The goal of this book is to improve the readers' knowledge of metabolite elucidation in drug metabolism by exposing them to in depth coverage of the biotransformation of xenobiotics, strategies for identifying and characterizing metabolites, FDA guidelines, and case studies on how to improve the decision-making process in structural modification of drug candidates to reduce toxicity.

The book consists of 8 chapters; it first provides an introduction on biotransformation of xenobiotics, and then presents modern approaches and strategies for dealing with metabolite characterization, using tools such as LC-MS, H-D exchange, stable isotopes LC-MS-NMR, and radiolabeled compounds. Also, strategies for dealing with reactive intermediates in drug discovery and development are presented as well as case studies on improving the decision-making process in the structural modification of drug candidates. The last chapter discusses the regulatory perspectives of safety testing of drug metabolites and why, how, and when to test their safety.

ABOUT THE AUTHOR

ALA F. NASSAR, PHD, has worked in the pharmaceutical industry for more than ten years. For over five years, Dr. Nassar oversaw the drug metabolism and bioanalytical department at Vion Pharmaceuticals, working in these key areas of drug discovery and development. One principal area of his research involved understanding how structure modification can improve the ADME profile for new chemical entities as they advance toward clinical candidacy. He identified and subsequently patented
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