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Nota di contenuto	Preface -- Chapter 1. Phosphate Metabolism: from Physiology to Toxicity (Mohammed S. Razzaque) -- Chapter 2. Phosphate Burden and Inflammation (Sarah Erem , Satoko Osuka and Mohammed S. Razzaque) -- Chapter 3. Extracellular Phosphate, Inflammation and Cytotoxicity (Toshimi Michigami, Miwa Yamazaki, Mohammed S. Razzaque) -- Chapter 4. Phosphate-sensing (Yuichi Takashi and Seiji Fukumoto) -- Chapter 5. Vitamin D and phosphate interactions in health and disease (Nuraly S. Akimbekov, Ilya Digel, Dinara K. Sherelkhan, Mohammed S. Razzaque) -- Chapter 6. Fibroblast growth factor 23 as regulator of vitamin D metabolism (Shinya Nakatani; Ayumi Nakatani, Katsuhito Mori, Masanori Emoto; Masaaki Inaba; and Mohammed S. Razzaque) -- Chapter 7. Phosphate and Cellular Senescence (Ming Chang Hu and Orson W. Moe) -- Chapter 8. Phosphate toxicity and epithelial to mesenchymal transition (EMT) (Eric Lewis, Faith Seltun, Mohammed S. Razzaque, Ping He) -- Chapter 9. Phosphate & endothelial function: How sensing of elevated inorganic phosphate concentration generates

signals in endothelial cells (Nima Abbasian, Alan Bevington and Dylan Burger) -- Chapter 10. Common dietary sources of natural and artificial phosphate in food (Ken-ichi Miyamoto, Joanna Oh, Mohammed S. Razzaque) -- Chapter 11. Phosphate is a Cardiovascular Toxin (Maren Leifheit-Nestler, Isabel Vogt, Dieter Haffner and Beatrice Richter) -- Chapter 12. Coordination of Phosphate and Magnesium Metabolism in Bacteria (Roberto E. Bruna, Christopher G. Kendra and Mauricio H. Pontes) -- Index.

Sommario/riassunto

This contributed volume discusses the most important physiological aspects of phosphate metabolism, and how its pathological dysregulation can induce organ damage, which includes but is not limited to blood vessels, kidney, bone and tumor. The editor has selected a varied group of world renowned experts to provide a basic understanding of normal phosphate regulation, to then move on to explain the complex molecular mechanisms of abnormal phosphate regulation, also shedding some light on the downstream clinical consequences owing to phosphate toxicity. Each chapter clearly presents the biochemically important problems related to phosphate dysregulation with the necessary illustrations. Readers will be able to use the proposed book as a quick reference for updated information on phosphate metabolism, ranging from cellular system to physiology, from pathology to toxicity, also including the associated clinical consequences, without much prior acquaintance with the field.
