

by biopsy, treated by x-rays and followed up at regular intervals.¹⁷ At the end of 5 years after the onset of symptoms only 28 per cent were alive and at the end of 10 years only 3 per cent. Thus, the prognostic outlook is on the whole poor; unfortunately it is impossible to foretell the individual prognosis with any amount of certainty.

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AAGE VIDEBÆK

BOOK REVIEWS

CHEMICAL EMBRYOLOGY, *Jean Brachet*. New York, Interscience, 1950, pp 533.

This book is a translation by L. G. Barth of Jean Brachet's *Embryologic Chimique*, 1945 French edition, for which there has been a demand by investigators in this field. Emphasis has been placed on biochemical and biophysical investigations which throw light on the phenomenon of morphogenesis. The book begins with a valuable discussion of the principles and value of histochemical and cytochemical technics and a chapter on the chemical basis of sex determination. The biochemistry of fertilization is preceded by a consideration of gamete formation and is followed by a discussion of respiratory and nonrespiratory metabolism in relation to cell division. The synthesis, localization and physiologic role of the nucleic acids is the subject of an interestingly written and important chapter.

Other subjects discussed are growth and differentiation, the chemical embryology of invertebrates and of amphibian eggs, the chemistry of the organization center and the biochemistry of the organism during regeneration. The book concludes with a summation of the established facts, those points which are controversial, and with a statement of perspectives in the field of chemical embryology. A list of 1242 references completes the volume. Brachet deals impartially and critically not only with reference to his own major contributions but also with the work of others. Various hypotheses proposed to explain experimental observations in this field have been critically and intelligently discussed. Many chapters are completed with a summary of the conclusions reached, which will satisfy the individual who has only a general interest in the subject matter. *Chemical Embryology* is, at present, the most useful and valuable book in this field and should occupy a place on the shelf of investigators interested in biological phenomena.—*W. H. Fishman*

DIE GEWEBSMASTZELLEN IM MENSCHLICHEN KNOCHENMARK (Tissue Mast Cells in Human Bone Marrow), *P. Bremy*. Stuttgart, Georg Thieme Verlag, 1950, pp. 78.

This is an excellent treatise on tissue mast cells in human bone marrow.

Dr. Bremy introduces the subject with a careful review of the literature on tissue mast cells pertaining to their occurrence, morphology, physiology and pathology accompanied by a discussion of their relation to heparin. The morphologic review is augmented with a clearly written description of the cells based upon the author's own observations, but unfortunately the photomicrographs do not do justice to the text.

A major portion of the monograph is devoted to a description and discussion of 20 cases that demonstrated tissue mast cells in bone marrow. Among these are 3 cases of carcinomatosis, 2 of multiple myeloma, 6 of panmyelopathy, 3 of aplastic anemia, 3 of paroxysmal nocturnal hemoglobinuria, and 1 each of hypoplastic anemia, "native" sprue and hyperchromic anemia. The interesting details of these cases must be left to the reader, but the author suggests that all have a similar underlying cause for the proliferation of marrow tissue mast cells. He proposes that the underlying cause is a stimulus which results from an allergic-anaphylactic type of reaction of the marrow stroma.

In a concluding discussion of the clinical, hematologic and pathologic significance of marrow tissue mast cells Dr. Bremy points out that once these cells begin to proliferate the marrow becomes progressively less cellular, the resulting anemia is resistant to known therapy and the prognosis is poor.

This monograph does not answer questions concerning the developmental origin of marrow tissue mast cells, nor does it explain how the cells exert their influence upon normal marrow elements, but it should be read by every serious student of bone marrow pathology.

—*Robert S. Fadem*