Book Review

Kinetic Data Analysis. Edited by L. Endrenyi. Plenum Press, New York, 1981.

This book presents a collection of 23 articles, by 29 authors, given at a one-day symposium held in conjunction with the XIth International Congress of Biochemistry in 1979. The collection is divided into six sections: (i) nonlinear regression: principles, properties, and methods (103 pages); robust parameter estimation (31 pages); (iii) design of experiments for kinetic parameter estimation (43 pages); (iv) kinetic model identification (90 pages); (v) combination of experiments (38 pages); (vi) kinetic data analysis: methods and applications (106 pages).

Most of the book deals with the problems of designing experiments and analyzing data which can be described by a sum of exponential terms (pharmacokinetic experiments) or by the Michaelis–Menten equation and some of its modifications (enzyme kinetic experiments). In general the articles are well presented with very few typing errors. As would be expected in a collection of this nature, the articles can be read independently of each other.

The articles in this collection could be read without undue effort by specialist workers involved in the theory of the design and analysis of models in enzyme kinetics and pharmacokinetics. Unfortunately most of the articles could not be read by the average experimentalist collecting data in these fields. The problems inherent in the lack of communication between these two groups of workers are perhaps best exemplified by a quotation from Garfinkel's article (which is very readable and should be read by every experimentalist collecting data in these fields):

According to one editor of the *Journal of Biological Chemistry* there used to be more regression analysis several years ago than there is now. Someone at the XIth International Congress of Biochemistry, held in 1979, estimated that in the last six months of the *Journal of Biological Chemistry* no more than 20% of the enzyme kinetics papers had proper regression analysis, and the rest were simply "eyeballed" (fitted visually). There is some feeling that visual examination yields much the same results as linear regression.

As this book covers quite a range of different topics in the field of data analysis, it is unlikely that specialist workers would want to read, in detail, the whole book. The book is not recommended for purchase by individual workers in the field of data analysis, but should be available for them in libraries.

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