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 flavoproteids, cytochromes, and SH-containing hexokinases and pyrophosphatases. Perhaps the limiting factor for all survival *in vitro* and *in vivo* is the maintenance of adenosine triphosphate levels.

T. A. J. Pranker (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 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 a further symposium is planned for two or three years hence.