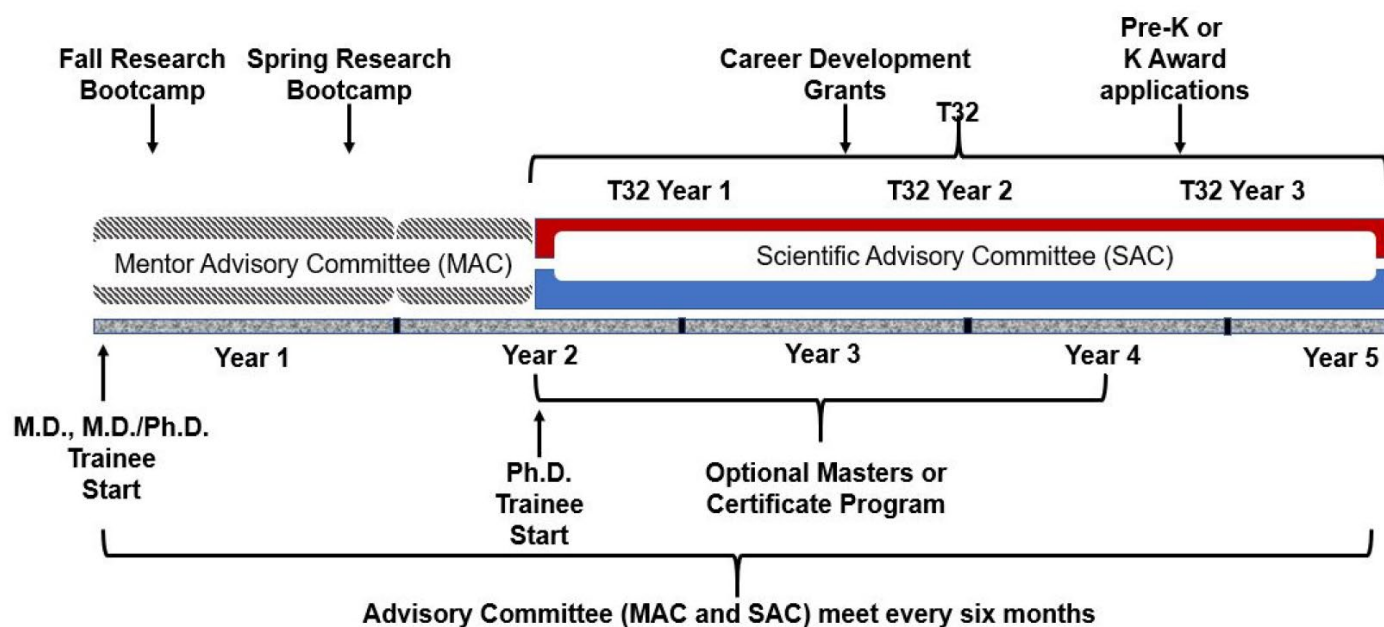
Our structured research program is led by world-renowned researchers in the fields of acute lung injury, sepsis, COPD, interstitial lung disease, pneumonia, pulmonary hypertension, among others. Fellows are mentored on

individualized projects with the goal of authorship, national conference abstracts, and ultimately the tools and skills to develop an academic career, including the pursuit of NIH funding opportunities after fellowship.

The Division maintains active NIH-funded laboratory research programs and provides research opportunities in basic science research, translational projects, and clinical research, including participation in national trials.

The Division has a dedicated clinical trials administrator, research coordinators, and reserved statistical support from the Division of Biostatistics and Epidemiology, allowing fellows to take their projects from beginning to end. Fellows have the option to enroll in a master's or Certificate Program in clinical and translational investigation or epidemiology. We encourage a fourth year of training for fellows who are committed to a career in academic medicine and research. The program has documented success in transitioning fellows to independent funding, or transition to highly competitive specialty fellowships (interventional pulmonary and pulmonary vascular disease). Numerous fellows hold independent funding and are on track to apply for career development awards (e.g. NIH K-awards). In addition, recent graduates and current fellows are enrolled or have completed the master's degree programs.

In 2018, the Division was awarded a T32 training grant from the NHLBI. Under the mentorship of highly acclaimed researchers within the institution, this grant solidifies a research training infrastructure for all research fellows, supports master's level training for interested fellows, and provides support for additional years of investigative training. Figure 1 illustrates a typical T32 supported training period.



Standard training timeline for M.D., M.D./Ph.D., and Ph.D. postdoctoral trainees. Hashed (▨) areas represent clinical training for M.D.s and M.D./Ph.D.'s. Research training in maroon (■) for M.D.s and M.D./Ph.D. trainees traditionally begins in the second year of training. Ph.D. postdoctoral trainees (■) begin research training in the second year of this timeline. The Masters (two years long) or Certificate (one year long) programs may be started in the beginning of the 1st or 2nd year of research training.

### **Supplemental Training Programs**

Other training programs within the Weill Cornell Medical College are available to supplement fellowship training, depending on the fellow's specific interests.

### **Clinical Research Training: Certificate and Master's Degree Programs**

The Graduate Program in Clinical and Translational Investigation at Weill Cornell Medicine trains patient-oriented researchers to conceive, design, and conduct independent clinical research in a well-structured cross-

disciplinary team environment. The NIH funds this program through their Clinical & Translational Science Award. The curriculum offers two tracks that are designed for rigorous training in clinical investigation.

The first track covers a core curriculum providing the basic skills of clinical investigation and leads to a **Certificate of Clinical Investigation**. It includes training in the development of research hypotheses, databases, and data management systems; computer programs for data analysis; statistical analysis and the appropriate use of various statistical techniques in clinical research; basic epidemiologic principles in clinical research design and conduct of meta-analyses and clinical trials; ethics and human subjects protections in the conduct of patient-oriented research; regulatory requirements of clinical research; preparing protocols for the Institutional Review Board and other agencies; grants management and intellectual property; and general and specific state-of-the-art research tools and techniques.

The second track leading to a **Master's Degree in Clinical and Translational Investigation** from Cornell University includes the core curriculum; additional electives in the trainee's area of interest; and a clinical research project mentored in its design and implementation by a clinical investigator. Many of our fellows and junior faculty members have used this program to supplement their training as clinical researchers.

### [Masters of Science in Healthcare Policy and Research at Weill Cornell Graduate School of Medical Sciences](#)

The **Master of Science in Health Informatics** prepares students for careers at the intersections of health and information technology through training in research, innovation and analysis. As our nation strives to improve health and healthcare, these skills are vital for positions in health analytics, policy, and management in academia, industry, and government. The innovative curriculum addresses the need for systems science perspectives in healthcare and incorporates a transdisciplinary approach by fusing traditional methods from health services research with computational and informatics techniques. This program provides a vibrant alternative to traditional training in health services research, healthcare management, health information technology and related fields.

### [Graduate Program in Clinical Epidemiology & Health Services](#)

The Graduate Program in Clinical Epidemiology & Health Services offers an 8-week intensive summer program or a 2-year **Master of Science (MS) degree in Clinical Epidemiology & Health Services Research** from Cornell University. The program is designed for fellows who wish to plan, implement, and analyze quantitative and qualitative research studies, using appropriate research designs. The core of the curriculum includes research methodology, biostatistical techniques, data management, decision analysis, health economics, and program evaluation. Graduates of the Master's program will be prepared to pursue academic careers in a variety of settings where data is required to answer complex questions. The emphasis is on training clinician researchers to teach research methods, conduct methodologically rigorous and scientifically sound studies, evaluate programs and perform cost-effectiveness and cost-benefit studies in a variety of populations.

### [Conferences](#)

A variety of conferences are offered to support the education and training of PCCM Fellows. These include:

#### **Core Conferences:**

- Core Curriculum Series in Pulmonary Medicine
- Core Curriculum Series in Critical Care
- Interstitial Lung Disease Multidisciplinary Conference/ILD Non-Radiology/Pathology
- Pulmonary Clinical Radiology Pathology Case Conference
- MICU Case Conference
- Journal Club
- Pulmonary and Critical Care Basic and Translational Research Conference

**Other Weekly, Biweekly or Monthly Conferences:**

- Joint Pulmonary & Thoracic Surgery Case Conference
- Multidisciplinary Pulmonary, Thoracic Surgery & Radiology Bronchoscopic Lung Volume Reduction Conference
- Thoracic Tumor Board
- Medicine Grand Rounds
- Chest Radiology Review
- Lung Biology Working Group
- Briscoe-King Lung Club
- Inter-ICU Conference
- Clinical Research Working Group
- Clinical ILD Group Meeting

**Annual Conferences:**

- Weill Cornell Medicine Royal Brompton Hospital/National Heart Lung Institute-Imperial College London Annual Research Conference

**You can view a copy of our Sample monthly conference schedule [here](#)**

# PROFILES OF FELLOWS WITHIN THE DIVISION OF PCCM

## THIRD YEAR FELLOWS (2021-2024)



**Matthew Brandorff, M.D.**

**B.A.:** Cornell University

**M.D.:** Stony Brook University School of Medicine

**Residency:** Weill Cornell Medical Center/NewYork-Presbyterian

**RESEARCH INTERESTS/PROJECT:** Interventional pulmonology (IP), Clinical research in IP outcomes, Critical care outcomes, Airway management

**PRESENTATIONS:**  
MICU Case Conference



**Chou Chou, M.D.**

**B.A.:** Princeton University

**M.D.:** Weill Cornell Medicine

**Residency:** Weill Cornell Medical Center/NewYork-Presbyterian

**RESEARCH INTERESTS/PROJECTS**

Mechanisms of acute lung injury. Pulmonary lymphatics. Hasina Outtz-Reed Lab

**PRESENTATIONS:**

1. **Chou C** and Sanders A. (May 2023). Electromyograms And Diaphragms: Two Unexpected Cases Of Diaphragmatic Weakness Driving Hypoxia. Thematic poster presentation presented at: Diagnostic Testing and Case Reports in Dyspnea and Lung Disease / American Thoracic Society 2023 Conference. Washington D.C. USA
2. **Chou C** and Zappetti D. (May 2023). All That Glitters is Not Gold: An Unexpected Case of Plastic Bronchitis. Thematic poster presentation presented at: Fungi Everywhere! / American Thoracic Society 2023 Conference. Washington D.C. USA
3. Desta M, **Chou C**, Mailman J. (May 2022). A Focus on the Benign Diagnosis of Pulmonary Sclerosing Pneumocytoma. Oral Presentation presented at: Great Cases 2022 / American Thoracic Society 2022 Conference. San Francisco, CA, USA.
4. Krakora R, **Chou C**, Weir D, Mailman J. (May 2022). A Case of Miliary Tuberculosis and Anthracosis. Thematic poster session at: Tuberculosis / American Thoracic Society 2022 Conference. San Francisco, CA, USA.



5. Kelkar A, Chou C, Mailman J. (May 2022). Extramedullary Extension: A Parenchymal Pulmonary Plasmacytoma. Thematic poster session presented at: Curious Presentations Cancers and Mimickers / American Thoracic Society 2022 Conference. San Francisco, CA, USA.

## HONORS/AWARDS

2022 Fellow of the Year, NewYork-Presbyterian Weill Cornell



### **Alexander Gazda, D.O.**

**B.S.:** University of Chicago

**M.D.:** Kansas City University of Medicine and Biosciences College of Osteopathic Medicine

**Residency:** UT Health Science Center at Houston

**RESEARCH INTERESTS/PROJECT:** Research Pathophysiology, clinical outcomes, and novel therapeutics in Group 3 and 5 pulmonary hypertension.

### **PRESENTATIONS:**

1. Merits of Early Tracheostomy; A Review of Recent Literature 4/11/22
2. Pulmonary Hypertension; The Role of the Pulmonologist 5/24/22
3. Pulmonary Embolism Basics 7/1/22
4. Joint Pulmonary-Thoracic Conference: Pulmonary Artery Pseudoaneurysms 7/20/22
5. Joint Pulmonary-Thoracic Conference: Central Thoracic Masses 8/17/22



### **Julia Graham, M.D.**

**B.F.A.:** University of Arizona

**M.D.:** Loyola University Chicago Stritch School of Medicine

**Residency:** University of California at Davis

**RESEARCH INTERESTS/PROJECT:** Health policy and economics including socioeconomic determinants of health system utilization among high need/high cost COPD patients.

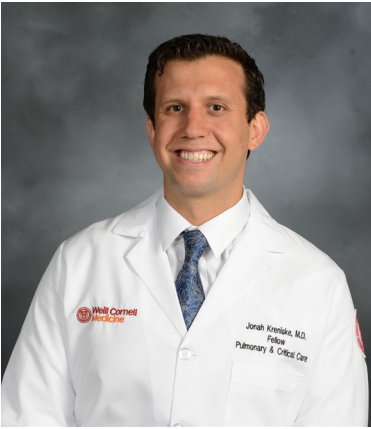
### **PRESENTATIONS:**

1. Monthly Pulmonary Radiology-Pathology Conference
2. New York State Thoracic Society 2023 - Fellows Forum Presenter
3. CHEST Annual Conference 2023 - Case Presenter

## AWARDS/HONORS

NIH T32 Research Training Grant

Inaugural Lauder Family Fellowship, WCMC Division of Pulmonary and Critical Care Medicine



**Jonah Susser Kreniske, M.D.**

**B.A.:** Earlham College

**M.D.:** Ben-Gurion University of the Negev

**Residency:** Tulane

**RESEARCH INTERESTS/PROJECT:** Diagnosis and treatment of tuberculosis; health disparities; global health and social medicine.

