monella and enteric infection is so compressed as to be of little value, and repeats the myth that in enteric fever the faeces are negative until the third week of disease.

JOAN TAYLOR

Neoplastic Development Vol. 1. By L. Foulds. (Pp. xi + 439; illustrated. 110s.) London and New York: Academic Press. 1969.

This is a solid book, closely knit and writ. There are approximately 890 references, and this is only the first volume. To quote from the Preface, 'It is hoped that this discussion will be a helpful introduction to readers who are not conversant with comparatively recent impacts of cybernetics and molecular biology, in their widest senses, on biological method and thought. Volume 2 deals in more detail with special cases of neoplastic development in animals and in man.' Dr Foulds does not invoke much cybernetics although he clearly likes the concept of network-organization in growth control (Weiss), but molecular biology has emphatically stimulated him to much pondering and poring over acres of print.

Critical reviews of the literature can be more satisfactorily critical when the pen is pushed by an old hand in the field; this provides the relish in the first seven chapters on neoplasia. It is worth remembering that *he* says 'No satisfactory definition of neoplasia is available or will be until a great deal more is known about the nature and properties;...' (p. 91). The other eight chapters on biological organization and development biology present him with sloughs and quagmires of speculation and neologisms through which he progresses nobly, and it may be that his own particular efforts to identify and define the strange mechanisms of the cell will in return illuminate the thinking of the professional microchemical and cellular biologists. Perhaps in the next volume he is going to show that the facts already obtained about neoplasia in animals and man can be logically arranged to match the pattern he draws for us in this volume.

It is difficult to summarize intelligibly a long complex journey, and the features the author names might mean little to those who have not been there, but I think the main theme of the last eight chapters can be suggested by the following extractions. 'The most immediate impact of molecular biology upon developmental biology has been on the study of differentiation, ... Differentiation entails the preselection and selection of effective genomes and the transcription and translation of these genomes by linkage with conforming dynamic biochemical systems. ... The problem of preselection

is inextricably related to that of the nature of *competence* which, as here proposed, depends on the differential availability of the utilizable genetic patterns constituting the facultative genome. ... The facultative genome was invented (Foulds, 1963) to take account of the empirical evidence for the differential availability of alternative genetic patterns for use as effective genomes under a variety of circumstances; it provides a genetic basis for pathological *metaplasia* as well as for normal developmental *competence* and capacity and is closely relevant to many problems of neoplastic development as will be described later.' (Pp. 375-6.)

'A basic, and it seems to me incontrovertible, presumption of this discussion is that "genes", and more specifically DNA, have no intrinsic "activity" at all. DNA supplies genetic patterns; dynamic biotonic systems provide all the activity. ... Differentiation is not adequately described in terms of the activation of individual genes; it entails the activation of integrated genetic patterns. The activated genetic patterns constitute *effective genomes*. ... Differential utilization of the genome presupposes a choice between multiple integrated genetic patterns *available* for use as effective genomes. The available choices constitute the *facultative genome*. ... The facultative genome supplies the genetic basis for ... the multiplicity of the differentiative types of neoplasms derived from a single tissue' (Pp. 360-1).

If, as could be the case, I have failed to grasp the significance, perhaps Volume 2 will bring things into focus. Nonetheless this volume has taught me much about neoplasia, about viruses, and about biological organization. This last is surprising and perhaps his success on this stony ground is because Dr Foulds understands and is really trying to help pathologists in fields we know we should but have scarcely time to study. On the terminology used by histopathologists he rather agrees with Smithers, although elsewhere he finds the latter's views 'massively unconvincing' (p. 135).

This volume, apart from its intrinsic interest, is essential reading as a pruning guide for pathologists who write or talk about neoplasia. Even those who merely think about neoplasia are doubtless also awaiting the next volume with excitement.

A. C. LENDRUM

Aetiology of Lung Cancer By Leiv Kreyberg. (Pp. 90; 12 graphs, 23 tables. NKr 48.00) Oslo: Universitetsforlaget. 1969.

In less than one hundred pages Professor Kreyberg, a pathologist of world fame,

has made a useful, scholarly and comprehensive survey of the various forms of lung cancer which he has been studying for more than twenty years.

