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References; 3 Airway smooth muscle: role in airway constrictor hyperresponsiveness; 3.1 What is airway constrictor hyperresponsiveness (AHR)?; 3.2 Is AHR ever good?; 3.3 Potential mechanisms leading to airflow obstruction
3.4 Potential abnormalities of airway smooth muscle (ASM)3.5 If ASM is dysfunctional, how did it get that way?; 3.6 Summary; Acknowledgements; References; 4 Airway smooth muscle phenotypic and functional plasticity; 4.1 Introduction; 4.2 Historical perspective: smooth muscle phenotype plasticity; 4.3 Features of phenotype plasticity; 4.4 Mechanisms for phenotypic plasticity; 4.5 Functional plasticity of airway smooth muscle: role in asthma pathogenesis; 4.6 Concluding remarks; References; 5 Airway smooth muscle proliferation: insights into mechanisms regulating airway smooth muscle mass
5.1 Increases in airway smooth muscle (ASM) mass and the functional consequences5.2 Growth factors, inflammatory mediators and cytokines modulate ASM proliferation; References; 6 Airway smooth muscle bidirectional interactions with extracellular matrix; 6.1 Overview; 6.2 Introduction; 6.3 Airway extracellular matrix (ECM) in health and disease; 6.4 Integrins; 6.5 Airway smooth muscle (ASM) as a modulator of airway ECM; 6.6 Airway ECM as modulator of ASM function; 6.7 Impact of anti-asthma therapy on ASM-ECM interactions; 6.8 Conclusions; Acknowledgements; References
7 Airway smooth muscle interaction with mast cells7.1 Introduction; 7.2 Mast cell mediators alter smooth muscle function; 7.3 Smooth muscle cells induce mast cell chemotaxis; 7.4 Mast cells can adhere to airway smooth muscle; 7.5 Conclusion; Acknowledgements; References; 8 Airway smooth muscle synthesis of inflammatory mediators; 8.1 Introduction; 8.2 Lipid mediators; 8.3 Chemokines; 8.4 Growth and remodelling factors; 8.5 Conclusions; References; 9 Airway smooth muscle in experimental models; 9.1 Introduction; 9.2 Methods of assessment of airway smooth muscle (ASM) function
9.3 Potential mechanisms by which ASM properties may contribute to airway responsiveness

Sommario/riassunto

In this book, leading researchers in medicine and molecular pharmacology explain the cellular mechanisms that control airway smooth muscle. The means by which these are disrupted in disease, and the pharmacologic strategies by which they may be modified are discussed and future therapeutic interventions are identified. Aimed at specialists in pulmonology, this volume provides the clinician with the most up to date information on one of the core physiological processes in airway disease, and offers insights into current and future approaches to management. Authori