

Index

- adaptive immunity 183, 188, 190
- adenovirus, vaccines 209
- alternative activation pathway 155
- alveolar macrophage 150
- amantadine 82
- amantadine-resistant virus strain 82
- antibiotics 7 ff
 - penicillins 8
 - macrolides 8
 - fluorquinolones 9
 - resistance 5
- antigen, lipid and protein 194
- antigenic drift 76
- antigenic shift 76
- antiviral compounds 82
- antiviral therapy 31, 33, 36, 45
- asthma, and *M. pneumoniae* 192
- autoimmune reaction 191

- bacterial ghosts 221
- biological characteristics 184
- bird flu virus 77
- blood cultures 6
- blood-brain barrier (BBB) 149
- Bordetella pertussis*, vaccines 212
- bronchiectasis 191
- bronchitis 79, 80

- C. pneumoniae* see *Chlamydia pneumoniae*
- C3 degrading activity 154
- CAPNETZ 16
- capsular polysaccharide 142
- capsule regulation 153
- CD4⁺ 79
- CD8⁺ T-cell responses to influenza 79
- cell wall hydrolase 144
- cellular activation 188
- chest x-ray 6
- Chlamydia pneumoniae* 15, 84, 86, 89–95
 - detection by PCR 86
 - differential diagnosis 84
 - immunity 89–93
 - reinfection 84
 - seroprevalence 84
 - virulence factors 95
 - vaccines 212
- Chlamydia*, nomenclature 84
- Chlamydophila*, nomenclature 84
- choline-binding proteins (CBP) 144
- chronic obstructive pulmonary disease (COPD) 80, 193
- classical pathway of complement
 - activation 154
- clathrin-coated vesicle 150
- clone, international (pneumococcal) 61
- clone, pneumococcal 68
- co-infection with microorganisms (influenzavirus) 78
- combined bacterial and viral pneumonia 80
- complement factor H 155
- complement fixation (CF) 194
- CRB-65 score 5
- C-reactive protein 154
- cytokine production 189

- differential fluorescence induction (DIF) 151
- DNA vaccines 226
- Dot/Icm type IV secretion system 119

- efflux, PmrA 65
- elderly, immune system 228
- encephalitis 81
- encephalopathy 80
- enolase 148
- enzyme immunoassay (EIA) 194
- extrapulmonary complication 190
- extrapulmonary syndrome 191

- factor H (complement) 155
- failure, treatment 67
- fluoroquinolone 196
- fowl plague 77

- GAPDH 148
 gene target 195
 gene, mosaic 60
 ghosts (bacterial) 221
 G-protein pathway 150
 Guillain-Barré syndrome 81, 191
- Haemophilus influenzae* 3, 15, 78, 80
 non typeable, vaccines 212
 type b (Hib), conjugated vaccines 212
 vaccines 211
- healthcare associated pneumonia 2
 hemagglutinin (HA) 74–76
 hemolytic anemia 191
 hypogammaglobulinemia 189
 hypotension 80
- IFN-alpha, in influenza 79
 Immunoglobulin subclasses, and
 diagnosis 194
 immunologic hypersensitivity 189
 immunological memory 227
 influenza infection of neonates 80
 influenza vaccines 202–204
 influenza virus 73
 adaptive immune response to 79
 co-infection with microorganisms 78
 influenza, laboratory diagnosis 204
 innate immunity 79, 183, 188
 interferon antagonism 78
 interleukin (IL)-6 79
 interleukin (IL)-8 79
- ketolide, resistance 65
- Legionella* 15
dot/icm genes 112, 120
dot/icm mutants 117
 egress 123
 entry in host cells 117
 growth phase 122
 immunity 125
 in free-living amoebae 113
 Naip proteins 117
 persistence 114
 Toll-like receptors 125
 transient association with amoebae 112
 vesicles 118
- Legionella pneumophila*, vaccines 215
- Legionnaires' disease, outbreak 111
 leukocyte recruitment 150
 linezolid, resistance 66
 lipoteichoic acid (LTA) 156
- local (mucosal) immune response 189
 LPxTG sequence 144
 lung abscesses 191
 lymphocyte activation 189
 lymphoid infiltration 189
- macrolide 196
 macrolide resistance 196
 macrolide treatment 193
 macrophage receptor, MARCO 161
 manipulation of vesicle traffic 118
 mast cell degranulation 193
 microimmuno-fluorescence (MIF) 22
Moraxella catarrhalis, vaccines 212
 mouse infection model 146
 mucosal adjuvants 224
 mucosal delivery systems 220
 multi-locus sequence typing (MLST) 61
 MurM protein 63
Mycoplasma pneumoniae 3, 15, 183, 184
 adaptive immune response 190
 adherence to epithelium 186
 biological characteristics 184
 cell biology 183
 epidemiology 185
 genome 184
 pathogenesis 183
 vaccines 215
 myocarditis 80
 myositis 80
- naip5* 117
 natural reservoir of influenza-A-virus 76
 neuraminidase (NA) 74, 76
 neuraminidase (NanA, NanB, NanC) 145
 neuraminidase inhibitors 82
 neuraminidase subtype 76
 neutralizing antibody directed against the
 HA 79
 nucleic acid amplification assay 15, 20, 195
- opsonophagocytosis 153
 orthomyxoviridae 74
 oseltamivir 82
 otitis media 80
- P1 adhesin 185
 pandemic (influenza) 76
 parainfluenza virus (PIV), vaccines 205
 pathogen-associated molecular patterns
 (PAMPs) 156
 Pce 150
 PCR assay 15, 20, 195
 penicillin-binding protein (PBP) 62