**PUBLICATIONS:**

1. DiMaggio C, Abramson D, Susser E, Hoven C, Chen Q, Andrews H, Herman D, **Kreniske J**, et al. The COVID-19 Healthcare Personnel Study (CHPS): Overview, Methods, and Preliminary Findings. *J Neurosurg Anesthesiol.* 1 January 2022.
2. Zifodya JS, **Kreniske JS**, et al. Xpert MTB/RIF Ultra and Xpert MTB/RIF assays for pulmonary tuberculosis and rifampicin resistance in adults. *Cochrane Database of Systematic Reviews* 2021. 25 February 2021.

**PRESENTATIONS:**

1. Monthly Pulmonary Radiology and Pathology Conference

**SECOND YEAR FELLOWS (2022-2025)**

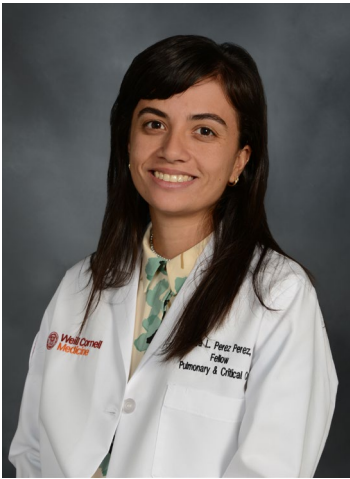


**Kelly Crane, M.D.**

**B.A.:** University of Colorado at Boulder

**M.D.:** University of Colorado School of Medicine

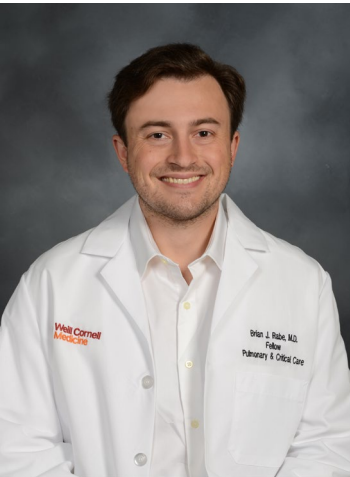
**Residency:** Weill Cornell Medical Center/NewYork-Presbyterian



**Jessica Perez Perez, M.D.**

**M.D.:** Universidad de La Laguna Facultad de Medicina

**Residency:** SUNY Downstate



**Brian Rabe, M.D.**

**B.S.:** Southeast Missouri State University

**M.D.:** Washington University in St. Louis School of Medicine

**Residency:** Duke University Hospital

**RESEARCH INTERESTS/PROJECT:** Interstitial lung disease, epidemiology

**PRESENTATIONS:**

Dupilumab and Cocaine Associated Eosinophilic Granulomatosis with Polyangiitis Presenting as Widespread Subcutaneous Eosinophil-Enriched Abscesses. New York State Thoracic Society Conference; March 23, 2023.



**Amanda Rosen, M.D., M.S.**

**B.S.:** Georgetown University

**M.D.:** Northwestern University The Feinberg School of Medicine

**Residency:** Columbia University/ NewYork -Presbyterian Hospital

**RESEARCH INTERESTS/PROJECT:** Chronic critical illness; Post-ICU syndrome; End of life care; Patient safety

**PRESENTATIONS:**

**Rosen A, Podolsky MJ.** A Patient with Peripheral Eosinophilia, Pulmonary Infiltrates, and Positive Parasitic Serologies. Poster presentation, New York State Thoracic Society, Valhalla, NY. March 2023.

**PUBLICATIONS:**

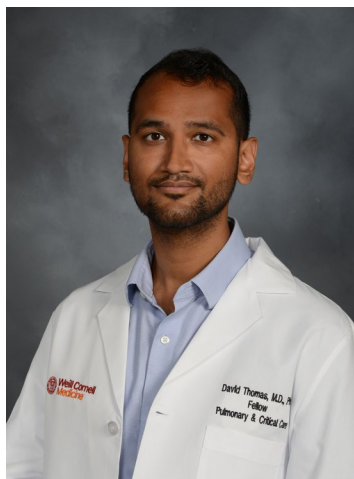
Grauer A, **Rosen A**, Applebaum JR, Carter D, Reddy P, Dal Col A, Kumaraiah D, Barchi DJ, Classen DC, Adelman JS. "Examining Medication Ordering Using AHRQ Network of Patient Safety Databases." J Am Med Inform Assoc. 2023 Jan 30. Online ahead of print.

**Rosen A**, Cahill JM, Dugdale LS. "Moral Injury in Health Care: Identification and Repair in the COVID-19 Era." J Gen Intern Med 2022 Nov;37(14):3739-3743.

**Rosen A, Carter D, Applebaum JR, Southern WN, Brodie D, Schwartz J, Cornelius T, Shelton RC, Yip NH, Pincus HA, Hwang C, Cooke J, Adelman JS. "Critical Care Clinicians' Experiences of Patient Safety During the COVID-19 Pandemic." J Patient Saf 2022 Dec 1; 18(8):e1219-e1225.**

**HONORS/AWARDS:**

Ravi Rajmane Abstract and Poster Competition, New York State Thoracic Society, Second Place, Case Report Category, March 2023



**David Thomas, M.D., Ph.D.**

**B.A.:** Princeton University

**M.D.:** Columbia University Vagelos College of Physicians and Surgeons

**Residency:** Weill Cornell Medical Center/NewYork-Presbyterian

**RESEARCH INTERESTS/PROJECT:** Mediators of extrapulmonary organ injury in mouse models of ARDS and severe pneumonia

**PRESENTATIONS:**

NYSTS 2023 "Spontaneous Hemothorax due to Metastatic Epithelioid Angiosarcoma"

ATS 2023 "It Doesn't Have to End That Way: A Case of Acute Fibrinous and Organizing Pneumonia With Spontaneous Resolution"

**PUBLICATIONS:**

1. Endo-Umeda et al. Myeloid LXR (Liver X Receptor) Deficiency Induces Inflammatory Gene Expression in Foamy Macrophages and Accelerates Atherosclerosis. *Arterioscler Thromb Vasc Biol.* 2022;42(6):719-731.
2. Tall AR, **Thomas DG**, Gonzalez-Cabodevilla AG, Goldberg IJ. Addressing dyslipidemic risk beyond LDL-cholesterol. *J Clin Invest.* 2022;132(1):e148559.

**FIRST YEAR FELLOWS (2023-2026)**



**Dan Moshe Benenson, M.D.**

**B.A.:** Rutgers University

**M.D.:** Weill Cornell Medical Center/NewYork-Presbyterian

**Residency:** Weill Cornell Medical Center/NewYork-Presbyterian

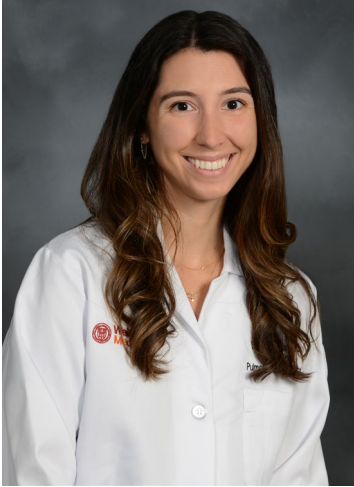


**Bradley Miles Isaacs, M.D.**

**B.A.:** Johns Hopkins University

**M.D.:** Johns Hopkins University School of Medicine

**Residency:** NYU Grossman School of Medicine



**Vickie Demetra Kassapidis, D.O.**

**B.A.:** Barnard College New York

**D.O.:** New York Institute of Technology College of Osteopathic Medicine

**Residency:** NYU Grossman School of Medicine



**Aaron Jeffrey Landau, M.D.**

**B.A.:** Boston University

**M.D.:** University of Pittsburgh School of Medicine

**Residency:** NYU Grossman School of Medicine





**Benedict Osorio Jr., M.D.**

**B.S.:** Loyola University

**M.D.:** Rutgers, Robert Wood Johnson Medical School

**Residency:** Weill Cornell Medical Center/NewYork-Presbyterian

## FORMER FELLOWS FROM THE PAST 10 YEARS

Name	Class	Medical School and Residency	Current Position
Michael S. Aboodi, M.D., M.S.	2023	Albert Einstein College of Medicine/ NYP/Columbia	Instructor in Medicine Weill Cornell Medicine
Kristin N. Berger, M.D.	2023	Pennsylvania State University College of Medicine/ University of Pittsburgh Medical Center	Instructor in Medicine Weill Cornell Medicine
Samuel J. Chung, M.D.	2023	SUNY Downstate College of Medicine/ NYP/Weill Cornell Medical Center	Instructor in Medicine Weill Cornell Medicine
Colleen M. Farrell, M.D.	2023	Harvard Medical School/ NYU Langone / Bellevue Hospital	Attending Physician, PCCM Brigham and Women's Hospital Instructor in Medicine, Harvard Medical School
Erik K. Nielsen, M.D.	2023	Renaissance School of Medicine at Stony Brook University/ NYP/Weill Cornell Medical Center	Attending Physician, Stamford Health Medical Group
Alexander J. Pronko, M.D.	2023	Rutgers, Robert Wood Johnson Medical School/ NYP/Weill Cornell Medical Center	Pulmonary and Allergy Associates, Atlantic Medical Group, Attending Physician (Associate Staff)
Joshua Davis, M.D.	2022	New York Medical College/Beth Israel Deaconess Medical Center	Instructor in Medicine Weill Cornell Medicine
Margaret H. Goldberg, M.D.	2022	Sidney Kimmel Medical College at Thomas Jefferson/Tufts Medical Center	Instructor in Medicine Weill Cornell Medicine
Di Pan, D.O.	2022	Lake Erie College Osteopathic Medicine/Icahn School of Medicine at Mount Sinai/St. Luke's Roosevelt Hospital	Instructor in Medicine Weill Cornell Medicine
Karissa Lee Weidman, M.D.	2022	New York Medical College/Tufts Medical Center	Clinical Assistant Professor of Medicine, Department of Medicine, Division of Pulmonary, Critical Care and Sleep Medicine Director of Post-ICU Outpatient Services

			Stonybrook University Medical Center
William Whalen, M.D.	2022	University of Connecticut/Tufts Medical Center	Instructor in Medicine Weill Cornell Medicine
Ermias K. Jirru, M.D., M.P.H.	2021	Johns Hopkins Bloomberg School of Public Health/Icahn School of Medicine at Mount Sinai/St. Luke's Roosevelt Hospital	Attending Physician, Pulmonary/Critical Care Baylor University Medical Center
Shashi Kariyawasam, M.D.	2021	University of Sri Jayewardenepura, Sri Lanka/Danbury Hospital, Yale University School of Medicine	Clinical Instructor Carle Foundation Hospital, University of Illinois Urbana-Champaign
Elyse LaFond, M.D.	2021	Tufts University School of Medicine/University of California at Davis	Assistant Professor of Medicine, New York University
Stefi Frances Lee, M.D.	2021	Texas A&M Health Science Center - College of Medicine/Warren Alpert/Brown University	Instructor, Pulmonary and Critical Care Medicine Brigham and Women's Hospital
Alexandra C. Racanelli, M.D., Ph.D.	2020	Virginia Commonwealth University NYP/Weill Cornell Medical Center	Instructor in Medicine Weill Cornell Medicine
Brittany Gary, M.D.	2020	University of Pittsburgh Montefiore Medical Center	TBD
Jamuna K. Krishnan, M.D., M.B.A.	2020	University of Michigan NYP/Weill Cornell Medical Center	Assistant Professor of Medicine Weill Cornell Medicine
Christopher N. Parkhurst, M.D., Ph.D.	2020	NYU Langone Medical Center NYP/Weill Cornell Medical Center	Instructor in Medicine Weill Cornell Medicine
Kerri I. Aronson, M.D.	2019	SUNY Upstate Medical University NYP/Weill Cornell Medical Center	Assistant Professor of Medicine Weill Cornell Medicine
David Price, M.D., M.S.	2019	Drexel University University of California, Davis	Assistant Professor of Medicine Weill Cornell Medicine
Andrea Shiolen, M.D.	2019	Pennsylvania State University Baylor	Assistant Professor University of Miami's Transplant Institute
William Zhang, M.D.	2019	NYU Langone Medical Center NYP/Weill Cornell Medical Center	Assistant Professor of Medicine Weill Cornell Medicine
John S. Harrington, M.D.	2018	SUNY Upstate Medical University Johns Hopkins Medicine	Assistant Professor of Clinical Medicine Weill Cornell Medicine
Cristobal Risquez Cordovez, M.D.	2018	Universidad Central de Venezuela University of Miami	PCCM Specialist Baptist Hospital of Miami and South Miami Hospital
Lisa K. Torres, M.D., M.S.	2018	Royal College of Surgeons McGovern Medical School at the University of Texas Health Science Center at Houston	Assistant Professor of Medicine Weill Cornell Medicine
Michael Bender, M.D.	2017	University of Rochester School of Medicine NYP/Weill Cornell Medical Center	Clinical Assistant Professor New York University
Daniel S. Jones, M.D.	2017	Thomas Jefferson University University of San Diego School of Medicine	PCCM Specialist Scripps Health