The book contains a great deal of information about various histological types of the disease and links the histological findings with the sex and environment of the patients concerned, as well as with their smoking habits. Professor Kreyberg concludes that the most common forms of lung cancer—epidermoid carcinoma and small cell anaplastic carcinoma (types I and II of the WHO 1967 histological type code)—are very closely linked to tobacco smoking habits. Indeed, in Professor Kreyberg's experience such tumours hardly ever occur in non-smokers. Furthermore, the risk is not confined to those who smoke cigarettes, pipe tobacco and cigars also exact their toll of lives, although they may be a little less lethal.

Atmospheric pollution, at least as encountered in Norway, is not considered to be a major factor in the aetiology of lung cancer. Occupational influences are of much less importance than smoking habits.

Because this book is written primarily from the standpoint of human biology the synthesis of pathology and epidemiology is most effective. I recommend the volume not only to medical students, clinicians of all degrees of specialization, pathologists and epidemiologists, but also to all others who care about the public health.

R. A. M. CASH

Tumours of the Female Sex Organs Part 2 suppl. By A. T. Hertig and H. Gorio. (Pp. 51; illustrated. \$1.35.) Washington: Armed Forces Institute of Pathology. 1968.

This supplement deals further with tumours of the vulva, vagina, and uterus and is part of the now well known Atlas of Tumour Pathology. Most of the new material concerns the cervix. Readers will find interesting the comments on the epithelial changes in the cervix which may be attributable to taking of the 'contraceptive pill' and warning is given against overdiagnosis of adenocarcinoma in this respect. Unfortunately the ugly term 'adenoma malignum' is mentioned in this section and elsewhere in this supplement though its continued use was rightly condemned in the original fascicle. Dysplasias now described and illustrated, though Fig. 284, published elsewhere, is not a well suited choice.

It is salutary to read that the authors have not changed their view that minimal degrees of stromal invasion in carcinoma *in situ* (p. 103) do not of themselves justify more radical treatment than that required if no such microscopical change had been discovered.

In a timely attempt to clarify discussion on the possible precursors of carcinoma, including endometrial hyperplasia, a plea is made for simplification of the terminology and variable meanings so often used in description. The occurrence in young women of endometrial carcinoma is documented and the danger of mistaking certain specimens of secretory endometrium for carcinoma is illustrated.

Each section has many useful new references and a number of excellent photomicrographs appear in all parts of this supplement; although it is an atlas many readers will find the new discussions and references at least as useful as the illustrations.

MAGNUS HAINES

Diabetes and the Eye By F. I. Caird, A. Pirie, and T. G. Ramsell. (Pp. x + 230; illustrated. 63s.) Oxford: Blackwell Scientific Publications. 1969.

For some time there has been a growing need for such a book as this. In recent years there has been a surge of interest in the ocular manifestations of diabetes, stimulated largely by their ever increasing prevalence in the population. As a result a considerable wealth of information has accrued, dispersed amongst the equally increasing number of scientific journals. While there have been several excellent reviews dealing with selected aspects, there has not been, until now, any comprehensive attempt to summarize the new data and to evaluate current thinking on the subject as a whole.

Any attempt therefore to fill this gap is to be welcomed, and, when it is as successful as is this treatise, the authors are to be particularly congratulated. Treating their subject in a stimulating academic manner, they have presented their material fairly, reasoned with objectivity and written with clarity. As might be expected coming from a physician, a biochemist, and an ophthalmologist the book is wide in its scope and deals fairly comprehensively with all aspects of the diabetic eye, of particular merit being the sections dealing with the epidemiology of visual disturbance in diabetes, the natural history and clinical features of diabetic retinopathy, and lens metabolism in relation to cataract formation. Disappointingly the sections concerned with the pathology of the various disorders are rather less satisfying for the pathologist, lacking the incisive critical comment which typifies most other parts of this otherwise excellent book.

In summary, this is a quite laudable attempt to cover a still developing field, managing to cram a vast amount of information into somewhat less than 200 pages,

and can be recommended without reservation.

