Contributors

CONSULTING EDITOR

BIMAL H. ASHAR, MD, MBA, FACP
Associate Professor of Medicine, Division of General Internal Medicine, Johns Hopkins School of Medicine, Baltimore, Maryland

EDITOR

ALI I. MUSANI, MD, FCCP
Vice Chair, Global Health, Professor of Medicine and Surgery, Department of Medicine, Director, Complex Airway Pillar of the Center for Lung and Breathing Director, Interventional Pulmonology Program, Fellowship Director, Bronchoscopy Service, University of Colorado Hospital, Division of Pulmonary Sciences and Critical Care Medicine, University of Colorado School of Medicine, University of Colorado Denver, University of Colorado Anschutz, Aurora, Colorado

AUTHORS

MATTHEW ABOUDARA, MD, FCCP
Division of Allergy, Pulmonary and Critical Care Medicine, Vanderbilt University Medical Center, The Vanderbilt Clinic, Nashville, Tennessee

VIVEK N. AHYA, MD, MBA
Associate Professor of Medicine, Vice Chief, Clinical Affairs, Division of Pulmonary, Allergy and Critical Care, Clinical Director, Paul F. Harron, Jr. Lung Center, Penn Medicine, Perelman School of Medicine, University of Pennsylvania, Philadelphia, Pennsylvania

MUHAMMAD SAJAWAL ALI, MD, MS
Division of Pulmonary and Critical Care Medicine, Medical College of Wisconsin, Milwaukee, Wisconsin

EMILY P. BRIGHAM, MD, MHS
Assistant Professor of Medicine, Division of Pulmonary and Critical Care Medicine, Johns Hopkins School of Medicine, Baltimore, Maryland

SHARON D. CORNELISON, RCP, RRT-NPS
Department of Pulmonary and Cardiac Rehabilitation, J. Paul Sticht Center on Aging and Rehabilitation, Wake Forest Baptist Medical Center, Winston-Salem, North Carolina

GERARD J. CRINER, MD
Professor, Department Chair, Department of Thoracic Medicine and Surgery, Lewis Katz School of Medicine at Temple University, Philadelphia, Pennsylvania

JOSHUA M. DIAMOND, MD, MSCE
Associate Medical Director, Lung Transplantation Program, Assistant Professor of Medicine, Division of Pulmonary, Allergy and Critical Care, Perelman School of Medicine, University of Pennsylvania, Philadelphia, Pennsylvania
SEAN P. DUFFY, MD
Assistant Professor, Department of Thoracic Medicine and Surgery, Lewis Katz School of Medicine at Temple University, Philadelphia, Pennsylvania

GEORGE A. EAPEN, MD
Professor of Medicine, Department of Pulmonary Medicine, The University of Texas MD Anderson Cancer Center, Houston, Texas

ENO-OBONG ESSIEN, MD
Division of Internal Medicine Residency Program, Temple University Hospital, Philadelphia, Pennsylvania

M. PATRICIA GEORGE, MD
Associate Professor, Department of Medicine, National Jewish Health, Denver, Colorado

UZAIR KHAN GHORI, MD
Division of Pulmonary and Critical Care Medicine, College of Wisconsin, Milwaukee, Wisconsin

NABEEL HAMZEH, MD
Associate Professor, Division of Pulmonary, Critical Care and Occupational Medicine, University of Iowa College of Medicine, Iowa City, Iowa

DAVID W. HSIA, MD
Division of Respiratory and Critical Care Physiology and Medicine, Harbor-UCLA Medical Center, Torrance, California

SANDHYA KHURANA, MD
Associate Professor of Medicine, Co-Director, Pulmonary and Critical Care Medicine, Mary Parkes Center for Asthma and Pulmonary Care, University of Rochester School of Medicine, University of Rochester Medical Center, Rochester, New York

DARLENE KIM, MD
Associate Professor, Department of Medicine, National Jewish Health, Denver, Colorado

