

the book cover-to-cover rather disjointed, but most of the individual chapters are well-written, interesting, and worthy of careful review.

Eight chapters present examples of bioassay-directed isolation of novel natural products from plants. The range of bioassays employed include specific target site assays, microbial growth assays, and whole insect tests. These chapters vary considerably in depth of information provided on isolation methods and in level of documentation on structure assignments. While a number of chapters touch on elements of discovery strategy, papers by researchers at Xenova, Shaman Pharmaceuticals, and Phytera document their experiences with plant secondary metabolite expression and testing from a high-altitude, strategic perspective. These chapters, along with the overview of the NCI experience in screening natural products provided by Cragg et al., help define the relative merits of contrasting approaches to drug discovery from plants.

Transformations involving semisynthetic modifications and biotransformations of plant- and microbial-derived natural products are described in three chapters. The examples presented illustrate the relative applicability of each method to selected specific chemical modifications. Single chapters are presented on the biosynthesis of tetrapyrroles and on computer database design for dereplication. The remaining chapters address various commercial considerations for plant-derived natural products and their genes for production. Collectively, these proceedings cover a range of topics that will make this a useful reference to principal researchers in the field. The lack of comprehensive treatment of any single topic limits its cover-to-cover readability.

Dr. Cliff Gerwick

Natural Products Discovery
DowElanco
9330 Zionsville Road
Indianapolis, Indiana 46268-1054

NP970101J

S0163-3864(97)00101-8

International Collation of Traditional and Folk Medicine: Northeast Asia. Part 1. By Takeatsu Kimura. World Scientific Publishing Co., Inc., River Edge, NJ. 1996. 221 pp. 16.5 × 24.5 cm. \$48.00. ISBN 981022589X.

This book is a comprehensive and timely contribution to the scientific understanding of traditional medicine and plant use in China, Hong Kong, Japan, and Korea. The book was specifically designed to assist phytochemists in identifying plant species that may be worth investigating. The information on each plant includes botanical information, local names of the "drug" or formulation, how it is administered or used, the medical application in each country, as well as some information on contraindications and side effects. There are also some literature citations on the chemistry and pharmacology of the species. The book includes 200 plants and is very well organized and presented. The index includes an alphabetical list of the plant genera dis-

cussed. There is also a medical indication index that is very useful. Lastly, there is a Chinese character index, which makes the book useful to non-English speaking scientists. In general, this is a compilation that is extremely useful for the growing international interest in traditional, herbal, and phytomedicine. The authors are highly qualified with diverse backgrounds including pharmacologists, physicians, and specialists in medicinal plants of China. This book will be extremely useful to scientists and individuals who are not familiar or facile with the literature on medicinal plants of northeast Asia.

There are a few inconsistencies in the way information is presented. Most plants list the specific plant part and then give all the information associated with that plant part. The compounds listed under the area of chemistry do not indicate the plant part from which the compounds were isolated. It would have been useful to have included a distinction of what compounds had come from which plant parts. In the pharmacology section the plant part is mentioned. There are also some unusual aspects of the dates and breadth of literature citations. As an example, *Ginkgo biloba* is a well-studied plant. There are, however, only 25 literature citations associated with this plant and the most recent one of those citations is 1993. The majority of them are late 1980s and early 1990s. This may have to do with the editorial production process, but there has been a tremendous amount of literature generated on this species in the last several decades. A reader would not necessarily encounter or be aware of the extensive amount of research that has been associated with this species.

The most frequently listed contraindication is pregnancy. There is, however, no information, citation, or way to ascertain for what reason this particular plant would have contraindication for pregnancy. One can conjecture on some of the pharmacology sections or even some of the potential compounds present, but it is conjecture. Considering the focus of the book on traditional and folk medicine, it would have been useful to add some qualification of these contraindications.

The most fascinating and complex section focuses on each plant and its medicinal uses. The uses listed are given in western medical terminology and western medical therapeutic applications. In this area, we find the most challenging aspect of cross-cultural medicinal plant studies. There is a tremendous diversity of cultural interpretations of disease and illness. Many researchers are aware of the complexity and sophistication of the Chinese medical system. The reader wonders how much of the true complex medical application of a plant has been truncated or forced into a Western medical concept to enable the book to be of use. This of course goes to the heart of the matter of indigenous or traditional medical systems. I would urge readers involved in this type of research to look at the primary literature wherever possible and involve a Western-trained physician to look at the descriptions of uses.

The other key issue that this publication raises is the use of the term "folk medicine". This reviewer would strongly urge subsequent publications to use the term traditional medicine and to reduce the application of the term "folk". One of the reasons is that this term may

immediately downgrade or diminish the perception of the potential efficacy, sophistication, or utilization of these plants.

The last aspect of concern was the section on processing and administration. There is a description of a plant part being utilized and how it is dried, but no indication of the quantity of plant or dose. Without that information one has little sense of potency, potential toxicity, or dose range by which materials should or could be administered for scientific studies in other research models.

The above-noted concerns are minor compared to the overall utility of this extremely valuable synthesis of information on plants of importance throughout temperate North East Asian traditional medicine. This is volume number one of a four volume series that is an extremely important contribution to the area of phytochemistry, traditional medicine, and plant ethnop-

armacology. This book will undoubtedly become an essential part of all institutional library collections on plant medicine of North East Asia. The authors and UNESCO are to be complimented for this work. It would be ideal for other regions and countries of the world to produce similar volumes in order to catalog the biocultural diversity of medicinal plant use on the planet. There is an urgency to this task considering the loss of habitat which has and is taking place throughout the planet. The importance of these plants in primary health care and as potential sources of discovery for pharmaceutical/phytomedicines cannot be overstated.

Dr. Steven R. King

Shaman Pharmaceuticals

South San Francisco, California 94080-4812

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S0163-3864(97)00102-X