

CONTENTS

VOLUME ONE

PART I

HOST-PARASITE RELATIONSHIPS AND THE PATHOGENESIS OF INFECTIOUS DISEASES

- 1 MOLECULAR DETERMINANTS OF MICROBIAL PATHOGENESIS, 3
David A. Hunstad • Ravi Jhaveri • Joseph W. St. Geme III
- 2 NORMAL AND IMPAIRED IMMUNOLOGIC RESPONSES TO INFECTION, 22
Michael F. Tosi
- 3 METABOLIC RESPONSE OF THE HOST TO INFECTIONS, 65
Elizabeth C. Bellino • Alina Olteanu • Ralph D. Feigin • William R. Beisel
- 4 FEVER: PATHOGENESIS AND TREATMENT, 83
Mark A. Ward
- 5 THE HUMAN MICROBIOME, 88
Douglas S. Swanson
- 6 EPIDEMIOLOGY AND BIOSTATISTICS OF INFECTIOUS DISEASES, 95
Eugene D. Shapiro and Robert S. Baltimore

PART II

INFECTION OF SPECIFIC ORGAN SYSTEMS

SECTION I

UPPER RESPIRATORY TRACT INFECTIONS, 131

- 7 THE COMMON COLD, 132
James D. Cherry
- 8 INFECTIONS OF THE ORAL CAVITY, 140
Constantine Simos and Blanca E. Gonzalez
- 9 PHARYNGITIS (PHARYNGITIS, TONSILLITIS, TONSILLOPHARYNGITIS, AND NASOPHARYNGITIS), 156
James D. Cherry
- 10 UVULITIS, 165
Ellen R. Wald

- 11 PERITONSILLAR, RETROPHARYNGEAL, AND PARAPHARYNGEAL ABSCESES, 167
Nira A. Goldstein and Margaret R. Hammerschlag
- 12 CERVICAL LYMPHADENITIS, 175
C. Mary Healy and Carol J. Baker
- 13 PAROTITIS, 189
Judith R. Campbell
- 14 RHINOSINUSITIS, 193
James D. Cherry • Jagmeet Mundi • Nina L. Shapiro
- 15 OTITIS EXTERNA, 203
Ellen M. Friedman and Maria Carrillo-Marquez
- 16 OTITIS MEDIA, 209
Jerome O. Klein and Charles D. Bluestone
- 17 MASTOIDITIS, 233
James D. Cherry • Audrey P. Calzada • Nina L. Shapiro
- 18 CROUP (LARYNGITIS, LARYNGOTRACHEITIS, SPASMODIC CROUP, LARYNGOTRACHEOBRONCHITIS, BACTERIAL TRACHEITIS, AND LARYNGOTRACHEOBRONCHOPNEUMONITIS) AND EPIGLOTTITIS (SUPRAGLOTTITIS), 241
James D. Cherry

SECTION II

LOWER RESPIRATORY TRACT INFECTIONS, 261

- 19 ACUTE BRONCHITIS, 262
James D. Cherry
- 20 CHRONIC BRONCHITIS, 265
I. Celine Hanson and William T. Shearer
- 21 BRONCHIOLITIS AND INFECTIOUS ASTHMA, 271
Robert C. Welliver, Sr.
- 22 PEDIATRIC COMMUNITY-ACQUIRED PNEUMONIA, 283
Carrie L. Byington and John S. Bradley
- 23 CHILDREN'S INTERSTITIAL LUNG DISEASE AND HYPERSENSITIVITY PNEUMONITIS, 295
Minh L. Doan and Leland L. Fan
- 24 COMPLICATIONS OF PNEUMONIA, 306
J. Gary Wheeler and Richard F. Jacobs
- 25 CYSTIC FIBROSIS, 323
Peter W. Hiatt • Ruth Ann Luna • Kathryn S. Moffett

SECTION III INFECTIONS OF THE HEART, 349

- 26 INFECTIVE ENDOCARDITIS, 350
Jeffrey R. Starke
- 27 INFECTIOUS PERICARDITIS, 371
Sheldon L. Kaplan
- 28 MYOCARDITIS, 381
Jesus G. Vallejo
- 29 ACUTE RHEUMATIC FEVER, 401
Diana R. Lennon
- 30 MEDIASTITIS, 419
Morven S. Edwards

