

## BOOK REVIEW

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### *Načela dizajniranja lijekova* [Principles of Drug Design]

HINUS d.o.o., Zagreb, 2000,  
pages 202  
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### *Lijekovi u prostoru – farmakofori i receptori* [Drugs in the space – pharmacophores and receptors]

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pages 230  
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A very productive group of authors, headed by Professor Mladen Mintas, produced these two topical books, but they have also announced that the third book in the series on medicinal chemistry is ready for print. It should be pointed out that such an activity is rare in Croatian science.

The first book *Načela dizajniranja lijekova* (Principles of Drug Design) consists of an introduction, two parts, dictionary of less-known terms and index. The first part (pp. 10–96), entitled *Prediction and Interpretation of Drug Action*, contains a presentation of current methods used for predicting drug action. The following approaches are discussed: the qualitative approach, the heuristic approach (QSAR) and the molecular modeling approach (based on molecular mechanics, quantum chemistry), indirect methods (such as pharmacophore analysis) and direct methods (such as docking). The second part (pp. 97–193), entitled *Retrosynthetic Analysis and Synthesis of Drugs*, presents fundamental concepts of retrosynthetic analysis, synthesis strategy and planning, and examples of multistep-syntheses. Each section in the book is followed by a set of per-

tinent references. The book is well-written and nicely illustrated.

The second book *Lijekovi u prostoru – farmakofori i receptori* (Drugs in the space – pharmacophores and receptors) consists of four chapters, a glossary and index. The first chapter (pp. 9–36), entitled *The Theory of Pharmacophores*, presents the key-and-lock idea of Ehrlich in the contemporary research of pharmacophores and receptors and discusses the receptors in the space. The second chapter (pp. 39–132), entitled *Stereochemical Basis of Drug Action*, discusses the concepts of stereoisomers, symmetry and asymmetry, chirality, pseudosymmetry, prochirality, chiral drugs, pharmacophores and their analysis, and search of databases such as the *Cambridge Structural Database*. The third chapter (pp. 135–174), entitled *Preparation of Enantiomeric Pure Compounds*, presents natural chiral building blocks, chromatographic separation of enantiomers on the chiral stationary phase, separation of enantiomers by fractional crystallization of racemic mixtures, kinetic differentiation of enantiomers, biological synthetic methods of chiral compounds and stereoselective organic synthesis. The fourth chapter (pp. 177–220), entitled *Examples of Holistic Stereochemical Approach*, consists of sections on stereochemistry of sugar-based drugs, stereochemistry of nucleic acids building blocks, and three sections on cytostatics and antitumor drugs. Each is followed by selected references. The whole book is clearly written and nicely illustrated.

Both books are intended for graduate students and for organic and pharmaceutical chemists, but I believe that undergraduate students will also find them useful in their studies. It should be also noted that both books are listed as University of Zagreb textbooks. The publisher of the first book, HINUS d.o.o, publishes a series of books on topical subjects in science and technology whilst Školska knjiga d.d. is a well-known Croatian publishing house of textbooks, monographs, literary masterpieces, dictionaries, etc.

Finally, I wish to stress that I greatly enjoyed reading these two books and am looking forward to the authors' other books that I was told will follow. It is a pity that other distinguished Croatian chemists do not follow the example set by this diligent trio: Mladen Mintas, Silvana Raić-Malić and Nenad Raos.

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