BOOKS RECEIVED

Cell and tissue culture

By JOHN PAUL. 5th ed., 1975. Edinburgh, London and New York: Churchill Livingstone. Pp. xii and 484. £7.50.

This latest edition is longer by 54 pages than its predecessor and much of the additional material is to be found in an entirely new chapter on cell genetics. This deals first with a variety of techniques for karyotype determination and the use of cultured cells in the diagnosis of hereditary metabolic disorders. Then follows a detailed account of somatic cell genetics, describing procedures for the selection of cell variants displaying specific marker characteristics, cell-fusion techniques and some studies of heterokaryons and hybrids. Also new is a short chapter on cell-culture techniques in cancer research, dealing with oncogenic viruses, transformation by viruses and chemical carcinogens, and problems encountered in the establishment of cell cultures from tumour tissue. In keeping with the general style of the book these new chapters contain a careful blend of technical detail and background information, presented with a conciseness that makes for pleasant reading and easy comprehension.

Other parts of the book have been extensively reorganised and contain more than 80 separate revisions on such diverse topics as the effect of hormones on tissue cultures, the detection of mycoplasma contamination, the 3T3 mouse-cell system and the determination of the various phases of the cell cycle. Information on the culture of plant cells and cells from cold-blooded vertebrates and invertebrates has been collected into separate chapters, and the section on nucleic-acid synthesis has been enlarged to provide a suitable introduction to the new chapter on cytogenetics. The appendices now include a general bibliography of tissue-culture literature and a section on the possible hazards of working with cell cultures and the precautions to be taken.

Apart from some minor faults, such as the occasional misplacement of textual references of one chapter to the bibliography of another, the current edition is excellent value and will undoubtedly maintain the high reputation it has deserved in the past.

J. C. BOOTH

Quality control in microbiology

Edited by JAMES E. PRIER, JOSEPHINE BARTOLA and HERMAN FRIEDMAN. 1975. Baltimore, London and Tokyo: University Park Press. Pp. x and 188. US \$14.50.

The fifteen articles by 14 participants at a two-day symposium differ greatly in the generality of their content and treatment. The first article is wide ranging and insists that not only can quality control be afforded but must be if it is to play a part in halting the ever increasing expenditure on medical laboratories. Benefit to the patient must be the justification for all investigation, and laboratories can be faulted for doing unnecessary work as much as for doing their work badly. Three constrained contributions follow that discuss safety, biological indicators and laminar air-flow.

The quality of culture media, antibiotic disks and diagnostic reagents for syphilis and other infections, which are available commercially, are discussed in four sections. After giving the history of the improvement in disks that followed the adoption of certification, the authors discuss the considerable differences in results of sensitivity tests by different laboratories, and one of the sections looks hopefully towards standardisation to reduce the discrepancies. Even the smallest laboratory should have at least a small stock of bacterial strains; one article deals with maintenance of such a stock and another with the help a national collection can give in quality control. Proficiency tests, that is, the comparing of results obtained with test specimens in different laboratories, are soberly evaluated in three articles. These tests have their dedicated supporters, but, as is pointed out, a basic weakness is the tendency