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Computational Toxicology: Risk Assessment for Pharmaceutical and Environmental Chemicals, S. Ekins (Ed.). John Wiley & Sons Inc., Hoboken, NJ (2007). 836 pp., Price: US$ 140.00, ISBN: 978-0-470-04962-4

This book is the first in Wiley's new series entitled: "Technologies for the Pharmaceutical Industry." Given the broad scope of the topic, it is not surprising that there are a multitude (70) of contributors from nine countries. The book has five major sections:

- Introduction to toxicology methods (5 papers).
- Computational methods (3 papers).
- Applying computers to toxicology assessment: pharmaceutical (12 papers).
- Applying computers to toxicology assessment: environmental (4 papers).
- New technologies for toxicology: future and regulatory perspectives (3 papers).

Of most interest to readers of this journal will be the papers published in the fourth major section. They are by title:

- The toxicity and risk of chemical mixtures.
- Environmental and ecological toxicology: computational risk assessment.
- Application of QSARs in aquatic toxicology.
- Dermatoxicology: computational risk assessment.

The editor notes in the Preface that: "This book includes a comprehensive discussion of the state of the art of currently available molecular-modeling software for toxicology and their role in testing strategies for different types of toxicity when used alongside in vitro and in vivo models." The editor later states: "This book is not aimed solely at laboratory toxicologists, as scientists of all disciplines in the pharmaceutical, chemical industries, and environmental sciences will find it of value."

Toxicology is, in the broadest sense, the study of adverse affects of drugs or chemicals on living systems, but how and why are questions that need answers. To this end, modern computational methods are assisting in screening and in answering those questions. As with so many other mysteries of science, computational science and information technology are being employed to explain the unknown, and this task is large. Whereas 212,000 chemicals were known in 1965, 12,000,000 are known now. Given that number, there appearance in water, air and soils with concomitant human exposure is inevitable. Thus, the need for health impact assessment is extremely important.

One technique new to me was the use of QSARs (Quantitative Structure-Activity Relationships) for the prediction of the toxicity of chemicals based on their molecular structure and/or physicochemical properties.

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Bioavailability, Bioaccessibility and Mobility of Environmental Contaminants, J.R. Dean. John Wiley & Sons Inc., Hoboken, NJ (2007). 316 pp., Price: US$ 170.00, ISBN: 978-0-470-02577-2

This book is the 11th in a series entitled "Analytical Techniques in the Sciences." This series includes a number of open learning/distance learning books which cover major analytical techniques and their applications in the physical, life and materials sciences. Dean, the author of this book, has written two others entitled: (1) Methods for Environmental Trace Analysis and (2) Practical Inductively Coupled Plasma Spectroscopy.

The goal of this series of books is to provide a broader coverage of the many areas of science in which analytical techniques and methods are commonly utilized. The books are, according to the publisher, ". . . presented in an easy-to-read, user-friendly style with each chapter including both learning objectives and summaries of the subject matter covered." Also included are self-assessment and discussion questions with responses given in appendix. The book has the following eight chapters:

1. Contaminated land and the link to human health.
2. Sample preparation and analytical techniques for elemental analysis of environmental contaminants.
3. Sample preparation and analytical techniques for persistent organic pollutant analysis of environmental contaminants.
4. Methods used to assess bioavailability of metals.
5. Methods used to assess bioavailability of persistent organic pollutants.
6. Methods used to assess oral bioaccessibility.
7. Selected case studies on bioavailability, bioaccessibility and mobility of environmental contaminants.
8. Recording of information and selected resources.

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