Progress in Biochemistry and Biotechnology

NEW HORIZONS IN NATURAL COMPOUND RESEARCH



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About the book

Description

New Horizons in Natural Compound Research provides the latest updates in natural compound research (plant, microbes, algae, fungi) and their novel applications in health, agriculture and environment. The book gives recent advances in the extraction of natural compounds, cutting-edge approaches for natural compound purifications, and emerging trends in natural compound screening and identification. In addition, it provides a detailed explanation of the databases and libraries of natural compounds, as well as their significance. Sections focus on research and multidisciplinary practical techniques of natural product research, encouraging young scientists to pursue unique research while also generating strong research ideas.

From a future perspective, this book acts as a guide to identify potential areas and new research opportunities in the field of natural products and their service towards human beings, animals and the environment.

Key Features

- Provides a one-stop solution for concepts, cutting-edge techniques, methods, and novel applications of natural products in health and the environment
- Focuses on current gaps in natural product research, as well as methodologies and techniques to assist researchers in resolving existing challenges and speeding up t pace of drug discovery from natural sources
- Highlights new avenues of natural product research
- Contains contributions from well-experienced researchers from academia, researc institutes and top-notch young scientists from industry

Details

ISBN	Language	Published	Copyright
978-0-443-15232-0	English	2023	Copyright © 2023 Elsevier Inc. All rights reserved.
Imprint Academic Press	DOI https://doi.org/10.1016/C2022-0-00460-		
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New Horizons in Natural Compound Research



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2023, Pages 75-132

Chapter 6 - Diversity of chemical skeletons: a practical strategy to benefit

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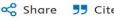
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Available online 21 April 2023, Version of Record 21 April 2023.

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https://doi.org/10.1016/B978-0-443-15232-0.00023-0 7

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Abstract

Since ancient times, human civilization has grappled with diseases. The remedies employed were animal products, inorganic materials, and herbs.

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particular ailment, the structure of the phytochemical became relevant. Plants produce thousands of chemicals, very few of which are commercialized as drugs. The first step in the search for an active component is to test the biological activity of the plant extract. The bio-guided fractionation approach is critical to future success. The development of high throughput screening (HTS) helped to simultaneously test multiple extracts or compounds. The high demand for chemicals from pharma companies led to the development of combinatorial synthesis. Huge libraries of compounds prepared by combinatorial synthesis are now available. In this chapter, we presented a picture of the structural diversity of chemicals found in nature, as well as their modifications and known applications. This should assist readers in choosing chemical skeletons when designing in silico medicines.