

BOOK REVIEW

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Review of: *Benzodiazepines and GHB: Detection and Pharmacology*

REFERENCE: Benzodiazepines and GHB—Detection and Pharmacology. Salamone SJ. Humana Press, Totowa NJ, 2001. 148 pp \$79.50

As the publisher's cover notes on this volume point out, the low dose benzodiazepines and gamma hydroxybutyrate (GHB) escape detection in many laboratories because of their low effective doses and rapid metabolism. This is an important shortcoming because of the forensic consequences of the use and misuse of these drugs. Edited by Dr. Salvatore Salamone, the book is a collection of seven papers, any of which would be at home in the pages of this Journal, and it will be a useful addition to the library of any laboratory looking to improve its performance in the areas discussed. Its focus, however, is on a few of the low dose benzodiazepines, (a fact not clear from the title), and includes only a single chapter on GHB.

The book begins with a brief review of the pharmacokinetics, pharmacodynamics, and abuse liability of some of the low dose benzodiazepines, focusing on flunitrazepam (Rohypnol®). There follows a chapter on immunoassay, discussing the poor cross reactivity of various commercially available assays with a variety of benzodiazepines. The book is definitely written from a practical perspective. For example, the authors detail how enzymatic hydrolysis improves the prospects of reducing false negatives in immunoassay screens. Other chapters deal with sample preparation, followed by GCMS, GCMS/MS, or LCMS of flunitrazepam, alprazolam, midazolam, lorazepam, and triazolam in a variety of matrices including human hair, and give specific conditions including columns, instrument settings, temperature programs, or solvent systems. This approach can help to guide the reader through the set up and evaluation of a method, although only two examples of sample chromatograms are included.

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Each chapter is authored by one or more prominent workers well known to the forensic toxicology community, and the quality of the writing is excellent. All chapters are well referenced, and the sections dealing with methodology are detailed and comprehensive. Disappointingly, there is no cross referencing between chapters, which reinforces the format as a collection of related papers rather than a textbook. The single chapter in the volume dealing with GHB is a thorough and current review of its chemistry, pharmacology, pharmacokinetics, and analytical methods. It also deals appropriately with the complex interpretive issues surrounding GHB.

The final chapter deals with the incidence of various drugs in urine samples from alleged drug facilitated sexual assaults (DFSA), and presumably was the impetus for grouping these compounds—low dose benzodiazepines and GHB—together in the same volume.

The greatest weakness of the book is that its scope is much narrower than is suggested by its title. This is not a general textbook on benzodiazepines or their pharmacology, clinical use, or forensic interpretation. Its focus is analytical, concentrating on only a few members of this important class, most notably flunitrazepam, a drug used widely in Europe and South America but not available legally in the United States. It does not deal with many of the features which benzodiazepines and GHB have in common, other than their use in DFSA. There is, for example, little consideration given to their impairing effects, and no discussion of the use of benzodiazepines in treating alcohol withdrawal, although that application is discussed for GHB; nor is the use of benzodiazepines in treating GHB withdrawal touched on.

In the preface, the editor justifies the pairing by describing both compounds individually as being of recently emerging importance to forensic toxicologists, and in that respect this book succeeds by providing some practical insight into the measurement of these analytically challenging and forensically important drugs.