- pericarditis 80
- pharmacodynamics 66
- phase variation 141
- phospholipase C 150
- phosphorylcholine (PCho) 144
- phosphorylcholine esterase 150
- photophobia 80
- PK/PD 67
- plasmin(ogen) 148
- platelet-activating factor (PAF) 148
- pleural effusion 191
- pneumococcal clone 61, 68
- pneumococcal colonization 141
- pneumococcal adherence and virulence factor A (PavA protein) 147, 148
- pneumococcal pneumonia 142
- pneumococcal serotype 140
- pneumococcal surface adhesin A (PsaA) 146
- pneumococcal surface protein A (PspA) 151
- pneumococcal surface protein C (PspC, SpsA, CbpA) 147
- pneumococcal molecular epidemiology network (PMEN) 61
- pneumolysin 142
- polymeric immunoglobulin receptor 147
- primary atypical pneumonia (PAP), diagnosis 190
- primary viral pneumonia 79, 80
- progressive pulmonary failure 193
- Pseudomonas aeruginosa* 3
- Pseudomonas aeruginosa*, vaccines 216
- pseudoviruses 222
- pulmonary fibrosis 191
- pulmonary infiltrates 80

- quinolone resistance-determining region (QRDR) 64

- real-time PCR assay 195
- receptor binding 74
- recombination 60, 65
- requirement for sterols 184
- resistance, acquired 60
- resistance, fluoroquinolone 64
- resistance, macrolides 63
- resistance, tetracycline 64
- resistant virus variants 33, 35, 36, 39, 40
- respiratory syncytial virus (RSV), vaccines 206, 207
- respiratory viruses 28, 29, 42–44, 48
- reverse genetics 218
- reverse vaccinology 217, 219

- Reye's syndrome 81
- ribosomal protein 64
- rimantadine 82
- risk stratification 5, 6

- secondary bacterial pneumonia 79, 80
- secretory component (SC) 147
- senescence, immune 229
- seroconversion 194
- severe acute respiratory syndrome (SARS), vaccines 208
- signature-tagged mutagenesis (STM) 151
- Spanish influenza 74, 76
- Staphylococcus aureus* 78, 80
- streptococci, viridans 60, 63
- Streptococcus pneumoniae* 3, 5, 15, 78, 80, 209, 210
 - vaccines 140, 209, 210
- Streptococcus*, *erm* gene 64
- Streptococcus*, *mef* gene 63
- streptogramin, resistance 66

- telithromycin 196
- telithromycin, resistance 65
- terminal sialic acid 146
- tetracycline 196
- Toll-like receptor 156
- transmission 185
- transverse myelitis 81
- treatment 7ff
- two-component regulatory systems (TCS) 152

- urinary antigen 6, 20

- vaccine 140, 202–216
 - adenovirus 209
 - B. pertussis* 212
 - C. pneumoniae* 214
 - H. influenzae* 211, 212
 - influenza 202–204
 - L. pneumophila* 215
 - M. catarrhalis* 214
 - M. pneumoniae* 215
 - P. aeruginosa* 216
 - parainfluenza virus (PIV) 205
 - respiratory syncytial virus (RSV) 206, 207
 - S. pneumoniae* 209, 210
 - severe acute respiratory syndrome (SARS) 208
- vaccine design 226
- vaccine, pneumococcal 69
- vectors, live attenuated bacterial 221

vectors, live attenuated viral 221
vesicle traffic, manipulation 118
viral pneumonia 27, 32, 33, 37, 41, 42, 47
virosomes 222, 223
virosomes 223
virulence 183
virus detection 42-48
virus-like particles (VLP) 222

wheezing attacks in asthmatics 80

zanamivir 82
zinc metalloprotease 146

The BAID-Series

Birkhäuser Advances in Infectious Diseases

Infectious diseases remain a substantial drain on human well-being and economies despite the availability of modern drugs. New pathogens emerge and known pathogens change their geographical distribution and their susceptibility to the available drugs. An understanding of the structure and function of infectious disease pathogens is a major scientific challenge with important potential applications.

This new cross-disciplinary monograph series will provide up-to-date information on the latest developments in infectious disease research. The multi-authored volumes will cover basic biology and biochemistry of pathogens as well as applied medical aspects and implications for public health and policy.

The contributions are written by leading infectious disease researchers and pharmaceutical scientists with a wide range of expertise.

The envisaged readership includes academic and industrial researchers in medicine and infectious diseases as well as clinicians and others involved in diagnostics and drug development.

Forthcoming volumes:

Pediatric Infectious Diseases Revisited, H. Schroten, S. Wirth (Editors), 2007

Available volumes:

Coronaviruses with Special Emphasis on First Insights Concerning SARS, A. Schmidt, M.H. Wolff, O. Weber (Editors), 2005

The Grand Challenge for the Future. Vaccines for Poverty-Related Diseases from Bench to Field, S.H.E. Kaufmann and P.-H. Lambert (Editors), 2005

Poxviruses, A. Mercer, A. Schmidt, O. Weber (Editors), 2007