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*Bacterial Cell Surface Techniques*: IAN C. HANCOCK AND IAN R. POXTON, Wiley, Chichester, England, 1988, xvi + 328 pages, £ 40.00.

This book is the latest in the series "*Modern Microbiological Methods*", edited by M. Goodfellow. It discusses the chemistry, biochemistry, and immunochemistry of the complex macromolecules found on the surfaces of bacteria, and the recent advances in carbohydrate chemistry that led to the present understanding of the causes of virulence. The text is very much a laboratory manual that describes the techniques by which the individual cell-surface components can be isolated, purified, and analyzed. It is designed for experimental microbiologists interested in the control of adhesion, adsorption, and cell disruption of bacteria.

The book comprises seven chapters, two appendices, a list of more than five hundred references arranged alphabetically according to authors, and a Subject Index. It is written by the two principal authors, Hancock and Poxton, whose names appear on the title page, and fourteen contributors, from the UK, Austria, Canada, and West Germany, who are listed at the beginning of the chapter or the section they contributed. Thus, Chapter 1, entitled "Structure of Bacteria and Their Envelopes", is written by the two principal authors and U. B. Sleytr, P. Messner, D. E. Minnikin, V. E. Heckels, and M. Virji. It classifies cell walls, according to the content of peptidoglycans, into Gram-positive and Gram-negative eubacteria, and discusses the composition of the envelope without the peptidoglycan, the polysaccharide walls, and the protein S-layers. Of the two chapters that follow, the first is authored, in part, by A. R. Archibald, and treats the culture of bacteria, and the other, written by the principal authors alone, discusses the isolation and purification of cell walls. Chapter 4, authored partly by Heckels, Messner, Minnikin, R. R. B. Russel, Sleytr, and Virji, deals with the separation and purification of surface components, which include appendages, peptidoglycans, teichoic and lipoteichoic acids, surface proteins, exopolysaccharides, lipopolysaccharides, and mycobacterial-wall lipids. Chapter 5, "Chemical Analysis of Envelope Polymers", is written, in part, by D. R. Bundle, B. Glauner, and U. Schwartz, and treats the analysis of polysaccharides, peptidoglycans, lipopolysaccharides, and accessory polymers. Chapter 6, "Immunochemistry of Cell Surfaces", is written solely by the principal authors. The book concludes with a review of present and future applications of bacterial surfaces, authored, in part, by D. C. Old, G. Dougan, and D. Parratt.

In spite of the large number of authors involved in writing many of its chapters, this book retains a good deal of cohesion. It is well organized, easy to read, and contains a large amount of useful and up-to-date information. Its principal authors and fourteen contributors must be congratulated for their efforts, and thanked for bringing us a much needed work.