Books of Interest

Echinacea. The Genus Echinacea. Medicinal and Aromatic Plants—Industrial Profiles. Edited by Sandra Carol Miller and He-ci Yu. CRC Press, Boca Raton, FL. 2004. xi + 276 pp. 18.5 × 26 cm. ISBN 0415288282. $84.95.

Cancer Chemoprevention. Volume I. Promising Cancer Chemopreventive Agents. Edited by Gary J. Kelloff, Ernest T. Hawk, and Caroline C. Sigman. Humana Press, Totawa, NJ. 2004. xvi + 697 pp. 22 × 29 cm. ISBN 1-58829-076-X. $195.00.

Illustrated Pocket Dictionary of Chromatography. By Paul C. Sadek. Wiley-Interscience, Hoboken, NJ. 2004. vii + 227 pp. 13 × 20.5 cm. ISBN 0471200212 (paperback). $54.95.

Synthesis of Biaryls. By Ivica Cepanec. Elsevier, Amsterdam, The Netherlands. 2004. xiii + 349 pp. 17 × 24.5 cm. ISBN 0080444121. $140.00.

Pharmaceutical Excipients 2004. Single User Version. CD/ROM Version of Handbook of Pharmaceutical Excipients. Edited by Raymond C. Rowe, Paul J. Sheskey, and Siân C. Owen. American Pharmacists Association, Washington, DC, and Pharmaceutical Press, London, U.K. 2004. ISBN 1-58212-064-1. $299.95.

Drug Metabolism and Transport. Molecular Methods and Mechanisms. Edited by Lawrence H. Lash. Humana Press, Totowa, NJ. 2004. x + 387 pp. 15.5 × 23 cm. ISBN 1-588-29-324-6. $125.00.

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Book Reviews

Optimization in Drug Discovery. In Vitro Methods. Edited by Zhengyin Yan and Gary W. Caldwell. Humana Press, Totowa, NJ. 2004. xv + 418 pp. 16 × 23.5 cm. ISBN 1-588-29-332-7. $135.00.

New instrumentation and methodologies are driving forces in the advancement of science. Given the rapidly growing number of laboratory techniques in biomedical research, there are numerous books and serial publications that chronicle their development and provide practical information on their establishment and exploitation. The present volume, Optimization in Drug Discovery, is a recent addition to this genre. The fourth volume in a series on methods in pharmacology and toxicology edited by Y. James Kang, this offering focuses on techniques used to determine whether a new chemical entity has the physicochemical and potential pharmacokinetic properties required of a drug candidate. The title notwithstanding, there is no discussion of screening techniques for identifying new chemical entities. Rather, the work is devoted to methods employed for characterizing leads that have already displayed the desired pharmacodynamic properties.

The target audience is the scientist engaged in ADME studies. In all cases the basic principles of the assay are discussed, supplies listed, and detailed protocols provided. Topics covered include in vitro assays for defining and quantifying physicochemical properties, such as pK_a and solubility, absorption characteristics, plasma protein binding, metabolism, the potential for drug−drug interactions, safety, and genotoxicity. Many of the authors, who are drawn from both industry and academia, played significant roles in developing these techniques, such as Parkinson and the human hepatocyte assay for drug metabolism, and Finlayson and Sharkey and the [^{3}H]dofetilide HERO binding assay.

Each of the 25 chapters ends with a listing of miscellaneous information, such as the rationale for selecting certain cell lines or reagents or practical advice on experimental details. Results are provided to assist in assay validation. The literature citations suggest the chapters were written in 2003.

Optimization in Drug Discovery is a laboratory manual of contemporary in vitro assays used to aid in the characterization of a potential drug candidate. The information is presented in a clear, concise, and uniform manner. Those interested in the early stages of the drug discovery and development process will find this a valuable resource for helping to identify the most promising clinical candidates from a series of chemical leads.

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