



# Pharmacometrics: The Science of Quantitative Pharmacology

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## DESCRIPTION

Learn how to perform pharmacometrics to improve drug development success rates

This landmark text is the first to pull together and present in one volume the many facets of pharmacometrics. It features an international team of editors and authors who are experts in the field. Readers gain the knowledge base needed to perform pharmacometric analyses, interpret the results, and communicate these results to key decision makers. In particular, the text emphasizes the role of pharmacometrics in drug development, reflecting the field's enormous potential to increase drug development productivity.

Following an introduction that sets forth key landmarks in the history of pharmacometrics, a section on general principles features such topics as essential programming methods and techniques for pharmacometric analysis software validation. Next, the text presents a series of sections designed to enable readers to gain the knowledge needed to grasp pharmacometrics and then apply that knowledge to practical applications:

- Population pharmacokinetic basis of pharmacometrics
- Pharmacokinetics/pharmacodynamics relationship, including pharmacogenomics
- Clinical trial designs
- Pharmacometric knowledge creation including clinical trial simulation

- Pharmacometric service and communication
- Specific application examples

In addition to its clear and straightforward presentation of theory and methodology, the text features application examples with codes in NONMEM®, S-PLUS®, WinNonlin®, WinNonmix®, ADAPT®, and MATLAB®. Readers can reproduce the examples themselves and gain a deeper understanding of the many practical benefits of pharmacometrics.

Clinical pharmacologists/pharmacokineticists and pharmacometricians in drug development and pharmacotherapy, as well as students in clinical pharmacy, pharmaceutical sciences, and clinical pharmacology, should take advantage of this text to gain the training and knowledge needed to excel in pharmacometrics. More experienced pharmacometricians will want to keep the text on hand to address questions and further develop their skills.

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## ABOUT THE AUTHOR

**ENE I. ETTE**, PhD, is a Fellow of the American Colleges of Clinical Pharmacy and Clinical Pharmacology. He is the President/CEO of Anoxis Corp. and was formerly the senior director and head of clinical pharmacology at Vertex Pharmaceuticals, Inc. He is also an adjunct professor of applied pharmaceutical sciences at the University of Rhode Island. Dr. Ette was a pioneer pharmacometric staff in the Office of Clinical Pharmacology and Biopharmaceutics at the Food and Drug Administration, where he developed the popular reference Guidance for Industry: Population Pharmacokinetics. From 1989 –2001, he was an FDA Consultant. In recognition of his contributions to clinical pharmacy and clinical pharmacology, Dr. Ette is the recipient of The American College of Clinical Pharmacy's Russell Miller Award. He is also the 2006 recipient of The American College of Clinical Pharmacy's Therapeutic Frontiers Lecture Award. Dr. Ette is chairman of the pharmacometrics panel of The Annals of Pharmacotherapy editorial board.

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