To this poverty of theoretical thought, Hechter brings some enriching gifts of his own and finally, having shown that the "old" pharmacologist's concern with cell membranes was not so naive after all, we are left with some hard-headed criteria against that day when we think we understand how a hormone "acts."

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Recent Progress in Hormone Research. vol. XI. Proceedings of the 1954 Laurentian Hormone Conference. Gregory Pincus, Ed. Academic Press, New York, 1955. 518 pp. Illus. $10.

The Hormones. Physiology, chemistry and applications. vol. III. Gregory Pincus and Kenneth V. Thimann, Eds. Academic Press, New York, 1955. xiii + 1012 pp. Illus. $22.

The ten previous volumes of *Progress in Hormone Research,* the proceedings of the Laurentian Hormone Conferences, provide the best interpretative record in existence of the progress of endocrinology during the decade in question. The new volume, XI, maintains the fine tradition of those that preceded it. In a more encyclopedic vein, volume III of *The Hormones* presents the combined efforts of a distinguished group of investigators, ranging from botanists to internists, to record the current status of studies of internal secretion in plants and invertebrate and vertebrate animals. They, too, have succeeded well.

I was introduced to endocrinology at a time when the pioneer teachers, such as W. W. Swingle, covered all important aspects of their subject in the lectures of one course. A glance at these two volumes shows that such feats are no longer possible. The field must now be subdivided into its own specialties, which in turn pervade almost all branches of biological science. Volumes like the two under consideration provide the indispensable reference tools through which some degree of unity and coordination can be achieved.

The Laurentian volume contains reviews of work on the following new substances by the investigators most directly involved: crystalline neurohypophyseal hormones (van Dyke *et al.*), amphenone (Hertz *et al.*), halogenated corticoids (Fried *et al.*), and aldosterone (Simpson and Tait). In addition, there are authoritative presentations on the regulation of ACTH secretion (Munson and Briggs), metabolism of anterior pituitary hormones (Sonenberg and Money), hormones and abnormal growth (Furth; Rawson and Rall), the relation of hormones to aging (Engle; Pincus *et al.*), the mechanism of action of insulin (Levine and Goldstein), effects of ions and hormones on carbohydrate metabolism (Hastings *et al.*), and of humoral cardiovascular relationships (Stammler *et al.*; Shorr *et al.*). The value of each paper is enhanced by the inclusion of extensive and well-edited discussions in which many new contributions are noted.

The Hormones is in the tradition of the German *Handbuchs* and includes comprehensive chapters, each with an extensive bibliography, on the following broad topics: plant growth hormones (Thimann and Leopold), invertebrate hormones (Scharrer), neurohormones (Welsh), parathyroids (Greep and Kenny), insulin and glucagon (Stetten and Bloom), chemistry of the anterior pituitary hormones (Hays and Steelman), growth hormone and corticotrophin (Astwood), gonadotrophins and lactogen (Cowie and Folley), posterior pituitary (Landgrebe *et al.*), thyroid (Rawson *et al.*), steroid chemistry (Hirschmann), steroid metabolism (Dorfman), ovary and testis (Pincus), adrenal cortex (Noble), and clinical endocrinology (Paschkis and Rakoff).

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Protein Malnutrition. Proceedings of a conference in Jamaica sponsored jointly by the Food and Agriculture Organization of the United States; World Health Organization; and Josiah Macy, Jr., Foundation, New York. J. C. Waterlow, Ed. University Press, Cambridge, England, 1955. xvi + 277 pp. Plates.

This monograph covers the proceedings of a conference on malnutrition held in Jamaica in 1953. The discussion is divided into the biochemical aspects, the pathology, the clinical aspects and treatment, and the epidemiology and prevention of protein malnutrition. The conference is carried on in the manner characteristic of the Macy conferences. The participants discuss the presentation freely. The reader becomes part of the conference and is exposed to the different points of view of the various members.

The biochemical aspects are presented by J. C. Waterlow of the University College of the West Indies in Jamaica. A good deal of his discussion is concerned with the clinical condition known as *kwashiorkor,* which occurs in children in certain parts of the world and is associated with liver damage. In considering the state of protein depletion, he points out that the degree of depletion, the pattern of depletion, and its chronicity must be considered. The ultimate aim should be to find some means of assessing these three factors and studying how they interact in any given case.

The pathology of protein malnutrition is discussed by G. R. Bras of the University College of the West Indies in Jamaica. He describes venous occlusive disease (V.O.D.), a condition not seen in this part of the world. V.O.D. leads to severe pathological changes in the liver, sometimes indistinguishable from other infantile cirrhoses. It is frequently preceded by an acute infection, but it is always associated with malnutrition.

The clinical aspects and treatment of protein malnutrition are presented by M. V. R. Rao of the Haffkine Institute, Parel, Bombay, and are discussed in great detail by the group.

The epidemiology and prevention are presented by R. F. A. Dean of Uganda, East Africa. Discussion was aimed at the broad principles of prevention and treatment of malnutrition of children all over the globe. The question of the relation of the onset of the disease to the time of weaning was discussed at great length. It was obvious from the discussion that parasitic infestation and infection play a considerable part in the onset of the protein malnutrition diseases. Most of the members of the panel felt that it was important to derive protein from foods that could be grown locally.

This conference is excellent. The interruptions are sometimes a little disconcerting but always provocative. There is a tremendous amount of information in this monograph that will be of interest, not only to the individuals inhabiting the areas of the world where protein malnutrition in children has a high incidence, but also to those of us in this part of the world interested in the nutritional aspects of disease.

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Microscopy of Ceramics and Cements. Including glasses, slags, and foundry sands. Herbert Insley and Van Derck Fréchette. Academic Press, New York, 1955. xii + 286 pp. Illus. $7.50.

This book brings together the extensive data on ceramics and inorganic cements and the fundamental knowledge and techniques necessary for their study. Although the book is devoted chiefly to light microscopy, electron microscopy is discussed in several connections.

The fundamentals of crystal optics are not treated at length. Indeed, these essential principles are stated so tersely that