SECTION IV CENTRAL NERVOUS SYSTEM INFECTIONS, 424

- 31 BACTERIAL MENINGITIS BEYOND THE NEONATAL PERIOD, 425
Kwang Sik Kim
- 32 PARAMENINGEAL INFECTIONS, 462
Xavier Sáez-Llorens and Javier Nieto Guevara
- 33 FUNGAL MENINGITIS, 473
José R. Romero and Richard F. Jacobs
- 34 EOSINOPHILIC MENINGITIS, 481
Barbara W. Stechenberg
- 35 ASEPTIC MENINGITIS AND VIRAL MENINGITIS, 484
David E. Bronstein and Carol A. Glaser
- 36 ENCEPHALITIS AND MENINGOENCEPHALITIS, 492
David E. Bronstein • W. Donald Shields • Carol A. Glaser
- 37 PARAINFECTIOUS AND POSTINFECTIOUS DISORDERS OF THE NERVOUS SYSTEM, 513
- 37A ■ PARAINFECTIOUS AND POSTINFECTIOUS DEMYELINATING DISORDERS OF THE CENTRAL NERVOUS SYSTEM, 513
J. Lloyd Holder, Jr. and Timothy E. Lotze
- 37B ■ INFECTION-ASSOCIATED MYELITIS AND MYELOPATHIES OF THE SPINAL CORD, 520
J. Lloyd Holder, Jr. and Timothy E. Lotze

SECTION V GENITOURINARY TRACT INFECTIONS, 529

- 38 URETHRITIS, 530
Ellen R. Wald
- 39 CYSTITIS AND PYELONEPHRITIS, 535
Ellen R. Wald
- 40 RENAL ABSCESS, 553
Edmond T. Gonzales, Jr. and Sheldon L. Kaplan

- 41 PROSTATITIS, 558
Sheldon L. Kaplan
- 42 GENITAL INFECTIONS, 560
Mariam R. Chacko • Mary Allen Staat • Charles R. Woods, Jr.

SECTION VI GASTROINTESTINAL TRACT INFECTIONS, 592

- 43 ESOPHAGITIS, 593
Paul Krogstad and Robert S. Venick
- 44 APPROACH TO PATIENTS WITH GASTROINTESTINAL TRACT INFECTIONS AND FOOD POISONING, 598
Theresa J. Ochoa • Mara Zambruni • Elsa Chea-Woo
- 45 ANTIBIOTIC-ASSOCIATED COLITIS, 632
Robin Schmucker and Kristina Bryant
- 46 WHIPPLE DISEASE, 639
Zev Davidovics and Mark A. Gilger

SECTION VII LIVER DISEASES, 647

- 47 HEPATITIS, 648
Daniel H. Leung and Leon L. Chen
- 48 CHOLANGITIS AND CHOLECYSTITIS, 658
Pia S. Pannaraj and Douglas S. Fishman
- 49 PYOGENIC LIVER ABSCESS, 672
Sheldon L. Kaplan
- 50 REYE SYNDROME, 676
Eugene S. Hurwitz

SECTION VIII OTHER INTRA-ABDOMINAL INFECTIONS, 678

- 51 APPENDICITIS AND PELVIC ABSCESS, 679
Thomas L. Kuhls
- 52 PANCREATITIS, 689
Thomas L. Kuhls
- 53 PERITONITIS AND INTRA-ABDOMINAL ABSCESS, 698
Judith R. Campbell
- 54 RETROPERITONEAL INFECTIONS, 706
Alice Pong and John S. Bradley

SECTION IX MUSCULOSKELETAL INFECTIONS, 710

- 55 OSTEOMYELITIS, 711
Paul Krogstad
- 56 SEPTIC ARTHRITIS, 727
Paul Krogstad

- 57 BACTERIAL MYOSITIS AND PYOMYOSITIS, 735
Charles Grose

SECTION X

SKIN INFECTIONS, 740

- 58 CUTANEOUS MANIFESTATIONS OF SYSTEMIC INFECTIONS, 741
James D. Cherry
- 59 ROSEOLA INFANTUM (EXANTHEM SUBITUM), 768
James D. Cherry
- 60 SKIN INFECTIONS, 772
- 60A ■ BACTERIAL SKIN INFECTIONS, 772
Mary Anne Jackson
- 60B ■ VIRAL AND FUNGAL SKIN INFECTIONS, 782
Meena R. Julapalli and Moise L. Levy

SECTION XI

OCULAR INFECTIOUS DISEASES, 793

- 61 OCULAR INFECTIONS, 794
Mohamed Hussein • Aaron M. Miller • Paul G. Steinkuller

SECTION XII

SYSTEMIC INFECTIOUS DISEASES, 823

- 62 BACTEREMIA AND SEPTIC SHOCK, 824
Sheldon L. Kaplan and Jesus G. Vallejo
- 63 FEVER WITHOUT SOURCE AND FEVER OF UNKNOWN ORIGIN, 837
Debra L. Palazzi
- 64 TOXIC SHOCK SYNDROME, 848
Jeffrey Suen
- 65 ACUTE RESPIRATORY DISTRESS SYNDROME IN CHILDREN, 866
Jan Hau Lee • Ira M. Cheifetz • David A. Turner

