

MEDICAL RESEARCH

*Medical Research: A Midcentury Survey.* Volume I. American Medical Research: in principle and practice. Volume II. Unsolved Clinical Problems: in biological perspective. Pp. (Vol. I xxxii + 765) (Vol. II xxxii + 740). 105s. per set. Boston—Toronto: Little, Brown and Company. 1955.

*Contents:* Volume I. *American Medical Research: in principle and practice.* Foreword. Introductory: Outlining why and how this study was made. 1. Medical Research in the Perspective of Biological, Chemical, Physical, Mathematical Science. 2. Current Trends and Current Problems in Medical and Biological Research in the United States. 3. Research Agencies. 4. Clearing Results and Controlling Products of Medical Research. Appendix. Volume II. *Unsolved Clinical Problems: in biological perspective.* 1. Current Metabolic Concepts Orienting Research in Biology and Medicine. 2. Cancer. 3. Infertility. 4. Arteriosclerosis. 5. Hypertension. 6. The Rheumatic Syndromes. 7. Tuberculosis. 8. The Nature of Viruses and of Virus Diseases. 9. Alcoholism. 10. Biology of Schizophrenia. Appendix.

It is well recognized that America has established a commanding lead in all fields of research. These two volumes show that this is not the result of chance but emerges from calculated endeavour. The American Foundation has as its objective, 'to set up defences against the lack of fact and the weight of particular propaganda that inhibit clear thinking on many important questions'. Following its numerous other fact-finding enquiries it sets down, in this report, the facts regarding research in biology, chemistry and physics in relation to the maintenance of high standards of medical education and of medical care for the whole population. Here we find the whole panoply of the American research scene—the magnificent structure is arrayed before us. Nay, it is dissected for our edification. Here we find pen-pictures of all the hundred-and-one institutions which contribute to the whole—they can only be 'snippets' or else these volumes would be monumental in size—the foundations (e.g. Rockefeller, Commonwealth, Macy and Carnegie), the Universities and Medical Schools, the independent endowed research institutes and the like; the financing of these agencies, and their difficulties as well as their achievements; the extent of Government support and responsibility, as well as the contribution of that other great American institution 'private enterprise'. In addition there is an evaluation of the significance of the various varieties of research and how they should be compared. The emphasis is always on fundamental research viewed in biological perspective, utilizing the contributions of chemistry, physics and mathematics and the results of research on atomic energy. Always the enquiry is how to further this research, how best to reorganize and support the institution, individual or project which is most worthy of this support.

In the second volume, 9 clinical conditions are discussed. These are cited merely as examples and there could be many more. They have been chosen because they exemplify some of the unsolved clinical problems which face us at this mid-point of the

20th century. No attempt is made to present a comprehensive monograph on any one of these problems, for each of them could easily justify a volume or more on its own. Rather do they aim at reviewing current trends in fundamental research needed for understanding the mechanisms involved in the clinical state. Any success in any one of these conditions must immediately reflect on many of the others and on most biological problems. It is a tall order and because of its very magnitude can only succeed in the smallest degree.

It is not a book one can take up to pass an idle moment. It is largely a book for reference; it is a research project on the research scene. It will find its niche in libraries and in institutions whose function it is to sustain medical (and other) research and education. It is a contribution to knowledge, an analyses of fact, and a hope for the future. It is hardly likely to become a 'best seller', but it will not lie neglected on the library shelf.

C.M.

THE CEREBROSPINAL FLUID

*The Cerebrospinal Fluid.* By S. Lups, M.D. and A. Haan, M.D. (Pp. 350 + xv. 52s. 6d.) London, Amsterdam, New York: Elsevier Publishing Co. Ltd. 1954.

*Contents:* 1. Anatomical and Physiological Observations. 2. The Puncture of the Cerebrospinal Fluid. 3. The Investigation of the Cerebrospinal Fluid as an aid in Diagnosis. 4. Methodology. Bibliography. Index.

This monograph, the first in the English language for some 15 years, supplements but does not replace, the classical works of Boyd, Greenfield and Carmichael, Cushing, Merrit and Freemont-Smith. It is a pity that the translators should have adopted such an unfortunate style to put across the ideas of the authors.

The book reviews the mode of formation and composition of normal and pathological fluids and the different methods used in their chemical and cytological analysis. The technique of lumbar puncture is treated in an orthodox manner. Detailed descriptions are given of the extent to which these methods can be used in the differential diagnosis of lesions of the central nervous system and its membranes.

A feature of the book is the large number of diagrams illustrating the mastic, gold, benzoin and other colloidal tests. The reviewer wishes he could share the obvious enthusiasm of the authors for these tests, and their interpretation of the 'minimally pathological curves'. One would also not expect 'Ayala's index' or the 'Boveri reaction' to be mentioned in a modern text-book.

This volume should serve as a stimulus for investigators who wish to probe more deeply into the significance of the cerebrospinal fluid.

A.A.K.