

1. Record Nr.	UNINA9910293152703321
Titolo	Anticancer Plants: Clinical Trials and Nanotechnology : Volume 3 // edited by Mohd Sayeed Akhtar, Mallappa Kumara Swamy
Pubbl/distr/stampa	Singapore : , : Springer Nature Singapore : , : Imprint : Springer, , 2017
ISBN	981-10-8216-2
Edizione	[1st ed. 2017.]
Descrizione fisica	1 online resource (331 pages)
Disciplina	615.321
Soggetti	Plant physiology Proteins Agriculture Plant genetics Plant Physiology Protein Biochemistry Plant Genetics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Chapter 1. Cancer therapies: Current scenario, management and safety aspects -- Chapter 2. Nano-natural products as anticancer agents -- Chapter 3. Natural anticancer compounds and their derivatives in clinical trials -- Chapter 4. Insight approaches of medicinal plants for the discovery of anticancer drugs -- Chapter 5. Designing of natural cancerous drugs and their delivery system -- Chapter 6. Applications of nano based novel drug delivery systems in herbal medicine mediated cancer therapy -- Chapter 7. Toxicological and pharmacological use of anticancer compounds -- Chapter 8. Recent advancements in the clinical evaluation of plant derived anticancer compounds -- Chapter 9. Organosulfur compounds of garlic as potent chemotherapeutic agents against cancer -- Chapter 10. Relevance of traditional unani (Greco-Arab) System of medicine in cancer: An update -- Chapter 11. Signaling pathways of anticancer plants: Action and reaction.
Sommario/riassunto	Cancer is one of the leading causes of death in human beings. Though several synthetic medicines are used to treat cancer, they are largely inefficient and unsafe. In contrast, plants, which have been used for

medicinal purposes since time immemorial, have proved to be useful in fighting cancer, with natural compounds from plants and their derivatives offering safe and effective treatment and management for several types of cancer. Plants such as *Catharanthus roseus*, *Podophyllum peltatum*, *Taxus brevifolia*, *Camptotheca acuminata*, *Andrographis paniculata*, *Crateva nurvala*, *Croton tonkinensis*, *Oplopanax horridus* etc., are important source of chemotherapeutic compounds. These plants have proven their value in the treatment of cancer and various other infectious diseases, and several common anticancer compounds such as taxol, podophyllotoxins, camptothecin, vinblastine, vincristine, homoharringtonine etc. have been isolated and purified from these medicinal plants. Unfortunately, many of these anticancer plants have become endangered due to ruthless and irresponsible harvesting practices. Hence, there is a need to conserve these species and to propagate them on a large scale using plant tissue culture. Alternatively, plant cell tissue and organ culture biotechnology could be adopted to produce these anticancer compounds without the need for cultivation. A better grasp and continuing exploration of these isolated molecules and products could provide a powerful alternative means of reducing cancer risk. "Anticancer Plants: Volume 3, Clinical Trials and Nanotechnology" provides a timely review of concepts and experimental data on the application of anticancer plants and their compounds in clinical trials, and on the use of nanotechnology in cancer therapy.
