

BOOK REVIEWS

The International Biotechnology Directory 1984: Products, Companies, Research and Organizations

J. COOMBS

The Nature Press, New York, 1983, \$100.00

This hardcover book is divided into three parts: international organizations and information services; national profiles; and the largest part, noncommercial organizations and commercial companies. In addition, there is a products research and service guide that provides information about suppliers. The Directory primarily covers North America, Western Europe, and Japan. Companies are listed alphabetically within country listings. The US listing includes 174 noncommercial organizations (mostly universities) and approximately 700 commercial entries. The UK listing includes 85 noncommercial and about 340 commercial entries. Each entry consists of name, mailing address, telephone and telex numbers, and a brief description of the organization's activities.

Limited sampling suggests the entries are accurate and timely. This is the only directory I know of that covers biotechnology on such an international basis. The cost is high, but less than that of any other directory. This book will be required by libraries and business organizations dealing with biotechnology.

W. Scott Ramsey
Corning Glass Works
Corning, New York 14830

Information Sources in Biotechnology

A. CRAFTS-LIGHTY

The Nature Press, New York, 1983, \$80.00

This softcover book by Celltech Ltd.'s head of information services will be of use to librarians, market researchers, journalists, and, in general, those who wish a guide to the vast biotechnology literature. Scientists doing research will find little of interest here.

The biotechnology industry has benefited greatly from the computer revolution and data bases are covered in some detail. There are lists of research journals, textbooks, general and specialized books, and conference publications, as well as chapters describing the technology, trade and review publications, patents, markets, directories, and organizations. The final chapter describes the results of a rather dubious survey based on 30 replies to questionnaires sent to an arbitrarily chosen list of 254 organizations. It would have been useful if a suggested list of journals and books for libraries serving various-sized organizations had been provided. As a former researcher, Dr. Crafts-Lighty knows that a scientist needs access to relatively few such journals and reference books.

W. Scott Ramsey
Corning Glass Works
Corning, NY 14830

Immunohistochemistry

Edited by A. C. CUELLO

Wiley, New York, 501 pages, 1983

This text is the third volume in the International Brain Research Organization (IBRO) Handbook Series on Methods in the Neurosciences. The stated purpose of the series is to provide neuroscientists with specialized methods suited to certain problems in terms of procedures needed, difficulties encountered, and limitations. This volume does an excellent job of addressing all three elements of the latest methods used in immunohistochemistry. In addition, the information presented is relevant for any area of study and not specifically limited to the neurosciences.

The first chapter delves into how one sets up an immunocytochemistry protocol. Some time is spent discussing tissue processing and fixing procedures and a good representation is given of how fickle a specific antigen or tissue can be, so that no standard procedure works for every system. There is a brief discussion of the pros and cons of different staining procedures, such as direct versus indirect or PAP versus fluorescence. The majority of the chapter focuses on how to establish the specificity of staining obtained by a chosen procedure.

Excellent steps are presented that differ from the traditional absorbed antiserum controls in that they do not require a purified antigen and also lead to more information about exactly what elements of a tissue react in the system. Detailed discussions are presented on what problems may arise, what may cause them, and how to eliminate them. Appendices at the end of the chapter contain solution recipes and procedures in concise form for easy referral and additional references for more in-depth study. This format is maintained throughout all chapters of the book.

The next two chapters present discussions and protocols for labeling molecules with fluorescent dyes and horseradish peroxidase. Methods of quantitation and comparisons of various types of conjugates are included.

Several chapters are devoted specifically to the immunohistochemistry of catecholamine synthesizing enzymes, including detailed protocols for enzyme purification, antisera production, and in vivo as well as

in vitro localization by light and electron microscopy. One chapter each is also devoted to glutamic acid decarboxylase and serotonin.

A chapter coauthored by Milstein is included that presents all the information necessary for producing monoclonal antibodies, labeling them, and establishing immunocytochemistry methods specifically for those antibodies. Some disadvantages of using monoclonal antibodies are discussed.

Double staining techniques, electron microscopy immunocytochemistry, protein-A colloidal gold, whole mount preparations, and specific markers for various types of neural cells each have a chapter devoted to them. In all, the handbook addresses most of the techniques and problems that might be encountered in any type of immunocytochemistry study. Detailed presentations are given so that a complete protocol can be obtained from this source, including trouble-shooting tricks. The authors have accomplished quite expertly the goals stated in the Foreword of the handbook series.

Brenda D. Manning
Corning Glass Works
Corning, N.Y. 14831

Directory of Genetic Engineering and Biotechnology Firms, USA (1982–83 Edition)

Edited by MARSHALL SITTIG AND ROBERT NOYES

*Sittig and Noyes, 84 Main Street, Kingston, NJ 08528, 1982, 255 pp.
\$127.00*

This book provides an extremely useful overview of the biotechnology industry. It should be a handy reference on the desk-top of interested investors, nontechnical executives, as well as university professors who may have the intention of becoming entrepreneurs. A more useful form of this kind of publication may be loose-leaf data sheets of each company, updated frequently, leaving space for the reader to put in his/her own clippings from *The Wall Street Journal* or other publications. Otherwise, it is outdated at the time of publication.

A very brief preface gives a few hints on how to get into biotechnology business and stay in it. The authors' equating, "applied genetics" to biotechnology, bioengineering, and genetic engineering is an unfortunate semantic mistake, which may result in unfair treatment of companies dealing with immunology, diagnostics, applied enzymology, liposome technology, and so on.

The 37 page introduction on the different areas of biotechnology is followed by the major content—an alphabetical listing of over 450 US companies, up from 260 in the 1981 edition. Most of the descriptive section on each company is brief, from just an address and a telephone number to one or two paragraphs. Occasionally, 2–3 page coverage is found for the relatively established companies. The reasons for uneven exposure are probably due to secrecy, lack of information from the sources, and the size and scope of the companies, rather than negligence or prejudice. In any event, the addition of names of chief executive officers and a field index at the end may make the book more useful.

Sju-Leung Lee
Corning Glass Works
Corning, New York 14831