

Advanced Vaccine Research Methods for the Decade of Vaccines

Edited by: Fabio Bagnoli and Rino Rappuoli

Novartis Vaccines, Via Fiorentina 1, 53100 Siena, Italy

xiv + 456 (plus colour plates) pp

Hardback: April 2015. ISBN 978-1-910190-03-6 £180, \$360

Ebook: Feb 2015. ISBN 978-1-910190-04-3 £180, \$360

Since the publication of our first book '*Vaccine Design: Innovative Approaches and Novel Strategies*' in 2011, the field of vaccinology has advanced significantly. This has prompted the need for this new volume, which aims to distil the most important new findings to provide a timely overview of the field. Essential reading for everyone working in vaccine R&D in academia, biotechnology companies, and the pharmaceutical industry and a recommended volume for all Microbiology libraries.

Table of Contents

Chapter 1: Deep Sequencing in Vaccine Research, Development and Post-marketing Surveillance.

Stefano Censini, Silvia Guidotti, Giulia Torricelli, Rino Rappuoli and Fabio Bagnoli

Chapter 2: New Bioinformatics Algorithms Applied to Deep Sequencing Projects. *Mina Rho*

• Chapter 3: Comparative Genomics Approaches for Tracking the Emergence and Spread of Disease-associated Bacteria. *Tracy H. Hazen and David A. Rasko*

Chapter 4: Quantitative Proteomics in Vaccine Research. *Massimiliano Biagini and Nathalie Norais*

• Chapter 5: Structural Biology in Vaccine Research. Danilo Donnarumma, Matthew J. Bottomley, Enrico Malito, Ethan Settembre, Ilaria Ferlenghi and Roberta Cozzi

• Chapter 6: Cellular Screens to Interrogate the Human T and B Cell Repertoires and Design Better Vaccines. *Jens Wrangé and Kaja Murali-Krishna*

• Chapter 7: Novel Strategies of Vaccine Administration: The Science Behind Epidermal and Dermal Immunization. *Béatrice Combadière and Hélène Perrin*

• Chapter 8: TLRs as Targets to Develop Novel Adjuvants. *Şefik Ş. Alkan*

• Chapter 9: The Importance of Cell Mediated Immunity for Bacterial Vaccines. *Alison G. Murphy and Rachel M. McLoughlin*

• Chapter 10: T Cell Inducing Vaccines. *Sarah Gilbert*

• Chapter 11: Exploiting the Mutanome for Personalized Cancer Immunotherapy. Ugur Sahin, Sebastian Kreiter, John Castle, Martin Löwer, Cedrik Britten and Özlem Türeci

• Chapter 12: Malaria Vaccine Development: Progress to Date. *Kevin Marsh*

• Chapter 13: Tuberculosis. Else Marie Agger and Peter Andersen

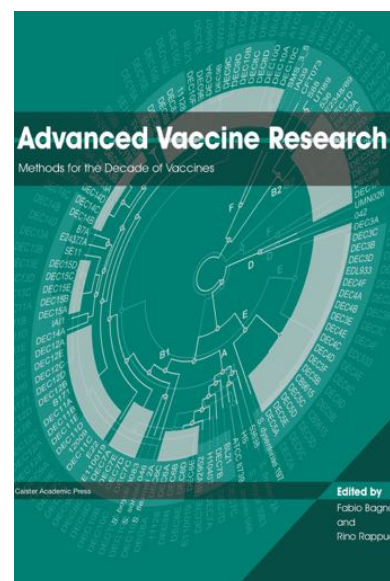
• Chapter 14: HIV-1 Vaccine Development. Barton F. Haynes, Georgia D. Tomaras, Hua-Xin Liao and Andrew J. McMichael

• Chapter 15: Cancer Immunotherapy: The Road to Rejection. Peter E. Fecci, Christina Chen, Susanne Baumeister and Glenn Dranoff

• Chapter 16: The Challenge of Developing Global Health Vaccines Against the Invasive Salmonellosis: Enteric Fever and Invasive Nontyphoidal *Salmonella* Disease. *Calman A. MacLennan*

• Chapter 17: The Path to an RSV Vaccine. Christine A. Shaw, Max Ciarlet, Brian W. Cooper, Lamberto Dionigi, Paula Keith, Karen B. O'Brien, Maryam Rafie-Kolpin and Philip R. Dormitzer

• Chapter 18: *Staphylococcus aureus*. Linhui Wang and Jean C. Lee



Pathogenic *Escherichia coli*

Molecular and Cellular Microbiology

Edited by: S Morabito

x + 304 pp, April 2014

Hardback: ISBN 978-1-908230-37-9 £159/\$319

Ebook: ISBN 978-1-908230-99-7 £159/\$319

"current, comprehensive, and a great resource" (JAVMA)



Human Pathogenic Fungi

Molecular Biology and Pathogenic Mechanisms

Edited by: DJ Sullivan, GP Moran

x + 342 pp, June 2014

Hardback: ISBN 978-1-908230-44-7 £180/\$360

Ebook: ISBN 978-1-908230-66-9 £180/\$360

"a carefully edited and well-produced reference work" IMA Fungus



Pathogenic *Neisseria*

Genomics, Molecular Biology and Disease Intervention

Edited by: JK Davies, CM Kahler

x + 260 pp, July 2014

Hardback: ISBN 978-1-908230-47-8 £159/\$319

Ebook: ISBN 978-1-908230-61-4 £159/\$319

Reviews the most important research on pathogenic *Neisseria* including: vaccine development; antibiotic resistance; transcriptomics of regulatory networks; etc.