CHRISTOPHER M. KNIESE, MD
Fellow, Interventional Pulmonology, Division of Pulmonary Sciences and Critical Care Medicine, University of Colorado Denver, University of Colorado Anschutz, Aurora, Colorado

KATHERINE KROL, MD
Fellow, Pulmonary and Critical Care Medicine, University of Rochester School of Medicine, University of Rochester Medical Center, Rochester, New York

CHARLES W. LANKS, MD
Division of Respiratory and Critical Care Physiology and Medicine, Harbor-UCLA Medical Center, Torrance, California

OSCAR LLANOS, MD
Fellow, Division of Pulmonary, Critical Care and Occupational Medicine, University of Iowa College of Medicine, Iowa City, Iowa

LISA A. MAIER, MD, MSPH
Division of Environmental and Occupational Health Sciences, National Jewish Health, Division of Pulmonary and Critical Care Sciences, School of Medicine, Environmental Occupational Health Department, Colorado School of Public Health, University of Colorado, Denver, Colorado
FABIEN MALDONADO, MD, FCCP
Associate Professor of Medicine and Thoracic Surgery, Division of Allergy, Pulmonary and Critical Care Medicine, Vanderbilt University Medical Center, The Vanderbilt Clinic, Nashville, Tennessee

STEPHEN C. MATHAI, MD, MHS
Associate Professor of Medicine, The John Hopkins Hospital, Baltimore, Maryland

MEREDITH C. McCORMACK, MD, MHS
Associate Professor of Medicine, Division of Pulmonary and Critical Care Medicine, Johns Hopkins School of Medicine, Baltimore, Maryland

MARY ANNE MORGAN, MD
Associate Professor of Medicine, Associate Fellowship Program Director, Pulmonary and Critical Care Medicine, University of Rochester School of Medicine, University of Rochester Medical Center, Rochester, New York

ALI I. MUSANI, MD, FCCP
Vice Chair, Global Health, Professor of Medicine and Surgery, Department of Medicine, Director, Complex Airway Pillar of the Center for Lung and Breathing Director, Interventional Pulmonology Program, Fellowship Director, Bronchoscopy Service, University of Colorado Hospital, Division of Pulmonary Sciences and Critical Care Medicine, University of Colorado School of Medicine, University of Colorado Denver, University of Colorado Anschutz, Aurora, Colorado

FARIA NASIM, MD
Fellow, Department of Pulmonary Medicine, The University of Texas MD Anderson Cancer Center, Houston, Texas

RODOLFO M. PASCUAL, MD, FCCP
Department of Internal Medicine, Section on Pulmonary Medicine, Critical Care, Allergy and Immunologic Diseases, Wake Forest Baptist Medical Center, Winston-Salem, North Carolina

DAVID M. PERLMAN, MD
Division of Pulmonary and Critical Care Medicine, University of Minnesota, Minneapolis, Minnesota

PARTH RALI, MD
Assistant Professor, Division of Thoracic Surgery and Medicine, Director, Pulmonary Embolism Response Team (PERT), Temple University Hospital, Philadelphia, Pennsylvania

BRUCE F. SABATH, MD
Fellow, Department of Pulmonary Medicine, The University of Texas MD Anderson Cancer Center, Houston, Texas

MONA SARKISS, MD, PhD
Professor, Departments of Anesthesiology and Perioperative Medicine, and Pulmonary Medicine, The University of Texas MD Anderson Cancer Center, Houston, Texas

ANGELA SELZER, MD
Assistant Professor, Department of Anesthesiology, University of Colorado, Aurora, Colorado
Contributors

**LUBNA SORATHIA, MD**
Assistant Medical Director, Innovage Greater CO PACE, Denver, Colorado

**TIANSHI DAVID WU, MD, MHS**
Postdoctoral Fellow, Division of Pulmonary and Critical Care Medicine, Johns Hopkins School of Medicine, Baltimore, Maryland