



Advances in Phytomedicine: Ethnomedicine and Drug Discovery

Edited by Maurice M. Iwu and Jacqueline C. Wootton, Volume 1, Elsevier, 2002, 336 pages in hardback, US\$170, ISBN 0-444-50852-X

The use of medicinal herbs and herbal medicines is an age-old tradition and the recent progress in modern therapeutics has stimulated the use of natural products throughout the world. The educated public and health professionals have enormous interests in the medicinal uses of herbs but, unfortunately, there is a great deal of confusion about their identification, effectivity, therapeutic doses, toxicity, standardization and regulation.

The first volume of *Advances in Phytomedicine* is a compilation of 25 papers, which provides a unique understanding between ethnomedicinal approaches to new drug discovery, and modern advances in molecular, technological and clinical sciences that help to transform the age-old medicines into modern drugs. The series is an outcome of an international conference on *Ethnomedicine and Drug Discovery*, held in Silver Spring (MD, USA), 3–5 November 1999.

The authors represent a rare collection of contributors from eminent scholars and experts in their respective fields and the editors are the masters of the discipline. Maurice M. Iwu's discussion clarifies the conceptual ambiguities regarding ethnomedicinal and ethnobotanical research in the *Introduction*. Chapter 1 (Cragg, G. and Newman, D.J.) represents the rich history of drugs developed from natural sources through isolation of active compounds and the vast potential of the

world's unexplored biodiversity for future research. The second chapter, by A.L. Harvey, emphasizes the more effective screening process and in the subsequent chapter, T.J.S. Carlson suggests the multidisciplinary approach of ethnobotanical research for developing bioactive compounds.

Wootton talks about a recent interactive herbal database (Ch. 4) and the SARs of drugs from natural sources are presented in Chapter 5. Later in the volume, K. Moran provides an overview of the convention of biodiversity (Ch. 16), and the underlying legal and ethical issues and practical aspects of intellectual property rights (IPR), with respect to traditional medicine, are discussed in three separate chapters (Ch. 7, 18, 19).

The problem of sustainability and conservation and the role of bioprospecting in economic development and regional cooperation in Southern African context are also discussed in three separate chapters (Ch. 8, 9, 13). The spiritual and cosmological belief in North American ethnomedicine is described by J.E. Noé, while J.I. Okogun discussed the Nigerian contribution to developing an ethnomedicinal drug for sickle cell anemia (Chs 10 and 12).

A chapter on the experience of antimalarial and antiparasitic drug development from traditional sources by the Walter Reed Army Institute (<http://wrair-www.army.mil/>; Ch. 14) is a valuable addition and Chapter 11 represents the different aspects of antipsychotic drugs obtained from plant sources. L. Meserole gives an interesting insight on the traditional diets, health foods, dietary supplements and their adaptogenic and antiaging abilities in Chapter 15. By contrast, Chapter 17 provides a unique case study with *Garcinia cola*, an adaptogenic West African species to develop a modern ethnobotanical product.

A primary healthcare model developed by Obijiofor for integrating the Western biomedicine and traditional ethnomedicine of South Eastern Nigeria is presented in Chapter 6. Integrative approaches to modern medicine involve a distinction between pharmaceutical drugs and dietary supplements and their regulation. The European and Nigerian regulatory situations are described in Chapters 20 and 21, respectively. Although the most sensitive aspect of traditional medicine is the standardization of raw materials, quality control and its dosage determination is also described in a later chapter (Ch. 22).

The accomplishments and challenges of the Belize Ethnobotany Project (<http://www.nybg.org/bsci/belize/index.html>), a unique model for evaluation of forest based medicines is appended in Chapter 23; and in the penultimate chapter the authors exemplify a case study of the collaboration between Shaman Pharmaceuticals (<http://www.shaman.com>) and Bugunda Traditional Healers Association for antidiabetic drug development from ethnomedicine. Iwu describes the strength and limitations of drug discovery from ethnomedicine in the concluding paper.

In general, the book is a snapshot of different areas of research on the role of phytochemicals in health, written in a comprehensive format, and is useful for picking up tidbits of knowledge or ideas for research. Any of these subjects could be the basis of an entire book. This volume is highly recommended and the need to conserve and manage the immense biological and cultural diversity is magnified by each page of this book.

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