SECTION XIII

INFECTIONS OF THE FETUS AND NEWBORN, 876

- 66 APPROACH TO INFECTIONS IN THE FETUS AND NEWBORN, 877
Gail J. Harrison

SECTION XIV

INFECTIONS OF THE COMPROMISED HOST, 902

- 67 PRIMARY IMMUNODEFICIENCIES, 903
Javier Chinen • Mark W. Kline • William T. Shearer
- 68 THE FEBRILE NEUTROPENIC PATIENT, 921
Brian T. Fisher and Lillian Sung

- 69 OPPORTUNISTIC INFECTIONS IN HEMATOPOIETIC STEM CELL TRANSPLANTATION, 933
Christopher C. Dvorak and William J. Steinbach

- 70 INFECTIONS IN PEDIATRIC HEART TRANSPLANTATION, 945
Sheldon L. Kaplan

- 71 INFECTIONS IN PEDIATRIC LUNG TRANSPLANTATION, 957
Jill A. Hoffman

- 72 OPPORTUNISTIC INFECTIONS IN LIVER AND INTESTINAL TRANSPLANTATION, 989
Michael Green and Marian G. Michaels

- 73 OPPORTUNISTIC INFECTIONS IN KIDNEY TRANSPLANTATION, 1002
Gail J. Harrison

- 74 INFECTIONS RELATED TO PROSTHETIC OR ARTIFICIAL DEVICES, 1015
Ram Yogev and Tina Q. Tan

- 75 INFECTIONS RELATED TO CRANIOFACIAL SURGICAL PROCEDURES, 1043
Marc A. Mazade

- 76 INFECTIONS IN BURN PATIENTS, 1047
Janak A. Patel and Natalie Williams-Bouyer

SECTION XV

UNCLASSIFIED INFECTIOUS DISEASES, 1063

- 77 KAWASAKI DISEASE, 1064
Stanford T. Shulman
- 78 CHRONIC FATIGUE SYNDROME, 1085
Leonard R. Krilov

PART III

INFECTIONS WITH SPECIFIC MICROORGANISMS

SECTION XVI

BACTERIAL INFECTIONS, 1095

- 79 NOMENCLATURE FOR AEROBIC AND ANAEROBIC BACTERIA, 1096
David A. Bruckner

SUBSECTION 1

GRAM-POSITIVE COCCI, 1113

- 80 *STAPHYLOCOCCUS AUREUS* INFECTIONS (COAGULASE-POSITIVE STAPHYLOCOCCI), 1113
Sheldon L. Kaplan • Kristina G. Hulten • Edward O. Mason

- 81 COAGULASE-NEGATIVE STAPHYLOCOCCAL INFECTIONS, 1131
David Y. Hyun

- 82 GROUP A, GROUP C, GROUP G BETA HEMOLYTIC STREPTOCOCCAL INFECTIONS, 1140
Linette Sande and Anthony R. Flores

- 83 GROUP B STREPTOCOCCAL INFECTIONS, 1153
Pia S. Pannaraj and Carol J. Baker

- 84 ENTEROCOCCAL AND VIRIDANS STREPTOCOCCAL INFECTIONS, 1170
B. Keith English and Jerry L. Shenep

- 85 PNEUMOCOCCAL INFECTIONS, 1198
Stephen I. Pelton and Michael R. Jacobs

- 86 MISCELLANEOUS GRAM-POSITIVE COCCI, 1246
Randall G. Fisher

SUBSECTION 2 GRAM NEGATIVE COCCI, 1250

- 87 *MORAXELLA CATARRHALIS*, 1250
Barbara W. Stechenberg

- 88 MENINGOCOCCAL DISEASE, 1253
Marsha S. Anderson • Mary P. Glodé • Arnold L. Smith

- 89 GONOCOCCAL INFECTIONS, 1271
Charles R. Woods, Jr.

SUBSECTION 3 GRAM-POSITIVE BACILLI, 1301

- 90 DIPHTHERIA, 1301
Barbara W. Stechenberg

- 91 ANTHRAX, 1311
Morven S. Edwards

- 92 *BACILLUS CEREUS*, 1316
Margot Anderson and Richard A. Oberhelman

- 93 *ARCANOBACTERIUM HAEMOLYTICUM*, 1322
Natascha Ching

- 94 *ERYSIPELOTHRIX RHUSIOPATHIAE*, 1327
Randall G. Fisher

- 95 LISTERIOSIS, 1329
Tobias Kollmann • Robert Bortolussi • Timothy Mailman

- 96 TUBERCULOSIS, 1335
Andrea T. Cruz and Jeffrey R. Starke

- 97 OTHER MYCOBACTERIA, 1381
W. Matthew Linam and Richard F. Jacobs

- 98 LEPROSY AND BURULI ULCER: THE MAJOR CUTANEOUS MYCOBACTERIOSES, 1392
Andrea T. Cruz

- 99 *NOCARDIA*, 1418
Nada Harik and Richard F. Jacobs

- 100 *CORYNEBACTERIUM* AND *RHODOCOCCLUS*, 1423
Randall G. Fisher

SUBSECTION 4 GRAM-NEGATIVE BACILLI, 1429

- 101 *CITROBACTER*, 1429
Randall G. Fisher

- 102 *ENTEROBACTER*, 1433
Laura A. Sass and Randall G. Fisher

- 103 EXTRAINTESTINAL PATHOGENIC *ESCHERICHIA COLI*, 1439
Patrick C. Seed

- 104 DIARRHEA-CAUSING AND DYSENTERY-CAUSING *ESCHERICHIA COLI*, 1449
Jorge J. Velarde • Andrea A. Berry • James P. Nataro

