BOOK REVIEW

Tuomanen, Elaine, I., volume editor The Pneumococcus

AMS Press, American Society for Microbiology: Washington, DC, 2004. XXX + 427 pages. Format 178 × 255 mm. Binding: Hardcover. Price: USD 115.95. ISBN 1-55581-297-X

The volume editor is affiliated with St. Jude's Children's Research Hospital, Memphis, TN. The list of contributors implicates a group of foremost scientists from USA, Europe (Germany, Finland, Spain, Switzerland, United Kingdom), Israel and Australia. It is stated in the foreword by R. Austrian (University of Pennsylvania) that the colonization of the human upper respiratory tract by the pneumococcus (Streptococcus pneumoniae) may occur at the day of the birth and over a period of several ears by 12 different capsular types. The virulence of a given pneumococcal type, of which 90 have been defined to date, is determined both by the chemical composition of the capsular polymer and the amount synthetized. Of the two, the former is more important. In addition the capsular polysaccharides, the pneumococcus produces an additional polymer in this category, the so-called C or cell wall polysaccharide composed in part of a teichoic acid. Treatment of pneumococcal infection has followed two somewhat parallel courses: immunotherapy and chemotherapy. The advances in antimicrobial therapy of the last century have brought at least temporary respire from the mortality of pneumococcal infection. In the preface, the volume editor declares that this book will serve as a milestone against this pathogen and invigorate young investigators in the field.

The volume is composed of three major sections: the bacteria, host-microbe interactions, and treatment and prevention. In total, 25 chapters are providing coverage of topics in basic microbiology such as details of DNA transformation, molecular and medical epidemiology, the molecular basis of invasive disease, and various interactions with host defenses. Textual parts are supplemented with a comprehensive list of topical references in each chapter. The volume is illustrated by an inset of figures and full-page colour plates featuring miscellaneous biological phenomena. Besides, there is a comprehensive collection of summary type tables.

The Pneumococcus presents important historical information on the field of pneumococcal research. It suggests strategies for future investigation. This book is a valuable source of current information for graduate and medical school students, infectious diseases specialists, and field researchers in the pathogenesis of gram-positive bacteria.

Jindřich Jíra