'Hemic cells in vitro' is the proceedings of a symposium held by the Tissue Culture Association in June 1968 together with abstracts of 160 papers on other subjects from the same meeting.

Of all the tissues of the body the haemopoietic tissues have been most refractory to study *in vitro* but some limited progress has been made and is conveniently put together in this volume. Three sections, devoted to 'Haemopoietic precursors', 'Differentiation controls', and 'Immunoactive hemic cells', comprise 10 papers, the majority of which deal with short-term culture techniques. For example, by organ culture of embryonic bone rudiments the old question of whether the stem cells rise from bone tissue or migrate there from elsewhere might be answered. The authors incline to the latter but readers will probably not be convinced by the photographic evidence.

The growth of granulocytic colonies in agar has now been achieved in several laboratories but the technique remains precarious and is dependent on elusive factors from other cells. Perhaps the chief obstacle is the formation of inhibitors or chalones by mature granulocytes, this being part of an essential feedback control mechanism *in vivo*. Erythropoietic colonies have never been claimed but valuable biochemical data can be gained from studying the final stages of erythropoietic maturation *in vitro*. Lymphocyte transformation or blastogenesis naturally gets a mention as does the more far-reaching topic of immune activity of lymphocytes in culture.

Finally there are two papers on long-term culture of leucocytes from blood, marrow, and elsewhere. These prolonged cultures of leucocyte lines have nothing to do with haemopoiesis of course. One of the main questions posed here is whether the indefinite capacity for growth is induced by EB herpes virus infection. The answer seems to be 'probably yes' but the evidence is conflicting and it is here that the absence of published discussion or of a chairman's summing up is felt. In a symposium of this sort comments, questions, or summaries help to emphasize points of significance or of uncertainty and give a valuable sense of perspective. Presumably tissue culture-mongers will read this volume anyway. Haematologists and others may find it a useful, quick guide to the subject as it was in 1968.

H. E. M. KAY

Human Trophoblast By Arthur T. Hertig (Pp. vii + 344; illustrated. \$12.00). Springfield, Illinois: Charles C. Thomas. 1969.

This publication relates many of the contributions and thoughts of the author that have resulted from a thirty-five-year study. The origin and development of the human trophoblast is described in detail and there is a helpful chapter on examination of the placenta. Although not indicated on the cover, the book deals with pathological conditions including hydatidiform mole and choriocarcinoma. To the pathologist these chapters in particular will appeal, but for full understanding of the difficulties in diagnosis the author's explanation of normal trophoblast development should be studied. Distinction between hydatidiform mole and choriocarcinoma is fully discussed; the author considers that 16% of the moles are invasive but questions the too ready link in thought between hydatidiform mole and the true neoplasm choriocarcinoma which may follow any pregnancy. He emphasizes that 'to determine by pathologic or clinical or endocrinologic means whether the lesion is a hydatidiform mole or a choriocarcinoma' may be almost impossible at times, but his text and pictures will greatly help the pathologist concerned with the task. The comprehensive term 'trophoblastic disease' rather than definitive diagnosis may be resorted to, particularly when the material to be examined has been curetted from the uterus. Modern therapy will often be employed in the absence of exact diagnosis.

The book is adequately illustrated, beautifully written, and reflects the humour and wisdom of this well-known author. It should have a wide appeal and will be welcomed, especially by embryologists, obstetricians, and pathologists.

CLAUD W. TAYLOR

Practical Bacteriology By Nuala Crowley, Jean M. Bradley, and J. H. Darrell (Pp. v + 238; illustrated. 50s.). London: Butterworth and Co., Ltd. 1969.

This book, which is concerned entirely with *medical* bacteriology, is essentially a 'teach yourself' bench manual aimed to assist candidates preparing to take the examinations for membership of the Royal College of Pathologists. Virological and certain public health bacteriological procedures are not included. The authors emphasize that the book is intended to supplement routine experience gained in a hospital laboratory. A list of books and references for additional reading is given. Considering the importance of reproducibility in performing Gram's staining technique, reference to the method described by Preston and Morrell (1962) might well have been included. The book

is likely to prove useful to those for whom it is intended.

C. E. D. TAYLOR

Reference

Preston, N. W., and Morrell, A. (1962). *J. Path. Bact.*, **84**, 241.

Review of Medical Microbiology 8th ed. By E. Jawetz, J. L. Melnick, and E. A. Adelberg. (Pp. 502. 58s 6d.) Los Altos, California: and Oxford and Edinburgh: Blackwell Scientific Publications. 1968.

The aim of this book is to provide in some 500 pages a review of those aspects of medical microbiology that are 'of particular significance in the fields of clinical infections and chemotherapy' for medical students, house officers, and practising physicians. This it certainly does not do. A relatively large part of the text is devoted to basic microbiology, and the sections on morphology, biochemistry, and genetics are admirably up to date and interestingly written. They will certainly provide valuable reading matter for the student or young graduate, but he will learn little of practical value from the rest of the book about the intelligent use of the laboratory in clinical practice or about the applications of microbiology to the prevention of disease. This is not because of a shortage of information; indeed the authors have succeeded in mentioning a surprisingly large number of facts. What is often missing is a critical assessment of their significance. For example, the unqualified statement is made that *Bordetella pertussis* may be isolated from a nasopharyngeal (ie, pernasal) swab or by means of a cough plate, but no indication of the relative efficiency of the two methods is given.

Some important topics are dealt with entirely by means of tables. There is one table entitled 'Practical chemical disinfectants' which lists agents that may be used for the treatment of inanimate objects, skin and air, but gives no indication of their activity on different classes of microorganisms. The skin disinfectants listed are soap and water, hexachlorophene soaps, anionic detergents, iodine compounds, and alcohols—in that order. Quaternary ammonium compounds are recommended for the disinfection of inanimate objects and aerosols of glycols for air disinfection.

There is little relation between the amount of space devoted to a topic and its importance in clinical practice. Thus, 53 lines are devoted to *Pseudomonas aeruginosa* and *Pseudomonas* infections—including the remarkable statement that 'involvement of the respiratory tract is uncommon'—but the reovirus group receives 182 lines. The section on sal-