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Book review

Fundamentals of pharmacognosy and phytotherapy Michael Heinrich, Joanne Barnes, Simon Gibbons, Elizabeth Williamson, . Fundamentals of Pharmacognosy and Phytotherapy, Churchill Livingstone, 2003, ISBN 0-443-07132-2, October 2003. p. 294. £24.99

This book follows decades of personal and diverse research in all areas of the subject matter by the authors, and this is very evident from the wealth of information and quality of writing. Do not for one moment think that this book is of the same style and covers the same ground as a number of other texts in the area.

The book is very sensibly and clearly laid out, and consists of two main parts, firstly the Fundamentals of Pharmacognosy, and secondly, Important Natural Products and Phytomedicines used in Pharmacy and Medicine. The first part, Part A, deals with the basic scientific principles underpinning the use of medicinal plants, and extracts and single compounds isolated from them. This outlines the scale of the use of medicinal plants, and has a very interesting chapter on the history of pharmacognosy, covering evidence documented in a number of civilisations, continuing up to and including the developments in the 20th century. Next follow three chapters covering Basic Plant Biology, describing morphology and systematics, an interesting and detailed chapter discussing plant families yielding important plant medicines, a subject not usually dealt with in comparable texts, and finally a chapter covering the background of ethnobotany and the search and validation of indigenous, orally distributed medical systems through to the development of pharmaceutical medicines. A section covering Natural Product Chemistry contains a chapter of the same title, which gives a detailed coverage of the most important chemical types of natural products, quoting many of the most important compounds found in medicinal plants. Next a chapter discussing the preparation, extraction and analytical methods used in structure elucidation of natural products covers the major techniques used, and the industrial approach to natural product drug lead discovery. The last chapter in this section gives detailed information about some of the most important anticancer natural products, including those of plant, marine and microbial origin. The next section entitled Plant Extract Derived Pharmaceuticals and Nutraceuticals has a chapter covering production, standardisation and quality control, which includes a number of specific examples, as well as some of the major quantitative techniques required in quality control. A last chapter in this section discusses Characteristics of Phytomedicines, including synergy, polyvalent action and toxicity. The fifth section entitled Medicinal Plants in Selected Healthcare Systems contains a chapter discussing Traditional Chinese medicine, Ayurveda and Traditional African medical systems, and another on Complementary/Alternative Medicine which covers medical herbalism, homoeopathy, anthroposophical medicine, aromatherapy, and flower remedy therapy, and a sufficiently detailed outline of the regulation of herbal medicine in the UK. Both of these chapters include much useful information concerning the underlying principles, and contain information regarding diagnosis, treatment, and safety of the particular scheme of medicine. The final section, Important Natural Products and Phytomedicines used in Pharmacy and Medicine consists of chapters devoted to the major plant-derived medicines in each of twelve therapeutic categories. Clever and appropriate use of symbols to denote inclusion of medicines in European Pharmacopoeia monographs allows readers to instantly recognise those products of officially recognised importance. This patient, or disease, orientated approach produces a much more practical application of the knowledge contained therein. Throughout the book there is sensible balance of both good quality reviews and original research references in the References and Further Reading sections at the end of each individual chapter.

The book does cover most of the subjects and issues expected to fall within the scope of the title, but I personally would have liked to see a chapter including the techniques and applications of plant tissue culture in the field of medicinal plant exploitation. The Forward and the Epilogue are written by two of the world's internationally recognised researchers into the medicinal effects of plant medicines, Douglas Kinghorn and David Phillipson, respectively. Douglas Kinghorn effectively reviews the text, highlighting its importance in view of increased usage, and awareness by the general public and regulatory authorities of medicinal plants. He notes that this is the first new book on the subject matter to be published in the 21st century, and likely to be useful in the primary and continuing education of a range of healthcare professionals.

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In addition to the main text, the book has a very useful Botanical Glossary, and a comprehensive Index. As a pharmacognocist I recognise the book as being useful not solely in the areas of Pharmacognosy and Phytotherapy, but it also contains much useful information in areas of pharmaceutical analysis and practice. I concur with Douglas Kinghorn's view on its readership, but also consider it would be useful for complementary therapists and lay people, and to anyone researching the general area. Overall, this book is a pleasure to read, and contains sufficient accurate chemical structures throughout to make both interesting and highly informative reading, with a very limited number of typographical errors. Looking at its current competitors in the general subject area, it represents excellent value for money, at £24.99.

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