

## Book Reviews

**DAS INNERE LYMPHGEFÄSSSYSTEM DER ORGANE.** By F. Renyl-Vamos. (Pp. 447; 278 figures. Price not stated.) Budapest: Akademiai Kiado. 1960.

The injection techniques by which nineteenth century anatomists worked out the main systems of lymphatic drainage are unsuitable for such organs as the kidney; besides filling lymphatic capillaries, the injection material leaks into tissue interstices and blood vessels and gives a totally misleading picture. Following up an earlier discovery, the author of this monograph found that if he ligated the renal lymphatics at the pelvi-ureteric junction, or indeed the ureter itself, the resulting dilatation of the lymphatics within the kidney made them easily recognizable in sections prepared a few days later. The principle is to produce local oedema, so that the lymphatics become distended by the protein they have to carry away.

The technique has produced several interesting results. Infections in the kidney and ureter and in other organs, including the gall-bladder and uterine tube, spread not via lymphatics but directly through interstitial tissue: leucocytes are never seen inside lymphatic capillaries. In acute glomerulonephritis there is interstitial oedema but the lymphatic dilatation which accompanies it in other conditions is absent and protein stagnation provokes the laying down of collagen fibres.

These views are illustrated by many clear and convincing photographs, but the coloured illustrations in the copy received are indecipherable because the blocks were out of register. The text is easy to read, but is repetitive and contains much irrelevant matter. This work deserves attention from the pathologist interested in lymphatics, but not all the author's views will command universal agreement.

D. P. WINSTANLEY

**PROTIDES OF THE BIOLOGICAL FLUIDS:** Proceedings of the Seventh Colloquium, Bruges, 1959. Edited by H. Peeters. (Pp. 420; 210 illustrations and 98 tables. 76s.) Elsevier Publishing Company, Amsterdam, London, New York, Princeton, 1960.

Every year D. H. Peeters puts those who are interested in the proteins of the body fluids more greatly into his debt. Once again he has edited the papers and discussions given at the annual Bruges Colloquium (the one in 1959 was the seventh of the series). At this Colloquium even more papers, covering an even wider field than previously, are recorded in an excellently produced volume.

There is a first-rate brief review on 'The Synthesis of Antibodies and of Protein' by Professor H. E. Schultz. This is followed by sections on technical aspects of the subject of protein analysis by electrophoresis and spectrophotometric methods. Then come sections on immunoelectrophoresis, on chromatography, on certain biochemical aspects, and on some binding properties of

proteins. Then follow sections on nutrition and pathology.

There are very many excellent papers included in the 87 given at the meeting. This volume can be very strongly recommended to all those interested in the body proteins.

J. N. CUMINGS

**OXOSTEROIDS: THE USE OF PHENOLIC HYDRAZIDES FOR DETECTION, CHARACTERIZATION AND ESTIMATION.** By Bernard Camber. (Pp. viii + 79; 8 figures. 12s. 6d.) London: H. K. Lewis. 1960.

This is a specialized work. In a field bedevilled by a confusing literature the author conveys a clear picture. The methods described will be of interest both to those who seek to determine these compounds in body fluids and tissues and to those seeking to characterize them in histochemical preparations.

ARTHUR JORDAN

**AN INTRODUCTION TO HUMAN BLOOD GROUPS.** By Fulton Roberts. (Pp. 85. 9s. 6d.) London: Heinemann. 1960.

This monograph of 13 short chapters attempts to give a sound basic knowledge of blood groups to those having neither the time nor the inclination to explore the numerous larger volumes filled with curious symbols.

There is a short serological introduction and the author goes on to give a commendably clear account of the rhesus blood groups, their discovery, detection, and importance. Understandably he uses the Fisher CDE nomenclature, although he voices the recent doubt of its validity.

The minor blood groups are dealt with briefly. The ABO group is dealt with later because it displays unusual features, such as the presence of natural antibodies.

Short chapters follow to explain the importance of blood groups in disease and in the study of genetics and anthropology and, finally, in a chapter entitled 'Some Growing Points', current research is discussed. A short bibliography is given.

The author has succeeded in writing a most readable introduction to human serology which can be confidently recommended to students and junior pathologists.

