

BOOK REVIEW

MLADEN MINTAS, SILVANA RAIĆ-MALIĆ

Medicinska kemija

[*Medicinal Chemistry*]

Medicinska naklada, Zagreb, 2009, 415 pages
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The authors of the monograph *Medicinska kemija* [Medicinal Chemistry] Dr. Mladen Mintas and Dr. Silvana Raić-Malić are professors at the Faculty of Chemical Engineering and Technology, University of Zagreb. They are very productive, since in the period of last 9 years (from 2000 to 2009) produced three topical monographs. It should be stressed that such an activity is very rare indeed in Croatian science.

The first two monographs were *Načela dizajniranja lijekova* [Principles of Drug Design, HINUS, Zagreb, 2000, 202 pages] and *Lijekovi u prostoru – farmakofori i receptori* [Drugs in the Space – Pharmacophores and Receptors, Školska knjiga, Zagreb, 2005, 230 pages] were reviewed in this journal, e.g., *Croat. Chem. Acta* **80** (2007) A1. Besides Professors Mintas and Raić-Malić, Dr. Nenad Raos, senior research scientist at the Institute for Medical Research and Occupational Health in Zagreb, was co-author of both monographs.

The present book has two parts: *Principles of Medicinal Chemistry* and *Development of Successful Drugs*. The first part of the monograph *Principles of Medicinal Chemistry* (chapters 1–3, pages 1–136) is educational; it informs the reader about basics of medicinal chemistry. The first chapter is entitled *Drugs and Receptors* (pages 3–71). It covers historical introduction, definitions, receptors and action of drugs including the mechanism of drug actions. The second chapter, *Enzymes – Targets of Drug Action* (pages 72–101), presents classification, nomenclature and structure of enzymes, action of enzymes, the kinetics of their action, enzymes as drugs, etc. The third chapter is entitled *Strategy in Drug Development* (pages 102–136). This chapter deals with rational strategies in drug development.

The second part of the monograph *Development of Successful Drugs* (chapters 4–14, pages 137–400) presents several classes of modern (and some not so modern) drugs for treatment of variety diseases and infections. Thus the authors discuss drugs used to treat pain and inflammation, such as aspirin or ibuprofen (chapter 4, pages 140–165), drugs to treat hypertension (chapter 5, pages 166–201), activators of potassium channels (chapter 6, pages 202–217), blockaders of calcium channels – drugs to treat *angina pectoris* and hypertension (chapter 7, pages 218–235), drugs to treat gastric ulcer such as cimetidin (chapter 8, 236–251), inhibitors of proton pump and of secreting gastric acid (chapter 9, pages 237–267), antidepressant drugs (chapter 10, pages 268–309), drugs acting on benzodiazepine receptors (chapter 11, pages 310–323), drugs against allergic rhinitis (chapter 12, pages 323–341), quinolone antibiotics (chapter 13, pages 342–367) and inhibitors of HIV (chapter 14, pages 368–400).

Each chapter is followed by selected references; the total number of references is 440. The monograph ends with three additions: the *Glossary* (pages 401–409) that will be of help to beginners, *Index* (pages 409–413) and *Short biographies of authors* (page 415). The monograph is clearly written and beautifully illustrated.

Since the monograph *Medicinal Chemistry* is aimed to graduate students, but the undergraduate students may also find it useful in their studies, the University of Zagreb accepted the monograph as the university textbook.

I read the monograph with interest since in a part of my research I was interested in developing theoretical methods for rational drug design. Therefore, I believe that this monograph will be of interest to organic, bioorganic, biological and pharmaceutical chemists and other researchers interested in developing drugs.

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