Calcd for $C_{21}H_{18}N_2O_5$, 378.1214. Found, 378.1219. ($C_{21}H_{18}N_2O_5$) C, H, N.

11-Hydroxy-(20*RS*)-camptothecin (4). The methoxy compound 3 (75 mg) was combined with 48% aqueous HBr (2.5 mL) and heated at reflux for 6 h. The red-brown mixture was stripped of solvent under high vacuum. Chromatography of the residue through silica gel (15 g) (7% MeOH–$CHCl_3$) gave compound 4 (33 mg, 45%) as a beige solid, which was further purified by recrystallization from 13% MeOH in $CHCl_3$: mp 323–326 °C (lit.[11] mp 327–330 °C dec); IR (KBr) 3450 (OH), 1742 (lactone), 1654 (pyridone), 1613–1592 (aromatic), 1570, 1245 cm^{-1}; ^1H NMR (Me_2SO-d_6) δ 0.88 (t, 3, J = 7 Hz, H-18), 1.85 (m, 2, H-19), 5.20 (s, 2, H-5), 5.41 (s, 2, H-17), 6.51 (br s, 1, 20-OH), 7.26 (dd, 1, J = 9, 2.5 Hz, H-10), 7.28 (s, 1, H-14), 7.36 (d, 1, J = 2.5 Hz, H-12), 7.95 (d, 1, J = 9 Hz, H-9), 8.52 (s, 1, H-7), 10.43 (s, 1, 11-OH). Anal. Calcd for $C_{20}H_{16}N_2O_5$, 364.1059. Found, 364.1054. ($C_{20}H_{16}N_2O_5 \cdot 1.0H_2O$) C, H, N.

Acknowledgment. The studies reported in this paper were supported under PHS Grant R01-CA29890, awarded by the National Cancer Institute, DHHS. We wish to thank Harold Taylor for technical assistance, Dr. James Ellard, Monsanto Research Corporation, for the enriched 10-hydroxycamptothecin fractions and data relating to these fractions, and Dr. Matthew Suffness, Chief, Natural Products Research, DTP, DCT, NCI, for valuable discussions and procurement of antitumor assays.

Additions and Corrections

1986, Volume 29

Utpal Sanyal, Saktimoyee Mitra, Prasun Pal, and S. K. Chakraborti*: New α-Methylene γ-Lactone Derivatives of Substituted Nucleic Acid Bases as Potential Agents.

Page 595. This paper was published in error as a Communication. It should have been published as a Note.

Book Reviews

Drug Fate and Metabolism. Methods and Techniques. Volume 5. Edited by E. R. Garrett and J. L. Hirtz. Marcel Dekker, New York. 1985. xv + 345 pp. 16 × 23.5 cm. ISBN 0-8247-7423-x. $79.50.

This book is the latest volume in a continuing series of monographs concerning practical approaches to the study of drug metabolism and pharmacokinetics. As with the previous volumes of this series, the editors have maintained a similar format by reviewing specific areas of interest to those investigators who are interested in recent developments and techniques in this field.

This volume contains six well-written chapters. The first chapter entitled "Pharmacokinetic Procedures and Strategies" written by E. R. Garrett gives very practical suggestions for the design and evaluation of pharmacokinetic studies. Rather than presenting a series of pharmacokinetic equations which can be found elsewhere, Dr. Garrett has developed a general outline for performing pharmacokinetic studies including useful comments on drug assay and protocol design. The section on the evaluation of pharmacokinetic studies is well written and the addition of simulations and literature examples help further to clarify the theoretical equations which are given in the Appendix of this chapter. The second chapter, by D. Riad-Fahmy and G. F. Read reviews the most recent approaches for the performance of radio- and enzyme immunoassay. Although the authors give a table summarizing most of the commercially available kits for performing immunoassay procedures for therapeutic drug monitoring, the emphasis of this chapter is concerned mainly with factors necessary for the development of specific immunoassay procedures within the laboratory. Topics included in this chapter are the production of antisera, the preparation of antigen labels, the general format of immunoassays, and assay validation. An overview on the principles of radioactivity measurement in biological experiments is presented in the third chapter, by L. Botta, H.-U. Gerber, and K. Schmid. This chapter discusses primarily liquid scintillation counting including basic principles, instrumentation, and measurement. A brief note is given by the authors on autoradiography and column chromatography.

In Chapter 4, S. L. Beal and L. B. Scheiner describe in detail data analysis methods applicable to population pharmacokinetic studies, with emphasis on the standard two-stage method and the first-order method. These methods are usable even when the number of responses per patient are small. Each method is given a rigorous mathematical derivation for the general case. In addition, Appendix III of this chapter applies the first-order method to a pharmacokinetic study with specific equations for several pharmacokinetic parameters. This chapter represents a useful reference containing the theoretical framework for a blend of statistics and pharmacokinetics that should have utility for the interpretation of actual patient data. B. F. H. Drenth and R. A. deZeeuw provide an overview of high-pressure liquid chromatography in Chapter 5. A theoretical introduction is followed by sections containing practical comments on stationary and mobile phases, the HPLC apparatus, derivitization, and sample preparation. The longest section emphasizes applications to drug fate and metabolism, including quantitative aspects. Also included in this chapter is a table of stationary phases used for the assay of more commonly used drugs in biological media. The final chapter, by A. Gouyette, gives the current status of mass spectrometry as a universal and sensitive detector for liquid chromatography. The author discusses off-line and on-line techniques and their limitations. Included in this chapter are a summary and three extensive tables of applications of these techniques