The fields of respiratory and critical care medicine have grown and changed rapidly during the last couple of decades. From their original definitions, acute respiratory distress syndrome (ARDS) and sepsis have evolved into their new and third versions in 2012 and 2016, respectively, aiming to provide more accurate and rapid diagnoses for patient management. The evolutionary approach of mechanical ventilation using low tidal volume has saved thousands of lives worldwide. There have been many advances in our understanding of several chronic lung diseases from epidemiology and pathogenesis of genetics, inflammation and biomarkers to patient management including pulmonary function testing, pharmacotherapy and non-pharmacological therapy, pulmonary rehabilitation and exercise programmes. Lung cancer immunotherapy by multidisciplinary teams has now emerged as a promising model of precision medicine with several important therapeutic breakthroughs. Since environment has been considered a trigger of lung disease, metabolomics has thus become a rapidly expanding field of systems biology that is receiving significant attention in respiratory research.

While the fields continue to advance rapidly, sufficient knowledge and experience have accumulated to warrant the production of a proceeding from the Journal of Thoracic Disease (JTD) dedicated to respiratory and critical care medicine.

Modern respiratory medicine involves many disciplines that are represented by, not only classic organ-based subspecialties of medicine, but also the specialties of critical care, surgery and anaesthesiology. In this first edition, we chose to limit the subject material of our proceeding to “respiratory medicine” in order to allow for the production of a highly readable book that can serve equally well for comprehensive review and as a reference source. We have tried to extract what seems to have made significant advances to our knowledge that have shaped and may future have potential impact on our own approach to daily practice in the field.

This book is envisioned to include multiple authors of a truly exceptional group of clinician-scientists actively involved in the field and is targeted primarily at practicing physicians who spend a large part of their time caring for patients at bedside. Each chapter of this book consists of a comprehensive review of pertinent clinical diagnosis, pathophysiology data and management issues. Substantial references are provided for readers to explore subjects in greater detail; thus, the book is appropriate for respirologists as well as intensivists, surgical or anesthesia specialists. The goal is to update the acknowledged excellence of best practice in respiratory medicine.

We wish to thank the extremely dedicated editorial staff that provided us with outstanding organizational and editorial assistance to complete a venture of this magnitude. A special thank goes to Professor Guangqiao Zeng, the editorial director of JTD and editorial moderator of this book, who organized and oversaw the editorial process of JTD and the proceeding series.

Haibo Zhang, MD, PhD
Professor of Anesthesia, Medicine and Physiology
University of Toronto Canada