Record Nr. UNINA9910437992803321 Natural Products and Cancer Drug Discovery [[electronic resource] /] / **Titolo** edited by Frank E. Koehn Pubbl/distr/stampa New York, NY:,: Springer New York:,: Imprint: Humana,, 2013 **ISBN** 1-283-84893-7 1-4614-4654-6 Edizione [1st ed. 2013.] Descrizione fisica 1 online resource (247 p.) Collana Cancer Drug Discovery and Development, , 2196-9906 Disciplina 616.99 616.99/406 616.99406 Soggetti Cancer research Oncology Pharmacology Cancer Research Oncology Pharmacology/Toxicology Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Nota di bibliografia Includes bibliographical references and index. Nota di contenuto Preface. The Impact of Natural Products upon Cancer Chemotherapy -- Identification and development of vascular disrupting agents: Natural products that interfere with tumor growth -- Discodermolide: Past, Present and Future -- HDAC Inhibitors and Other Histone Modifying Natural Products as Emerging Anticancer Agents -- Natural Product Cytotoxins As Payloads For Antibody Drug Conjugates --Natural Product Scaffolds in Cancer Therapy -- The Role of Genetic Engineering in Natural Product-based Anticancer Drug Discovery --Accessing Anti-Cancer Natural Products by Plant Cell Culture -- Natural Products as Tools for Discovering New Cancer Targets -- Index. Natural products- compounds derived from plants, microbes and Sommario/riassunto marine organisms, have been an unsurpassed source of cancer drugs in the modern era of drug discovery. The historical record is strong, but what is the current impact of natural products in the discovery and development of cancer drugs, and importantly what are the prospects

for natural products to be a valuable source of future agents? This volume attempts to address this question through a series of chapters authored by leading researchers in the field which effectively provide an in-depth view of several high impact areas of natural products cancer research. The volume begins with a focused analysis and rationale for the clinical success of current natural product anti-cancer drugs. The following chapters then describe new natural product based drugs in three rapidly evolving target classes and modalities- agents which target tumor vasculature, inhibitors of histone deacetylase and other histone modifying enzymes, and antibody drug conjugates. Subsequent chapters examine the central role of natural product chemical scaffolds in the genesis of new anti-cancer therapeutics- first via the powerful application of chemical synthesis, and then through the rapidly emerging fields of biosynthetic engineering and plant cell culture. The volume concludes with an assessment of the critical role that natural products continue to play in the search for new cancer drug targets. As the reader makes his or her way through the volume it may become clear that there is strong evidence that natural products will continue to exert a profound positive impact on cancer drug discovery.