- 105 *KLEBSIELLA*, 1465
Randall G. Fisher

- 106 *MORGANELLA MORGANII*, 1469
Randall G. Fisher

- 107 *PROTEUS*, 1471
Randall G. Fisher

- 108 *PROVIDENCIA*, 1474
Randall G. Fisher

- 109 *SHIGELLA*, 1476
Theresa J. Ochoa and Margaret Kosek

- 110 *SERRATIA*, 1488
Randall G. Fisher

- 111 *SALMONELLA*, 1491
Theresa J. Ochoa and Javier Santisteban-Ponce

- 112 PLAGUE (*YERSINIA PESTIS*), 1509
Gary D. Overturf

- 113 OTHER *YERSINIA* SPECIES, 1514
Charles R. Woods, Jr.

- 114 MISCELLANEOUS ENTEROBACTERIACEAE, 1532
Randall G. Fisher

- 115 *AEROMONAS*, 1538
Santhosh Nadipuram and James D. Cherry

- 116 *PASTEURELLA MULTOCIDA*, 1545
Barbara W. Stechenberg and Kathy Pinkerman

- 117 *CHOLERA*, 1548
Debbie-Ann T. Shirley and Matthew B. Laurens

- 118 *VIBRIO PARAHAEMOLYTICUS*, 1556
David Y. Hyun

- 119 *VIBRIO VULNIFICUS*, 1560
Randall G. Fisher

- 120 MISCELLANEOUS NON-ENTEROBACTERIACEAE
FERMENTATIVE BACILLI, 1563
Randall G. Fisher

- 121 ACINETOBACTER, 1568
Armando G. Correa

- 122 ACHROMOBACTER (*ALCALIGENES*), 1573
Randall G. Fisher

- 123 EIKENELLA CORRODENS, 1576
Randall G. Fisher

- 124 ELIZABETHKINGIA AND CHRYSEOBACTERIUM
SPECIES, 1578
Randall G. Fisher

- 125 PSEUDOMONAS AND RELATED GENERA, 1582
Michael T. Brady and Mario J. Marcon

- 126 STENOTROPHOMONAS (*XANTHOMONAS*)
MALTOPHILIA, 1605
Carlos A. Sattler

SUBSECTION 5 GRAM-NEGATIVE COCCOBACILLI, 1610

- 127 AGGREGATIBACTER
ACTINOMYCETEMCOMITANS, 1610
Suzanne Whitworth and Richard F. Jacobs

- 128 BRUCELLOSIS, 1611
Edward Young

- 129 PERTUSSIS AND OTHER *BORDETELLA*
INFECTIONS, 1616
James D. Cherry and Ulrich Heininger

- 130 CALYMMATOBACTERIUM GRANULOMATIS, 1640
Mariam R. Chacko

- 131 CAMPYLOBACTER JEJUNI, 1644
Ramia Zakhour • Gloria P. Heresi • James R. Murphy

- 132 TULAREMIA, 1657
Gordon E. Schutze

- 133 HAEMOPHILUS INFLUENZAE, 1665
Stephen J. Barenkamp

- 134 OTHER *HAEMOPHILUS* SPECIES (*DUCREYI*,
HAEMOLYTICUS, *INFLUENZAE* BIOGROUP *AEGYPTIUS*,
PARAHAEMOLYTICUS, AND *PARAINFLUENZAE*) AND
AGGREGATIBACTER (*HAEMOPHILUS*)
APHROPHILUS, 1685
Stephen J. Barenkamp

- 135 *HELICOBACTER PYLORI*, 1691
Aldo Maspons and Mark A. Gilger

- 136 *KINGELLA KINGAE*, 1699
Eric A. Porsch • Kimberly F. Starr •
Joseph W. St. Geme III

- 137 LEGIONNAIRES' DISEASE, PONTIAC FEVER, AND
RELATED ILLNESSES, 1705
Paul H. Edelstein and Wilbert H. Mason

- 138 *STREPTOBACILLUS MONILIFORMIS* (RAT-BITE
FEVER), 1715
Kara Dubray and Carol A. Glaser

- 139 *BARTONELLA* INFECTIONS, 1720
Leigh M. Howard • Kathryn M. Edwards •
Barbara Stechenberg

