

Pharmacokinetic and Pharmacodynamic Data Analysis: Concepts and Applications, 5th Edition

Johan Gabrielsson and Dan Weiner

Apotekarsociteten – Swedish Academy of Pharmaceutical Sciences

Stockholm 2016

The 5th edition of “Pharmacokinetic and Pharmacodynamic Data Analysis: Concepts and Applications” is a new, revised and expanded version of this PK/PD Bible that has been widely used for many years. It is valuable both as a text-book for beginners and as a reference book for more experienced scientists. The book contains numerous figures illustrating concepts and models.

The first 3 Chapters cover general principles and pharmacokinetic and pharmacodynamic concepts. The 4th Chapter discusses modeling strategies and ends with a checklist for assessing goodness-of-fit for models. Chapter 5 discusses elements of design for kinetic and dynamic studies and what data and design are needed to answer specific questions. Chapter 6 is entirely new and is my favorite since it deals with pattern recognition and the value of actually looking at data and curve shape as diagnostic tools for proposing mechanisms and improving data analysis and linking data to actual biological processes.

The second half of the book contains applications and case studies and the data sets are supplied on an attached USB memory stick. There are 53 PK case studies, including a few with large molecules (antibodies and enzyme), and 52 PD case studies. All exercises start with the objectives for the exercise, continue with a problem specification, describes the study design and data, the models used (with references to the concept chapters) and ends with a section on the interpretation of results and conclusions. These exercises are clearly indexed and start off with simple PK studies such as single dose bolus i.v. or p.o. studies and continue with more complex examples. There is also an excellent overview Table in Chapter 1, listing the case studies and the concepts on which they build.

I strongly recommend this book to everybody working in this field

Ylva Terelius, PhD, Distinguished Scientist
Stockholm, 2016