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DIRECTORIES OFFER QUICK CHECKS ON BIOTECH

Biotechnology Guide U.S.A. Mark D. Dibner. Pp. 378. Published by Macmillan Publishers Ltd. (Basingstoke, U.K. under ISBN 0-333-48551-3.) In North America, ISBN 0-935859-40-3. \$175. (Stockton Press, New York, NY: 1988). **The Biotechnology Directory 1988.** Edited by J. Coombs and Y. R. Alston. Pp. 500. Published by Macmillan Publishers Ltd. (Basingstoke, U.K. under ISBN 0-333-43726-8.) In North America, ISBN 0-935859-13-6. \$150. (Stockton Press, New York, NY: 1987).

Why should anyone buy yet one more biotech directory? How many do we really need? Sittig and Noyes update their *Genetic Engineering and Biotechnology Related Firms Worldwide Directory* on a regular basis (the 1988/89 version is \$240). So, too, do Coombs and Alston hit the market annually with a revised version of *The Biotechnology Directory*—the 1989 volume, at \$170, is due in early December. Though the editors of the latter are getting better at including complete addresses and phone numbers for the government agencies, societ-

ies, associations, and companies listed in this world-wide compendium, they still fall short. But, 'tis better to have no phone number than the wrong one. The most informative sections of this directory continue to be the Indexes—especially the products, research, and services buyer's guide.

Hammer's *Genetic Engineering and Biotechnology Yearbook*, to date the priciest of the lot at \$800, hasn't had a revision since the 1986/87 edition—nor, as far as we can determine, is one forthcoming. If the latest is indeed the last, we rue its passing—it has continued to be the best of the lot for one-stop shopping. Dibner's new volume, *Biotechnology Guide U.S.A.*, rivals the Hammer series in all respects save one—it provides no international coverage. Dibner stands almost alone in the number of companies he has covered: unlike so many list-makers, he has chosen only those 360 organizations that are actually working with the new technologies—not the other 700-odd with only peripheral interests in biotechnology.

Dibner relies on the North Carolina Biotechnology Center's massive in-

house computer databases, as well as commercial databases, to generate the charts and tables that lie between the covers. There is an immense amount of information here—arranged every which way but Sunday. Is a biotech company private or public? Is it small, medium, or large? How are personnel resources allocated? When and where was it founded, and by whom? What are the primary and secondary areas of interest? Does it have any agreements—of whatever type—with other biotech companies? Any patents?

One can start from most any point and access this information: instead of tracking a particular biotech company, for instance, one might need a list of all companies that have major research programs in biosensors. Or of large corporations with biotech subsidiaries. As a bonus—though not a surprise—Dibner has added sections on state biotechnology centers and biotech trend analysis. At \$175, *Biotechnology Guide U.S.A.* is a steal.

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WHO OWNS THE RIGHTS TO HUMAN TISSUES?

New Developments in Biotechnology: 1. Ownership of Human Tissues and Cells. By the Office of Technology Assessment, U.S. Congress. Pp. 168. OTA-BA-337. \$7.50. (U.S. Government Printing Office, Washington, D.C.: 1987).

Since 1980, when the U.S. Supreme Court ruled in *Diamond v. Chakrabarty* that new life forms created by DNA recombinations could be patented, the number of applications for patents on human biological materials has proliferated. This has also resulted in a rapid increase in the number of court cases over ownership.

The legal, ethical, and economic issues of rights to human tissues and cells that predominated in early 1987, when this Office of Technology Assessment (OTA) report first appeared, still remain. Congress, and federal and state regulatory agencies, continue to wrestle with whether and under what conditions rights to human cell lines are enforceable. Attempts continue at isolating, characterizing, and quantifying the relative

contributions to the ultimate economic value of a commercially useful line made by the donors, physicians, researchers, and others who take the work a step farther.

That *New Developments in Biotechnology: Ownership of Human Tissues and Cells* was cited as an Historic Document of 1987 by the Congressional Quarterly (Washington, DC) is easily understood. OTA is doing what it does best—to assess, not to suggest or to speculate. The study emphasizes the role of biotechnology research as science first; fitting the social, legal, and moral implications into that context. Thus, it only explores those non-scientific areas that have already been brought to light through other means—for example by the filing of a lawsuit or by a direct request from Congress. (The only frustration may be that, having done such an outstanding job in laying the ground work in an even-handed manner, the reader may be tempted to ask "Okay, so what do you suggest we do?")

The systematic approach taken in each section continues to provide guidance to physicians, researchers,

and attorneys charged with assessing the effects of these potential bottlenecks to research and commercial uses for biotechnology. From an introductory overview of policy issues and options for Congressional action, moving on through chapters on the technologies, the parties involved, the legal considerations (with an extremely useful chapter on the parameters for informed consent and disclosure), and finally the economic and ethical considerations, *Ownership of Human Tissues and Cells* particularizes each issue and the options presently under discussion. The possible shape the eventual solutions to these issues might take—be it in the state or federal courts, the legislatures, or by regulatory action—are outlined one-by-one, fleshed out with informative historical and analytical dicta.

Without taking a viewpoint—moral, economic, legal or scientific—it makes clear that these issues must be addressed, and soon.

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