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Titolo	Biology of Vascular Smooth Muscle: Vasoconstriction and Dilatation / / by Yuansheng Gao
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ISBN	981-10-4810-X
Edizione	[1st ed. 2017.]
Descrizione fisica	1 online resource (XIII, 286 p. 43 illus., 33 illus. in color.)
Disciplina	612
Soggetti	Human physiology Cell physiology Angiology Molecular biology Human Physiology Cell Physiology Molecular Medicine
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references at the end of each chapters.
Nota di contenuto	Architecture of the vessel wall -- Ultrastructure of vascular smooth muscle -- Vascular endothelium -- Electrical and mechanical properties of vascular smooth muscle -- Biochemistry of the contractile proteins of smooth muscle -- Metabolism of vascular smooth muscle -- Neurotransmitters -- Endothelium-derived factors -- Local metabolic factors -- Shear stress myogenic response and blood flow autoregulation -- Intracellular Ca <sup>2+</sup> regulation -- Regulation of myosin light chain phosphorylation -- Cyclic AMP signalling -- Cyclic GMP signaling -- Coronary vasoreactivity -- Cerebral vasoreactivity -- Pulmonary vasoreactivity -- Hypoxic vasoreactivity -- Ageing and vasoreactivity.
Sommario/riassunto	This book provides a concise yet comprehensive review of the morphological, biochemical, electrical, mechanical, and metabolic properties of vascular smooth muscle, the regulation of vascular activities and the intracellular signaling involved. It particularly focuses on recently identified vasoactive agents, enzymes and transduction mechanisms. It also discusses the latest findings in the regulation of

cerebral, coronary and pulmonary circulation as well as vascular activity under hypoxia and ageing. The contraction and dilatation activities of vasculature are of fundamental importance for maintaining circulation homeostasis and adapting physiological changes. Over the last four decades, there have been significant advances in our understanding of the biochemical, structural, genetic, physiological, and pharmacological aspects of vascular activity regulation, and these insights into the responsiveness of blood vessels under normal and pathophysiological conditions help to provide valuable weapons in the fight against vascular diseases. The book is of interest to researchers and graduate students, both in basic research and in clinic settings, in the field of vascular biology.

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