Kevin C. Ma, M.D.	2017	University of Washington School of Medicine NYP/Weill Cornell Medical Center	Assistant Professor of Medicine University of Pennsylvania
Xiaoping Wu, M.D.	2017	New York Medical College Icahn School of Medicine at Mt Sinai/St Luke's Roosevelt Hospital	Assistant Professor Rush University
Sarah O'Beirne, M.B. B.Ch. B.A.O., Ph.D.	2016	National University of Ireland- Galway Western Pre-Membership Training Scheme-University Hospital Galway	Respiratory Physician St Vincent's University and St Michael's Hospital, Dublin
Lourdes M. Sanso, M.D.	2016	NYU Langone Medical Center NYP/Weill Cornell Medical Center	Residency Program Director Assistant Professor of Clinical Medicine NewYork-Presbyterian Queens Hospital
Inderjit Singh, M.D.	2016	Royal College of Surgeons in Ireland Pennsylvania Hospital	Assistant Professor, Director of Pulmonary Vascular Program, Pulmonary, Critical Care & Sleep Medicine Yale School of Medicine
Frances West, M.D.	2016	Jefferson Medical College NYP/Weill Cornell Medical Center	Assistant Professor of Medicine, Associate Program Director of Pulmonary and Critical Care Fellowship Jefferson University Hospital
Adviteeya Dixit, M.D.	2014	M.S. Ramaiah Medical College Rochester General Hospital	Assistant Professor of Medicine Emory University School of Medicine
Caroline Gulati, M.D.	2014	University of Chicago Pritzker School of Medicine University of Pennsylvania Medical Center	Private Practice, Stamford, CT
Laura Libby, M.D.	2014	Weill Cornell Medicine Saint Vincent's Catholic Medical Center and NYP/Weill Cornell Medical Center	Pulmonary Consultants of New York Private Practice, New York, NY
Julio Lanfranco Molina, M.D.	2014	Universidad Peruana Cayetano Heredia University of Miami-Jackson Memorial Hospital	Associate Professor of Medicine- Pulmonary, Assistant Professor of Anesthesiology University of Tennessee
Mary Harris, M.D.	2013	Temple University School of Medicine Montefiore Medical Center/Albert Einstein College of Medicine	Atlantic Sleep & Pulmonary Associates at Summit Health Private Practice, New Jersey
Justina Hessel, M.D.	2013	NYU Langone Medical Center Montefiore Medical Center/Albert Einstein College of Medicine	Assistant Professor of Medicine, Hofstra Northwell School of Medicine
David Kung, M.D.	2013	Tufts Medical Center Yale New Haven Hospital	Private Practice, NY
Lindsay Lief, M.D.	2013	Temple University School of Medicine NYP/Weill Cornell Medical Center	MICU Director, Associate Professor of Clinical Medicine, Weill Cornell Medicine
Eugene Shostak, M.D.	2013	State University of New York Health Science Center at Brooklyn	Assistant Professor of Medicine in Clinical Cardiothoracic Surgery



## PROFILES OF FACULTY WITHIN THE DIVISION OF PCCM



### **Fernando J. Martinez, M.D., M.S.**

*Division Chief*

*Bruce Webster Professor of Medicine*

*Division of Pulmonary and Critical Care Medicine, Weill Cornell Medicine*

Dr. Martinez's main research interests include Chronic Obstructive Pulmonary Disease (COPD), interstitial lung disease biology and therapeutic trials. He is a member of numerous societies, including the American Thoracic Society, the European Respiratory Society, the American College of Chest Physicians, and the Fleischer Society. He has been or is an active member of the American Thoracic Society/European Respiratory Society

Committees which generated guidelines for the management of COPD, respiratory infections, cardiopulmonary exercise testing, COPD, ILD diagnosis and IPF therapy. He is the former chair of the Clinical Problems Assembly of the American Thoracic Society. Dr. Martinez is a member of the GOLD Science Committee and sits on a number of editorial boards, including serving as Deputy Editor for the *American Journal of Respiratory and Critical Care Medicine*. Dr. Martinez is currently funded by multiple NHLBI R01s, UG3 and is the Co-PI of the Divisional T32. [Vivo Profile](#)

[Google Scholar Page](#)



### **David Berlin, M.D.**

*Professor of Clinical Medicine*

*Associate Division Chief*

*Medical Director of Critical Care Services, New York Presbyterian Hospital*

*Medical Director of the Pulmonary Function Laboratory, Hospital for Special Surgery*

*Division of Pulmonary and Critical Care Medicine, Weill Cornell Medicine*

Dr. Berlin's main research interest is the application of physiology to patient care. He is interested in improving ways to monitor the circulation as well as the effects of mechanical ventilation and emergency airway management on hemodynamics. He also collaborates

with Dr. Holly Prigerson to develop new treatments for symptoms of critically ill patients and their caregivers.

[Vivo Profile](#)

[Google Scholar Page](#)



### **Michael S. Aboodi, M.D., M.S.**

*Instructor in Medicine*

*Division of Pulmonary and Critical Care Medicine, Weill Cornell Medicine*

Dr. Aboodi is passionate about improving the care of patients with pulmonary disease or critical illness. His primary research areas include the treatment of acute respiratory failure, Acute Respiratory Distress Syndrome (ARDS) and Post-intensive Care Syndrome (PICS). He sees patients in the Weill Cornell Post ICU Clinic and he is also a member of the multidisciplinary VV ECMO consultation service.

[Vivo Profile](#)



**Muhammad Sajawal Ali, M.D., M.S., FCCP**

*Assistant Professor of Clinical Medicine*

*Division of Pulmonary and Critical Care Medicine, Weill Cornell Medicine*

*Department of Cardiothoracic surgery, Division of Thoracic Surgery*

Dr. Ali is a joint recruit with the Department of Cardiothoracic surgery, Division of Thoracic Surgery. His clinical interests include malignant and benign complex airways and pleural diseases, along with advanced bronchoscopic therapies for COPD and asthma. His research interests include systematic reviews and meta-analyses. He is working with Dr.

Ben-Gary Harvey and Eugene Shostak in the expansion of the Interventional Pulmonary program.

[Vivo Profile](#)



**Kerri Aronson, M.D., M.S.**

*Assistant Professor of Medicine*

*Division of Pulmonary and Critical Care Medicine, Weill Cornell Medicine*

Dr. Aronson's current research is focused on patient-centered outcomes in interstitial lung disease (ILD). She has a particular interest in health-related quality of life and development and validation of instruments to measure patient reported outcomes in ILD. She is currently working on developing and validating an instrument to measure quality of life in patients with HP and will soon develop and test an intervention to improve quality

of life in both HP and Scleroderma-related ILD. Dr. Aronson's work has been supported by the Weill Cornell Department of Medicine Fund for the Future Award, the Pulmonary Fibrosis Foundation, and the Scleroderma Foundation.

[Vivo Profile](#)



**Srijani Basu, Ph.D.**

*Postdoctoral Associate in Medicine*

*Division of Pulmonary and Critical Care Medicine, Weill Cornell Medicine*

Dr. Basu received her B.Sc., M.Sc. from the University of Delhi, Delhi in 2010 and her Ph.D. in Immunology from the University of Pennsylvania in 2017. She is currently doing her postdoctoral studies at Weill Cornell Medicine with Dr. Laurel Monticelli. Her current research work is aimed at understanding the role dietary amino acid enzyme Arginase 1 (Arg1) in regulating the metabolism of Innate lymphoid cells (ILC) during intestinal

inflammation.

[Vivo Profile](#)



**Kristin N. Berger, M.D.**

*Instructor in Medicine*

*Division of Pulmonary and Critical Care Medicine, Weill Cornell Medicine*

Dr. Berger's research interest involves early identification and prognostication of interstitial lung disease, and she is currently investigating radiographic biomarkers of disease. Her research is supported by the Division's NHLBI T32 grant. She has clinical interests in outpatient management of ILD patients and critical care medicine.

[Vivo Profile](#)



**Lester Blair, M.D.**

*Associate Professor of Clinical Medicine*

*Division of Pulmonary and Critical Care Medicine, Weill Cornell Medicine*

Dr. Blair's primary interest is in caring for patients with known or suspected lung diseases including chronic bronchiectasis, asthma, and sarcoidosis.

[Vivo Profile](#)



**Soo Jung Cho, M.D., M.Sc.**

*Assistant Professor of Medicine*

*Division of Pulmonary and Critical Care Medicine, Weill Cornell Medicine*

Dr. Cho's research is focused on interstitial lung disease. During her pre-clinical research training at Yale, she investigated the cytokine effector mechanisms of chronic lung diseases including COPD, asthma and lung fibrosis that are prevalent in aged populations. At NYU, she demonstrated that various mediators of metabolic syndrome, inflammation and vascular injury are predictive of eventual abnormal lung function. Additionally, she identified

biomarkers that are predictive of interstitial lung injury from WTC-exposed firefighters.

With the expertise, leadership, training, and motivation necessary to successfully carry out her research, Dr. Cho transferred to Weill Cornell Medicine to pursue translational research to identify underlying mechanisms of interstitial lung diseases in aged populations. Her research goal is to investigate the mechanism by which glucose metabolism mediates lung fibrogenesis, with the ultimate goal of supporting the development of therapies for idiopathic pulmonary fibrosis. More recently, Dr. Cho's lab is focused on the role of nucleic acids including miRNA and dsDNA in acute exacerbation of pulmonary fibrosis.

[Vivo Profile](#)

[Google Scholar Page](#)



**Augustine M.K. Choi, M.D.**

*Professor of Medicine*

*Senior Vice President and Senior Advisor for Strategic Planning to the President and CEO at NYP*

Dr. Choi has a long-standing commitment to the training of postdoctoral fellows and physician-scientists in lung diseases. An internationally renowned physician-scientist in the field, he has focused his research on understanding how chronic and acute lung disease develop in response to molecular, cellular, and genetic triggers. His laboratory studies how oxidative stress and inflammation affect stress response genes and antioxidant enzymes in the lung, and it has contributed much to our understanding of the molecular regulation and function of heme oxygenase-1 and gaseous molecule carbon monoxide in lung and vascular disease. Dr. Choi is currently examining whether inhaling carbon monoxide can be an effective therapy in human disease.

Dr. Choi has published more than 300 peer-reviewed articles and is a member of the American Society of Clinical Investigation and the Association of American Physicians. He is currently funded by multiple NIH R01 grants, an NIH/NHLBI R61 grant, is the Co-PI of the Division's NHLBI T32 grant and is responsible for an NIH/NHLBI program project grant. Additionally, he is the PI on a newly awarded therapeutic trial from the Department of Defense. Among his many awards and honors are the 2011 Ho-Am Prize in Medicine, and the 2015 J. Burns Amberson Lecture, which recognizes a career of major lifetime contributions to pulmonary

research. He was elected to the National Academy of Medicine in 2020.

[Vivo Profile](#)

**Samuel J. Chung, M.D.**



*Instructor in Medicine*

*Division of Pulmonary and Critical Care Medicine, Weill Cornell Medicine*

Dr. Chung's research is focused on phenotyping of patients with pulmonary hypertension and right ventricular dysfunction through multiomic analysis. He is collaborating with Dr. Evelyn Horn (Director of Perkin Heart Failure Center) and Dr. Alexandra Racanelli to identify metabolomic markers of early right ventricular dysfunction within the PVDOMICS cohort of patients with pulmonary hypertension due to chronic lung disease and hypoxemia.

[Vivo Profile](#)



**Suzanne M. Cloonan, Ph.D.**

*Adjunct Assistant Professor of Biochemistry in Medicine*

*Division of Pulmonary and Critical Care Medicine, Weill Cornell Medicine*

Dr. Cloonan's current research focuses on using basic biochemical approaches to study the role of iron metabolism and mitochondrial biology to the pathogenesis of lung disease. She is also interested in the genetic aspects of COPD susceptibility and to the development of more efficacious biomarkers for COPD diagnosis.

[Vivo Profile](#)



**Joshua Davis, M.D.**

*Instructor in Medicine*

*Division of Pulmonary and Critical Care Medicine, Weill Cornell Medicine*

Dr. Davis' primary interest is in clinical application of physiology to guide the care of patients with pulmonary disease & critical illness, such as shock and respiratory failure. As an area of academic activity, he is primarily interested in curriculum development, applied to the education of medical students in pulmonary & critical care medicine, as well as development of medical students and residents as growing medical educators. He is the co-course director of the pulmonary physiology unit for the first-year medical students, and is heavily involved in education of medical students, medical residents and

Pulmonary/Critical care medicine fellows, as well as nurse and PA education at NYP/Lower Manhattan Hospital.

[Vivo Profile](#)



**Robert Glennon, M.D.**

*Assistant Professor of Clinical Medicine*

*Division of Pulmonary and Critical Care Medicine, Weill Cornell Medicine*

Dr. Glennon's clinical expertise is in caring for patients in the Intensive Care Unit setting, as well as for patients with Pulmonary disease. He finds it gratifying and challenging to care for critically ill patients. Collaborating with various disciplines enables our team at Weill Cornell to develop a treatment plan that is tailored to meet the individual needs of the patient. The ICU setting affords the staff the opportunity to address subtle changes in the patient's presentation, fostering positive patient outcomes.

[Vivo Profile](#)





**Margaret H. Goldberg, M.D.**

*Instructor in Medicine*

*Division of Pulmonary and Critical Care Medicine, Weill Cornell Medicine*

Dr. Goldberg's primary interest is in the care of critically ill patients in the Intensive Care Unit as well as Pulmonary Disease. She is part of the Pulmonary Procedure Service where she performs diagnostic pulmonary procedures such as bronchoscopy and pleural catheter placement. She is also a member of the VV-ECMO Consultation service in conjunction with the department of Cardiothoracic Surgery. She is involved in Quality Outcomes Initiatives within the division, particularly in relation to bronchoscopy and procedure-related outcomes and has performed research in this area. She completed her fellowship in Pulmonary and Critical Care Medicine at New York Presbyterian – Weill Cornell Medicine before joining on as faculty.

