1. Record Nr. UNINA9910797589003321 Mechanism of the anticancer effect of phytochemicals / / edited by S. **Titolo** Zahra Bathaie, Department of Clinical Biochemistry, Tarbiat Modares University Tehran, Iran, Fuyuhiko Tamanoi, Department of Microbiology, Immunology and Molecular Genetics Jonsson Comprehensive Cancer Center Molecular Biology Institue University of California Los Angeles, California, USA Waltham, MA:,: Elsevier Science,, 2015 Pubbl/distr/stampa **ISBN** 0-12-803877-2 0-12-803876-4 Edizione [First edition.] 1 online resource (285 p.) Descrizione fisica Collana Enzymes, , 1874-6047; ; volume 37 616.994061 Disciplina Cancer - Chemoprevention Soggetti Cancer - Diet therapy Phytochemicals - Therapeutic use 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 indexes. Front Cover; Mechanism of the Anticancer Effect of Phytochemicals; Nota di contenuto Copyright; Contents; Contributors; Preface; Chapter One: How Phytochemicals Prevent Chemical Carcinogens and/or Suppress Tumor Growth?; 1. Introduction; 2. Phytochemicals Application in Chemoprevention Strategies; 2.1. Blocking Initiation/Reversing Promotion; 2.2. Activating Phase II Detoxifying Enzymes; 2.3. Prooxidant/Antioxidant Activities; 2.4. Protection Against Radiation; 2.5. Alteration in Signaling Pathways; 2.6. Effect on Cell-Cell Adhesion Machinery; 2.7. Induction of Epigenetic Changes 3. Phytochemicals Usage as Chemotherapeutic3.1. Inhibition of Enzymes: 3.1.1. Inhibition of Topoisomerases I or II; 3.1.2. Effect on Telomerase; 3.1.3. Other Enzymes; 3.2. Direct Binding to Biomacromolecules; 3.3. Epigenetic Alteration/Chromatin Modification; 3.3.1. Histone Modifications: Acetylation/Deacetylation and Methylation/Demethylation; 3.3.2. DNA Methylation Status; 3.4. RNA Modulation; 3.5. Autophagy and UPR68; 3.6. Apoptosis Induction; 3.7.

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## Sommario/riassunto

Volume 37 will provide details on the major chemical constituents of medicinal plants and their mechanism of action as the anticancer compounds. This special issue, in addition to the previous volume (volume 36 of the Enzyme series was on the topic of Natural Products and Cancer Signaling Targets: Isoprenoids, Polyphenols and Flavonoids), will highlight the significant advance made in the field in elucidating mechanisms of anticancer effect of the major phytochemicals. Key features: \* Contributions from leading authorities \* Informs and updates on all the latest developments in the field