BOOK REVIEW

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Review of *Principles of Forensic Toxicology*

REFERENCE: Levine B, (ed.). Principles of forensic toxicology, 1st ed., American Association for Clinical Chemistry, Inc., Washington, DC, 1999, 394 pp., $49.00.

The publishers promote this textbook as the new standard. It is not the new standard; it is the premier textbook in forensic toxicology. After thirty years of teaching graduate courses in forensic toxicology, I well recognize that a textbook for a course on the topic was not available. We have always needed a forensic toxicology textbook the equivalent of Goodman & Gilman's Pharmacology text. This textbook has the potential for becoming the Goodman & Gilman of forensic toxicology.

Like Gaul, the book is divided into three parts. Part I is the Introduction. It includes three chapters on what the editor considers the applications of forensic toxicology. Chapter 1 covers postmortem aspects. Chapter 2 covers human performance aspects and Chapter 3 covers forensic drug testing. All three could be combined into one chapter. Chapter 4 is very useful and appropriate, covering pharmacokinetics and pharmacodynamics. This chapter should be expanded with more case examples and more forensic applications of pharmacokinetics. This would also be an appropriate area to discuss postmortem redistribution of drugs. Part II describes the various methods used for detecting and quantitating the various analytes. I particularly like the presentation of Chapter 5 by Dr. Siek on specimen preparation and Chapter 7 on chromatography by Dr. David Stafford. Part II is really not forensic toxicology, but the application of the methods of analytical chemistry to toxicology.

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Part III contains 11 chapters on the various analytes commonly encountered in forensic toxicology. The chapter on opiates, unlike the other chapters in the book, has several tables with fine print that I have trouble reading without a magnifying glass. The numbering system for the opiates should be illustrated. The chapter on marijuana likewise does not present the numbering system for the cannabinoids. The chapters covering various therapeutic medications use the generic names. Since all toxicologists are not pharmacists, it would be useful to parenthetically identify the generic name with a popular trade name.

The illustrations and the tables in the book are well done and very useful with the exception of the micro-print in the opiate chapter. It is also a happy note to indicate that all acronyms used throughout the book are identified.

A useful addition would be an appendix discussing the units used to report the concentration of analyte found. It should include examples of converting the units in the metric system as well as converting mg% to mEq/L and to mmol/L. Since this is a textbook, addition of appendices on other topics would also be welcome. I found no serious misspellings and no errors in the organic structures presented in the figures.

This premier textbook is most welcome and is useful not only as a textbook, but as a reference book as well. It is a great educational piece for physicians, pathologists, emergency room personnel, and trauma unit personnel. My experience indicates that Chapter 4 should be read by all of them. I suggest and strongly recommend that the forensic community welcome this text so that it does, indeed, become the Goodman & Gilman of forensic toxicology.

The book is edited by Barry Levine with 17 contributing experts, some of whom I actually recognize!!