BOOK REVIEWS

SYMPATHETIC CONTROL OF HUMAN BLOOD VESSELS, *H. Barcroft and H. J. C. Swan*. London, Edward Arnold and Company. Williams and Wilkins, Baltimore, 1953, pp. 165.

This monograph of 150 pages published under the auspices of The British Physiological Society is an excellent presentation of present day knowledge of the mechanisms of control of human blood vessels. Although they have concerned themselves primarily with studies on the circulation in the extremities, the authors believe that the responses have a more general application to the function and behavior of blood vessels in other parts of the body. Vasodilator and vasoconstrictor nerves to skeletal muscle, the action of adrenaline and noradrenaline on the circulation in skeletal muscle, the circulation in skeletal muscle during exercise, the responses of circulation after sympathetic denervation and the action of adrenaline and noradrenaline on the circulation in the skin and on the general circulation are described in detail. Fundamental experiments, both of historic interest and recent completion, are described in detail. Summaries and conclusions are included concerning each of the experiments and one is impressed with the strict scientific validity of the conclusions drawn from the experimental result. The book is outstanding in its avoidance of interpretations which appeal to the imagination without adequate support by observation and experiment. The larger part of the volume is concerned with fundamental experiments and observations on peripheral circulation; it is written from the point of view of the scientific investigator but the nature of the observations is so fundamental to an understanding of blood vessel physiology that they should be familiar to the clinician interested in peripheral vascular disease. The material here is for the student of physiology as well as the specialist in vascular disease. Probably of greater appeal and immediate usefulness to the clinician are the discussions on adrenergic blockage, pheochromocytoma, and the vasovagal syndrome. Plethysmography is described in an appendix. Each chapter is supported by a well selected bibliography. The British Physiological Society and the authors are to be congratulated.—*Alan Callow*

BLOOD CELLS AND PLASMA PROTEINS. THEIR STATE IN NATURE, edited by *J. L. Tullis*. New York, Academic Press, 1953, pp. 436.

This volume is Number 2 in a series "Memoirs of the University Laboratory of Physical Chemistry related to Medicine and Public Health, Harvard University." It considers the present state of knowledge about blood and its component parts and represents material originally presented in seminars. There are seven main sections, each with from two to five chapters, and each chapter is written by one or more authorities in the field.

Edwin J. Cohn is responsible for Section I, which deals with the characterization and separation of plasma proteins and with the interaction of proteins with each other and with metals, alkaline earths, steroids, and specific polysaccharides. The technical parts of this section are preceded by a very well written historical account of the separation of the formed elements of the blood from the plasma, and of the early observations on the nature of proteins.

Section II deals with coagulation (Douglas M. Surgenor, Benjamin Alexander, John H. Ferguson, John T. Edsall, and James L. Tullis).

Section III considers the components of human blood concerned in immunity, the nature of the immune-process (Charles A. Janeway), the gamma globulins (John F. Enders), and the cellular sources of antibodies (John L. Oncley and William E. Ehrich).

Section IV deals with the general properties and life span of the erythrocyte (John G. Gibson, 2nd), their preservation (Max Strumia and Robert B. Pennell), and their enzyme systems (Orville F. Denstedt).

Section V is concerned with white cells, their role in immunity, and some aspects of their metabolism (James L. Tullis, Claude-Starr Wright and Charles A. Doan, Charles F. Code, and Britton Chance).

Section VI describes the plasma enzymes (Douglas M. Surgenor, Margaret J. Hunter,

Ray K. Brown, and Joseph Fruton), while the last section deals with lipoproteins and glycoproteins (John L. Oncley, Frank R. N. Gurd, Michel Macheboeuf, Jordi Folch-Pi, David P. Barr, Ella M. Russ, Howard A. Eder, Walter F. Lever, and Nancy A. Hurley).

Some chapters are more specialized than others, and some are little masterpieces while others do not quite reach that level, but the range of information is so broad and so well covered that almost any reader can profit from any chapter and almost any page. Some readers may find, perhaps with dismay, that a considerable knowledge of physical chemistry and chemistry is necessary for following some of the discussions, which, since they deal with blood, are presumably within the domain of hematology; they may even deplore the fact that what was once thought of as a nicely circumscribed subject is now overflowing all its ancient boundaries. But this is the way things are going; *ducunt Fata volentem, nolentem trahunt*, and this volume is as good a starting point as any.

Indices, author and subject, are good. References are given at the end of each chapter. The illustrations and the general style of the book are excellent.—*Eric Ponder*

MULTIPLE MYELOMA, *I. Snapper, L. B. Turner, and H. L. Moscovitz.* New York, Grune & Stratton, 1953, pp. 176.

This little volume of 154 pages with 10 pages of bibliography is an outstanding addition to the literature of the disease and will be certain to clear up many often obscure points for the student and physician. It represents a personal study of ninety-one cases, forty-one of which were autopsied, and is thus a worthy addition to the great clinical works which have emanated over the years from the Mount Sinai Hospital in New York.

The myeloma cell is exhaustively described and its probable derivation from the reticulum cell series cited. Clinical manifestations, including visceral involvement, and many remarkable x-ray films of bones are presented. There is a very comprehensive description of Bence Jones proteinuria, the abnormal serum proteins, and a strong section on the electrophoretic abnormalities. Paramyloidosis is discussed thoroughly. Thus a good many interesting abnormalities, previously mentioned in little dribs and drabs elsewhere, are authoritatively discussed. The section on therapy is admirable, with adequate discussions of the author's method of Stilbamidine treatment and of the use of Urethane.

This is a good solid book, by no means exhaustive, but taking up many fine points previously given only passing attention. It is systematic and descriptive, although it might have been somewhat more logically presented as a generalized or leukemic plasmocytic proliferative process, thus leading to various abnormalities of the blood, marrow, serum, kidneys, etc. Aside from this rather captious criticism, one can recommend the book wholeheartedly.—*William Dameshek*