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Nota di contenuto Genomic structure of the KLK locus -- Single nucleotide

polymorphisms in the human KLK locus and their implication in various diseases -- Evolution of Kallikrein-related peptidases -- Structural aspects of Kallikrein-related peptidases -- Molecular recognition properties of Kallikrein-related peptidases on synthetic and endogenous substrates -- Natural, engineered, and synthetic inhibitors of Kallikrein-related peptidases -- Kallikrein-related peptidases as pharmaceutical targets -- Expression of Kallikrein-related peptidases under (patho) physiological conditions -- Kallikrein-related peptidases within the proteolytic web -- Kallikrein-Kinin cascade: bioregulation by human tissue kallikrein 1 (HK1, KLK 1) -- Role of KLK4 in dental

enamel formation.

Kallikrein-related peptidases and semen -- Kallikrein-related peptidases and inhibitors of the skin -- Physiological and pathophysiological roles of Kallikrein-related peptidases in the central nervous system -- Kallikrein-related peptidases (KLKS), proteinasemediated signaling and proteinase-activated receptors (PARS) --Pathophysiology of Kallikrein-related peptidases in lung cancer --Clinical relevance of Kallikrein-related peptidases in gastric and

colorectal cancer -- Pathophysiology of Kallikrein-related peptidases in

head and neck cancer -- PSA (prostate-specific antigen) and other Kallikrein-related peptidases in prostate cancer -- Cellular model systems to study the tumor biological role of Kallikrein-related peptidases in ovarian and prostate cancer -- Clinical relevance of Kallikrein-related peptidases in breast cancer -- Clinical relevance of Kallikrein-related peptidases in ovarian cancer -- MicroRNAs: a new control mechanism for Kallikrein-related peptidases in kidney and other cancers -- Genomic instability of the KLK-locus in cancer -- Kallikrein-related peptidases as biomarkers in personalized cancer medicine.

Sommario/riassunto

This handbook is the first comprehensive book of its kind reviewing the clinically relevant current status of tissue kallikrein and kallikrein-related peptidases research. Since several members of the KLK family are key players in (patho-)physiological processes, structural, functional, and regulatory studies are under way to develop new strategies to prevent and treat disorders to which individual members of the KLK protease family contribute significantly. The goal of this book is to inform clinicians, physician scientists and researchers about the prominent role of the multifaceted and interactive KLK system in normal physiology and pathological organ function.