BOOK REVIEWS

Laboratory-acquired Infections: History, Incidence, Causes and Preventions


This is the fourth edition of a book that has always been well received in the past. It has been updated to include recent developments in infections, current European regulations and recommendations, and also includes an extra chapter on the principles and practice of risk assessment. This latest edition has a striking yellow cover which should make it easy to locate on the shelf. Inside there are 19 chapters which cover three broad topics: the infectious hazards involved in laboratory work, control measures needed to contain them and chapters on specific organisms or situations.

The subject matter is covered in great depth with a comprehensive discussion of each topic. However, the user-friendly style of writing makes it a pleasure to read. Much of the book seems to be based on the considerable personal experience of the authors and in consequence it contains a plethora of interesting anecdotes. I particularly liked the story of the man who objected to the design of his building being sealed by top-placing of exhaust ducting from the microbiological safety cabinets on the outside wall. He insisted that the exhaust air was safe to recirculate within the building until it was proposed that it be ducted into his own room. All objections to external exhausting were suddenly dropped.

Tables and diagrams are used extensively throughout the book. They illustrate well some of the complex issues discussed in the text. In these days of evidence-based medicine it is also good to see that references are cited for all the points raised. The bibliography, consisting of 40 pages of closely typed references, is a testament to the thorough research carried out. However, the use of authors' names rather than a numerical system within the text does, tend to interrupt the flow, making some sections difficult to read.

Some chapters deserve particular praise. The discussion on safety cabinets was full of good background data and practical advice which increased my knowledge of the subject. I would also recommend that all new microbiology trainees read the section on "Equipment and techniques" before their bad habits develop. In this way they should realise why certain practices are encouraged and others forbidden. The new chapter on risk assessment gives a step-wise plan of action and reviews each step extensively. This will serve as a useful guide in a laboratory where there is no experience of this practice. The chapter also includes an interesting section on the hazards that can be associated with hazard prevention.

I was disappointed with the coverage of spillage procedures, especially the fact that there was no advice on how to deal with a room contaminated by tuberculous material. I am sure that this is an oversight, as in general the coverage of this organism was excellent. Two mistakes caught my eye. The name Stenotrophomonas was spelt incorrectly both in the text and in the index. More worrying was the use of the antediluvian classification Staphylococcus albus instead of coagulase-negative staphylococci.

In summary this book is an extremely useful text for anyone running a routine or research laboratory. I would recommend that people dipped into it to answer specific questions rather than trying to read it from beginning to end.

T. WELLER

Defense of Mucosal Surfaces: Pathogenesis, Immunity and Vaccines Current Topics in Microbiology and Immunology, volume 236


Mucosal immunity nowadays encompasses an increasingly wide field that includes areas of developmental biology, epithelial cell and molecular biology, molecular and cellular immunology, microbiology, virology and vaccine development. It is appropriate that a text like this brings together each of these strands of knowledge in such a way that it can be appreciated by the experts and non-experts alike. Fourteen presentations are included, e.g., mucosal structure and function covering such topics as the organisation of mucosal lymphoid tissue (W. R. Hein), M cells in antigen sampling in mucosal cells (M. R. Neutra), dendritic cells and Langhans cells in the uptake of mucosal antigens (G. G. MacPherson and L. M. Liu), epithelial cells in antigen sampling and presentation in mucosal tissues (D. Kaiserman).

To follow there is a series of articles which include oral tolerance and antipathological vaccines (C. Czerkinsky, J-B. Sun and J. Holmgren), antibody-mediated protection of mucosal surfaces (B. Corthesy and J-P. Kraehnenuhl), effector and regulatory lymphoid cells and cytokines in mucosal sites (T. T. MacDonald) and two articles which address the host-parasite relationship at mucosal sites: bacterial epithelial cell cross-talk (B. Raupach, J. Mecsas, U. Heczko, S. Falkow and B. B. Finlay) and microbial-host interactions at mucosal sites – host response to pathogenic bacteria at mucosal sites (A. Phalipon and P. J. Sansonetti).

The remaining five contributions deal primarily with vaccinology in relation to the mucosal site and cover such topics as host response to respiratory virus infection and immunisation (J. E. Crowe), bacterial toxins as mucosal adjuvants (L. C. Freytag and J. D. Clements), Vibrio cholerae as a live attenuated vaccine/vector paradigm (K. Killeen, D. Spriggs and J. Mekalanos), recombinant viruses as vectors for mucosal immunity (C. D. Morrow and colleagues) and plant expression systems for the production of vaccines (J. K-C. Ma and N. D. Vine).

It is clear from the foregoing that the subject area covered in this monograph is expanding with ever more applications of basic biological principles to extend the efficacy of a range of bacterial and viral vaccines. The text extends to almost 300 pages, but illustrations and tables are remarkably scarce. However, what the monograph loses out on tables and figures, it makes up for in literature citations. Each article is well referenced, which should allow the experienced and inexperienced investigator a chance to access the original findings.

This is a text that is full of interesting information on a
subject that deserves to be brought to the attention of those outwith the mucosal immunology field and it is likely that several significant developments in vaccinology will emerge from the studies included in this treatise. However, its price will keep it off many bookshelves.

C. G. GEMMELL

Biotherapeutic Agents and Infectious Diseases

There is now much interest in non-antibiotic agent-based therapeutic options, but often a paucity of hard evidence for the effectiveness of such approaches. Concerns about antimicrobial resistance will inevitably fuel further attention on probiotics; therefore it is useful to gather together the available and increasing data on these therapeutic modalities. This book is directed at ‘pharmacists, internists, gastroenterologists, specialists in infectious diseases, gynaecologists and representatives of the pharmaceutical industry’ and aims to review concisely the scientific background for and the applications of biotherapeutic agents to human therapy.

The book was published in 1999 and yet the three sample chapters which I read on mechanisms of action of biotherapeutic agents, antibiotic-associated diarrhoea and Clostridium difficile-associated disease contain references only up to 1996 (plus one paper submitted in 1997), one from 1997 and two from 1997 (out of 160), respectively. This is disappointing given the aims of the book, but reflects the often interminable lag time between manuscript production and book release. Furthermore, this delay has meant that new important information is missing; for example, recent evidence of the relatedness of Saccharomyces cerevisiae and Saccharomyces boulardii and the potential virulence of commercial preparations of the latter. The weighting of subjects covered reflects the areas of interest of the editors. However, the book could have benefited from stronger editing given the repetition between chapters such as those on antibiotic-associated diarrhoea, Clostridium difficile-associated disease and adult diarrhoea.

Setting these criticisms aside, the book is a valuable source of reference for those interested in discovering the facts as opposed to the myths about biotherapeutic agents. The layout is pleasing and user-friendly, with appropriate use of tables and occasional figures and photographs. There is a comprehensive account of the effects of biotherapeutic agents on the normal gut flora, and interesting chapters on vaginitis therapy and on future directions. Individuals and departments with an interest in this area should consider having a copy of the book, and libraries should be encouraged to purchase one as a reference.

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