[Vivo Profile](#)



**Luis Gómez-Escobar, M.D., M.S.**

*Postdoctoral Associate in Medicine*

*Division of Pulmonary and Critical Care Medicine, Weill Cornell Medicine*

Dr. Gomez-Escobar coordinates the Weill Cornell Registry and Biobank of Critically Ill Patients and A Phase II Trial of Inhaled Carbon Monoxide for the Treatment of Acute Respiratory Distress Syndrome (ARDS). His research focuses on the molecular mechanisms of cell death in critical illness such as sepsis or ARDS. Additionally, he assists other investigators with their research projects focused on lung injury and cell death pathways.

[Vivo Profile](#)



**Kelly Griffin, M.D.**

*Associate Professor of Clinical Medicine*

*Director of Nocturnal Critical Care Services*

*Director, ICU Outreach*

*Division of Pulmonary and Critical Care Medicine, Weill Cornell Medicine*

Dr. Griffin is a dedicated clinician with interest in obstetric critical care and has been very focused on building partnerships with our obstetrician, MFM, and ob-anesthesia colleagues. She is also very interested in disaster management and how to best respond to medical crises, providing perspectives and guidance for providers in other healthcare facilities around the country. She has extensive experience in the critical care of our leukemia, lymphoma, and bone marrow transplant patients and is interested in the various differences in their manifestations of critical illness as well as how to best guide decisions on goals of care and end of life. Additionally, she is interested in diversity in medical education and professional life and in health care disparities among our patients, working in our department's racial justice and equity task force. She deeply values her time working with and teaching our residents and fellows.

[Vivo Profile](#)



**Kirana Gudi, M.D.**

*Assistant Professor of Medicine  
Program Director of Internal Medicine, Residency  
Vice Chair of Education  
Division of Pulmonary and Critical Care Medicine, Weill Cornell Medicine*

As Vice Chair of Education for the Department of Medicine, Dr. Gudi oversees a broad range of training programs and works closely with the Department to advance its educational mission in furthering faculty development. Dr. Gudi received her medical training on the Weill Cornell campus beginning with an M.D. from Weill Cornell Medical College. She served as a Chief Resident and completed her residency training, as well as a fellowship in Pulmonary and Critical Care Medicine, at New York-Presbyterian Hospital/Weill Cornell Medicine. She maintains an active outpatient pulmonary practice, serves as an attending on the Inpatient Pulmonary Consult and the ICU Consult services, and is a passionate advocate of medicine and medical education.

[Vivo Profile](#)



**Deborah Haisch, M.D.**

*Assistant Professor of Clinical Medicine  
Division of Pulmonary and Critical Care Medicine, Weill Cornell Medicine*

Dr. Haisch's current research focuses on illness severity scoring in low- and middle-income countries (specifically Ethiopia) and outcomes for critically ill patients in these settings. She is also working to promote multi-center research collaborations across East Africa, in addition to her role supporting the education of pulmonary and critical care fellows through the East African Training Initiative.

[Vivo Profile](#)



**John Harrington, M.D.**

*Assistant Professor of Clinical Medicine  
Division of Pulmonary and Critical Care Medicine, Weill Cornell Medicine*

Dr. Harrington's primary research interests are in sepsis and critically ill patients. He is currently conducting a study to investigate the association between mitochondrial DNA and clinical outcomes in patients presenting to the Emergency Department with suspicion of sepsis.

[Vivo Profile](#)



**Ben-Gary Harvey, M.D.**

*Associate Professor of Clinical Medicine  
Director of Bronchoscopy and Procedure Services  
Division of Pulmonary and Critical Care Medicine, Weill Cornell Medicine*

Dr. Harvey is the Director of the Bronchoscopy and Procedure Services in the Pulmonary Division. Under his direction, the Pulmonary Division offers a variety of advanced pulmonary procedures including bronchoscopy with lavage, biopsies, endobronchial ultrasound guided biopsy of mediastinal masses and enlarged mediastinal lymph nodes; Navigation bronchoscopy to reach peripherally located nodules, infiltrates, masses, endobronchial hot and cold therapies for airway diseases, trachea-bronchial stent placement and bronchoscopic valve placement for lung volume reduction for advanced emphysema/COPD in individuals with limited exercise tolerance. In January 2019, Dr. Harvey successfully started a bronchoscopic

valve lung volume reduction program in the Pulmonary Division at Weill Cornell Medicine for individuals with COPD and significant hyperinflation. Similarly, the Procedure Service offers management of pleural effusions with thoracentesis, insertion of chest tubes and insertion and management of indwelling pleural catheters for the management of persistent pleural effusions. In addition to the Pulmonary Procedure Service, Dr. Harvey has a special outpatient office session dedicated to the evaluation and management of individuals with lung nodules and lung masses. For the past decade, Dr. Harvey has engaged in the assessment and management of individuals with pulmonary arterial hypertension (PAH). In this regard, Dr. Harvey provides outpatient and inpatient care including critical care management to individuals affected by PAH .

[Vivo Profile](#)



**Bradley Hayward, M.D.**

*Assistant Professor of Clinical Medicine  
Associate Fellowship Program Director  
Division of Pulmonary and Critical Care Medicine, Weill Cornell Medicine  
Division of Geriatrics and Palliative Medicine*

Dr. Hayward is dually appointed within the Division of Pulmonary and Critical Care Medicine and the Division of Geriatrics and Palliative Medicine. He is interested in the intersection of Palliative Medicine and Critical Care Medicine, specifically focused on improving end-of-life communication. His research examines the palliative care needs of critical care consults and incorporating communication training in rapid response teams for rapid assessment of goals of care. He is also interested in the impact of COVID-19 pandemic on the well-being of trainees. Past research projects have concerned creating and evaluating palliative medicine curriculum for PCCM fellows, as well as communication training for rapid assessment of goals of care for emergency room physicians.

[Vivo Profile](#)



**Robert J. Kaner, M.D.**

*Professor of Clinical Medicine  
Associate Fellowship Program Director  
Associate Program Director T32 Training Grant  
Division of Pulmonary and Critical Care Medicine, Weill Cornell Medicine*

Dr. Kaner was the Principal Investigator of the Weill-Cornell Medicine site of the NIH-sponsored Idiopathic Pulmonary Fibrosis (IPF) Clinical Research Network for which he chaired the Adjudication Committee. He has extensive experience in the phenotyping of subjects with lung disease and their enrollment in research studies. He leads a monthly multidisciplinary ILD conference with Dr. William Travis (MSKCC) and Dr. Chen Zhang (WCM) for the past 15 years. He is the director of the New York Presbyterian Hospital – Weill Cornell Medicine Pulmonary Fibrosis Foundation Clinical Center of Excellence. He participates in clinical trials evaluating various pharmacologic interventions in IPF and other ILDs, sponsored by both NIH and pharma. He leads an ILD biobank, which enhances future translational research opportunities. He leads an observational study to determine the incidence and natural history of ILD following COVID-19 acute respiratory failure.

Dr. Kaner chairs the bronchoscopy sub-study committee of the NHLBI SPIROMICS and SOURCE research networks, which uses RNA-sequencing to evaluate gene expression changes in lung cells associated with smoking and COPD endotypes. He is analyzing the effects of doxycycline on BAL matrix metalloproteinase (MMP) inhibition in HIV-positive individuals with early emphysema, based on his previous translational work. He is also participating in pharmacologic intervention studies in COPD and emphysema sponsored by the ALA, DOD and NIH, including leadership (with Dr. Marshall Glesby) of a Phase II multicenter trial of doxycycline to slow emphysema progression in PLWH. He is the Associate Director of the T32 training program and Associate Fellowship Program Director.



[Vivo Profile](#)  
[Google Scholar Page](#)



**Ana Krieger, M.D., M.P.H.**  
*Professor of Clinical Medicine*  
*Medical Director, Center for Sleep Medicine*  
*Division of Pulmonary and Critical Care Medicine, Weill Cornell Medicine*

For over 20 years, Dr. Krieger has been actively involved in patient care, teaching and sleep disorders education while also developing her academic career as a clinician scientist in translational sleep medicine and technology research development in the field, in close collaboration with the Cornell Engineering School in Ithaca, NY. She is a clinician scientist and the principal investigator in research projects funded by the NIH and NSF. Dr. Krieger also serves as the Chair of the NHLBI K99/R00 grant review committee at the National Institutes of Health and Chief of the Division of Sleep Neurology at Weill Cornell Medicine.

[Vivo Profile](#)



**Jamuna Krishnan, M.D., M.B.A.**  
*Assistant Professor of Medicine*  
*Division of Pulmonary and Critical Care Medicine, Weill Cornell Medicine*

Dr. Krishnan is an early-stage investigator who is passionate about developing interventions targeted at overcoming healthcare disparities in chronic respiratory disease. Her long-standing interest in healthcare disparities led her to pursue a combined MD/MBA at the University of Michigan, focused on designing health systems to deliver high quality care for vulnerable populations. Her current research program is focused on characterizing gaps in the optimal management of comorbid COPD and cardiovascular disease (CVD) among socially disadvantaged patients. Her research interests are informed by caring for patients in her COPD focused clinic, where she has found that optimal comorbidity management in COPD is complex, requires significant care coordination, and influences outcomes. She is now using both quantitative and qualitative methods to design interventions to improve outcomes in socially disadvantaged populations with comorbid COPD and cardiovascular disease.

[Vivo Profile](#)



**Lindsay Lief, M.D.**  
*Associate Professor of Clinical Medicine*  
*Medical Director, MICU*  
*Abby Joseph Cohen Clinical Scholar*  
*Division of Pulmonary and Critical Care Medicine, Weill Cornell Medicine*

Dr. Lief's research focuses on the identification of unrecognized suffering in the ICU and during recovery. Dr. Lief works with the Center for Research on End-of-Life Care to identify and minimize suffering in ICU patients and their families, both while in the ICU and in the post-ICU period. She is co-investigator on an R21-funded study, which is evaluating mindfulness interventions to improve outcomes of loved ones of critically ill ICU patients. She is currently adapting these interventions for both ICU patients and staff and expanding the randomized controlled trial for families. Dr. Lief is involved in several clinical and translational projects to further characterize post intensive care syndrome (PICS) in patients with and without a history of COVID ARDS. She is the Director of the NYP-WCM Medical Intensive Care Unit, and is the founder and



medical director the Post-ICU Clinic.

[Vivo Profile](#)



**Joseph Mailman, M.D.**

*Assistant Professor of Clinical Medicine*

*Division of Pulmonary and Critical Care Medicine, Weill Cornell Medicine*

Dr. Mailman is an intensive care physician with a keen interest in technological innovation and medical informatics. He strives for high quality medical care and is a member of the Quality Improvement and Clinical Documentation Improvement Committees. Additionally, he is a member of the institution wide Venous Thromboembolism Reduction Task Force and leads the VV-ECMO Consultation Service as well as the Pulmonary Embolism Response Team. He works closely with Pulmonary and Critical Care fellows and Internal Medicine residents on programs in the

field of clinical documentation integrity and medical informatics.

He has led the division through our transition to the EPIC electronic health record and he continues to serve on several committees focused on its optimization and efficient use. He is a Certified Epic Physician builder and has several projects designed to facilitate smoother end-user experiences and capture high quality data seamlessly. Additional projects include hospital automation to bring the medical team back to the bedside. He has obtained his medical degree from SUNY Upstate Medical University. He completed residency training at Stony Brook Medicine and fellowship training at the University of Rochester prior to joining the faculty at New York-Presbyterian Weill Cornell Medicine in 2018. In 2023 Dr. Mailman graduated from the prestigious NYP Lead Academy in which he obtained a certificate in Business Excellence from the Columbia Business School.

[Vivo Profile](#)



**Seth Manoach, M.D.**

*Associate Professor of Clinical Medicine*

*Director of the Medical ICU at New York Presbyterian Lower Manhattan Hospital*

*Division of Pulmonary and Critical Care Medicine, Weill Cornell Medicine*

Dr. Manoach is an academic Critical Care physician and clinical leader. He is Director of the Medical Intensive Care Unit at New York Presbyterian Lower Manhattan Hospital (NYP-LMH). He participates in teaching and research with other faculty in the Division of Pulmonary and Critical Care Medicine. He has particular expertise in Airway Management, Hemodynamic Monitoring, and the Cardiopulmonary Interface. He has served in clinical leadership at NYP-LMH and at other institutions and

participates in center-wide quality assurance and performance improvement initiatives.

[Vivo Profile](#)

[Google Scholar Page](#)



**Laurel Anne Monticelli, Ph.D.**

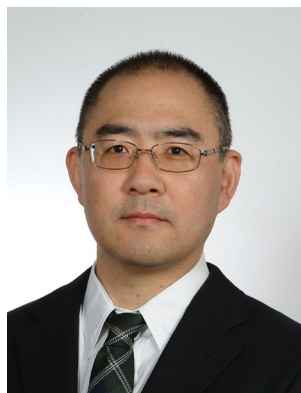
*Assistant Professor of Immunology in Medicine*

*Division of Pulmonary and Critical Care Medicine, Weill Cornell Medicine*

Dr. Monticelli received her B.S., M.Sc. from the University of California San Diego in 2008 and her Ph.D. in Immunology from the University of Pennsylvania in 2014. She undertook postdoctoral studies at Weill Cornell Medicine and joined the faculty in 2018 as Instructor of Immunology in the Division of Pulmonary and Critical Care Medicine. In 2019 she was appointed as Assistant Professor of Immunology in Medicine. Employing models of allergen exposure, pathogen infection, and chronic inflammation, research in the Monticelli lab is examining how the innate immune system responds to

metabolic cues to coordinate resolution of inflammation and promotion of tissue homeostasis in the lung. Dr. Monticelli's research is funded through a NIAID MIST U01 grant and a NIAID K22 grant.