Alphaviruses: Current Biology

Edited by: Mahalingam, L Herrero and B Herring

Summer 2015

Hardback: ISBN 978-1-910190-15-9

Ebook: ISBN 978-1-910190-16-6

Flow Cytometry in Microbiology

Technology and Applications

Edited by: MG Wilkinson

c. 230 pp, June 2015

Hardback: ISBN 978-1-910190-11-1 £159/\$319

Ebook: ISBN 978-1-910190-12-8 £159/\$319

A thorough description of flow cytometry and includes practical and up-to-date information aimed specifically at microbiologists.

Probiotics and Prebiotics

Current Research and Future Trends

Edited by: K Venema, AP Carmo

c. 560 pp, August 2015

Hardback: ISBN 978-1-910190-09-8 £180/\$360

Ebook: ISBN 978-1-910190-10-4 £180/\$360

Containing 33 chapters, the book is an invaluable source of information and essential reading for everyone working with probiotics, prebiotics and the gut microbiota.

Epigenetics

Current Research and Emerging Trends

Edited by: BP Chadwick

c. 330 pp, June 2015

Hardback: ISBN 978-1-910190-07-4 £159/\$319

Ebook: ISBN 978-1-910190-08-1 £159/\$319

Thought-provoking discussions on classic aspects of epigenetics and on the newer, emerging areas.

Corynebacterium glutamicum

From Systems Biology to Biotechnological Applications

Edited by: A Burkovski

x + 198 pp, May 2015

Hardback: ISBN 978-1-910190-05-0 £159/\$319

Ebook: ISBN 978-1-910190-06-7 £159/\$319

A comprehensive and authoritative overview of current research, this book is essential reading for everyone working with Corynebacterium and related organisms.

Antifungals

From Genomics to Resistance and the Development of Novel Agents

Edited by: AT Coste, P Vandeputte

x + 334 pp, April 2015

Hardback: ISBN 978-1-910190-01-2 £159/\$319

Ebook: ISBN 978-1-910190-02-9 £159/\$319

A timely overview of current antifungal research with chapters written from a molecular and genomic perspective.

Aeromonas

Edited by: J Graf

viii + 230 pp, May 2015

Hardback: ISBN 978-1-908230-56-0 £159/\$319

Ebook: ISBN 978-1-908230-57-7 £159/\$319

An essential handbook for everyone involved with Aeromonas research or clinical diagnosis.

Antibiotics

Current Innovations and Future Trends

Edited by: S Sánchez, AL Demain

xii + 430 pp, January 2015

Hardback: ISBN 978-1-908230-54-6 £180/\$360

Ebook: ISBN 978-1-908230-55-3 £180/\$360

"a useful resource" (Book News)

Leishmania

Current Biology and Control

Edited by: S Adak, R Datta

x + 242 pp, January 2015

Hardback: ISBN 978-1-908230-52-2 £159/\$319

Ebook: ISBN 978-1-908230-53-9 £159/\$319

"an excellent reference" (Doodys)

Acanthamoeba

Biology and Pathogenesis (2nd edition)

Edited by: NA Khan

x + 334 pp, January 2015

Hardback: ISBN 978-1-908230-50-8 £159/\$319

Ebook: ISBN 978-1-908230-51-5 £159/\$319

"comprehensive review" (Book News)

Microarrays

Current Technology, Innovations and Applications

Edited by: Z He

x + 246 pp, August 2014

Hardback: ISBN 978-1-908230-49-2 £159/\$319

Ebook: ISBN 978-1-908230-59-1 £159/\$319

Proteomics

Targeted Technology, Innovations and Applications

Edited by: M Fuentes, J LaBaer

x + 186 pp, September 2014

Hardback: ISBN 978-1-908230-46-1 £159/\$319

Ebook: ISBN 978-1-908230-62-1 £159/\$319

"many excellent chapters" (Doodys)

Applied RNAi

From Fundamental Research to Therapeutic Applications

Edited by: P Arbuthnot, MS Weinberg

x + 252 pp, June 2014

Hardback: ISBN 978-1-908230-43-0 £159/\$319

Ebook: ISBN 978-1-908230-67-6 £159/\$319

"Essential reading" (Biotechnol Agron Soc Environ);

"recommended" (Fungal Diversity)

Molecular Diagnostics

Current Research and Applications

Edited by: J Huggett, J O'Grady

xii + 248 pp, May 2014

Hardback: ISBN 978-1-908230-41-6 £159/\$319

Ebook: ISBN 978-1-908230-64-5 £159/\$319

"I would highly recommend this book (Doodys)"

Phage Therapy

Current Research and Applications

Edited by: J Borysowski, R Międzybrodzki, A Górski

xvi + 378 pp, April 2014

Hardback: ISBN 978-1-908230-40-9 £180/\$360

Ebook: ISBN 978-1-908230-74-4 £180/\$360

"comprehensive overview" (BioSpektrum)

Bioinformatics and Data Analysis in Microbiology

Edited by: Ö Taştan Bishop

x + 248 pp, April 2014

Hardback: ISBN 978-1-908230-39-3 £159/\$319

Ebook: ISBN 978-1-908230-73-7 £159/\$319

Campylobacter Ecology and Evolution

Edited by: SK Sheppard

xvi + 360 pp, April 2014

Hardback: ISBN 978-1-908230-36-2 £159/\$319

Ebook: ISBN 978-1-908230-98-0 £159/\$319