SUBSECTION 6 TREPONEMATACEAE, 1729

- 140 BORRELIA, 1729

- 140A ■ LYME DISEASE, 1729
Sunil K. Sood and Peter J. Krause

- 140B ■ RELAPSING FEVER, 1739
Peter J. Krause

- 141 LEPTOSPIROSIS, 1743
Delma J. Nieves

- 142 *SPIRILLUM MINUS* (RAT-BITE FEVER), 1759
Kara Dubray and Carrie L. Byington

- 143 SYPHILIS, 1761
Simon R. Dobson and Pablo J. Sánchez

- 144 NONVENEREAL TREPONEMATOSES, 1782
David C. Hilmers

SUBSECTION 7 ANAEROBIC BACTERIA, 1791

- 145 CLOSTRIDIAL INTOXICATION AND INFECTION, 1791
Gary D. Overturf

- 146 INFANT BOTULISM, 1801
Stephen S. Arnon

- 147 TETANUS, 1809
James D. Cherry and Rick E. Harrison

- 148 ACTINOMYCOSIS, 1820
Suzanne Whitworth and Richard F. Jacobs

- 149 *BACTEROIDES*, *FUSOBACTERIUM*, AND
PREVOTELLA, 1825
Steven C. Buckingham

VOLUME TWO

SECTION XVII VIRAL INFECTIONS, 1835

- 150 CLASSIFICATION AND NOMENCLATURE OF
VIRUSES, 1836
Marjorie J. Miller

DNA VIRUSES—SUBSECTION 1 PARVOVIRIDAE, 1843

- 151 HUMAN PARVOVIRUS B19, 1843
Danica J. Schulte

- 152 HUMAN BOCAVIRUSES, 1858
Jennifer E. Schuster and John V. Williams

DNA VIRUSES—SUBSECTION 2
POLYOMAVIRIDAE, 1863

- 153 HUMAN POLYOMAVIRUSES, 1863
John A. Vanchiere

- 154 HUMAN PAPILLOMAVIRUSES, 1871
Colleen B. Nash • Gail J. Harrison •
Kenneth A. Alexander

DNA VIRUSES—SUBSECTION 3
ADENOVIRIDAE, 1888

- 155 ADENOVIRUSES, 1888
James D. Cherry and Santhosh Nadipuram

DNA VIRUSES—SUBSECTION 4
HEPATOVIIRIDAE, 1911

- 156 HEPATITIS B AND D VIRUSES, 1911
Maureen Jonas and Janis Stoll

DNA VIRUSES—SUBSECTION 5
HERPESVIRIDAE, 1933

- 157 HERPES SIMPLEX VIRUSES 1 AND 2, 1933
Kathleen Gutierrez • Benjamin Pinsky • Ann M. Arvin

- 158 CYTOMEGALOVIRUS, 1968
Gail J. Harrison

- 159 EPSTEIN-BARR VIRUS, 1992
Charles T. Leach • Ciro V. Sumaya • Gail J. Harrison

- 160 HUMAN HERPESVIRUSES 6, 7, AND 8, 2016
Charles Grose

- 161 VARICELLA-ZOSTER VIRUS, 2021
Anne A. Gershon

DNA VIRUSES—SUBSECTION 6
POXVIRIDAE, 2033

- 162 SMALLPOX (VARIOLA VIRUS), 2033
James D. Cherry

- 163 MONKEYPOX AND OTHER POXVIRUSES, 2040
Samantha H. Johnston and Anne W. Rimoin

- 164 MIMIVIRUSES, 2048
Ramya Ramraj and Gail J. Harrison

RNA VIRUSES—SUBSECTION 1
PICORNAVIRIDAE, 2051

- 165 ENTEROVIRUSES, PARACHOVIRUSES, AND SAFFOLD
VIRUSES, 2051
James D. Cherry and Paul Krogstad

- 166 RHINOVIRUSES, 2109
Robert L. Atmar and Janet A. Englund

- 167 HEPATITIS A VIRUS, 2128
Ana María Rios

RNA VIRUSES—SUBSECTION 2
CALICIVIRIDAE, 2147

- 168 CALICIVIRUSES, 2147
Yalda C. Lucero • Miguel L. O'Ryan •
David O. Matson

- 169 HEPATITIS E VIRUS, 2158
Ravi Jhaveri

RNA VIRUSES—SUBSECTION 3
REOVIRIDAE, 2168

- 170 REOVIRUSES, 2168
James D. Cherry

- 171 ORBIVIRUSES, COLTIVIRUSES, AND
SEADORN VIRUSES, 2172
Theodore F. Tsai

- 172 ROTAVIRUS, 2176
Mary Allen Staat • Monica Malone McNeal •
David I. Bernstein

