

Contents

| | |
|--|------|
| Foreword by David R. Franz, COL (RET.), DVM, PhD | v |
| Foreword by Matthew Meselson, PhD | vii |
| Preface | ix |
| Disclaimer | xii |
| Contributors | xvii |
| I. PREPARATION AND MILITARY SUPPORT FOR A POSSIBLE BIOTERRORISM INCIDENT | |
| 1 Department of Defense Capabilities Supporting Bioterrorism Response <i>Anna Johnson-Winegar, Karl Semancik, Robert S. Borowski, Keith R. Vesely, Brenda Wyler, Matt Eussen, and John V. Wade</i> | 3 |
| 2 Modeling for Bioterrorism Incidents <i>Zygmunt F. Dembek</i> | 23 |
| 3 Biological Weapons Defense: <i>Effect Levels</i> <i>Ross D. LeClaire and M. Louise M. Pitt</i> | 41 |
| II. MEDICAL COUNTERMEASURES AND DECONTAMINATION | |
| 4 Pathogenesis by Aerosol <i>M. Louise M. Pitt and Ross D. LeClaire</i> | 65 |
| 5 <i>Bacillus anthracis</i> and the Pathogenesis of Anthrax <i>Dominique M. Missiakas and Olaf Schneewind</i> | 79 |
| 6 Virologic and Pathogenic Aspects of the <i>Variola</i> Virus (Smallpox) as a Bioweapon <i>Robert G. Darling, Timothy H. Burgess, James V. Lawler, and Timothy P. Endy</i> | 99 |
| 7 Plague Vaccines: <i>Retrospective Analysis and Future Developments</i> <i>Jeffrey J. Adamovicz and Gerard P. Andrews</i> | 121 |
| 8 Medical Protection Against Brucellosis <i>David L. Hoover and Richard H. Borschel</i> | 155 |
| 9 Pathogenesis of and Immunity to <i>Coxiella burnetii</i> <i>David M. Waag and Herbert A. Thompson</i> | 185 |
| 10 Glanders: <i>New Insights Into an Old Disease</i> <i>David M. Waag and David DeShazer</i> | 209 |
| 11 Medical Countermeasures for Filoviruses and Other Viral Agents <i>Alan Schmaljohn and Michael Hevey</i> | 239 |

| | | |
|--|---|-----|
| 12 | Medical Defense Against Protein Toxin Weapons: <i>Review and Perspective</i> <i>Charles B. Millard</i> | 255 |
| 13 | Antimicrobials for Biological Warfare Agents <i>Jon B. Woods</i> | 285 |
| 14 | Nonspecific Immunomodulator Therapy: CpG <i>D. G. Cerys Rees, Arthur M. Krieg, and Richard W. Titball</i> | 317 |
| 15 | Decontamination <i>Robert J. Hawley and Joseph P. Kozlovac</i> | 333 |
| III. EMERGING THREATS AND FUTURE PREPARATION | | |
| 16 | Definition and Overview of Emerging Threats <i>Luther E. Lindler, Eileen Choffnes, and George W. Korch</i> | 351 |
| 17 | Department of Defense Global Emerging Infections System Programs in Biodefense <i>Julie A. Pavlin and Patrick W. Kelley</i> | 361 |
| 18 | Information Resources and Database Development for Defense Against Biological Weapons <i>Frank J. Lebeda, Murray Wolinsky, and Elliot J. Lefkowitz</i> | 387 |
| 19 | Genomic Efforts With Biodefense Pathogens <i>Rekha Seshadri, Timothy D. Read, William C. Nierman, and Ian T. Paulsen</i> | 417 |
| 20 | Genomics for Biodefense: <i>Exploiting the Francisella tularensis</i> <i>Genome Sequence</i> <i>Siv G. E. Andersson, Mats Forsman, Petra C. F. Oyston, and Richard W. Titball</i> | 435 |
| 21 | Genetic Fingerprinting of Biodefense Pathogens for Epidemiology and Forensic Investigation <i>Luther E. Lindler, Xiao-Zhe Huang, May Chu, Ted L. Hadfield, and Michael Dobson</i> | 453 |
| 22 | <i>Yersinia pestis</i> as an Emerged Pathogen: <i>What Lessons Can</i> <i>Be Learned?</i> <i>Luther E. Lindler</i> | 481 |
| IV. DIAGNOSTIC DEVELOPMENT FOR BIOWARFARE AGENTS | | |
| 23 | Requirements for Biological Threat Identification Systems <i>Erik A. Henchal and George V. Ludwig</i> | 509 |
| 24 | DNA-Based Diagnostic Tests for Detection and Identification of Biological Weapons <i>Luther E. Lindler, David Norwood, Michael Dobson, and Ted L. Hadfield</i> | 525 |

| | | |
|-------------|---|-----|
| 25 | Concepts for the Development of Immunodiagnostic Assays for Detection and Diagnosis of Biothreat Agents <i>George V. Ludwig, Cynthia A. Rossi, and Robert L. Bull</i> | 551 |
| Index | | 581 |

Biological Weapons Defense

Infectious Disease and Counterbioterrorism

Lindler, L.E.; Lebeda, F.J.; Korch, G. (Eds.)

2005, XXII, 598 p. 78 illus., Hardcover

ISBN: 978-1-58829-184-4

A product of Humana Press