

## Preface

The last decade or so has seen remarkable advances in our knowledge of cough. This applies especially to its basic mechanisms: the types of airway sensors, the pharmacological receptors on their membranes, the brainstem organization of the 'cough centre', and the involvement of the cerebral cortex in the sensations and the voluntary control of cough. With the exception of the last of these, nearly all the studies have been on experimental animals rather than humans, for obvious reasons. One group of experimental studies has particular relevance to human patients, and that is the demonstration of the sensitization of cough pathways both in the periphery and in the brainstem. Similar sensitizations have been shown for patients with chronic cough or who have been exposed to pollutants, and it is reasonable to suppose that this is the basis of their cough and that the underlying mechanisms are generally similar in humans and other species.

Important advances are also being made in clinical cough research. For the three main causes of clinical cough, asthma, post-nasal drip syndrome, and gastro-oesophageal reflux disease, we are beginning to understand the pathological processes involved. There remains a diagnostically obdurate group of idiopathic chronic coughers, but even for them approaches are being devised to clarify underlying mechanisms and to establish diagnoses.

Perhaps surprisingly, the field in which there has been the least spectacular advance is the therapy of cough. This is not because current therapies work; indeed most seem to work little better than a placebo. This applies not only to the many remedies bought over the counter at the pharmacist and to those administered as part of complementary and alternative medicine, but also to those available on prescription (only codeine, pholcodine, and dextromethorphan in the UK). Basic studies are pointing to many potentially valuable approaches to the treatment of cough, based on understanding the basic peripheral receptor mechanisms, the brainstem pathways in the control of cough, and the sensitization processes that may apply in disease. The pharmacological industry is following up these leads, and clinicians are waiting hopefully for the fruits of their research.

An indication of the growth of interest in cough is the recent surge in publications dedicated to the subject. Before 1996, the editors can only think of two or

three. Since then there have been two multiauthor books, at least ten international symposia, with the proceedings of nearly all of them being published as journal supplements, and at least five task-force reports set up by national and international organizations such as the American College of Chest Physicians and the European Respiratory Society. These publications will be frequently referred to in the chapters in the present volume. If asked 'Does this justify more description and analysis?', the answer is an emphatic yes! The field is being explored very fast; and new and emerging results are very important for understanding and alleviating one of the commonest disease symptoms of mankind. In this volume, we hope to show that basic mechanisms are helping us to understand clinical cough and also the other way round.

The editors are grateful to all the contributors, including co-authors, who, as is well known, often do most of the hard work; and to the diligent but tolerant publishers, especially Susanne Dathe, for their help and encouragement.

London, UK

*Kian Fan Chung*  
*John G. Widdicombe*

Pharmacology and Therapeutics of Cough

Chung, K.F.; Widdicombe, J. (Eds.)

2009, XII, 376 p. 39 illus., 3 illus. in color., Hardcover

ISBN: 978-3-540-79841-5