[Vivo Profile](#)



**Kiichi Nakahira, M.D., Ph.D.**

*Adjunct Assistant Professor of Medicine*

*Division of Pulmonary and Critical Care Medicine, Weill Cornell Medicine*

Dr. Nakahira's research has been focused on the role of mitochondria and mitochondrial DNA (mtDNA) in inflammatory diseases and critical care illness such as sepsis. His works revealed that mitochondria (particularly mtDNA) critically regulate immune responses and inflammation. His research has also been involved in clinical studies to examine novel biomarkers for patients in medical intensive care unit (MICU). He established an assay to measure cell-free mtDNA and found the significant association between circulating cell-free mtDNA levels and the disease severity and outcome of

critically ill patients in MICU. Dr. Nakahira now develops his work on mitochondria and investigates the role of mtDNA mutation (mitochondrial heteroplasmy) in innate immune response and human sepsis.

[Vivo Profile](#)



**Michael S. Niederman, M.D., MACP, FCCP, FCCM, FERS**

*Lead Academic and Patient Quality Officer*

*Professor of Clinical Medicine*

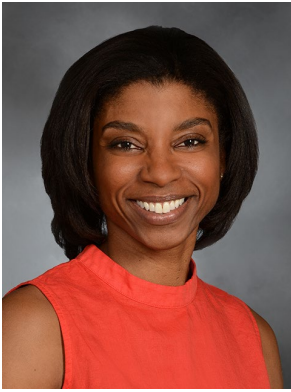
*Division of Pulmonary and Critical Care Medicine, Weill Cornell Medicine*

Dr. Niederman's interests lie in respiratory tract infections, and include mechanisms of airway colonization, the management of community- and hospital-acquired pneumonia, the role of guidelines for pneumonia, and the impact of antibiotic resistance on the management and outcomes of respiratory tract infections. He has published over 500 peer reviewed or review articles, and has lectured widely, both nationally and internationally. Dr. Niederman served as co-chairman of the committees that created the

American Thoracic Society 1993 and 2001 guidelines for the treatment of community-acquired pneumonia and the 1996 and 2005 committees that wrote guidelines for the treatment of nosocomial pneumonia. He was the co-lead author for the 2017 Guidelines for Nosocomial Pneumonia published by the ERS/ESICEM and ESCMID. He was a member of the ATS/IDSA committee that published guidelines for community-acquired pneumonia in 2007. He served for 6 years as a member of the Board of Regents of the American College of Chest Physicians and in 2013 was elected as a Master of the American College of Physicians. He is also an Associate Editor for the European Respiratory Review and for Critical Care , and serves on the editorial boards of Critical Care Medicine, and Intensive Care Medicine. He has previously served on the editorial board of The American Journal of Respiratory and Critical Care Medicine and CHEST.

[Vivo Profile](#)

[Google Scholar Page](#)



**Hasina Outtz Reed, M.D., Ph.D.**

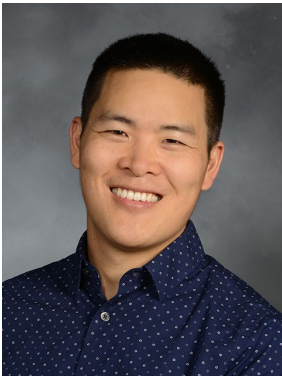
*Assistant Professor of Medicine*

*James Hilton Manning and Emma Austin Manning Foundation Research Scholar  
Division of Pulmonary and Critical Care Medicine, Weill Cornell Medicine*

Dr. Outtz Reed's research focuses on the role of the lymphatic and blood vasculature in lung biology and the response to lung injury. She has developed novel mouse models for studying the effect of lymphatic dysfunction on the lungs, and is using these approaches along with models of lung injury to investigate how the pulmonary lymphatics may be therapeutic targets in lung disease. Dr. Outtz Reed's research is funded through a NHLBI K01 grant, a Robert Wood Johnson Foundation Career Development Award,

and the Manning Research Scholar Award.

[Vivo Profile](#)



**Clark Owyang, M.D.**

*Assistant Professor in Medicine*

*Division of Pulmonary and Critical Care Medicine, Weill Cornell Medicine*

Dr. Owyang's research interests are in heart-lung interactions in critical illness. Specifically, he studies right ventricular dysfunction in ARDS and collaborates with mentors in cardiology and emergency medicine. Additionally, he is co-investigator in a large animal resuscitation laboratory with veterinary anesthesiology colleagues in Ithaca studying a swine model of cardiac arrest and mechanical circulatory support/ECMO. His clinical interests are in both transthoracic and transesophageal echocardiography.

[Vivo Profile](#)

[Google Scholar Page](#)



**Corrina Oxford-Horrey, M.D.**

*Assistant Professor of Clinical Obstetrics & Gynecology*

*Medical Director, Labor & Delivery*

*Maternal Fetal Medicine/Critical Care*

Dr. Oxford-Horrey is one of the few Obstetric Intensivists in the United States. She completed her medical school training at Howard University College of Medicine followed by an Obstetrics & Gynecology residency at Pennsylvania Hospital. In 2010, she then went on to become the 9th person in the country with fellowship training and board certification in Maternal Fetal Medicine and Critical Care Anesthesia. Both of her fellowships were done at the Brigham & Women's Hospital where she stayed on faculty

with a dual appointment in the Division of Maternal Fetal Medicine and Department of Surgery. While at Brigham & Women's Hospital, she cared for critically ill mothers and served as attending faculty in the Surgical ICU, Thoracic Intermediate care and Burn-Trauma units. In late 2012, she joined the University of Pennsylvania Health System where she spent 3 years as the Director of Obstetric Services at Pennsylvania Hospital maintaining her clinical focus on high acuity maternal care and administrative efforts in Quality Improvement and Patient Safety. She subsequently led the Critical Care Obstetrics and In-situ Simulation curriculum at the Hospital of the University of Pennsylvania where she was also the Co-Director of the Pregnancy and Heart Disease Program. Outside of her clinical duties in Maternal Fetal Medicine, she served on the Philadelphia Maternal Mortality Review Board. Her publications include journal articles and chapters on hemodynamics of pregnancy, care of the pregnant surgical patient and trauma in pregnancy.



Dr. Oxford-Horrey has demonstrated a strong dedication to improving high acuity maternal care with the use of simulation education, local and national speaking engagements and publications on hemodynamics of pregnancy, trauma and critical illness in pregnancy. She will continue to use simulation and collaborative care models to ensure the safest and highest quality inpatient experience for our patients.

[Vivo Profile](#)



**Di Pan, D.O.**

*Instructor in Medicine*

*Division of Pulmonary and Critical Care Medicine, Weill Cornell Medicine*

Dr. Pan's research is focused on predicting and optimizing functional status outcomes in ICU survivors and minimizing ICU-related complications. He utilizes a diverse range of healthcare and clinical data to gain insight through data science methodologies. He is also fellowship-trained in healthcare simulation and incorporates this background into patient care, research, and medical education.

[Vivo Profile](#)



**Christopher Parkhurst, M.D., Ph.D.**

*Instructor in Medicine*

*Division of Pulmonary and Critical Care Medicine, Weill Cornell Medicine*

Dr. Parkhurst earned his undergraduate degree in neurobiology and behavior from Cornell University before joining the medical scientist training program at the New York University School of Medicine, jointly earning his MD and PhD degrees. During this time his research focused on understanding the interaction between the immune and central nervous systems, including the impact of inflammation on brain function. After his graduate training Dr. Parkhurst completed his residency in internal medicine and fellowship in pulmonary and critical care medicine at the New York-Presbyterian

Hospital where he served as chief fellow. He is currently an attending physician at Weill-Cornell Medicine and New York-Presbyterian Hospital. His current research efforts focus on understanding the mechanisms by which critical illness generates persistent physical and cognitive dysfunction.

[Vivo Profile](#)



**Maria Plataki, M.D., Ph.D.**

*Assistant Professor of Medicine*

*Division of Pulmonary and Critical Care Medicine, Weill Cornell Medicine*

Dr. Plataki's research is focused on obesity and ARDS, specifically on whether high fat diet induced alterations in lipid metabolism modify responses to acute lung injury (hyperoxia, pneumonia or injurious mechanical ventilation). Dr. Plataki's research is currently funded by a K08 Award Program from NIH and a DOD Grant.

[Vivo Profile](#)



**Anna J. Podolanczuk, M.D., M.S.**

*Assistant Professor of Medicine*

*Division of Pulmonary and Critical Care Medicine, Weill Cornell Medicine*

Dr. Podolanczuk is a clinical and translational investigator studying novel risk factors for pulmonary fibrosis in humans. Her research focuses on understanding early or subclinical interstitial lung disease, imaging and blood biomarkers of pulmonary fibrosis, the role of environmental exposures, and the connection between cardiovascular disease and pulmonary fibrosis. She has characterized quantitative and qualitative measures of subclinical ILD on CT scans in the Multi-Ethnic Study of Atherosclerosis and used them to study established and novel risk factors for early ILD. She has been awarded an NHLBI K23 grant to investigate the role of high-

density lipoprotein in adults with clinically established ILD, and an American Lung Association Dalsemer grant to examine the role of household dust microbiome in idiopathic pulmonary fibrosis.

[Vivo Profile](#)

[Google Scholar Page](#)



**Michael J. Podolsky, M.D.**

*Assistant Professor of Medicine*

*Division of Pulmonary and Critical Care Medicine, Weill Cornell Medicine*

Dr. Podolsky's research is focused on understanding the resolution of fibrosis, both how this phenomenon is regulated in health and dysregulated in disease. This includes the study of mechanisms of extracellular matrix turnover in pulmonary fibrosis and other fibrotic diseases.

[Vivo Profile](#)



**David Price, M.D., M.S.**

*Assistant Professor of Medicine*

*Division of Pulmonary and Critical Care Medicine, Weill Cornell Medicine*

Dr. Price studies acute respiratory distress syndrome (ARDS) pathogenesis. He completed his residency training at the University of California, Davis Medical Center. Dr. Price is a graduate of the WDOM's Fellowship Program in Pulmonary and Critical Care Medicine and served as a Chief Fellow. His Fund for the Future project will focus on the functional role of vascular cell death in acute lung injury.

[Vivo Profile](#)



**Alexandra C. Racanelli, M.D., Ph.D.**

*Instructor in Medicine*

*Division of Pulmonary and Critical Care Medicine, Weill Cornell Medicine*

Dr. Racanelli's previous research interest focused on transcriptional, epigenetic, and cellular signaling events involved in the efficacy of targeted cancer therapeutics. As a resident, she became interested in the disease processes associated with pulmonary and critical care medicine, with a particular interest in pulmonary vascular disease. The dysfunctional state of pulmonary vascular endothelial cells (ECs), namely arterial, in human pulmonary hypertension tissues is well established, but whether this change

initiates or is a consequence of disease progression remains unclear. Non-canonical functions of vascular ECs as drivers of organ regeneration and repair have been illustrated in multiple organs. Her collaborators, Drs. Shahin Raffi and Bi-Sen Ding, pioneered this field and defined the importance of the instructive vascular niche created by ECs, but also linked dysregulated ECs to maladaptive repair such as fibrosis and tumorigenesis. She is currently using a hypoxia mouse model to assess if dysregulated ECs drive release of aberrant angiocrine factors that create a maladaptive vascular niche which promotes the development of pulmonary vascular disease in humans.

[Vivo Profile](#)

[Google Scholar Page](#)



**Kapil Rajwani, M.D.**

*Associate Professor of Clinical Medicine*

*Director of Simulation Education*

*Associate Medical Director of the Joint Simulation Center*

*Co-Director for the Critical Care Clerkship*

*Director, Inpatient Clinical Operations and Critical Care Education*

*Division of Pulmonary and Critical Care Medicine, Weill Cornell Medicine*

Dr. Rajwani's interests include procedural training and medical education at all training levels, with a key focus on simulation. Dr. Rajwani is the director of medical simulation for the internal medicine residency and the director of critical care education for the pulmonary and critical care division. Fellows and residents participate in simulation activities including procedural training, airway management, and emergency scenarios that focus on both the medical care, as well as the teamwork skills necessary to manage these situations. Dr. Rajwani supervises many scholarly projects that evaluate the use of simulation including assessing the application of the four-phase brain-based lesson plan for code team training, validation of various evaluation tools, understanding team member behaviors during emergency scenarios, and hybrid studies to evaluate communication surrounding procedures. In addition, he has participated in various seminars and conferences teaching debriefing skills. Dr. Rajwani has co-authored several reviews and chapters on the various aspects of care for the critically ill patient, as well as manuscripts focusing on his research in medical simulation. In his role as the Director of Inpatient Clinical Operations, he creates and implements integrated staffing models for the division at both campuses.

[Vivo Profile](#)



**Abraham Sanders, M.D.**

*Associate Professor of Medicine*

*Director of the Pulmonary Function Lab*

*Division of Pulmonary and Critical Care Medicine, Weill Cornell Medicine*

Dr. Sanders is a clinician educator, whose interests include pulmonary physiology and clinical pulmonary medicine. He has expertise in overseeing the outpatient and inpatient consultation service and is also the Director of the Pulmonary Function Lab's at both the hospital and outpatient practice. He regularly engages in fellow's teaching where he meets with the fellows to learn and interpret pulmonary physiological testing and interacts with the Cardiopulmonary Lab to learn to perform and interpret cardiopulmonary exercise testing.

