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Collana	Handbook of Experimental Pharmacology, , 0171-2004 ; ; 218
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Soggetti	Pharmacology Pharmaceutical technology Internal medicine Respiratory organs—Diseases Diagnosis, Laboratory Molecular biology Pharmacology/Toxicology Pharmaceutical Sciences/Technology Internal Medicine Pneumology/Respiratory System Laboratory Medicine Molecular Medicine
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	Preface.- Part I. Pulmonary hypertension: conceptual bases of the disease. Pulmonary hypertension: definition, classification, and epidemiology. Pulmonary hypertension: pathophysiology and signalling pathways. Pulmonary hypertension: pathology. Pulmonary hypertension: biomarkers. Pulmonary hypertension: animal models -- Part II. Pulmonary hypertension: established therapies. General supportive care. Calcium channel blockers. Prostacyclins. Endothelin receptor antagonists. Phosphodiesterase 5 inhibitors -- Part III. Pulmonary hypertension: novel pathways and emerging

therapies Soluble guanylate cyclase stimulators. Therapeutics targeting dysregulated redox equilibrium and endothelial dysfunction (NOXs, sGC activators, GSNOR). Rho-kinase inhibitors. Serotonin transporters and serotonin receptors. PDGF inhibitors. Novel anti-proliferative strategies beyond imatinib. Immunosuppressive agents. Vasoactive peptides. Inhibitors of cGMP/cAMP metabolism (MRP4, MRP5, PDE1). Old targets re-visited. Stem cells and cell based therapy -- Part IV. Conclusions and Outlook. Pulmonary hypertension: evidence-based management in the modern era and future directions.

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## Sommario/riassunto

This volume focuses on current evidence-based pharmacological treatments of various forms of pulmonary hypertension and provides a comprehensive review of the latest developments in this area. The first part of the book covers the definition, classification, pathophysiology, pathology, biomarkers and animal models of the disease, thus laying the conceptual basis for what follows. The middle section provides an overview of the established therapies, such as calcium channel blockers, prostanoids, endothelin receptor antagonists, phosphodiesterase-5 inhibitors and inhaled nitric oxide. The last section explores novel pathways and emerging therapeutic approaches including soluble guanylate cyclase stimulators, Rho-kinase inhibitors, inhibitors of serotonin receptors and transporters, peptide growth factors, vasoactive peptides, modulators of redox equilibrium and cyclic nucleotide homeostasis, as well as immunosuppressive and anti-proliferative agents. Particular attention is given to the clinical applications of these experimental therapies, that are on the horizon. The book thus spans the continuum from basic science to clinical applications.

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