A DIVERSITY OF TRENDS IN MEDICINE

Ciba Foundation Symposium on Significant Trends in Medical Research

Edited by G. E. W. Wolstenholme, Cecilia O'Connor and Maeve O'Connor. (Tenth Anniversary Symposium.) Pp. xii+356. (London: J. and A. Churchill, Ltd., 1959.) 50*s*. net.

THIS account of the transactions of a special symposium arranged in June, 1959, to celebrate the tenth anniversary of the Ciba Foundation is the fiftieth major volume published for the Foundation. The aim in selecting the thirteen original papers, here printed together with the discussions on them, was to pick out the advances in medical research in the past ten-year period which would prove to be most significant in the next ten years. The speakers fortunately eschewed prophecy and talked about the work they were interested in personally. Distinguished as the participants were—they included seven Nobel laureates—it seems doubtful if any of them could have taken a sustained interest in everything that went on, or understood the whole of a terminology which included nuclear-spin and electron-spin magnetic resonance, genome, the ascending reticular system and co-arctation of the aorta. Few active scientists to-day are polymaths, and trends in medical research may diverge too widely to be the focus of a single gathering.

The Ciba Foundation has done such admirable work in providing hospitality for visiting scientists and arranging symposia of groups of experts that one must not grumble at an occasional *Festschrift* or express a perhaps purely personal prejudice against studying so many topics at once. Some of the subjects dealt with were general neurophysiology, hormones, pancreas and insulin, chronic pulmonary disease, clinical nutrition, and the organization of research in the United States. The remaining papers, which are concerned with such subjects as molecular structure in relation to biology and medicine, enzymes, the chemical basis of virus multiplication, population dynamics of body cells, genetics and medicine, malignant transformation, and the quantitative approach to disease as exemplified by essential hypertension, are a more homogeneous collection. They have in common the transmission of cellular characteristics, the disturbances which avoidably or unavoidably occur in this process, and the manifestations which these produce in the organism as a whole. The subject interests a wide range of workers, from electron microscopists to population research workers, and it will undoubtedly form a major trend in medical research in the next decade.

Pauling, Burnet and Medawar briefly indicated their own important contributions, discussing in particular the mechanism of antibody formation, and the question whether the relationship between stimulus and response should be described as 'instructive' or 'evocative'. Similar ideas were shown to underlie our notions of embryonic differentiation, ageing, and malignant disease. Waldenström (his Figs. 2 and 3 have unfortunately been transposed) emphasized the need for greater precision in the description and interpretation of inherited disease in man if human genetics is to support its theoretical superstructure, and Pickering reviewed his work on the incidence of hypertension and the quantitative approach to disease. Not all his audience agreed that the ability to arrange the blood pressures of a population in a normal frequency distribution curve tells us much about the etiology of essential hypertension. Moreover, it is doubtful whether many scientific clinicians to-day believe, as he suggests they do, that "a patient with a specific disease has a single basic fault". Indeed, I think the majority will be rather encouraged to learn that Waddington thinks the one-gene, one-enzyme hypothesis is an abstraction.

The book has been produced with remarkable speed, considering the inclusion of the discussions and the intervention of the printing strike, and it is a testimony to the experience and skill of the editors in this field.

L. J. Witts

THE EYE AND VISION

The Eye in Evolution

By Sir Stewart Duke-Elder. (System of Ophthalmology, Vol. 1.) Pp. xvi+843 (902 figures)+15 plates. (London: Henry Kimpton, 1958.) 126*s*. net.

Documenta Ophthalmologica

Advances in Ophthalmology, Vol. 13. Edited by G. von Bahr, G. B. Bietti, J. ten Doesschate, H. Fischer-von Bünau, J. Francois, H. Goldmann, H. K. Müller, Jean Nordmann, A. J. Schaeffer and Arnold Sorsby. Pp. xii+516. (The Hague: Dr. W. Junk, 1959.) 75 guilders.

BOTH these books are directed towards ophthalmologists. One is written by a clinician, the other records the work and opinions of men many of whom are clinical ophthalmologists. It is significant that the material is largely made up of the basic sciences upon which ophthalmology is built.

Sir Stewart Duke-Elder explains why he has preferred to initiate the preparation of a "System of Ophthalmology", of which he will be editor, to the production of a second edition of his own comprehensive, internationally renowned and sought-after "Text Book of Ophthalmology". Much of the material in its seven volumes is now out of date and the earlier volumes out of print. But while this new book, written by Duke-Elder himself, is the first of fifteen planned volumes to cover ophthalmology it is an entity in itself which can be read and entirely enjoyed not only by clinicians but also by anyone interested in natural history, and in man. Its pattern is perhaps best shown by extracts from the epilogue and introduction in that order.

"This is the story of the development of the eye from the primitive undifferentiated protoplasm of the simplest protozoon to become the most highly efficient sensory mechanism in the animal kingdom in the eyes of Birds. It is the story of the development of the sense of vision from an autonomic response associated at some stage with a vague awareness, to the capacity to be enraptured by a rainbow or to create a thing of beauty".

"It is a fascinating story extending back to where life started, a story mostly of steady progress, now in this direction, now in that, as one expedient after another was tried, this one to be discarded, that to be perfected".

"We begin with a drop of viscid protoplasm the reactions of which we do not understand and we end