

BOOK REVIEW

Toxicology: Principles and Applications

*R. J. M. Niesink, J. de Vries and
M. A. Hollinger
CRC Press, 1996, £49.50.
ISBN 0-8493-9232-2.*

This book has been derived from the toxicology course of the Open University of The Netherlands with the help of EUROTOX. Thus it is really a combination of a textbook and a study guide. It is divided into study units, each having learning objectives. These fall into fundamental principles, molecular aspects of toxicity, organ toxicology, organs involved in absorption and elimination, organs involved in maintaining homeostasis and application areas. There is thus extensive coverage of toxicology.

Each study unit is interspersed with assignments. At the end of each study unit are self assessment questions and answers to the assignments.

The book is somewhat of a tome, totalling more than 1200 pages. There are a fair number of diagrams some of

which are very good and are significant improvements on those in other similar texts. However the histological and pathological pictures were in general rather poor quality.

Although there is extensive coverage of the subject of toxicology, the depth is somewhat variable. For example the sections on protein binding and pharmacokinetics are reasonably detailed mathematical treatments whereas the section on metabolism and factors affecting this, is fairly basic. In some places old nomenclature is still used (cytochrome P448 for example with no mention of the new nomenclature such as cytochrome P450 2D6 in relation to debrisoquine hydroxylation). This is certainly not a book to sit down and read, but rather to work through a section at a time, trying to answer the questions and assignments. The text is broken up with study hints, learning objectives and questions and assignments. This makes it difficult to read in places. However a novice working through the book might not find this a problem. At the end of each study unit there is a summary which is an excellent idea, and the answers to the questions/assignments set earlier.

The optionally available CD-I mentioned in study section 22 would

certainly help the understanding of the histopathology particularly as the histological pictures are not good quality. Overall the coverage is good and most of the target organs and systems are covered. Unlike some textbooks of toxicology, chemical types are not considered specifically and the application areas might have included drug and environmental toxicology. However no textbook is perfect and this book is far more extensive than most of the others available.

Some of the sections were novel, and notably absent from other texts, for example those dealing with structure activity relationships and the toxicology of mixtures. At the end there is an achievement test covering the whole course which students are recommended to try in 2–3 hours. There is also a list of abbreviations, a formula index (a very useful addition), a glossary, a literature section and a good index.

Overall an excellent teaching resource for academics and a really useful text and learning aid for students. The price (£49.50 in the UK) is very reasonable for this size of textbook.

John Timbrell
Editor