RNA VIRUSES—SUBSECTION 4
TOGAVIRIDAE, 2195

- 173 RUBELLA VIRUS, 2195
James D. Cherry and Kristina Adachi

- 174 ALPHAVIRUSES, 2226

- 174A ■ EASTERN EQUINE ENCEPHALITIS, 2226
Theodore F. Tsai and Gail J. Harrison

- 174B ■ WESTERN EQUINE ENCEPHALITIS, 2230
Theodore F. Tsai and Gail J. Harrison

- 174C ■ VENEZUELAN EQUINE
ENCEPHALITIS, 2237
Theodore F. Tsai and Gail J. Harrison

- 174D ■ CHIKUNGUNYA, 2241
Scott B. Halstead

- 174E ■ ROSS RIVER VIRUS ARTHRITIS, 2248
John G. Aaskov

- 174F ■ OTHER ALPHAVIRAL INFECTIONS, 2251
Theodore F. Tsai

SUBSECTION 5
FLAVIVIRIDAE, 2253

- 175 FLAVIVIRUSES, 2253

- 175A ■ ST. LOUIS ENCEPHALITIS, 2253
Kimberly C. Martin • José R. Romero • Theodore F. Tsai

- 175B ■ WEST NILE VIRUS, 2261
José R. Romero

- 175C ■ YELLOW FEVER, 2274
Duane J. Gubler and Gail J. Harrison

- 175D ■ DENGUE, DENGUE HEMORRHAGIC
FEVER, AND SEVERE DENGUE, 2278
Scott B. Halstead

175E ■ JAPANESE ENCEPHALITIS, 2291

Theodore F. Tsai

175F ■ MURRAY VALLEY ENCEPHALITIS, 2301

John G. Aaskov

175G ■ TICK-BORNE ENCEPHALITIS, 2303Andrea Duppenhaler • Christoph Aebi •
Theodore F. Tsai**175H ■ OTHER FLAVIVIRAL INFECTIONS, 2313**

Theodore F. Tsai

176 HEPATITIS C VIRUS, 2317

Ravi Jhaveri

SUBSECTION 6**ORTHOMYXOVIRIDAE, 2326****177 INFLUENZA VIRUSES, 2326**

Timothy M. Uyeki

SUBSECTION 7**PARAMYXOVIRIDAE, 2360****178 PARAINFLUENZA VIRUSES, 2360**

Ram Yogeve and Caroline Breese Hall

179 MEASLES VIRUS, 2373

James D. Cherry

180 MUMPS VIRUS, 2395

James D. Cherry and Kevin K. Quinn

181 RESPIRATORY SYNCYTIAL VIRUS, 2407

H. Cody Meissner and Caroline Breese Hall

182 HUMAN METAPNEUMOVIRUS, 2434

Jennifer E. Schuster and John V. Williams

SUBSECTION 8**RHABDOVIRIDAE, 2444****183 RABIES VIRUS, 2444**Sergio E. Recuenco • Stanley A. Plotkin •
Charles E. Rupprecht**SUBSECTION 9****ARENAVIRIDAE AND FILOVIRIDAE, 2463****184 LYMPHOCYTIC CHORIOMENINGITIS VIRUS, 2463**

Rémi N. Charrel and Xavier de Lamballerie

185 ARENAVIRAL HEMORRHAGIC FEVERS, 2466

Rémi N. Charrel and Xavier de Lamballerie

**186 FILOVIRAL HEMORRHAGIC FEVER: MARBURG AND
EBOLA VIRUS FEVERS, 2478**

Eric Leroy and Gail J. Harrison

SUBSECTION 10**CORONAVIRIDAE AND TOROVIRIDAE, 2486****187 CORONAVIRUSES AND TOROVIRUSES, INCLUDING
SEVERE ACUTE RESPIRATORY SYNDROME, 2486**

Kenneth McIntosh and Janet A. Englund

SUBSECTION 11**BUNYAVIRIDAE, 2496****188 HANTAVIRUSES, 2496**Louisa E. Chapman • C. J. Peters • James N. Mills •
Kelly T. McKee, Jr.**189 LA CROSSE ENCEPHALITIS AND OTHER CALIFORNIA
SEROGROUP VIRUSES, 2513**

W. Garrett Hunt and James E. McJunkin

190 OTHER BUNYAVIRIDAE, 2528**190A ■ RIFT VALLEY FEVER, 2528**

C.J. Peters and Gail J. Harrison

**190B ■ CRIMEAN-CONGO HEMORRHAGIC
FEVER, 2531**

Robert B. Tesh and Gail J. Harrison

**190C ■ PHLEBOTOMUS FEVER (SANDFLY
FEVER), 2535**

Robert B. Tesh and Gail J. Harrison

190D ■ OROPOUCHE FEVER, 2537Francisco P. Pinheiro • Amelia P. A. Travassos da
Rosa • Pedro Fernando da C. Vasconcelos**190E ■ TOSCANA VIRUS, 2544**Rémi N. Charrel • Xavier de Lamballerie •
Laurence Bichaud**SUBSECTION 12****RETROVIRIDAE, 2552****191 HUMAN RETROVIRUSES, 2552****191A ■ ONCOVIRUSES (HUMAN T-CELL
LYMPHOTROPIC VIRUSES) AND
LENTIVIRUSES (HUMAN
IMMUNODEFICIENCY VIRUS
TYPE 2), 2552**

