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Book Reviews

Enzymes in Lipid Modification. edited by Uwe T. Bornscheuer / DGF. Wiley-VCH: Weinheim, 2000. 424 pp. ISBN 3-527-30176-3.

This substantial book contains 19 chapters devoted to lipid modification by enzymes. Most are related to lipases but there are also chapters on phospholipids (3), lipoxygenase (2), and other enzymes (2). Fuller details of chapter titles and authors can befound on the Wiley-VCH web site (www.wiley-vch.de). The writing team meets the requirement to be described as international with contributions from Europe, North America, and Japan. The editor has himself made valuable contributions in this field and has organized a very successful book.

The study of lipid enzymes and their reactions has grown rapidly in the last 10 – 20 years and most of those engaged in these studies are optimistic that the fuller understanding of enzymatic processes will lead to products in the market place. This book shows that the optimism is well founded. Significant advances are detailed here and commercial applications, beyond the few special products already available, get closer. Enzymatic reactions have many advantages at a time when there is a growing demand for products of designated structure and when environmental concerns call for improvements in today's conventional reactions.

Scientists and technologists can produce the compounds required but there is a need to convert laboratory recipes to robust procedures for products of consistent quality and appropriate prices. The question remains how much are consumers prepared to pay for the healthy lipids they have been persuaded to ask for.

Economic considerations focus on the enzymes themselves – on the original cost and on their useful lifetime – but progress is being made and the first of these is decreasing while the second is increasing. At least one of the chapters in this book describes attempts to improve a lipase by cloning and mutagenesis, suggesting that the natural specificity of a lipase may be enhanced as we learn more about how the lipase interacts with the reactive site.

As one would expect this book is well produced in the usual Wiley-VCH style. This reviewer was impressed by the large number of summarizing tables which will make it easier to locate information and examples already in the literature. The book should find a place in the many laboratories that are working with lipases, phospholipases, and lipoxygenases but it should also be available to those who plan future rearch and those called upon to judge the merits of research proposals in lipid science.

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