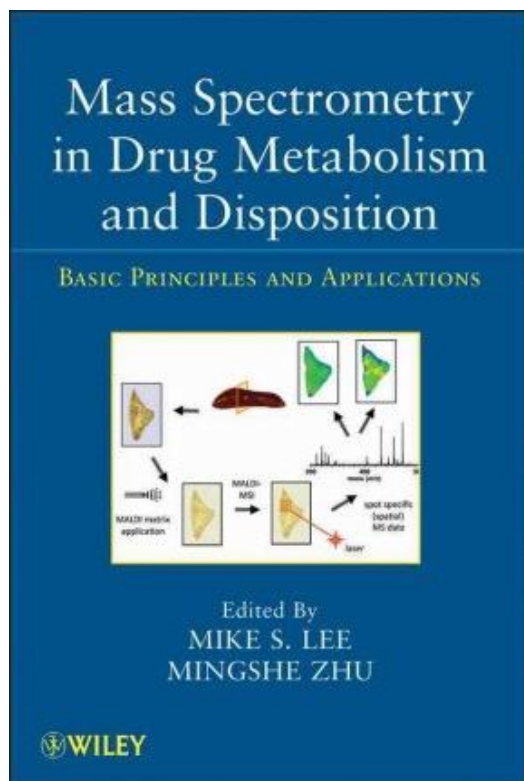


[PDF Download] Mass Spectrometry in Drug Metabolism and Disposition: Basic Principles and Applications Online eBook



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Author: *Mike S. Lee*

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Synopsis:

This book examines the background, industrial context, process, analytical methodology, and technology of metabolite identification. It emphasizes the applications of metabolite identification in drug research. While primarily a textbook, the book also functions as a comprehensive reference to those in the industry. The authors have worked closely together and combine complementary backgrounds to bring technical and cultural awareness to this very important endeavor while serving to address needs within academia and industry. It also contains a variety of problem sets following specific sections in the text.

See also:

Review quote

"It is a state-of-the-art and mostly comprehensive overview of the field. It will be a valuable source of information for all those who want to start in the fields of drug metabolism and MS, e.g., PhD students, but also senior scientists, etc." (Analytical and Bioanalytical Chemistry, 31 July 2012) "Overall, Mass Spectrometry in Drug Metabolism and Pharmacokinetics is a valuable and interesting resource for a broad readership, including scientists starting to work in DMPK as well as undergraduate and graduate students getting involved in drug discovery and characterization by means of MS." (J Am Soc Mass Spectrom, 2011) "Placing the imaging technology in the context of the principles and applications of drug design, the book can serve as a textbook for either field." (Book New, 1 August 2011)

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The pioneering guide to solving real-world problems in drug metabolism using mass spectrometry Mass spectrometry has become the predominant analytical tool for drug metabolism and pharmacokinetics research in modern drug discovery and development. This book represents a coherent integration of all relevant background knowledge and detail surrounding the analytical technologies in this new multidisciplinary field. With chapters written by internationally renowned authors, the book provides details on:

Basic concepts of drug metabolism and pharmacokinetics The principles and common practice of mass spectrometry in drug metabolism Applications of new LC/MS techniques in drug metabolism and disposition Mass Spectrometry in Drug Metabolism and Disposition examines fundamental aspects and practical considerations of using mass spectrometry in drug metabolism such as biotransformation reactions, metabolizing enzymes, transporters and drug-drug interactions, drug metabolism in drug design and development, theory and instrumentation of mass spectrometry, and LC/MS approaches to drug metabolism and mass spectral interpretation. Exciting details on new mass spectrometry technology and novel applications used in the frontiers of pharmaceutical research, including high-resolution mass spectrometry in metabolite identification, imaging mass spectrometry in drug tissue distribution, accelerator mass spectrometry in microdosing, as well as the analyses of metabolomes, herbal medicine, biomarkers, and biologics by various mass spectrometers are also highlighted in the book.

This unique book serves as both a textbook for students as well as a comprehensive reference for pharmaceutical professionals, offering fresh and exciting solutions in the ongoing effort to design and develop drugs that are both effective and safe.

About Mike S. Lee

MIKE S. LEE, PhD, is President of Milestone Development Services. His recent work has involved the development of automated orthogonal control systems for electrospray ionization. Formerly, Dr. Lee was director of analytical research and development at Bristol-Myers Squibb (BMS) Pharmaceutical Research Institute where he led interdisciplinary teams that contributed to the Food and Drug Administration's approval of Buspar(R) and Serzone(R), and the accelerated development and approval of Taxol(R). In addition, he has authored over forty scientific papers and issued patents. MINGSHE ZHU, PhD, is a drug metabolism researcher at Bristol-Myers Squibb, where he leads a team that investigates biotransformation in new drug discovery and preclinical drug metabolism and pharmacokinetics in development. His teams have provided key metabolism and disposition information for regulatory approval of Abilify(R) and NDA submission of Dapagliflozin. Dr. Zhu's research interests include LC/MS technology, optimization of ADME properties, metabolic activation, and regulatory drug metabolism. He has been frequently invited to speak and teach short courses at conferences/workshops and has coauthored over sixty research articles and one book.

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