BOOKS RECEIVED

Drug resistance in antimicrobial therapy

By E. J. L. LOWBURY and G. A. J. AYLIFFE. 1974. American Lecture Series. Springfield, Ill., USA: Charles C. Thomas. Pp. xi and 211. \$16.75.

This is an interesting and very well documented book. Although packed with facts, it is easy to read and refer to. The intending reader ought to know that it is not primarily about mechanisms of antibiotic resistance, although an early chapter deals with this and includes many key references that can be pursued. Nor is it solely an account of the current significance of drug resistance in antimicrobial chemotherapy. It is rather a well ordered review touching upon all aspects of the subject but written with a strong historical and epidemiological slant. After an introductory chapter, and chapters on mechanisms and modes of origin of resistance and on the clinical interpretation of sensitivity and resistance, each main group of bacteria is treated separately, with special emphasis on staphylococci and gram-negative bacilli. Although mainly about antibacterial drugs, short but useful sections on resistance to antifungal and to antimalarial drugs are included. The book ends with a thoughtful chapter on control of the emergence of antibiotic resistance, which combines practical policy making with a long-term ecological view.

Writing a conspectus like this does raise difficulties of emphasis and detail, most evident in the chapter on the clinical interpretation of sensitivity tests. This covers ground that is (or should be) fairly familiar to the expected readership. But to omit this material would do less than justice to an important facet of the subject, while to enlarge on it would be appropriate only in a practical manual. In general, the balance has been admirably held, and this monograph deserves wide readership. The extensive reference lists for each chapter mention publications of both recent and historic importance. I was fascinated to learn that Fleming had suggested that penicillinase-producing staphylococci might interfere with the action of penicillin on *Streptococcus pyogenes* in the same lesion.

H. P. LAMBERT

The biological role of bacterial lipids

By L. VACZI. 1974. Budapest: Akadémiai Kiadó. Pp. 64.

This is a concise but comprehensive account of an important but rather neglected subject. After showing that bacteria comprise three groups, having low, medium or high lipid content, the author classifies the types of lipids found into nine chemical groups. He deals with the role of various types of lipid as (1) sources of energy, (2) biologically active materials essential for metabolic processes and (3) elements in the structural composition of the bacterial cell. Then he considers the effect of the stage of the growth cycle, and of cultural conditions, such as temperature, pH and composition of the medium, on the composition of bacterial lipids.

Although lipids are the main components of the cytoplasmic membrane of gram-positive bacteria and of the surface layer of gram-negative bacteria, the author regrets that very little is yet known about their function and biological activity, particularly as they have been shown to play a definite role in resistance to antibacterial agents. He discusses the correlations between resistance of bacteria and their lipid composition, taking into account not only qualitative and quantitative changes in lipid content but also the presence of lipids at specific sites. Lastly, he deals with the roles of bacterial lipids in pathogenicity and virulence, discussing the toxic effect of some lipids, and also the action of bacterial lipases and phospholipases, and how they affect the lipid composition of the tissues during bacterial infections.