[Vivo Profile](#)





**Edward J. Schenck, M.D., M.S.**

*Assistant Professor of Clinical Medicine*

*James P. Smith Clinical Scholar*

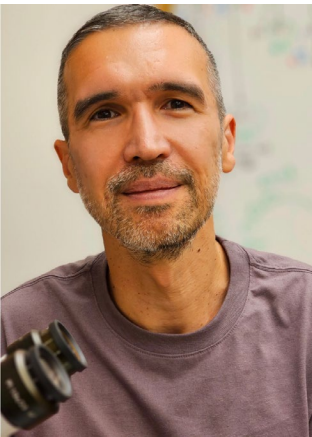
*Division of Pulmonary and Critical Care Medicine, Weill Cornell Medicine*

Dr. Schenck's research focuses on the development and assessment of novel biomarkers of critical illness and improving the clinical phenotyping of patients in the ICU. He has been instrumental in developing the biobank of critical illness and the critical care patient database (WC-CEDAR) that are being used for research efforts in the ICU. He is an associate editor of the American Journal of Respiratory and Critical Care Medicine. His research is supported by a K-23 from the NHLBI and the James P.

Smith Clinical Scholar award.

[Vivo Profile](#)

[Google Scholar Page](#)



**Renat Shaykhiev, M.D., Ph.D.**

*Associate Professor of Medicine*

*Division of Pulmonary and Critical Care Medicine, Weill Cornell Medicine*

Dr. Shaykhiev's research is focused on understanding fundamental principles of cellular organization and regeneration of human distal airways as a unique niche of lung aging and chronic lung diseases, including chronic obstructive pulmonary disease (COPD), idiopathic pulmonary fibrosis (IPF) and lung cancer. Dr. Shaykhiev's laboratory addresses this problem by employing advanced anatomical, imaging, systems biology and organotypic patient-derived ex vivo modeling approaches using human lung tissue samples from donors with and without lung disease. Research in Dr. Shaykhiev's laboratory is currently funded by an NIH U01 grant focused on

biologic pathways of human lung aging and aging-related chronic lung diseases.

[Vivo Profile](#)



**Ilias Siempos, M.D., D.Sc.**

*Adjunct Assistant Professor of Medicine*

*Division of Pulmonary and Critical Care Medicine, Weill Cornell Medicine*

Dr. Siempos is a physician-scientist whose main research interest focuses on acute respiratory distress syndrome and acute lung injury (particularly ventilator-induced lung injury). He studies these clinical entities using a variety of appropriate methodological tools, such as animal models; translational research; clinical outcomes research and meta-analyses. His publication record includes over 90 peer-reviewed papers and has received over 3650 citations in the literature with Hirsch index  $h = 35$  (according to Scopus). He enjoys learning from interactions with other scientists and/or physicians and he is committed to mentoring.

[Vivo Profile](#)



**Heather W. Stout-Delgado, Ph.D.**

*Associate Professor of Immunology in Medicine*

*Associate Program Director T32 Training Grant*

*Division of Pulmonary and Critical Care Medicine, Weill Cornell Medicine*

Dr. Stout-Delgado's research is focused on understanding the mechanisms that underlie age-associated changes in cellular and molecular immune signaling in the respiratory and conducting airways of the lung. Her current research interests include: (1) Understanding how the process of aging alters innate immune signaling pathways to bacterial and viral pathogens; (2) Investigating the impact of aging on mitochondria, endoplasmic reticulum (ER), and ER-mitochondrial communication and how these changes contribute to increased host susceptibility to acute lung injury and

pneumonia; (3) Examining age-associated alterations in immunometabolism and the impact of these changes on innate immune signaling cascades and cytokine release syndrome development; (4) Developing and characterizing compounds and therapeutic strategies to improve morbidity and mortality in aging populations during primary or secondary pulmonary infections. Special focus for these studies will be on *in vitro* and *in vivo* infection models using influenza (H3N2 and H1N1 strains), *S. pneumoniae*, or *S. aureus*. Dr. Stout-Delgado's research is currently funded by two NIH R01 grants, she serves as a mentor on two NIA K08 grants, and is an Associate Program Director of the Pulmonary and Critical Care Medicine T32 grant.

[Vivo Profile](#)



**Lisa K. Torres, M.D., M.S.**

*Assistant Professor of Medicine*

*Division of Pulmonary and Critical Care Medicine, Weill Cornell Medicine*

Dr. Torres' conducts clinical and translation research in sepsis. When septic patients continue in a persistent and pathologic anti-inflammatory state, they are known as immune paralyzed. Consequently, these patients are at a higher risk for opportunistic infections and mortality. A complete understanding of the underlying mechanisms driving immune paralysis remains poorly understood. Currently, Dr. Torres is investigating the degree of mitochondrial metabolic disarray in leukocytes of septic patients. Ultimately, she aims to predict who may develop immune paralysis and

identify therapeutic targets to restore normal immune function in the critically ill. Dr. Torres' research is supported by a KL2 award from the Clinical and Translational Science Center at Weill Cornell Medical College and the Mastercard Pilot Award. She attends on both the pulmonary consult service and ICU at our Weill Cornell and Lower Manhattan Hospital campuses.

[Vivo Profile](#)



**Meredith Turetz, M.D.**

*Assistant Professor of Medicine*

*Director of Inpatient Pulmonary Consultative Services*

*Fellowship Program Director*

*Division of Pulmonary and Critical Care Medicine, Weill Cornell Medicine*

Dr. Turetz is a clinician educator and the Director of the Inpatient Pulmonary Consultative Service. She serves as Program Director for the PCCM Fellowship and the Director of the pulmonary module for the medical school. In these roles she has developed curricula and adapted Weill Cornell's medical education to focus on small groups and the "reversed classroom." She is active in CHEST, focused on education



and participation of trainees and junior faculty. She serves on the Executive Committee of the New York State Thoracic Society. She is involved in quality improvement work focused on improving COPD care. Her clinical interests include airways disease, pulmonary mycobacterial infections, pulmonary complications of stem cell transplant, and pulmonary embolism.

[Vivo Profile](#)



**David Chappell Weir, M.D.**

*Assistant Professor of Clinical Medicine  
Site Director of Pulmonary and Critical Care Medicine at NYP/LMH  
Director for Virtual Critical Care Services  
Division of Pulmonary and Critical Care Medicine, Weill Cornell Medicine*

Dr. Weir provides inpatient care in the Medical Intensive Care Unit (MICU), on the pulmonary consult service, as well as outpatient care. He has been actively involved in the medical education of bedside ultrasound teaching of medical students, residents, and attendings. Current quality improvement projects that he is involved in include improving sedation in the ICU, inpatient sepsis management, and reducing COPD readmission rates.

[Vivo Profile](#)



**William Whalen, M.D.**

*Instructor in Medicine  
Division of Pulmonary and Critical Care Medicine, Weill Cornell Medicine*

Dr. Whalen's clinical interests involve the application of machine learning algorithms to high dimensional proteomic datasets to develop deep endophenotypes of ARDS and subclinical ILD and further understand the heterogeneity of treatment effects.

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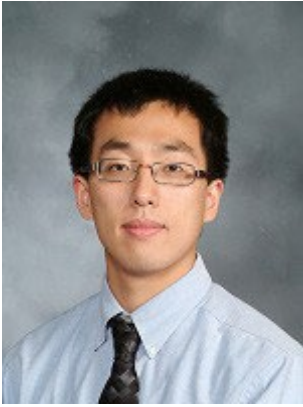
**Dana Zappetti, M.D.**

*Vice Chair of Clinical Operations  
Director, Outpatient Clinical Operations  
Assistant Professor of Medicine  
Division of Pulmonary and Critical Care Medicine, Weill Cornell Medicine*

Dr. Zappetti's interests lie in critical care medicine and general pulmonary medicine including asthma, COPD, bronchiectasis, and lung cancer. She is an expert in the pulmonary complications of hematologic malignancy and stem cell transplant.

In her role as Vice Chair for Clinical Operations in the department of medicine, Dr. Zappetti focuses on advancing ambulatory programs across the WDOM ensuring the best use of space and resources to meet the growing needs of patients at WCM and NYP. She has been involved in medical education throughout her career having been the director of the medical school 4th year sub-internship in medicine course (2006-2016), the director of the pulmonary and critical care fellowship program (2010-2016) and the Associate Dean of Student affairs at Weill Cornell Medical College (2016-2020).

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**William Zhang, M.D.**

*Assistant Professor of Medicine*

*Division of Pulmonary and Critical Care Medicine, Weill Cornell Medicine*

Dr. Zhang is a physician-scientist whose research is focused on understanding the pathogenesis of chronic obstructive pulmonary disease (COPD). Specifically, he is investigating the role of abnormal iron metabolism in mediating the biological processes of early COPD, using both samples from COPD patients as well as disease models. Dr. Zhang was previously supported by the Stony Wold-Herbert Fund Fellowship as well the CHEST Foundation, and is currently supported by the American Thoracic Society, the American Lung Association Catalyst Award, as well as the Weill

Cornell Medicine JumpStart Program.

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## **T32 RESEARCH TRAINING FACULTY IN OTHER DEPARTMENTS AND INSTITUTIONS**

**David Artis, Ph.D.:** Dr. Artis' research focuses on regulatory mechanisms that control immune cell homeostasis at barrier surfaces. Using models of microbial colonization, pathogen infection, and chronic inflammation, Dr. Artis has advanced paradigm-shifting discoveries, including identifying a role for epithelial cells in promoting an immunological barrier in the intestine, creating a new model of immunity and inflammation at mammalian barrier surfaces; identifying innate lymphoid cells in humans and mice, defining their functions and characterizing ILC responses in human skin, lung, and intestine. Drs. Martinez, Kaner, and Artis collaborate in defining alterations in the lung microbial community. Dr. Artis is a preceptor of T32 trainee C. Parkhurst.

**Karla Ballman, Ph.D.:** Dr. Ballman is the Division Chief of Biostatistics and Epidemiology at WCM. She has expertise in the analysis of high-dimensional data, design of clinical trials, generation of predictive biomarkers, and analysis of observational data. She has extensive experience in the design and analysis of prospective cohort studies. Dr. Ballman has developed numerous collaborative projects across the PCCM, including with Drs. A. Choi and E. Schenck in sepsis and acute lung injury, Drs. Martinez, A. Choi, and M. Choi in COPD, and Drs. Martinez and Kaner in ILD. She serves as the PI of the Data Coordinating Center conducting Dr. A Choi's R61 focused on the treatment of acute lung injury. She is the lead biostatistician collaborating with PCCM to provide statistical expertise and has been a biostatistical mentor to Drs. Zhang, Krishnan, Torres, and Harrington.

**Julie Magarian Blander, Ph.D.:** Dr. Blander is an expert in innate immunity, cell death and inflammation. Her work has contributed to the fields of T cell activation in mouse and human systems, cell biology and function of dendritic cells, phagocytosis, antigen presentation, as well as dissection of Toll-like receptor and Nod-like receptor signaling pathways in innate defense against infection and cancer. Dr. Blander established a robust Innate Immunity Research Program with projects spanning the characterization of CD8 T cell responses to human beta-coronaviruses, defining the signals for tissue repair and regeneration from distinct cell death modalities in the intestinal epithelium, identifying innate barriers to cancer in the premalignant stages of the disease, and developing safe and effective vaccines that incorporate vita-PAMPs, signature molecules of microbial viability.

**Mary E. Charlson, M.D.:** As Chair of Master's Program in Clinical Epidemiology & Health Services Research, Dr. Charlson along with a superb multidisciplinary faculty, has trained 165 clinical investigators (35% of African or Latino descent and 50% women) who have received \$301 million in independent peer reviewed funding, as

they have become leaders in academic medicine. Her seminal advances include: the Charlson Comorbidity Index; leading nine NIH funded randomized controlled trials to improve outcomes among patients with chronic cardiopulmonary disease. She is the PI for a current PCORI cluster randomized trial focused on reducing unplanned hospitalizations in 1900 patients with multiple chronic diseases. She collaborates with Dr. Martinez and several PCCM faculty to explore the role of comorbidity management and COPD outcomes.

**Mary E. Choi, M.D.:** Dr. M. Choi's research focuses on the molecular mechanism(s) of tissue inflammation and fibrosis in the pathogenesis of chronic diseases. Dr. M. Choi's seminal advances include: cloned and characterized cell surface receptors and identified novel interacting proteins involved in TGF- $\beta$ 1 signaling; delineated downstream intracellular signal transducing pathways that mediate TGF- $\beta$ 1 signals; and elucidated the cellular and molecular regulation of autophagy/mitophagy and necroptosis pathways as potential therapeutic targets to provide cytoprotection in COPD and lung fibrosis. Drs. A. Choi, M. Choi and Martinez collaborate to investigate the molecular mechanisms of tissue injury and the role of mitochondrial DNA in COPD and IPF. Dr. M. Choi serves as the Director of Training Unit in lung and vascular injury of the PCCM's NIH T32 grant.

**Barry S. Collier, M.D.:** Dr. Collier's research focuses on molecular interactions related to platelet physiology, thrombosis, vascular biology, and adhesion phenomena. His laboratory produced and characterized monoclonal antibodies related to platelet glycoprotein receptors and he collaborated on the first atomic level resolution of the mechanism of ligand binding to the platelet integrin receptor  $\alpha$ IIb $\beta$ 3. He developed one of his monoclonal antibodies into the drug abciximab with scientists at Centocor, and he developed the VerifyNow assays to monitor antiplatelet therapy with scientists at Accumetrics. His novel small molecule antiplatelet drug RUC-4 (zalunfiban) is in Phase 2 testing for prehospital treatment of myocardial infarction. As Co-Director of an NIH KL2 Clinical Scholars Program and in other educational roles, Dr. Collier has trained numerous fellows, residents, and students since the 1970s. His scientific expertise has direct relevance to pulmonary vasculopathy.

