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Titolo	Leptin : Regulation and Clinical Applications / / edited by Sam Dagogo-Jack, MD
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Descrizione fisica	1 online resource (299 p.)
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Soggetti	Endocrinology Metabolism - Disorders Metabolic Diseases
Lingua di pubblicazione	Inglese
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Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	Discovery of leptin and elucidation of leptin gene expression -- Leptin receptors and mechanism of action -- Leptin interaction with brain orexigenic and anorexigenic pathways -- Measurement of circulating leptin and soluble leptin receptors -- Physiological and hormonal factors that influence leptin production -- Leptin, obesity and leptin resistance -- Leptin and intermediary metabolism: Focus on glucoregulation and lipid metabolism -- Leptin in acute stress -- Leptin and the kidney -- Leptin, immune function, and inflammation -- Leptin and bone -- Leptin, cell cycle, and cancer -- Leptin, the autonomic nervous system, and hypertension -- Dynamic leptin secretion in obesity and diabetes -- Leptin therapy of congenital leptin deficiency -- Leptin therapy in people with normal leptin gene -- Leptin therapy in patients with lipodystrophy and syndromic insulin resistance -- Leptin therapy in women with hypothalamic amenorrhea -- Leptin therapy as a substitute for insulin replacement in experimental models of diabetes: Clinical implications in humans -- Novel combinatorial therapies involving leptin: Opportunities for

mechanistic advances and therapeutic translation in human diseases.

## Sommario/riassunto

Twenty years after its discovery, recombinant human leptin has been approved by the Food and Drug Administration for the treatment of patients with lipodystrophy. Beginning with a synthesis of the vast body of work on its discovery, dissection of mechanisms, and effects in experimental models, the focus of this book shifts to a consideration of the regulation and role of leptin in humans. The emphasis on human-level data is a unique feature of this book. The results of numerous studies indicate that leptin is indeed a regulated human hormone. Leptin provides a detailed account of the myriad physiological, hormonal, metabolic, immunological, mitogenic and inflammatory modulators and targets of leptin in a single volume. Next follows a comprehensive presentation of the therapeutic trials of recombinant leptin in patients with congenital leptin deficiency, lipodystrophy, hypothalamic amenorrhea, and other emerging areas, including leptin supplementation in leptin-replete subjects, leptin substitution for insulin in diabetic models, and novel combination regimens of leptin and other biogenic peptides. Unanswered questions and future directions in leptin research are highlighted in the Foreword by Dr. Jeffrey Friedman and throughout the volume. Identifying such questions helps direct research that could deepen understanding of the complex regulation of leptin under physiological and pathological conditions, a critical prerequisite to its rational deployment in the treatment of human disorders.