Svendsen, A. (ed.): **Enzyme Functionality. Design, Engineering, and Screening**. – Marcel Dekker, New York – Basel 2004. ISBN 0-8247-4709-7. 667 pp., USD 195.00.

The book concentrates on understanding the enzyme function in order to create new molecules with altered properties. Some concepts required for enzyme and protein analysis are presented, in order to understand their function. The idea of the book is to generate new trends for further development in the field of enzyme engineering. Articles published have theoretical but also pure experimental character.

The book is divided in three parts dealing with Enzyme design (Part I), Enzyme diversity generation (Part II), and Screening (Part III). The book focuses mainly on ideas and results and does not describe methods in details. Each part starts with a general overview and continues with scientific studies in the form of authors' ideas and experiences in the particular subject.

Part I includes enzyme engineering concepts, discusses the problems of classification of enzymes, application of X-ray crystallography in examination of 3D structure variability. The next papers are devoted to modelling of enzyme specifity (lipase) or prediction of binding energy (dehalogenases) and other computation fields (formation of complexes, ionization equilibria, *etc.*).

Part II starts with paper about redesign of substrate specifity and pH activity profile of α-amylases, lysozyme, and thermolysine. The following chapters are devoted to chitinase, phosphodiesterase, or glucose dehydrogenase. One article discusses the concept of stabilization of proteins. Five chapters of this part are discussing evolutionary methods, for example random mutagenesis methods, error-prone PCR methods, and exploration of phage display of enzymes. One article reviews the *in-vivo*-directed evolution of lipase in yeast. Enzymes mentioned in this part are glutathion transferase, β-lactamase, subtilisins, catechol 2,3-dioxygenase, and β-glusosidase.

The last part (III) contains eight articles. Methods used for screening are monitoring of thermostability, fluorescence methods, digital imaging, combinatorial algorithms, and library design. One chapter deals with bottlenecks in screening set-up, pricing, and HTS-primary and secondary screening.

The book "Enzyme Functionality" was edited by Allan Svendsen (*Novozymes*, Denmark). It is composed of 29 articles written by 77 contributors from all over the world. Article 5 about redesign of dehalogenases was written by Czech authors (Damborský, Kmoníček, and Jedlička from Masaryk University, Brno).

According to my opinion, the book will be useful to scientists, post-graduate students of enzymology, and those who use libraries and screening and computing approach in their work. The articles are written on high scientific level with wide range of references to original literature (about 1 500 citations).

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