**Ronald G. Crystal, M.D., M.S.:** Dr. Crystal's research focused on the pathogenesis and therapy of lung disorders. The work of his laboratory formed the basis of the current understanding of the pathogenesis of lung fibrosis and the hereditary form of emphysema associated with alpha 1-antitrypsin deficiency, a disease for which he developed the FDA-approved therapy now used to treat thousands of patients worldwide. In the late 1980's, Dr. Crystal shifted his focus to gene therapy, a field in which he is a pioneer. He was the first to use a recombinant virus as a vehicle for in vivo gene therapy and has carried out human trials of gene therapy for cystic fibrosis, cardiac ischemia, cancer and central nervous system disorders. In addition to gene therapy, his laboratory has programs in deciphering how human genetic variation modulates gene expression in the context of environmental exposure and exploiting these relationships to recategorize human disease at the biologic level. Dr. Crystal has received numerous professional honors and serves on several advisory boards to government and industry. He has published over 900 scientific articles, and his work has been cited over 50,000 times in the scientific literature. He has edited several textbooks, is responsible for numerous biomedical patents, and is a founder of several biotechnology companies focused on developing gene therapy therapeutics.

**Olivier Elemento, Ph.D., M.S.:** Dr. Elemento directs the Englander Institute for Precision Medicine, an Institute that focuses on using genomics and informatics to individualize medicine. Dr. Elemento is also an APD of the CTSC. The focus of his research group is on elucidating the patterns of aberrant pathway activities, rewiring of regulatory networks and mutations that have occurred in cancer cells. His laboratory is trying to understand how tumors evolve at the genomic and epigenomic level by using high-throughput sequencing to decipher epigenetic mechanisms and regulatory networks at play in malignant cells and study how they affect gene expression. He has developed computational approaches for analysis of deep sequencing data, as well as developed several computational approaches for regulatory element detection and analysis.

**Daniel W. Fitzgerald, M.D.:** Dr. Fitzgerald's research focuses on pulmonary tuberculosis and HIV in resource poor settings. The training of United States and international physician scientists is an integral part of his research activity. His tuberculosis research includes clinical trials and translational studies to optimize treatment of both latent and active TB, with a focus on patients with HIV. He conducted an investigator-initiated randomized clinical trial in HIV infected adults demonstrating that, after the successful treatment of tuberculosis, post-treatment isoniazid prophylaxis decreased the risk of TB recurrence 5-fold. He conducts early bactericidal activity (EBA) trials of new drugs for the treatment of pulmonary tuberculosis. He is the PI of the Weill Cornell-Haiti clinical trials unit in the CDC TB Trials Consortium (TBTC) (2021-2030). Translational studies conducted through the Tri-institutional TB Research Unit (TBRU) (2014-2026) aim to understand the persistence of *M. tuberculosis* in the human host and to develop diagnostics to detect persistent non-replicating mycobacteria and new drugs to treat them.

**Marshall J. Glesby, M.D., Ph.D.** Dr. Glesby's research focuses on the epidemiology, pathogenesis, and management of metabolic, cardiopulmonary, and aging-related complications in people living with HIV infection. He directs the Clinical and Translational Resources Unit of the Weill Cornell Clinical and Translational Science Center (CTSC), co-directs the CTSC's Clinical Trials Design and Analysis Course, and is a Program Advisor for the CTSC's Master's program in clinical and translational investigation. Dr. Glesby's early work demonstrated the importance of herpes zoster as a complication of HIV infection across the spectrum of immunodeficiency. His research group has made important contributions to the understanding of visceral adiposity and risk of diabetes and cardiovascular disease in people with HIV. Dr. Glesby has direct collaborative interactions with Dr. Kaner in the area of HIV/COPD and with Drs. A. Choi and M. Choi in studies of the mitochondrial DNA and aging-related phenotypes in older adults with HIV.

**Linnie M. Golightly, M.D.:** Dr. Golightly is an Associate Professor of Microbiology and Immunology and the Associate Dean for Diversity at WCM. She is an authority in molecular parasitology having defined 3' UTR elements important in Plasmodium parasites important for gene expression. Her laboratory has developed novel high throughput molecular signature-based techniques for the detection and identification of infectious pathogens and mechanisms of antimicrobial resistance. She has developed important collaborations and techniques to define the role of endothelial progenitor cells in the pathogenesis of cerebral malaria.

**Katherine A. Hajjar, M.D.:** Dr. Hajjar has led seminal discoveries on annexin A2, first identifying its vascular function as a binding site for plasminogen and a tissue plasminogen activator and then delineating its regulation of plasmin generation and fibrin clearance in vivo and in vitro. She recently identified a cohort of patients with thrombosis and annexin A2 deficiency. With regard to lung function, the Hajjar group has found that annexin A2 mediates secretion of pre-assembled macromolecules, such as collagen VI by bronchial epithelial cells, maintains the integrity of lysosomes in dendritic cells, and participates in the formation of the autophagosome during cellular stress. Dr. Hajjar has mentored many trainees and serves as the Senior Associated Dean for Faculty at WCM.

**Rainu Kaushal, M.D., M.P.H.:** Dr. Kaushal is the Senior Associate Dean for Clinical Research, Chair of the Department of Population Health Sciences, and Nanette Laitman Distinguished Professor at Weill Cornell Medicine; and the Physician-in-Chief of Population Health Sciences at NewYork-Presbyterian Hospital/Weill Cornell Medical Center. A distinguished information scientist and health services researcher, Dr. Kaushal leads Weill Cornell Medicine's clinical research enterprise, bridging cutting-edge science with patient care. Dr. Kaushal has made significant contributions to pediatric patient safety, health information technology, and value-based healthcare delivery. She has led several key studies on interoperable health information technology, and serves as the principal investigator of INSIGHT Clinical Research Network, the country's largest urban clinical database of 22 million patients. Dr. Kaushal is also a committed educator. She has established four master's

programs, including a joint Executive MBA/MS in Healthcare Leadership with the Cornell SC Johnson College of Business, a doctoral program, and a research fellowship with 200 students matriculating annually. An author of over 200 papers in various scientific publications, Dr. Kaushal is a frequently invited speaker at national and international meetings. She also serves on multiple boards and advisory committees and is an elected member of the National Academy of Medicine.

**Jan Krumsiek, Ph.D.:** Dr. Krumsiek's lab develops innovative systems biological approaches for multiomics datasets, with a special focus on the analysis of metabolomics data from human samples. Dr. Krumsiek's group has worked on all major parts of metabolomics analysis pipelines, ranging from preprocessing and quality control to statistical data analysis and complex pathway analysis algorithms. He has pioneered several network based approaches now widely used in the field. Moreover, Dr. Krumsiek was among the first to systematically combine metabolomics networks with other omics layers, including SNPs, transcriptomics, and proteomics data. Dr. Krumsiek's current research is focused on methods to computationally decipher drug escape mechanisms and tumor vulnerabilities to design personalized treatment strategies for patients. Dr. Krumsiek's laboratory has significant ongoing collaborations with Drs. Cho, A. Choi, M. Choi, Schenck, Martinez, and Stout-Delgado.

**Steven M. Lipkin, M.D., Ph.D.:** Dr. Lipkin's research focuses on hereditary cancer syndromes using massively parallel sequencing, computational biology, and cell culture and genomics to further understand the contribution and mechanisms of constitutional risk variants. His major discoveries include cloning of MLH3, a DNA mismatch repair gene that is a Mendelian cause of increased germline colorectal cancer; proved that DNA mismatch repair proteins are important in chromosomal recombination during meiosis and immunoglobulin class switching; and, classified missense mutations with the computational algorithm. He provides key expertise in the methodological approaches to computational biology.

**Conor Liston, M.D., Ph.D.:** Dr. Liston's research focuses on the interface between systems neuroscience and biological psychiatry. Dr. Liston is actively investigating how diverse neuronal cell types interact within prefrontal microcircuits to mediate various cognitive processes; how these processes are modulated by monoamines and neurosteroids; and, how prefrontal circuits function within systems-level networks. Dr. Liston is focused on how stress, sleep, and other circadian rhythms interact to regulate synaptic remodeling in corticolimbic circuits. Dr. Liston is a co-preceptor for T32 trainee C. Parkhurst.

**David C. Lyden, M.D., Ph.D.:** Dr. Lyden focuses on cancer metastasis research and was the first to investigate the role of tumor exosomes in metastasis and is credited with launching a new field focused on tumorsecreted metastatic progression. First to show genetic regulation in vasculogenesis, Dr. Lyden discovered a family of genes (Id1-4) implicated in early blood vessel development in embryogenesis and tumorigenesis. His group has also used exosome proteomics that led to discovery of biomarkers for various cancers. This investigative arena has direct relevance to the genesis and progression of chronic lung disease.

**Christopher Mason, Ph.D.:** With Dr. Olivier Elemento, Dr. Mason is one of the founding Directors of the WorldQuant Initiative for Quantitative Prediction. Dr. Mason's lab develops and deploys computational and experimental methodologies to identify the functional genetic elements of the human genome and metagenome. To do this, we perform research in three principal areas: (1) molecular profiling in patients with extreme phenotypes, including brain malformations, aggressive cancers, and astronauts, (2) creating new biochemical and computational techniques in DNA/RNA sequencing and DNA/RNA base modifications, and (3) the development of bioinformatics models for systems biology and metagenomics. We use high-throughput sequencing methods to generate single-cell, city-scale, and space-based multi-dimensional molecular maps of humans and their environments. We then develop algorithms to leverage these data for detecting, cataloging and functionally annotating interactions between these molecular changes and also connect them to larger datasets (ENCODE,



ICGC, MetaSUB) for replication and contextualization. In the very long term, we believe these systems-based methods will enable an understanding of the functional elements of the human genome and embedded metagenome, such that we can begin to repair or re-engineer these genetic networks for ameliorating disease and lay the foundation to enable long-term human spaceflight.

**Jorge Moscat, Ph.D.:** Dr. Moscat is a renowned cancer biologist with expertise in the cellular and molecular mechanisms that control the initiation and progression of tumors. His laboratory has made impactful contributions to understanding the metabolic and immunological landscape of various tumors and their response to immunotherapy. His research focuses on identifying non-oncogenic vulnerabilities in cancer, with a particular interest in the interface between inflammation and metabolism.

**Carl F. Nathan, M.D.:** Dr. Nathan's research focuses on how macrophages protect the host from intracellular microbial pathogens and how some microbes persist. The founding Director of WCM's Tri-Institutional M.D./Ph.D. Training Program, his seminal discoveries include how antigen-stimulated lymphocytes activate macrophages for enhanced antimicrobial effector function; identification of enhanced respiratory burst capacity as the first biochemically defined effector mechanism of activated macrophages and inducible nitric oxide synthase as the second; identification of IFN as the major macrophage activating factor; and TGF- and IL-10 as the first macrophage-deactivating cytokines. Dr. Nathan is a former preceptor of Dr. Rhee, who now is a senior preceptor of this training program.

**Lishomwa C. Ndhlovu, M.D., Ph.D.:** Dr. Ndhlovu's research programs examine the challenges of HIV and aging with a focused expertise on preventing or eliminating organ specific complications. His laboratory combines innovative immunology and virology methods as well as exploring single cell approaches to understand disease mechanisms.

**Virginia Pascual, M.D.:** Dr. Pascual is a pediatric rheumatologist with long standing experience in clinical, basic, and translational research related to inflammatory and autoimmune diseases affecting children. Dr. Pascual's laboratory is focused on understanding the diseases pathogenesis as well as finding biomarkers to guide therapeutic interventions. She is currently the Program Director of an NIAID-funded Autoimmunity Center of Excellence and a NIAMS-funded Center for Lupus Research. Her current efforts, using state-of-the-art single cell technologies, are progressing towards unraveling the molecular heterogeneity of SLE. Drs. Pascual and Martinez are exploring biological underpinnings of the lung immunological response during COVID-19. Dr. Pascual is an SAC member for T32 trainee C. Parkhurst.

**Jyotishman Pathak, Ph.D.:** Dr. Pathak is the Frances & John L. Loeb Professor of Medical Informatics and Psychiatry, Chief of the Division of Health Informatics, and Vice Chair of the Department of Population Health Sciences at Weill Cornell Medicine, Cornell University in New York City. His research focuses on secondary uses of electronic health record (EHR) and insurance claims data, clinical decision support systems for personalized therapeutics, and integration of genomic and mHealth data within EHRs for improving mental and behavioral health. Dr. Pathak received his Ph.D. in Computer Science from Iowa State University, Ames (2007) and a B.Engg. in Computer Science and Engineering from National Institute of Technology, Jamshedpur, India (2002). He is the recipient of Iowa State University Graduate Research Excellence Award and Mayo Clinic Early Career Development Award in 2007 and 2010, respectively. Dr. Pathak's research has been funded by multiple major national grants from the U.S. National Institutes of Health (NIH), the Patient-Centered Outcomes Research Institute (PCORI), the Agency of Healthcare Research and Quality (AHRQ), the American Heart Association (AHA), Merck Pharmaceuticals, and several private foundations. He has published over 230 papers including many book chapters and invited reviews. He is also the Founder of Iris OB Health Inc. – a startup company spun out of Weill Cornell developing digital health solutions for preventing postpartum depression.

**Sallie Permar, M.D., Ph.D.:** Dr. Permar is a translational viral immunologist whose research is designed to define the immune responses required for protection of neonates against vertical transmission of HIV-1, CMV, and Zika. She has served as a PI on funding mechanisms such as an NIH Director's New Innovator Award, vNIAID HIV vaccine research and development P01, R01s, R21s, and Doris Duke Foundation Clinical Scientist Awards. Her laboratory serves as an Immunology Specialty Laboratory for the International Maternal Pediatric Adolescent AIDS Clinical Trial network. Dr. Permar has initiated work to define maternal B cell responses to Zika virus infection and the role of maternal antibody responses in congenital Zika virus disease. She is the Nancy C. Paduano Professor and Chair of Pediatrics at Weill Cornell Medicine and Pediatrician-in-Chief at NewYork-Presbyterian/Weill Cornell Medical Center.

