



BOOK REVIEWS

Herbal Medicines: A Guide for Health-Care Professionals, by C. A. NEWALL, L. A. ANDERSON and J. D. PHILLIPSON, The Pharmaceutical Press, London, 1996, 296 pp., £30.00. ISBN 0-85369-289-0.

Here is yet another book on British medicinal plants following the tradition set by Mrs M. Grieve (*A Modern Herbal*) and Potter's *New Cyclopedia of Botanical Drugs*. This one is different in that there is little on the plants themselves (no colour plates or drawings) with the concentration on their phytochemistry, pharmaceutical actions, side effects and herbal uses. It covers 141 plants, which are licensed for sale as herbal remedies in the U.K. In effect it includes most plant drugs that are used elsewhere in Europe and there are a number of more exotic taxa (e.g. the American *Passiflora incarnata* and the Asian *Panax ginseng*). One of the most useful features is the final section to each entry entitled *pharmaceutical Comment*. This summarizes what is known of the active principles and draws attention to any toxic constituents. Each entry is followed by an extensive bibliography to both the phytochemical and pharmaceutical literature. There are also a number of appendices listing those herbs with diuretic activity, those that are laxative, hypotensive, anticoagulant and so on.

In Britain there has long been a hang-up about the taking of herbal extracts, largely because the medical fraternity in the past have frowned on the use of green medicines. As the authors point out in their foreword it is remarkable that the demand for these herbs has increased so much in recent years, in fact enough to justify the production of the present book. One might even say today that it is the popular approach at least for chronic complaints. There may be just as many

people taking *Ginkgo* pills to counteract memory loss in Britain as there are in other parts of Europe.

In sampling the various entries in this book one is struck by the lack of solid knowledge of the active principles present. It is not often clear whether one ingredient is producing the pharmaceutical effect or whether a mixture of constituents is responsible. With feverfew, for example, which has come into prominence recently for treating migraine, it is still not entirely clear how far the presence of parthenolide is responsible for its beneficial effects. We have isolated the major flavonol tanetin at Reading and shown, together with Dr J. R. S. Hoult at King's College, that it too has pharmacological properties. Further work is clearly needed to see whether it has a role in treating migraine.

With many plant herbs one has the impression either that the plant should be avoided because of some toxic component (e.g. a pyrrolizidine alkaloid as in comfrey) or else that it is essentially innocuous and probably lacks any useful medicinal property. In this latter category I suggest must fall the use of cowslip flowers and couch grass. One of the many benefits accruing from this publication might be the elimination from the total herbal repertoire of some of the more dubious preparations. It is clearly successful in its aim in providing professional advice on the rational and safe use of herbal medicine. It will be useful to a wide audience including phytochemists in indicating the present state of knowledge concerning the active components of British (and European) drug plants.

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Phytochemistry of Medicinal Plants, edited by J. T. ARNASON, R. MATA and J. T. ROMEO, Volume 29 in the series *Recent Advances in Phytochemistry*, Plenum Press, New York, 1995, 364 pp. £89.50. ISBN 0-306-45181-6.

The resurgence of interest worldwide in the chemistry of medicinally useful drugs from plant sources has spawned a number of new publications. This latest one stems from a Phytochemical Society meeting held in Mexico in August 1994 and shows that North American research is discovering new leads in this very competitive field. The Mexican contribution to the volume is a significant one and includes papers on the bioactive

natural products of traditionally used Mexican plants and root culture as a source of valuable secondary metabolites. There are also chapters on the biodiversity of the Mexican flora and on the neoclerodane diterpenoids of Mexican *Salvia* species.

Among the United States' contributions is an important review by J. L. McLaughlin and coworkers on the Annonaceae acetogenins. It is one of the first comprehensive reviews of these fatty acid-derived lactones, which make up more than 160 compounds. Their isolation and structural analysis are described and also their special biological properties as antitumour agents. For example, in one *in vivo* test, the acetogenin bullaticin was 300 times more potent than taxol in

controlling a particular leukaemia in mice. A range of other plant anticancer agents are covered in two other chapters, one by J. M. Pezzuto from Chicago and the other by M. R. Boyd and his team from the National Cancer Institute in Maryland. The anticancer properties of plant substances also feature in a chapter on sesquiterpene lactones by T. Arnason and coworkers, who compare cytotoxicity with serotonin release inhibition in a structure-activity relationship analysis.

There is a single chapter from South America on the Chilean medicinal plants. H. M. Niemeyer points to the considerable unexploited wealth of biologically active components in these plants, illustrating his thesis with reference to insecticidal constituents. The three remaining chapters come from Europe and there is a welcome chapter by H. Wagner from Munich on immuno-

stimulants and adaptogens in plants, while K. Hostettmann from Lausanne describes the application of LC-MS to the investigation of several well-known medicinal plants. The third chapter in this group is by A. J. Vlietinck from Belgium, who considers wound-healing drugs (e.g. those from Dragon's blood) and new antiviral agents. The volume includes a wealth of new information on medicinal plants and their phytochemistry, from many different parts of the American continent. It is a worthy addition to the PSNA Recent Advances Series and should be included in all plant libraries.

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