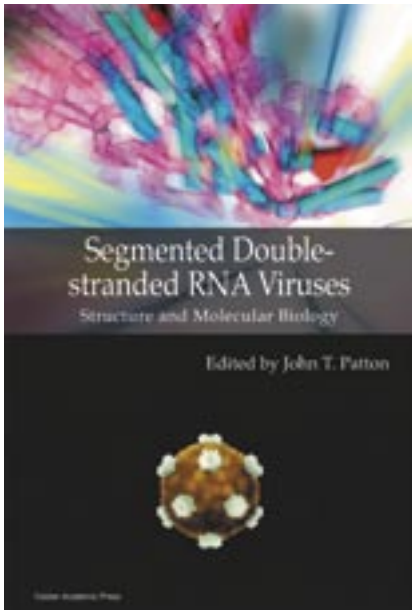
Segmented Double-Stranded RNA Viruses

Structure and Molecular Biology

Edited by: **John T. Patton,** *NIAID, NIH, Bethesda, USA*

x + 374 (plus a 22pp colour plate section), Jan. 2008
ISBN 978-1-904455-21-9 $319/£159

In recent years, remarkable progress has been made in determining, at atomic and subnanometer levels, the capsid structures of several of dsRNA viruses, as well as the structures of a number of individual viral proteins. This information has not only provided an unique insight into the events in the viral life cycle (including attachment and entry, genome replication, gene expression, and capsid morphogenesis), but also highlights the significant parallels in the structure and replicative processes of many of these fascinating viruses. In this timely volume, respected and experienced virologists review all of the current key recent research, providing for the first time a single resource reviewing structure and molecular biology of segmented dsRNA viruses. Topics include: the structures of orthoreoviruses, rotavirus, phytoreoviruses, and bluetongue virus, entry into the bacterial cell, crystal structure of reovirus polymerase λ3, assembly of the reovirus genome, genomic RNA packaging and replication in the *Cystoviridae*, and much more. Essential reading for all dsRNA virologists and all other virologists with an interest in molecular and structural biology.



www.caister.com

Table of Contents

Other books of interest

www.caister.com

Two-Component Systems in Bacteria

Edited by: R Gross, D Beier
c. 410 pp, August 2012
ISBN: 978-1-908230-08-9, $360/£180
Latest research on structure-function analysis, sensing mechanisms, atypical two-component systems, stress responses, developmental processes, virulence and symbiosis.

Foodborne & Waterborne Bacterial Pathogens

Epidemiology, Evolution and Molecular Biology
Edited by: SM Faruque
c. 330 pp, July 2012
ISBN: 978-1-908230-06-5, $319/£159
Review topics such as pathogenic properties, population genetics, virulence genes, evolution, drug resistance, epidemiology, detection, identification and control strategies.

Yersinia

Systems Biology and Control
Edited by: E Carniel, BJ Hinnebusch
c. 240 pp, July 2012
ISBN: 978-1-908230-05-8, $319/£159
Leading *Yersinia* researchers review the hot topics in the systems biology and control of these important bacteria.

Stress Response in Microbiology

Edited by: JM Requena
c. 500 pp, June 2012
ISBN: 978-1-908230-04-1, $360/£180
Expert authors from around the world summarise the current knowledge on microbial stress response and comprehensively review the recent findings that have greatly advanced the understanding of stress response systems.

Bacterial Regulatory Networks

Edited by: AAM Filloux
c. 400 pp, June 2012
ISBN: 978-1-908230-03-4, $360/£180
Authoritative, up-to-date reviews of the current research and theories on regulatory networks in bacteria. Critical reviews written by the leading research scientists in the field.

Systems Microbiology

Current Topics and Applications
Edited by: BD Robertson, BW Wren
c. 200 pp, June 2012
ISBN: 978-1-908230-02-7, $319/£159
Cutting-edge reviews by world-leading experts on the systems biology of microorganisms. Includes theoretical approaches, mathematical modelling, case studies on microbial species and the systems analysis of microbial phenomena.

Quantitative Real-time PCR in Applied Microbiology

Edited by: M Filion
c. 280 pp, May 2012
ISBN: 978-1-908230-01-0, $319/£159
Aimed specifically at microbiologists, this volume describes and explains the most important aspects of current real-time quantitative PCR (qPCR) strategies, instrumentation and software.

Bacterial Spores

Current Research and Applications
Edited by: E Abel-Santos
c. 300 pp, April 2012
ISBN: 978-1-908230-00-3, $319/£159
Comprehensive, up-to-date reviews on the current state of our knowledge of bacterial endospores. Essential text for everyone involved in spore research, the expression of recombinant proteins and pathogen detection.

Small DNA Tumour Viruses

Edited by: K Gaston
x + 324 pp, March 2012
ISBN: 978-1-904455-99-8, $319/£159
Leading scientists from around the world review current hot-topics on small DNA tumour virus research providing a fascinating overview of their molecular biology and interactions with the host.

Extremophiles

Microbiology and Biotechnology
Edited by: RP Anitori
xiv + 300 (colour figures) pp, January 2012
ISBN: 978-1-904455-98-1, $319/£159
Current and topical areas of extremophile research. The latest insights into the mechanisms these fascinating organisms use to survive and the most recent and novel biotechnological uses of extremophiles.

Bacillus

Cellular and Molecular Biology (2e)
Edited by: P Graumann
xii + 398 pp, February 2012
ISBN: 978-1-904455-97-4, $360/£180
A valuable reference work providing a comprehensive and up-to-date analysis. Critical reviews on the most recent and topical research.

Microbial Biofilms

Current Research and Applications
Edited by: G Lear, GD Lewis
x + 228 pp, February 2012
ISBN: 978-1-904455-96-7, $319/£159
An up-to-date review of the latest scientific research on microbial communities and a discussion of future trends and growth areas in biofilm-related research.

Bacterial Glycomics

Current Research, Technology and Applications
Edited by: CW Reid, SM Twine, AN Reid
x + 270 pp, February 2012
ISBN: 978-1-904455-95-0, $319/£159
Up-to-date overview of our current understanding of bacterial glycomes, the main analytical methods and recent and novel applications.

Non-coding RNAs and Epigenetic Regulation of Gene Expression

Drivers of Natural Selection
Edited by: KV Morris
x + 216 pp, February 2012
ISBN: 978-1-904455-94-3, $319/£159
An important and up-to-date overview of the modulation of gene transcription by non-coding RNAs. An essential reference book and a major information resource for those working in the area.

Brucella

Molecular Microbiology and Genomics
Edited by: I López-Goñi, D O'Callaghan
x + 262 pp, February 2012
ISBN: 978-1-904455-93-6, $319/£159
Highly acclaimed *Brucella* scientists comprehensively review the most important advances in the field. Topics include: genetic diversity, proteomic analysis, transcriptomic analysis, and much more.

Molecular Virology and Control of Flaviviruses

Edited by: P-Y Shi
x + 358 pp, January 2012
ISBN: 978-1-904455-92-9, $360/£180
An up-to-date and cutting-edge anthology from the leading experts in the flavivirus field. Essential reading for flavivirus researchers at the graduate level and beyond.
"a valuable resource" (Doodys)

Bacterial Pathogenesis

Molecular and Cellular Mechanisms
Edited by: C Locht, M Simonet
x + 370 pp, January 2012
ISBN: 978-1-904455-91-2, $360/£180
Distinguished scientists comprehensively describe the most relevant and up-to-date information on pathogenic features across the bacterial world.
"useful to those in many areas of research" (Doodys)

FULL DETAILS OF ALL OUR BOOKS AT WWW.CAISTER.COM