

is accumulating at an ever increasing rate about one single protein—albeit an important one.

VINCENT MARKS

INTERFERENCE MICROSCOPY FOR THE BIOLOGIST By S. Tolansky (Pp. xii + 166; 130 figures. \$11.75) Springfield, Illinois: Charles C. Thomas. 1968.

A rather specialized form of interferometry (phase contrast) is already well known to the biologist, but the commercial interference microscopes are mainly designed for the study of the surfaces of opaque objects, *eg* in metallurgy. Yet the principles of interferometry can be applied to the study of living material as a non-destructive tool in various ingenious ways. Some of these are quantitative methods, others qualitative, and Professor Tolansky explains with his usual lucidity the merits and shortcomings of different technical solutions. The essential advantage of interferometry lies in the quite surprising magnification in the 'up-and-down' direction, a magnification which can actually rival that of the electron microscope. This is possible since the method uses the wavelength of light as the measuring rod. Unfortunately, however, across the object only the ordinary performance of the light microscope operates. Even so, different optical thicknesses due to refractive index changes, or different physical thicknesses in biological objects, can be shown up and measured. The medical reader will be struck by the realization of the shortcomings of our senses. A diffracted wave may be full of structural information about the object through which it passes, without disclosing any of this information to the eye—unless interference with a structureless beam occurs. This information can then be accepted in the form of contrast and colour. In short the capabilities of the light microscope are by no means exhausted and people engaged in microscopy in the biological field will find much useful information in this book.

S. D. ELEK

TEXTBOOK OF GYNECOLOGIC ENDOCRINOLOGY Edited by Jay Gold. (Pp. 704; 240 figures. \$23.50.) New York: Hoeber Medical Division, Harper & Row. 1968.

This is a 'multi-authored' book written by 36 specialists in various fields of medicine and the basic sciences. Consequently, the subject is analysed and discussed from various wildly different aspects which gives the book a unique, though in parts controversial, character. Each major chapter, and there are eight in all, is subdivided into three to six subsections; each of these is written by individual authors, who are all authorities in their respective fields, so that the end result is more in the nature of a symposium than a textbook. Each chapter, and indeed each subsection, merits more detailed discussion than the space allotted to the reviewer permits.

The first chapter, under the heading 'Hypothalamo-

pituitary axis', deals with new concepts of the control of the central nervous system over the gonadotrophic secretion of the pituitary gland and gives a fascinating account of the experimental work that led to these concepts; it includes an admirably written section on steroid feedback control mechanisms with an excellent explanatory diagram. Finally, in the subsection on pituitary diseases, the clinical application of the physiological data is discussed.

The second chapter on the pharmacology and physiology of hormones presents a detailed account of ovarian function, the physiology and hormonal activity of the placenta, and the interaction of the thyroid and the gonads. The chapter on menstrual disorders includes a theoretical part with an excellent critical evaluation of the role of exfoliative cytology in the assessment of endocrine function, and this is followed by a lucid and concise account of the histological assessment of hormone effects. The clinical aspects of menstrual disorders are represented by subsections on amenorrhoea, menstrual dysfunction, and the radiological aspects of gynaecological endocrinopathies.

Chapter 4 discusses the therapeutic approach to menstrual disorders with excellent up-to-date information on the ovulation-inducing drugs. The chapter on abnormalities of sexual development and function includes a subsection on the sex chromosomes and short discussions and summaries of hermaphroditism, virilism, polycystic disease of the ovaries, precocious puberty, and the hormone-producing tumours of the ovary and placenta.

Special mention must be made of the chapter dealing with infertility which, although remarkably concise, not only presents a survey of the problems familiar to all workers in subfertility clinics, but also offers valuable advice on the management of the infertile couple. Diabetes and its special implications in the female is discussed in a separate chapter subdivided into sections dealing with pre-diabetes, insulin and insulin antagonism, and diabetes in pregnancy with special reference to the physiological basis of the diabetogenicity of pregnancy; there is also an excellent subsection on how to treat the pregnant diabetic and her baby. The last chapter, dealing with endocrine laboratory procedures and available tests, does not do justice to its heading; its sketchiness and lack of depth contrast sadly with the high standard of the rest of this volume and it is hoped that future editions will contain a larger and more detailed review of the role of the laboratory in the diagnosis and assessment of the gynaecological endocrinopathies.

In summary, this volume, which claims to be a textbook and which I consider to be a reference work, will prove of enormous value to established and budding specialists in endocrinology as well as in gynaecology as a unique source of information coordinating research and clinical application.

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