

1. Record Nr.	UNINA9910298628003321
Autore	Talapatra Sunil Kumar
Titolo	Chemistry of Plant Natural Products : Stereochemistry, Conformation, Synthesis, Biology, and Medicine // by Sunil Kumar Talapatra, Bani Talapatra
Pubbl/distr/stampa	Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 2015
ISBN	3-642-45410-0
Edizione	[1st ed. 2015.]
Descrizione fisica	1 online resource (1196 p.)
Disciplina	547.7
Soggetti	Organic chemistry Medicinal chemistry Pharmacology Biochemistry Pharmacy Organic Chemistry Medicinal Chemistry Pharmacology/Toxicology Biochemistry, general
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.
Nota di contenuto	Introduction: enzymes, cofactors/coenzymes, primary and secondary metabolites, natural products and their functions, plant chemical ecology, biosynthesis, metabolic pathways -- Fundamental Stereochemical Concepts and Nomenclatures -- Important Biological Events Occurring in Plants -- Natural Products Chemistry -- Biosynthesis of Terpenoids, The Oldest Natural Products -- Monoterpenoids (C10) -- Sesquiterpenoids (C15) -- Diterpenoids (C20) -- Sesterpenoids (C25) -- Triterpenes -- Steroids: Cholesterol and Other Phytosterols -- Carotenoids-GGPP Derived Polyisoprenoid (C40) Coloring Pigments -- Shikimic Acid Pathway -- Polyketide Pathway, Biosynthesis of Diverse Clases of Aromatic Compounds -- Alkaloids: General Introduction -- Hygrine, Hygroline and Cuscohygrine (Ornithine-Derived Alkaloids) -- Coniine, Conhydrine and

Pseudoconhydrine -- Nicotine -- Atropine [(±)-Hyoscyamine] and Cocaine -- Ephedrine and Pseudoephedrine -- Pilocarpine and Isopilocarpine -- Papaverine -- Morphine, Codeine, Thebaine -- Colchicine -- Quinine: Cinchona Alkaloids -- Reserpine -- Strychnine, an Alkaloid with Heptacyclic Dense Molecular Scaffold -- Dimeric Indole Alkaloids: Vinblastine (Vincaloeukoblastine), Vinorelbine (Leurocristine) and Their Derivatives -- Some More Alkaloids Having Diverse Skeletal Patterns -- Important Outcomes of Chemical Studies on Natural Products -- Chiral Recognition in Biological Systems and Natural Chiral Auxiliaries -- Natural Products in the Parlor of Pharmaceuticals -- Organic Phytonutrients and Their Functions -- Appendices. .

Sommario/riassunto

Aimed at advanced undergraduate and graduate students and researchers working with natural products, Professors Sunil and Bani Talapatra provide a highly accessible compilation describing all aspects of plant natural products. Beginning with a general introduction to set the context, the authors then go on to carefully detail nomenclature, occurrence, isolation, detection, structure elucidation (by both degradation and spectroscopic techniques) stereochemistry, conformation, synthesis, biosynthesis, biological activity and commercial applications of the most important natural products of plant origin. Each chapter also includes detailed references (with titles) and a list of recommended books for additional study making this outstanding treatise a useful resource for teachers of chemistry and researchers working in universities, research institutes and industry.