Michael A. Tolle and Susan L. Gillespie

**191B ■ HUMAN IMMUNODEFICIENCY
VIRUS AND ACQUIRED
IMMUNODEFICIENCY SYNDROME, 2591**

Filiz O. Seeborg • Mary E. Paul • William T. Shearer

SUBSECTION 13**PRION-RELATED DISEASES, 2619****192 TRANSMISSIBLE SPONGIFORM ENCEPHALOPATHIES
(CREUTZFELDT-JAKOB DISEASE,
GERSTMANN-STRÄUSSLER-SCHENKER DISEASE,
KURU, FATAL FAMILIAL INSOMNIA, NEW VARIANT
CREUTZFELDT-JAKOB DISEASE, SPORADIC FATAL
INSOMNIA), 2619**

William J. Britt and Gail J. Harrison

SECTION XVIII**CHLAMYDIA, 2630****193 CHLAMYDIA INFECTIONS, 2631**

Margaret R. Hammerschlag and Stephan A. Kohlhoff

SECTION XIX

RICKETTSIAL DISEASES, 2646

- 194 RICKETTSIAL AND EHRLICHIAL DISEASES, 2647
Paul M. Lantos and Ross McKinney, Jr.

SECTION XX

MYCOPLASMA, 2667

- 195 MYCOPLASMA AND UREAPLASMA INFECTIONS, 2668
James D. Cherry and Natalie M. Quanquin

SECTION XXI

FUNGAL DISEASES, 2701

- 196 CLASSIFICATION OF FUNGI, 2702
David A. Bruckner and Eszter Deak
- 197 ASPERGILLOSIS, 2704
William J. Steinbach
- 198 BLASTOMYCOSIS, 2723
Gregory M. Gauthier and Bruce S. Klein
- 199 CANDIDIASIS, 2735
Grace E. Lee • David A. Kaufman • Theoklis E. Zaoutis
- 200 COCCIDIOIDOMYCOSIS, 2769
Ziad M. Shehab and Kareem W. Shehab
- 201 PARACOCIDIOIDOMYCOSIS, 2780
Gil Benard and Maria José Soares Mendes-Giannini
- 202 CRYPTOCOCCOSIS, 2795
David Goldman and John Perfect
- 203 HISTOPLASMOSIS, 2807
Martin B. Kleiman
- 204 SPOROTRICHOSIS, 2832
Bernhard L. Wiedermann
- 205 MUCORMYCOSIS AND ENTOMOPHTHORYMYCOSIS
(FORMERLY ZYGOMYCOSIS), 2837
Theoklis E. Zaoutis and William J. Steinbach
- 206 FUSARIOSIS AND SCEDOSPORIOSIS, 2846
Damian J. Krysan • Melanie Wellington •
William J. Steinbach
- 207 MISCELLANEOUS MYCOSES, 2852
William J. Steinbach

SECTION XXII

PARASITIC DISEASES, 2860

- 208 CLASSIFICATION AND NOMENCLATURE OF HUMAN
PARASITES, 2861
Lynne S. Garcia

SUBSECTION 1

PROTOZOA 2866

- 209 AMEBIASIS, 2866
Shinjiro Hamano and William A. Petri, Jr.

- 210 BLASTOCYSTIS HOMINIS AND BLASTOCYSTIS SPP.
INFECTION, 2875
Peter J. Hotez

- 211 ENTAMOEBIA COLI INFECTION, 2877
Peter J. Hotez

- 212 GIARDIASIS, 2878
Tina Q. Tan

- 213 DIENTAMOEBIA FRAGILIS INFECTIONS, 2884
Damien Stark

- 214 TRICHOMONAS INFECTIONS, 2887
Joan S. Purcell and Mariam R. Chacko

- 215 BALANTIDIUM COLI INFECTION, 2894
Peter J. Hotez

- 216 CRYPTOSPORIDIOSIS, 2896
Theresa J. Ochoa and A. Clinton White, Jr.

