BOOK REVIEW

Essentials of microbiology for dental students

J. BAGG, T. W. MACFARLANE, I. R. POXTON, C. H. MILLER and A. J. SMITH. 1999. ISBN 0-19-263076-8 (Paperback). Oxford University Press, Oxford. Pp. 326. £35.00.

It is a pleasure to welcome the publication of this attractive new book on the *Essentials of microbiology for dental students*, written by a distinguished team of authors from Glasgow, Edinburgh and Indianapolis. As stated in the preface, these authors have set out to produce a highly illustrated textbook which links the science of microbiology and immunology with those clinical aspects directly relevant to dentistry. The clear layout and copious use of well-chosen illustrations is one of the first things to become apparent on opening the book.

The material is organised in three sections. In the first of these, basic concepts of microbiology and immunology are covered, including brief chapters on bacterial structure and physiology, bacterial taxonomy, bacterial pathogenicity, bacterial genetics and molecular biology, properties of viruses, host defences, immunisation, antimicrobial agents, and sterilisation and disinfection. Each of these topics is presented clearly and succinctly, with helpful tables and diagrams.

The second section contains nine chapters which deal with selected aspects of clinical microbiology, including virology. After two initial chapters on epidemiology and diagnostic microbiology, the remainder of this section is mainly organised around infections of different body systems, such as skin and soft tissues, genitourinary tract gastrointestinal tract, respiratory tract and infective endocarditis. The section concludes with coverage of two groups of viral infections of particular importance to dentists, viral hepatitis and retroviruses. This clinically orientated systems approach reflects the way in which undergraduate teaching has moved in many dental schools in recent years and is a departure from some of the more traditional texts, which cover each group of

micro-organisms systematically. However, students who may on occasions require more detailed information about particular infectious agents would need to refer to other sources.

Section 3 is concerned with oral microbiology. It comprises chapters on the oral microflora and dental plaque, defence mechanisms in the mouth, dental caries, periodontal diseases, infections of pulp and periapical tissues, salivary glands, oral fungal infections, bacterial and viral infections of the oral mucosa, and concludes with a chapter on cross-infection control in dentistry. This section provides a concise and up-to-date review of these important topics which are central to clinical dentistry.

Throughout the book, each chapter concludes with a helpful bullet point list of 'key facts' and a short list of recommended further reading. Most of these recommendations are to other books or book chapters rather than to original papers, so may be of limited value to those undertaking research projects. In general, the content is well-presented, readable, up-to-date and appropriate for undergraduate dental students. Postgraduates and dental practitioners will also find this a useful source if they wish to up-date their knowledge of microbiology. It is always possible to take issue with some of the details in any new textbook; for example, the '*S. milleri* group' of streptococci should more correctly be referred to as the '*S. anginosus* group' (chapter 3, page 33), and isolation of *Actinomyces bovis* from human actinomycosis may be questionable (chapter 24, page 278), but these are minor quibbles.

Overall, I believe that this is a welcome addition to the available texts on microbiology for dental students which can be recommended with confidence. At £35 it represents good value for money and my guess is that it will become a widely used text in many dental schools.

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