BOOK REVIEW

Essentials of microbiology for dental students
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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 retro-
viruses. 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 recommenda-
tions 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
hominis 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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