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# Letters to the Editor

## Liver-cell Mass and Nuclear-cytoplasmic Ratio in Human Liver

In spite of current interest in histoquantitation, reflected in your issue of February 1975, there is as yet little information on measurement of tissue components of mammalian liver under the microscope, and figures cited vary widely. Thus, for instance, hepatocyte cytoplasm is said to account for 77% of liver volume in the rat (Weibel *et al*, 1969) while in man about 60% of the liver is said to be composed of liver cells (Sherlock, 1968).

We have recently calculated figures for formalin-fixed, paraffin-embedded liver biopsies on the basis of point-count morphometry. The work formed part of a thesis presented by one of us (LCCG) for the degree of PhD in the University of London. Liver cells in 20 normal human livers accounted for 80·5 ± 4·2% of total volume (mean ± SD). Liver-cell cytoplasm alone accounted for 70·9 ± 4·5% and nuclei for 9·6 ± 1·9%. The latter figures give a mean nuclear-cytoplasmic ratio of approximately 0·14 or 1:7. Our results suggest that liver cells form an even larger proportion of human liver than was previously supposed.

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## Correction to Error

Anderson, J. D., Lacey, R. W., Lewis, E. L., and Sellin, M. A. (1974). Failure to demonstrate an advantage in combining sulphamethoxazole with trimethoprim. *J. clin. Path.*, **27**, 619-22.

The above paper contains two transcription errors, one of which appears to invalidate the conclusions in the text. Table II, column 3, line 4 (sulphamethoxazole in urine): for 0 read 1; Table II, column 3, line 12: for (0.01→6.3) read (0.11→6.3).

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# Book reviews

**The Acid-Base Status of the Blood. 4th Edition.** By Ole Siggaard-Andersen. (Pp. xii + 229; illustrated; Dan. Kr. 110:00.) Copenhagen: Munksgaard. 1974.

This book is something of a tour-de-force. It will be of the greatest scientific value to those trying to master the complexity of all the known factors concerned in acid-base blood chemistry. The author stresses mathematical and chemical exactness and this makes for very heavy going on the part of all who cannot describe themselves as physical chemists.

Nevertheless, this book should be a valuable comprehensive addition to the library of a clinical chemist. The sections on analytical methods are quite superb, and the sources of error are clearly outlined. The bibliography is excellent.

A. GUZ

**Atlas of Human Glomerular Pathology.** By Peter M. Burkholder. (Pp. 44; 100 figures; $35.00.) New York and London: Harper and Row. 1974.

In recent years advances in both experimental and human renal pathology have been rapid. Renal biopsy techniques have been improved and it is now mandatory in most centres for histological examination of kidney tissue to include immunofluorescence and electron microscopy as well as conventional light microscopy. The appearance of this atlas is thus timely and, coming from one who has himself contributed much to our present understanding of renal disease, it is authoritative as well. A chapter is devoted to each of the main glomerulopathies, and the illustrations of the light microscopic, immunofluorescent, and ultrastructural findings are clear and informative. Each chapter begins with a