- 217 CYCLOSPORIASIS, CYSTOSPORIASIS, AND
MICROSPORIDIOSIS, 2905
A. Clinton White, Jr. • Carlos Seas • Martin Montes

- 218 BABESIOSIS, 2915
Peter J. Krause

- 219 MALARIA, 2921
Rosemary M. Olivero and Elizabeth D. Barnett

- 220 LEISHMANIASIS, 2947
Lynne S. Garcia

- 221 TRYPANOSOMIASIS, 2959
Lawrence A. Ross • Lynne S. Garcia •
Murray Wittner • Herbert B. Tanowitz

- 222 NAEGLERIA, ACANTHAMOEBA, AND BALAMUTHIA
INFECTIONS, 2975
Patrick J. Gavin and Tina Q. Tan

- 223 TOXOPLASMOSIS, 2986
James B. McAuley • Kenneth M. Boyer •
Jack S. Remington • Rima L. McLeod

- 224 PNEUMOCYSTIS PNEUMONIA, 3005
Francis Gigliotti and Terry W. Wright

SUBSECTION 2

NEMATODES, 3012

- 225 PARASITIC NEMATODE INFECTIONS, 3012
Peter J. Hotez

SUBSECTION 3

CESTODES, 3030

- 226 CESTODES, 3030
A. Clinton White, Jr. • Philip R. Fischer • Pedro Legua

SUBSECTION 4 TREMATODES, 3049

- 227 **FOODBORNE TREMATODES, 3049**
Miguel M. Cabada • Philip R. Fischer •
A. Clinton White, Jr.

- 228 **SCHISTOSOMIASIS, 3060**
Philip R. Fischer and A. Clinton White, Jr.

SUBSECTION 5 ARTHROPODS, 3070

- 229 **ARTHROPODS, 3070**
Jan E. Drutz

SECTION XXIII GLOBAL HEALTH, 3080

- 230 **GLOBAL HEALTH, 3081**
Holly Corwin and Gail J. Harrison
- 231 **INTERNATIONAL TRAVEL ISSUES FOR
CHILDREN, 3091**
Michelle Weinberg • Nicholas Weinberg •
Susan A. Maloney
- 232 **INFECTIOUS DISEASE CONSIDERATIONS IN
INTERNATIONAL ADOPTES AND REFUGEES, 3121**
Mary Allen Staat

PART IV THERAPEUTICS

- 233 **ANTIBIOTIC RESISTANCE, 3137**
Philip Toltzis and Jeffrey L. Blumer
- 234 **THE PHARMACOKINETIC-PHARMACODYNAMIC
INTERFACE: DETERMINANTS OF ANTI-INFECTIVE
DRUG ACTION AND EFFICACY IN PEDIATRICS, 3159**
Susan M. Abdel-Rahman • Jennifer L. Goldman •
Gregory L. Kearns
- 235 **ANTIBACTERIAL THERAPEUTIC AGENTS, 3182**
Carla Garcia and George H. McCracken, Jr.
- 236 **ANTIMICROBIAL PROPHYLAXIS, 3242**
Gary D. Overturf
- 237 **OUTPATIENT INTRAVENOUS ANTIMICROBIAL
THERAPY FOR SERIOUS INFECTIONS, 3257**
John S. Bradley
- 238 **ANTIVIRAL AGENTS, 3265**
Gail J. Harrison
- 239 **ANTIFUNGAL AGENTS, 3291**
Andreas H. Groll and Thomas J. Walsh
- 240 **DRUGS FOR PARASITIC INFECTIONS, 3327**

- 241 **IMMUNOMODULATING AGENTS, 3355**
Timothy R. La Pine and Harry R. Hill

- 242 **PROBIOTICS, 3369**
Gail J. Harrison

PART V

PREVENTION OF INFECTIOUS DISEASES

- 243 **HEALTH CARE-ASSOCIATED INFECTIONS, 3377**
W. Charles Huskins • Julia Shaklee Sammons •
Susan E. Coffin
- 244 **ACTIVE IMMUNIZING AGENTS, 3420**
Penelope H. Dennehy • Ian C. Michelow •
Michael P. Koster • Nicole E. Alexander-Scott
- 245 **PASSIVE IMMUNIZATION, 3491**
Deborah Lehman and Danica J. Schulte

SECTION XXIV OTHER PREVENTIVE CONSIDERATIONS, 3537

- 246 **PUBLIC HEALTH ASPECTS OF INFECTIOUS DISEASE
CONTROL, 3538**
Kathleen H. Harriman and Laurene Mascola
- 247 **INFECTIONS IN CHILD CARE
ENVIRONMENTS, 3550**
Sheryl L. Henderson and Ellen R. Wald
- 248 **ANIMAL AND HUMAN BITES, 3570**
Morven S. Edwards
- 249 **BIOTERRORISM, 3579**
Robert J. Leggiadro

PART VI

APPROACH TO THE LABORATORY DIAGNOSIS OF INFECTIOUS DISEASES

- 250 **BACTERIAL LABORATORY DIAGNOSIS, 3589**
Paula A. Revell and Lakshmi Chandramohan
- 251 **FUNGAL LABORATORY ANALYSIS: SPECIMEN
COLLECTION, DIRECT DETECTION, AND
CULTURE, 3596**
David A. Bruckner
- 252 **VIRAL LABORATORY DIAGNOSIS, 3600**
Romney M. Humphries and Marjorie J. Miller
- 253 **PARASITIC LABORATORY DIAGNOSIS, 3620**
David A. Bruckner and Robyn Shimizu-Cohen