



Coronaviruses and Arteriviruses by Luis Enjuanes; Stuart G. Siddell; Willy Spaan

Review by: Raymond R. R. Rowland

The Quarterly Review of Biology, Vol. 74, No. 4 (Dec., 1999), p. 472

Published by: [The University of Chicago Press](#)

Stable URL: <http://www.jstor.org/stable/2664764>

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agricultural microbiology, industrial microbiology, and food and dairy microbiology is broader than in many other books. Coverage of the eukaryotic microorganisms, particularly the "protozoa," is sadly dated.

The text is peppered with very simple line drawings and a few photographs. The latter are of poor quality, probably as a consequence of the paper used to print the book. The overall look of the book is "plain-pipe rack." Other publishers have used color, more polished figures, dialog boxes, and other graphic tricks to make their textbooks more appealing to students. Although it is always difficult to judge appeal to students, the graphics and production qualities make this book less likely to be selected as a textbook for undergraduates.

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CORONAVIRUSES AND ARTERIVIRUSES. *Proceedings of a symposium held in Segovia, Spain, 10–15 May 1997. Advances in Experimental Medicine and Biology, Volume 440.*

Edited by Luis Enjuanes, Stuart G Siddell, and Willy Spaan. New York: Plenum Press. \$185.00. xviii + 826 p; ill.; index. ISBN: 0-306-45910-8. 1998.

This collection of 106 papers represents work presented at the VIIth International Symposium on Coronaviruses and Arteriviruses held in 1997. This book is especially useful for those who desire an overview of current concepts in coronavirus entry, replication, pathogenesis, and treatment of disease. An especially interesting chapter on RNA virus evolution is presented by Domingo et al. (Population Dynamics in the Evolution of RNA Viruses). The information on arteriviruses was sufficient, but by no means comprehensive. In this regard, the biggest disappointment is the lack of papers devoted to Lactate Dehydrogenase-Elevating Virus (LDV), the prototypic example of arterivirus persistence. Papers on Equine Arteritis Virus (EAV) are the major strength in the arterivirus area, especially those papers devoted to molecular genetics. Information presented on Porcine Reproductive and Respiratory Syndrome Virus (PRRSV) is adequate, but better treated in more recent publications.

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ENZYME AND MICROBIAL BIOSENSORS: TECHNIQUES AND PROTOCOLS. *Methods in Biotechnology, Volume 6.*

Edited by Ashok Mulchandani and Kim R Rogers. Totowa (New Jersey): Humana Press. \$69.50. xii + 264 p; ill.; index. ISBN: 0-89603-410-0. 1998.

PSEUDOMONAS. *Biotechnology Handbooks, Volume 10.* Edited by Thomas C Montie. New York: Plenum Press. \$110.00. xv + 335 p; ill.; index. ISBN: 0-306-45849-7. 1998.

The chapters in this volume present a concise review of important topics, including: plasmids, carbohydrate catabolism, polysaccharides, lipids, outer membrane proteins, transport systems, iron metabolism and siderophores, the flagellum, and industrial biotransformation.

Can another compilation of reviews be of any real help to those in the fields of *Pseudomonas* research? Perhaps, but there are timely articles published at such an accelerated rate in varied journals, that the book may become out of date rather quickly. We should be able to find updated references related to these topics and their applications more quickly online (<http://www.pseudomonas.com>).

This volume is designed to focus on research at the molecular level, with particular emphasis on biochemistry. Extensive reviews have been presented in the chapter on polysaccharides, which is very helpful for those who are working in the field of biochemistry. Alginate biosynthesis and regulation, and its immunoprotective function, however, should be included with immunobiology. Perhaps in the future a separate chapter on *pseudomonas* immunology will be included. Immunology of lipopolysaccharide (LPS) O-capsule function (an antigen) and other topics such as exotoxins, elastase and alkaline protease, and alginate regulation deserve their own chapters. It should be noted that the references cited in the immunology section end at 1986.

The chapter on biotransformation is very informative. The authors list all the strains, enzymes and patented products in a single table. The information on biodegradable, environmentally-friendly biopolymers, an alternative to common plastics, was very encouraging.

It is quite confusing to see all the different generic name changes of *Pseudomonas*, even though the reclassification of genus *Pseudomonas* is in effect; the changes were not in use in the text. Collectively, the chapters present a valuable review of different aspects of *pseudomonas* biology. Although primarily for specialists, this book can be read by anyone with some knowledge of this organism.

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WASTEWATER MICROBIOLOGY. *Second Edition. Wiley Series in Ecological and Applied Microbiology.*

By Gabriel Bitton. New York: Wiley-Liss. \$99.95. xii + 578 p + 4 pl; ill.; index. ISBN: 0-471-32047-1. 1999.

This is the second edition of a textbook that has previously received a degree of acceptance. There have been several earlier books on the same topic,