Leukotrienes are the 5-lipoxygenase products of arachidonic acid metabolism produced by activated cells following allergen stimulation, which play a critical role in the pathophysiology of both the early and late phases of the asthmatic inflammatory response. They were first described in 1979 by Robert Murphy as ‘slow-reacting substances of anaphylaxis’, who also defined the major paths of 5-lipoxygenase. Over the past two decades there has been accumulating evidence to suggest that the 5-lipoxygenase products are important mediators of asthma pathophysiology. LTB4 promotes leukocyte chemotaxis and the sulfidopeptide leukotrienes (LTC4, LTD4, LTE4) cause airway mucus secretion, increased vascular permeability, and bronchoconstriction. Furthermore, clinical models have supported the hypothesis that leukotrienes play an important role in different manifestations of asthma, such as exercise-, allergen-, and aspirin-induced asthma.

During the past 15 or so years, the pharmaceutical industry has expended considerable effort towards identifying and developing novel therapies for asthma. Two areas which have been mainly targeted are controlling leukotriene production through the inhibition of 5-lipoxygenase or blocking their biological effects through cysteinyl leukotriene-1 receptor antagonism. The pharmacological agents that have resulted include leukotriene receptor antagonists, 5-lipoxygenase inhibitors, 5-lipoxygenase-activating protein inhibitors and phospholipase A2 inhibitors. The leukotriene modifiers, that is, agents that inhibit the action of the cysteinyl leukotrienes, represent the first new class of antiasthma treatment in the past 20 years. Anti-leukotrienes are now included in most national and international asthma management guidelines.

Since the first description of the chemical structure of leukotrienes in 1979, there has been a global research explosion into the molecular, cellular and physiological understanding of this interesting molecule. *Five-Lipoxygenase Products in Asthma* provides a unique and thorough review of 5-lipoxygenase and its products, especially at a time when the place of leukotriene modifiers in the management scheme of asthma are still yet to be better defined. This very informative book contains 18 chapters covering all aspects of 5-lipoxygenase and its products from the biochemistry and physiology to the basic and clinical pharmacology of the leukotrienes. Each chapter of the book is written by international experts, going into basic and in-depth detail in this emerging field. It highlights the basic chemistry and molecular science of the 5-lipoxygenase pathway, cellular view of leukotriene synthesis and leukotriene receptor activation. It gives a very interesting account of the 5-lipoxygenase-activating protein, detailing its expression in a defined subset of myeloid cells, its gene structure and function using gene knockout mice. A very informative chapter is written about the measurement of leukotrienes from various human biological fluids and the importance of measuring urinary LTE4 in clinical studies with 5-lipoxygenase inhibitors. It also outlines the obvious advantages and disadvantages of measuring urinary LTE4. The unique aspect about this piece of literature comes in the concluding chapters where insight is given into inhibiting the 5-lipoxygenase pathway, giving comprehensive information about the pharmacology, pharmacokinetics, efficacy and safety of the leukotriene modifiers.

This is an excellent book which offers comprehensive information of the 5-lipoxygenase pathway and its products. It is important reading to those in the field of asthma research, respiratory clinicians and those interested in the molecular science of asthma and allergic diseases. We would strongly recommend this book to those interested in understanding the role of 5-lipoxygenase and its products in the inflammatory process of asthma and especially to clinicians who would be prescribing antileukotrienes as one of the newer drugs in asthma management.

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