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BOOK REVIEWS

New Natural Products and Plant Drugs with Pharmacological, Biological or Therapeutical Activity: edited by H. WAGNER and P. WOLFF. Springer-Verlag, Berlin, 1977. 286 pp. DM 67. US $29.50.

Each year the structures of several thousand new natural substances are reported in this and related journals and yet to what purpose? Even today the structural elucidation of new plant products is often carried out with little thought to the possible biological activity tied up in these novel molecules. There are, of course, a number of research programmes seeking anti-tumor agents in plant extracts and so on but even here there is a sad neglect in the sense that new structures found are not really tested for any other activity apart from that of the screen. Many of the reasons for the apparent lack of interest in higher plants as a source of new drugs are highlighted by Farnsworth and Bingel in the opening chapter of this symposium volume. These two authors stress the potential of new plant drugs as therapeutic agents in medicine and it is to be hoped that their important review will be widely read and its challenge met by those in charge of the funding of the appropriate phytochemical and pharmaceutical research.

The case for continued search for biological activity among plant products is, of course, based mainly on the successes of the past. Most of the remaining chapters in this symposium volume are concerned with describing the enormous variety of biological activities that have been discovered in molecules belonging to each of the major classes of natural compounds. Thus, G. A. Cordell summarizes new data on anti-tumor and cytotoxic agents from plants while C. H. Tamm considers recent advances in antibiotic research. The therapeutic value of alkaloids, lower terpenoids and saponins are then discussed by H. Achenbach, O. Sticher and S. Shibata, respectively. The considerable anti-cancer and other activity tied up in natural dimers such as the lignan podophyllotoxin are outlined in separate chapters by A. E. Schwarting and O. R. Gottlieb. The flavanolignans, which have been worked on especially by the senior editor of this book, receive special mention in a chapter by G. Vogel on natural substances with effects on the liver. This author points out the unique prophylactic importance of these agents in controlling liver diseases. Indian plants have been an especially rich source of new plant drugs over the last 30 years and recent investigations on Indian medicinal plants are summarized here by T. R. Govindachari. The final contribution covers the modification of natural substances in modern drug synthesis and is by P. W. Thies.

The book is excellently produced with many references, formulae and figures and in summary provides an invaluable up-to-date guide to new natural products with application in medicine. It should be read with interest and profit by a wide audience.

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Production of Natural Compounds by Cell Culture Methods: edited by A. W. ALFERMANN and E. REINHARD. Gesellschaft für Strahlen- und Umweltforschung, D. 8000 München, Josephspitalstrasse 15, W. Germany, 1978. 361 pp. No charge.

This volume contains the proceedings of an International Symposium on plant cell culture held in September 1977 at Tübingen, Germany on the occasion of the 500th Anniversary of the Eberhard Karls University of that city. Although many of the papers are not surprisingly by German authors, the volume includes contributions from India, Ireland and Israel and has a truly international flavour. As indicated in the title, emphasis is given to secondary plant constituents and there are a series of useful contributions on culturing cells of *Catharanthus, Digitalis, Galium* and *Mentha* for the production of alkaloids or other products. Some of the contents have appeared elsewhere but the volume does have the value of up-to-dateness, since it was produced within six months of the meeting. It will be of interest to all phytochemists working with tissue cultures. It may be obtained free of charge on application to the publishers, whose address is given above.

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