**Holly G. Prigerson, Ph.D.:** Dr. Prigerson's theme of her research across studies has been the examination of psychosocial and behavioral influences on late-life and late-stage patient and caregiver quality of life, end-of-life care, and surviving caregiver bereavement adjustment. She was funded by a NIMH R01 to refine diagnostic criteria for Prolonged Grief Disorder, a new mental disorder now included in the ICD-11 and approved for inclusion in DSM-5-TR based largely on her group's research. She has an expanding portfolio of research such as her EMPOWER studies to assist family surrogate decision makers in the ICU, including both the MICU and PICU. Prigerson has peerless experience and a longstanding commitment to research mentoring. She received Harvard Medical School's (HMS) A. Clifford Barger Excellence in Mentoring Award, served as a founding member of the HMS Council of Mentors, chaired the U54 Dana-Farber/Harvard Cancer Center Career Development Committee, and evaluated the mentor and mentee relationships sponsored by this Harvard-UMass Boston inter-university partnership. She has mentored >97 PhD and MD junior faculty and has served as the primary mentor on K and other career development awards (N>28), with 10 fundable K awards in the past 3 years at WCM. Prigerson's own T32 experience as a pre- and postdoctoral fellow, her research experience, availability of ongoing NIH-funded projects, and co-direction of the Center for Research on End-of-Life Care position her well to train future researchers interested in employing interdisciplinary approaches to improve the care provided to vulnerable older adults. Dr. Prigerson has the resources, background, and demonstrated commitment to supporting trainees in our T32 program.

**Shahin Rafii, M.D., Ph.D.:** Dr. Rafii's research focuses on lung tissue regenerative medicine. His seminal discoveries include: angiocrine factors support self-renewal of hematopoietic stem and lung regeneration; endothelial cells instruct the regeneration of lung tissue; angiocrine factors, through a dynamic vascular niche, may provide a cellular platform for reconstitution of stem cells to support lung regeneration; and new molecular mechanisms in lung regeneration leading to approaches for accelerating lung repair after injury. They have reported the most comprehensive database describing distinct molecular signatures of various vascular beds. Drs. Martinez, A. Choi, and Rafii have established an investigative collaboration targeting lung regeneration in emphysema. Dr. Rafii is a copreceptor of T32 trainee A. Racanelli.

**Kyu Rhee, M.D., Ph.D.:** Dr. Rhee's research focuses on the development and application of mass spectrometry-based analytical methods to conduct systems-level metabolic studies of *M. tuberculosis*. His laboratory has monitored the levels and fluxes of metabolites, including lipids, in a diverse range of cell types, discovering and identifying new and/or unannotated metabolites and enzymatic activities, and developing new technologies to accelerate antibiotic development. Serving as Director of the DOM MRT Program, Dr. Rhee has successfully mentored numerous postdoctoral trainees and graduate students and actively collaborates with numerous PCCM investigators.

**Monika M. Safford, M.D.:** Dr. Safford's community-engaged research program includes an NHLBI-funded ancillary study to the Reasons for Geographic and Racial Differences in Stroke focusing on coronary heart disease outcomes, and several community-based pragmatic trials including a PCORI-funded trial testing

interventions to improve medication adherence in diabetes, and an NHLBI/PCORI-funded trial testing two interventions designed to improve blood pressure control. Dr. Safford's work has identified health disparities in a number of contexts, developing an approach to focus on potentially remediable influences. She has made contributions in the field of cardiovascular epidemiology and clinical trials, and served as a Women's Health Initiative investigator. Dr. Safford serves as a preceptor for T32 trainees J. Krishnan and D. Pan.

**Randi B. Silver, Ph.D.:** Dr. Silver's research focuses on mast cells and their pathophysiological contribution to lung disease. While mast cells are known to be medically relevant across a broad spectrum of pulmonary diseases their function has not been well defined. Her lab studies how mast cells impact structural and pathological changes in the lung as in airway hyper-responsiveness, pulmonary fibrosis, and hyperoxia-induced neonatal lung disease. Taking a multifactorial experimental approach, *in vivo* and *in vitro* experiments are performed using murine models of lung disease as well as in primary cultures of cells derived from human lung tissue specimens, respectively, to examine how mast cells impact inflammation and structural changes in lung. Her ultimate goal is to utilize this mechanistic information to identify viable therapeutic targets and develop new drugs for treating lung disease. Dr. Silver is an active collaborator of Dr. Kaner and Dr. Martinez and has trained generations of biomedical and clinician scientists in her laboratory. As Associate Dean of WCMC's graduate school she has guided the careers of numerous trainees and provides key expertise in the selection and training of Ph.D. postdoctoral trainees for this T32 Training Program.

**Gregory Sonnenberg, Ph.D.:** Dr. Sonnenberg investigates the pathways that regulate a state of health in the mammalian gastrointestinal tract and epithelial cell barriers. Dr. Sonnenberg has been at the forefront of interrogating novel pathways regulating immunity, inflammation and tissue health in the mammalian intestine, with a particular focus on emerging families of innate lymphoid cells and dendritic cells. He employs innovative murine models and novel patient-based studies to provide new insights into the pathogenesis of infections, chronic inflammatory diseases and cancer. Dr. Sonnenberg is an SAC member for T32 trainee W. Zhang.

**Rulla Tamimi, Sc.D.:** Dr. Tamimi's research focuses on cancer risk and survival with the goal of reducing morbidity and mortality. Dr. Tamimi has led research on cancer in the Nurses' Health Study (NHS) cohort for the last 14 years, including work on lifestyle risk factors, biomarkers, genetics and gene expression. She was the Director of the NHS Tissue and Mammogram Repository for nearly a decade. As PI of multiple NIH-funded grants to understand risk factors for breast cancer, Dr. Tamimi's group has identified a number of genetic, molecular and lifestyle predictors of breast cancer risk and survival. Her group is developing population studies to better understand molecular, environmental, and social factors that impact breast cancer outcomes.

**Stefan Worgall, M.D., Ph.D.:** Dr. Worgall's research focuses on pulmonary infections and lung immune responses relevant to chronic lung diseases in children. His laboratory works on asthma and cystic fibrosis models, including the disease-relevant respiratory infections with respiratory syncytial virus, rhinovirus, and *Pseudomonas*. One of the recent interests has been the role of sphingolipids in asthma pathogenesis. The group was first to describe the functional relevance of decreased sphingolipid synthesis in childhood asthma. Current studies include airway reactivity studies in mice, human airway epithelial cells, and a clinical pediatric asthma cohort.

## **SELECTED DIVISIONAL RESEARCH PROGRAMS**

### **ACUTE RESPIRATORY DISTRESS SYNDROME**

#### *CO-ARDS II*

A Phase II Trial of Inhaled Carbon Monoxide for the Treatment of Sepsis-Induced Acute Respiratory Distress

Syndrome (ARDS). This is a multi-center, prospective, randomized, partially double-blind, placebo-controlled Phase II clinical trial of inhaled CO (iCO) for the treatment of ARDS.

**Faculty:** Choi, Plataki, Schenck

## **BIOREPOSITORIES**

### *Weill Cornell Pulmonary and Critical Care Biorepository*

This is a descriptive, non-randomized, single institution study intended to develop a Biorepository for Chronic Obstructive Pulmonary Disease (COPD), Interstitial Lung Disease (ILD), and ICU survivors with or without underlying lung disease at Weill Cornell Medicine in order to provide information about the biomarkers, outcomes, risk factors, prognostic indicators, and response to therapy in subjects with COPD/ILD, or ICU survivors. We will include an arm of healthy subjects to be enrolled as controls.

**Faculty:** Aronson, Kaner, Lief, Parkhurst, Podolanczuk, Schenck

### *Weill Cornell Registry and Biobank of Critically Ill Patients*

This is a descriptive, non-randomized, single-institution database and human sample repository that will be established from within the cohort of subjects admitted to the NewYork-Presbyterian Hospital – Weill Cornell Medical Center. The primary goal is to store whole blood samples, blood cells plasma urine BAL, CSF and tracheal aspirates for future RNA, DNA and protein isolation to perform genomic analysis, gene expression profiling and protein expression studies to determine disease susceptibility differences between patients with and without ARDS.

**Faculty:** Berlin, Choi, Schenck

## **CHRONIC OBSTRUCTIVE PULMONARY DISEASE (COPD)**

### *Doxycycline for Emphysema in People Living with HIV – DEPTH*

This study is a phase II, multicenter, randomized, double-blinded, placebo-controlled clinical trial of 100 mg doxycycline BID for 72 weeks for emphysema in people living with HIV.

**Faculty:** Kaner, Glesby (Infectious Diseases)

### *Early COPD: Understanding the Origins of Early COPD*

There is a fundamental gap in understanding the early origins of Chronic Obstructive Pulmonary Disease. Our long term goal is to arrest COPD progression by understanding its earliest stages. We will recruit a new cohort of younger at-risk individuals to link chest imaging and pathologic abnormality with longitudinal disease progression and thus define potentially targetable mechanisms laying the foundation for developing disease-modifying therapies.

**Faculty:** Martinez, Kaner

### *Chiesi Pillar*

To evaluate the efficacy of two doses of CHF6001 add-on to maintenance triple therapy (free or fixed combination of ICS, LABA, LAMA) to reduce the rate of moderate and severe exacerbations after 52 weeks of treatment in comparison with maintenance triple therapy

(i.e. placebo arm)

**Faculty:** Kaner, Krishnan, Martinez

### *SPIROMICS: Study of COPD Subgroups and Biomarkers*

SPIROMICS I and SPIROMICS II are observational studies of Chronic Obstructive Pulmonary Disease (COPD).

SPIROMICS I had two main aims: (1) To find groups of patients with COPD who share certain characteristics; (2) To find new ways of measuring whether or not COPD is getting worse and so provide new ways of testing whether a new treatment is working.

SPIROMICS II has three primary aims. Aim 1 is to define the natural history of "Smokers with symptoms despite preserved spirometry" and characterize the airway mucus abnormalities underlying this condition. Aim 2 is to determine the radiographic precursor lesion(s) for emphysema, and identify the molecular phenotypes underlying airway disease and emphysema. Aim 3 is to advance understanding of the biology of COPD exacerbations through analysis of predisposing baseline phenotypes, exacerbation triggers and host inflammatory response.

**Faculty:** Kaner

### **IDIOPATHIC PULMONARY FIBROSIS (IPF)**

#### *PRECISIONS: Prospective tReatment EffiCacy in IPF uSIng genOtype for Nac Selection*

A multi-center, randomized, double-blind, phase III, placebo-controlled trial comparing the effect of N-acetyl cysteine (NAC) plus standard care to matched placebo in idiopathic pulmonary fibrosis patients that have the TOLLIP rs3750920 TT genotype.

**Faculty:** Martinez, Podolanczuk

### **PROGRAM PROJECT GRANT (PPG)**

The pathogenesis of COPD and IPF is poorly understood. In this program project we have integrated the expertise of investigators from COPD and IPF communities, both basic and translational/clinical researchers, to come together to better understand the pathogenesis of these chronic lung diseases, and hopefully identify new molecular targets in the treatment of these diseases in the future.

**Faculty:** Choi, Martinez, Kaner

### **INTERSTITIAL LUNG DISEASE (ILD)**

#### *IPF/ILD-PRO*

The overall goals of this registry are to describe current approaches to diagnosis and treatment of IPF and other chronic fibrosing ILDs with progressive phenotype and to collect biological samples that will support future research studies.

**Faculty:** Kaner

#### *Post COVID-19 Hypoxemic Respiratory Failure Residual Pathophysiologic Outcomes*

This is a 52 week, observational study looking to see if the inflammatory process of hypoxemic respiratory failure associated with COVID-19 leads to progressive pulmonary fibrosis.

**Faculty:** Kaner, Gruden, Lief, Niederman, Schenck

#### *Assessing Health Related Quality of Life in Hypersensitivity Pneumonitis*

The objective of this study is to administer and validate a disease-specific health related quality of life (HRQOL) survey for patients with Chronic Hypersensitivity Pneumonitis (CHP).

**Faculty:** Aronson, Kaner, Krishnan, Martinez



## *REBUILD*

A randomized double-blind placebo-controlled dose escalation and verification clinical study to assess the safety and efficacy of pulsed, inhaled nitric oxide (iNO) in subjects at risks of pulmonary hypertension associated with pulmonary fibrosis on long term oxygen therapy (part 2 only).

**Faculty:** Kaner, Podolanczuk

*BI Fibroner 1305-0014 and 1305-0023*

A double blind, randomized, placebo-controlled trial evaluating the efficacy and safety of BI 1015550 over at least 52 weeks in patients with Idiopathic Pulmonary Fibrosis (IPF) and Progressive Fibrosing Interstitial Lung Diseases (PF-ILDs)

**Faculty:** Kaner, Podolanczuk

## **SLEEP MEDICINE**

*DEFINING THE ROLE OF SLEEP IN CANCER IMMUNITY AND METABOLISM*

A prospective, single-arm, observational, pilot study to assess the effect of pancreatic cancer on systemic metabolism, inflammation, and sleep parameters. We hypothesize that the magnitude of sleep disruption and metabolic dysfunction will correlate with weight loss and other markers of cachexia.

**Faculty:** Krieger