Record Nr.	UNINA9910144698303321
Titolo	The pulmonary epithelium in health and disease [[electronic resource] /] / edited by David Proud
Pubbl/distr/stampa	Chichester, England ; ; Hoboken, NJ, : John Wiley & Sons, c2008
ISBN	1-282-34293-2 9786612342936 0-470-72701-2 0-470-72700-4
Descrizione fisica	1 online resource (461 p.)
Altri autori (Persone)	ProudDavid
Disciplina	616.2
Soggetti	Respiratory organs - Pathophysiology Pulmonary endothelium Epithelium
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	The Pulmonary Epithelium in Health and Disease; Contents; Preface; List of Contributors; 1 Pulmonary Epithelium: Cell Types and Functions; 1.1 Introduction; 1.2 Epithelial cell types and functions in the cartilaginous proximal airway region; 1.3 Epithelial cell types and functions of the non-cartilaginous distal bronchioles; 1.4 Epithelial cell types and functions of the gas exchange region; 1.5 Circulating stem cells and applications in lung regenerative medicine; 1.6 Stem cell therapy: embryonic or adult?; 1.7 Conclusion; 2 Epithelial Adhesive Structures and Adhesion Molecule Expression 2.1 Introduction2.2 Cell-cell adhesive structures; 2.3 Cell-substratum adhesion; 2.4 Conclusion; 3 The Epithelium as a Target; 3.1 Introduction; 3.2 Asthma; 3.3 Alteration in epithelial cell type distribution; 3.4 Overview of epithelial damage in asthma; 3.5 Chronic obstructive pulmonary disease; 3.6 Effect of cigarette smoke; 3.7 Other causative factors; 3.8 Alveolar epithelial cell apoptosis - emphysema; 3.9 Overview of epithelial damage in COPD; 3.10 Damage to the epithelium in other diseases; 3.11 Conclusions; 4 Epithelial Repair and Function

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	<ul> <li>4.1 Brief introduction to epithelial shedding-repair and associated functions in health and disease4.2 Repair following shedding of single columnar epithelial cells and following shedding of clusters of columnar cells; 4.3 Epithelial denudation; 4.4 Pharmacology of epithelial repair; 4.5 Epithelial shedding-restitution as a causative process in airway inflammation and remodelling; 5 Integration of Epithelial lon Transport Activities into Airway Surface Liquid Volume and Ion Composition Regulation; 5.1 Introduction: the role of fluid in airway/ alveolar physiology</li> <li>5.2 Model of ion and solute transport through airway epithelia5.3 Airway histology; 5.4 Airway ion secretion; 5.5 The cystic fibrosis transmembrane conductance regulator; 5.6 Calcium-activated chloride channels; 5.7 K+ channels; 5.8 Airway ion absorption; 5.9</li> <li>Measurement of ion and water transport in airway epithelia; 5.10 In vivo transepithelial PDs; 5.11 Volume flow measurements; 5.12</li> <li>Physiologically 'thin film' measurements of ASL volume regulation with confocal microscopy and microelectrodes: studies of normal and CF airway epithelia</li> <li>5.13 The role of physiologic airway shear-stress in ion transport and ASL regulation5.14 Fluid transport across the alveolar epithelium; 6 Structure and Function of Cilia; 6.1 Introduction; 6.2 Structure; 6.3 Function; 6.4 Ciliary dysfunction associated with disease; 7</li> <li>Composition and Function of Airway Mucus; 7.1 Airway 'mucus'; 7.2</li> <li>Respiratory tract mucins; 7.3 Mucin genes and gene products; 7.4</li> <li>MUC5AC; 7.5 MUC5B; 7.6 Airway mucus hypersecretory phenotype in COPD; 7.7 Airway mucus hypersecretory phenotype in asthma; 7.8</li> <li>Mucociliary clearance in asthma and COPD</li> <li>7.9 Mechanisms of airway goblet cell hyperplasia</li> </ul>
Sommario/riassunto	""This is essential reading for everyone who would like to update their knowledge of the pulmonary epithelium. It offers a comparison between laboratory animal models and human lungs, highlighting the differences and the similarities between the two, which will be particularly useful to researchers."" -Doody's, April 2009 The past two decades have seen extraordinary advances in our understanding of the role of the pulmonary epithelium in airway health and disease. Our understanding of epithelial biology has expanded exponentially in the past decade. This book provides a unique