A. GARNER

A Short Textbook of Chemical Pathology By D. N. Baron. (Pp. xi + 211; illustrated. Hardback, 35s; paperback, 22s.) London: English Universities Press. 1969.

This book represents the second edition of 'Essentials of chemical pathology', first published in 1957 and subsequently reprinted six times with only minor corrections. The general format of the first edition is retained, and such a record of past success is an indication of the popularity likely to be enjoyed by the second edition, particularly if one accepts the claim, stated in the preface, that this book meets the needs in chemical pathology of medical students, of doctors in general, and of a variety of workers preparing for specialist or professional qualifications (Primary MCPATH, MSc and Mastership in Clinical Biochemistry, AIMLT and HNC in chemical pathology).

Chemical pathology has developed greatly in the last 12 years and it is perhaps too much to hope that a book of this length could provide adequately for the needs of the wide range of readers listed in the previous paragraph. The assessment of renal tubular function, the investigation of intestinal malabsorption, the range of tests based on the determination of steroid hormones and their metabolites, and the selection and interpretation of enzyme activity measurements in serum are some examples of important subjects which are rather lightly treated, and which will require further study by all the categories of reader for whom the book sets out to cater.

It is a pity that the book has been renamed a 'Textbook'. This has presumably been done so as to render the book more easily recognizable as part of the series from the same publishers, but this has resulted in a less accurate title than the original 'Essentials'. The book can be recommended as an introduction to chemical pathology, but some of the author's descriptions of established procedures constitute current personal assessments with which other chemical pathologists and clinical biochemists might well disagree. For instance, urine specific gravity and creatinine clearance determinations are described as complex; protein-bound iodine determinations are rated as technically tedious; and insulin-induced hypoglycaemia is designated as a semi-research procedure. It would be a pity if these and some other assessments of widely accepted procedures were to create a reluctance on the part of doctors to ask for valid and valuable diagnostic tests. There are several small errors, some typographical and

others errors of fact, which should be corrected when the book is reprinted. The sales of the first edition allow one to predict that the present edition will also have wide appeal.

L. G. WHITBY

Some Inherited Disorders of Brain and Muscle Proceedings of the Fifth Symposium of the Society for the Study of Inborn Errors of Metabolism. Edited by J. D. Allan and D. N. Raine. (Pp. viii + 154; 54 figures, 6 tables. 40s.) Edinburgh and London: E. and S. Livingstone Ltd. 1969.

This excellent little volume records the papers and discussions of yet another Symposium held under the auspices of the Society for the Study of Inborn Errors of Metabolism 1967. There were 13 main contributors whose topics included muscular dystrophy, skeletal muscle glycosinosis, the lipidoses, and Wilson's disease.

Some of the papers are excellent and reasonably complete, some could have been extended with pleasure to the reader, while one was given to a meeting other than the one recorded. The clinician, the histologist, and the biochemist are all catered for; however, the reproduction of some of the histological preparations could have been better.

This book will be read with interest and profit by many workers in this field.

J. N. CUMINGS

Isolation and Identification of Drugs Edited by E. G. C. Clarke. (Pp. xxii + 870. £14.) London: The Pharmaceutical Press. 1969.

Everyone who has had anything to do with drug toxicity in the last 25 years knows what a remarkable man E. G. Clarke is—industrious, academically minded, practical, prolific in idea and execution. First Professor in Chemical Toxicology to the University of London, he has wide acclaim as a world authority, and few would have the temerity to challenge in his field.

Combine with this editorial pen those of such experts as Curry, Jackson, Chapman and Moss, Daglish, Fox *et al* in their particular fields and you have a remarkable panel whose combined skills could hardly be exceeded anywhere in the world. The result is a remarkably compact 165-page guide to analysis by the current sophisticated techniques—screening, extraction, paper, thin-layer and gas-chromatography, u-v and i-v spectrophotometry, colour and micro-crystal tests. Never has so practical a guide to the difficult problem of the extraction and identification of drugs been so authoritatively set out for those in pathology and analytical chemistry, for whom this problem has been such a test of laboratory skill.