R. H. B. PROTHEROE

**BLOOD TRANSFUSION: A GUIDE TO THE PRACTICE OF BLOOD TRANSFUSION WITHIN HOSPITALS,** 2nd ed. By George Discombe. (Pp. 58. 6s.) London: Heinemann. 1960.

This pamphlet first appeared in 1955 as a guide to the practice of transfusion within hospitals. It is written primarily for the temporarily registered doctor during his first resident appointment. It is, however, popular with students and makes useful reading for the resident pathologist.

The second edition shows some rearrangement and incorporates some advances in knowledge. The development of transfusion is related, and the workings of a regional transfusion centre are described. The difficulties and dangers of transfusion are stressed, but no more of the theory or technique of transfusion is described than is necessary to aid the resident's clinical judgment.

This pamphlet, together with the Ministry of Health publication 'Notes on Transfusion', will greatly facilitate the task of the blood transfusion officer.

R. H. B. PROTHEROE

**MICROCHEMICAL METHODS FOR BLOOD ANALYSIS.** By Wendell T. Caraway. (Pp. xi + 109. 42s.) Oxford: Blackwell Scientific Publications; Springfield, Illinois: Charles C. Thomas. 1960.

This book sets out to present a system of micro-analysis based on the use of the Coleman Jr. spectrophotometer and flame photometer.

It is written as a biochemistry cookery book with the assumption that the cook has not yet even learnt how to light the gas.

Several macro-methods are described and others are somewhat out-dated macro-methods adapted for micro-analysis.

This book would have its place as a free issue with a Coleman Jr. spectrophotometer but can hardly be recommended at 42s.

W. P. STAMM

#### INTERNATIONAL CONGRESS OF NEUROLOGY

The Seventh International Congress of Neurology will be held in Rome from 10 to 15 September 1961, under the auspices of the World Neurologic Federation and of the National Institute for Nervous Diseases and Blindness of Bethesda.

Full details are available from the President of the Congress, Prof. Mario Gozzano, or from the Secretary General, Dr. Giovanni Alemà, Viale Università 30, Rome.

## The maturation and senescence of erythrocytes

A symposium was held at the Institute of Chemical Physiology, Humboldt University, Berlin, on the occasion of the 250th anniversary of the Charité Hospital and the 150th anniversary of the University

Amongst the subjects discussed were:—

**THE CYTOCHEMISTRY OF RED CELL MATURATION**, contributed by Bo Thorell (Stockholm), who used micro-spectrophotometry to quantitate and localize intracellular nucleic acids, proteins, haem, and iron, in single marrow cells as well as the loci of respiratory enzymes and coenzymes in certain other cells.

**ENZYME CHANGES IN RED CELL MATURATION, SENESCENCE, AND CONSERVATION** was discussed by S. Rapoport. He asserted that reticulocyte maturation involved interlinked and serially governed metabolic and structural processes sharing many pathways with senescence but differing from the changes accompanying storage. The key process in maturation is the decline in respiratory activity caused by protein inhibitors which act on iron flavoproteins, cytochromes, and SH-containing hexokinases and pyrophosphatases. Perhaps the limiting factor for cell survival *in vitro* and *in vivo* is the maintenance of adenosine triphosphate levels.

T. A. J. Frankerd (London) stressed the importance of changes in the stroma and lipids in these processes, and C. W. Löhr and A. P. Waller (Marburg) reported on enzyme changes in red cells during senescence *in vitro*.

**BLOOD PRESERVATION AND ADENINE NUCLEOTIDES** was discussed by H. Yoshikawa (Tokyo), who showed that survival of stored red cells is greatly prolonged by adding adenine to acid synthesis of adenosine triphosphate and inosine for preferential oxidation, sparing the heavy A.T.P. consumption of the glucose cycle. The steps of adenine to A.T.P. were delineated and the influence of A.T.P. on red cell morphology was shown. Dr. Fischer (Frankfurt) reported work leading to similar results.

H. Lehmann (London) covered recent advances in the haemoglobins, their chemistry, characterization, identification, distribution, and frequency. He spoke of experiments in hybridization conducted *in vitro* and postulated an interrelationship between the prevalence of abnormal haemoglobins and certain diseases in African communities. The sickle cell haemoglobin confers some resistance to malaria in early childhood.

The proceedings will be published shortly and further symposium is planned for two or three years hence.