1. Record Nr. UNINA9910983320803321

Autore	Puranik Nidhi
Titolo	Nano-formulation of Dietary Phytochemicals for Cancer Management / / edited by Nidhi Puranik
Pubbl/distr/stampa	Singapore : , : Springer Nature Singapore : , : Imprint : Springer, , 2024
ISBN	9789819780051 9819780055
Edizione	[1st ed. 2024.]
Descrizione fisica	1 online resource (530 pages)
Disciplina	616.994
Soggetti	Cancer - Treatment Pharmacology Drug delivery systems Cancer Nanomedicine Natural products Biomaterials Cancer Therapy Drug Delivery Cancer Nanotechnology Natural Products
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Chapter 1. Diet, Nutrition, and Cancer: An Overview -- Chapter 2. Insight into the Role of dietary phytochemicals in cancer treatment and management -- Chapter 3. Role of dietary supplements in cancer prevention -- Chapter 4. Anti-cancerous potential of medicinal plants and constitutes -- Chapter 5. Natural Compounds and their effect on cancer stem cells -- Chapter 6. Pharmacological Mechanisms of Action of Phytochemicals in Cancer Prevention and Treatment -- Chapter 7. Phytochemical-based strategies in enhancing chemotherapy and radiotherapy efficacy in cancer treatment -- Chapter 8. Preclinical and clinical studies on the efficacy of phytochemicals in cancer treatment -- Chapter 9. Improvements in Phytochemical-based drug delivery

systems -- Chapter 10. Nanocarrier in cancer therapy: An overview -- Chapter 11. Nanocarrier-based drug delivery in cancer therapy -- Chapter 12. The potential use of plant-derived green nanomaterials in cancer therapy -- Chapter 13. Advantages of nanotechnology-based dosage forms for delivery of herbal drugs in cancer -- Chapter 14. Emerging Nano phytochemical-based sustained drug-delivery systems for cancer therapeutics.

Sommario/riassunto

This book covers various cancer chemotherapeutics, offering research-oriented overviews of phytochemical-based cancer treatments. It contrasts nano-formulated phytochemical delivery with conventional chemotherapy, introducing nanocarriers or bioengineering for poly-chemotherapy and phytochemicals as alternative treatments to reduce resistance. The text elaborates on the nano-formulation techniques and synthesis approaches of phytochemicals as drugs, the targeted drug delivery facilitated by nanocarriers, and subsequent mechanisms of drug release. Additionally, it examines the implications of nano-formulated phytochemicals in cancer therapeutics and their impact on cancer treatment and prevention. By enhancing bioavailability and improving functional qualities through nanoencapsulation, this innovative approach promises significant advancements in cancer therapy. Key concepts include dietary phytochemicals' role in various types of cancer chemotherapeutics, the pharmacological mechanisms of action in prevention and treatment, and strategies to enhance chemotherapy and radiotherapy efficacy. The book also presents preclinical and clinical studies on the efficacy of phytochemicals in cancer treatment. Additionally, it highlights improvements in drug delivery systems using nanotechnology-based dosage forms for herbal drugs. The content is designed for professionals involved in drug development, including chemists, pharmacists, biologists, biotechnologists, industrialists, nanotechnologists, microbiologists, economists, and all disciplines related to cancer treatment and phytochemical-based drug development. Academic students, scientists, and researchers at universities, institutes, hospitals, botanical institutes, pharmaceutical industries, government organizations, and NGOs will find invaluable insights into the application of phytochemical drugs in cancer treatment. By providing a detailed examination of cutting-edge research on nano-formulated phytochemicals for cancer therapy, this book invites readers to rethink traditional approaches to chemotherapy and explore innovative solutions that promise better outcomes for patients worldwide.