

BOOK REVIEW

MLADEN MINTAS

Medicinska kemija protutumorskih lijekova

[Medicinal Chemistry of Antitumouric Drugs]

Medicinska naklada, Zagreb, 2013, 227 pages

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Professor Mladen Mintas, Ph. D. (from the Faculty of Chemical Engineering and Technology, University of Zagreb, Croatia) continues to produce topical monographs alone or in collaboration with his colleagues. The present monograph *Medicinska kemija protutumorskih lijekova* [Medicinal Chemistry of Antitumouric Drugs] is his fourth topical monograph. His previous three monographs were *Načela dizajniranja lijekova* [Principles of Drug Design, HINUS, Zagreb, 2000, 202 pages, ISBN 953-97716-6-8], prepared in collaboration with Silvana Raić-Malić and Nenad Raos, *Lijekovi u prostoru – farmakofori i receptori* [Drugs in the Space – Pharmacophores and Receptors, Školska knjiga d.d., Zagreb, 2005, 230 pages, ISBN 953-0-31566-X], prepared again in collaboration with Silvana Raić-Malić and Nenad Raos, and *Medicinska kemija* [Medicinal Chemistry, Medicinska naklada, Zagreb, 2009, 415 pages, ISBN 978-953-176-410-0]. The reviews of these three monographs appeared in this journal: the first two books were reviewed in 2007, see *Croat. Chem. Acta* **80** (2007) A1, and the third book was reviewed in 2010, see *Croat. Chem. Acta* **83** (2009) CCVII.

The present monograph *Medicinska kemija protutumorskih lijekova* (Medicinal Chemistry of Antitumouric Drugs) consists of Preface, Introduction, 10 chapters, Glossary of Concepts and the author's brief *Curriculum Vitae*. The target of this monograph is to present the modern approaches, based on the medicinal chemistry, to the development of anti-cancer drugs. The first chapter is entitled *Rak i kemoterapija raka* (Cancer and the Cancer Chemotherapy, pp. 1–13). In this chapter is discussed the cancer etiology, molecular mecha-



nisms of the cancer dysregulation, chemistry and the development of anti-tumouric drugs, the cancer chemotherapy, strategies in the development of anti-tumouric chemotherapeutics and the use of nanotechnology in the cancer chemotherapy.

The next eight chapters present the action of chemotherapeutics on a given biological target. The second chapter is entitled *Antimetaboliti* (Antimetabolites, pp. 15–39). The third chapter is entitled *Struktura i svojstva DNA* (The Structure and Properties of DNA, pp. 41–53). Note, the Croatian abbreviation of DNA is DNK. The author should have used DNK in the title of this and the next chapter. The fourth chapter is entitled *Lijekovi koji interferiraju s DNA* (The Drugs that Interfere with DNA, pp. 55–89). The fifth chapter is entitled *Protutumorski*

antibiotici (Antitumouric Antibiotics, pp. 91–113). The sixth chapter is entitled *Inhibitori stvaranja mikrotubula* (Inhibitors of the Mycrotubular Creation, pp. 115–121). The seventh chapter is entitled *Selektivni modulatori estrogenskih receptora* (Selective Modulators of Estrogenic Receptors, pp. 123–137). The eighth chapter is entitled *Inhibitori proteinske i receptorske kinaze* (Inhibitors of Protein and Receptor Kinase, pp. 139–153). The ninth chapter is entitled *Inhibitori proteasoma u kemoterapiji raka* (Proteasome Inhibitors in the Cancer Chemotherapy, pp. 155–159).

The tenth and the last chapter is entitled *Budućnost razvoja protumorskih lijekova* (The Future of the Antitumouric Drug Developments, pp. 161–213). This is the largest chapter in the book presenting possible developments in designing the antitumouric drugs. In this chapter I noticed an interesting subchapter on the use of teratogenic drug thalidomide in treating multiple myeloma.

The monograph ends with *Pojmovnik* (Glossary of Concepts, pp. 215–225) and *Životopis* (the author's biography, p. 227). Each chapter is followed by selected references. The total number of references in the monograph is 218. The monograph is well-written and nicely complemented with beautiful illustrations. This is indeed a very attractive book.

The monograph *Medicinska kemija protumorskih lijekova* (Medicinal Chemistry of Antitumouric Drugs) is aimed to undergraduate and graduate students of all faculties which offer courses in organic chemistry, biochemistry and bioorganic chemistry. I recommend this monograph to all who are interested in the modern medicinal chemistry and its uses in developing drugs for the treatment of various forms of cancer.

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