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Nota di contenuto	Chapter 1. Lysine demethylation in pathogenesis -- Chapter 2. Targeting the LSD1/KDM1 Family of Lysine Demethylases in Cancer and Other Human Diseases -- Chapter 3. KDM2 demethylases as drug targets -- Chapter 4. Role of histone demethylase KDM3 (JMJD1) in transcriptional regulation and cancer progression -- Chapter 5. KDM4 demethylases as drug targets -- Chapter 6. KDM5 lysine demethylases in pathogenesis, from basic science discovery to the clinic -- Chapter 7. Context-dependent functions of lysine demethylases in physiology and disease -- Chapter 8. KDM7 demethylases as drug targets.
Sommario/riassunto	This book provides a comprehensive summary of our current knowledge on lysine demethylases, a class of epigenetic regulators. It takes the reader on an exciting journey spanning the past two decades, starting from the initial discovery and characterization of these enzymes and leading up to the development of their small molecule modulators. These modulators have shown promise in clinical trials and hold great potential to improve patient outcomes. The book captures the progress made in this field and highlights the significant advancements that have paved the way for potential therapeutic applications. The book covers a wide range of topics, spanning both basic biology and clinical implications associated with lysine demethylases. It offers a comprehensive historical and conceptual

framework for the discovery and characterization of similar epigenetic enzymes or modulators. Chapter one serves as an introductory overview, providing insights into the general characteristics and functions of lysine demethylases. In subsequent chapters, specifically chapters two to eight, each major family of lysine demethylases is individually explored in depth. By providing in-depth insights into the functional aspects of these enzymes, the book allows readers to grasp their significance in regulating cellular processes and influencing pathogenesis. Moreover, the book goes beyond fundamental knowledge and also explores the development of diagnostic and therapeutic strategies related to lysine demethylases. It highlights the potential for utilizing these enzymes as therapeutic targets for the treatment of various diseases, including cancer and infectious diseases. Additionally, the book highlights future directions aimed at further unraveling the roles of lysine demethylases and translating these findings into the clinic.