

Subject Index

a

- AAA ATPase, *see* ATPase associated with various cellular activities
- ABC transporter, *see* ATP-binding cassette transporter
- O-acetylation 147, 167, 348 f.
- O-acetyltransferase 148 ff.
- adaptive strategy 99
- Addison's disease 458
- adenylat kinase (adk) 46
- adherence 105, 172 ff., 374
- adhesin 108, 187, 261, 377
- Hap 199
 - Hia/Hsf 199
 - island 400
 - Opc 201
 - receptor 187
- adhesion 248, 265
- adhesion and penetration protein (App) 377, 396
 - target 192
- adjuvant 353
- adk, *see* adenylat kinase
- ADP ribosyltransferase 399
- adrenal function 457
- aerobactin 229
- receptor 229
- agglutination 40
- alkylation repair 135
- allelic profile 23
- allozyme 42
- alpha-2-antiplasmin 462
- aluminium hydroxide 353
- anaphylaxis 521
- anaphylotoxin 455 ff.
- angiotensin 497
- antibiotic 54 ff.
- prophylactic 38, 527 f.
 - resistance 53 ff., 127 ff., 526
 - susceptibility 67
- therapeutic 38, 502
- antibody 323 ff., 451
- bactericidal 463
 - bactericidal antcapsular 343 f., 359 ff.
 - blocking 186, 286
 - complement-mediated bactericidal activity 394
 - opsonization 304, 376
 - opsonophagocytic 463
 - protective 278
 - secretory 266
 - serum bactericidal antibody (SBA) 323 ff.
- antigen 374 ff.
- cloning 394
 - gene 44
 - noncapsular 364
 - polysaccharide 344
 - prediction 393 f.
 - presentation receptor 297
 - purification 394
 - recognizing receptor 311
 - screening 394
 - T-cell independent 310, 344
 - T-cell dependent 344
- antigen presenting cell (APC) 345
- antigenetic diversity 21
- antigenicity 129
- antigenic variation 129 ff., 235
- antithrombin (AT) 460 f.
- APC, *see* antigen presenting cell
- aquaporin 467
- asplenia 361
- AT-rich repeat 129
- ATP hydrolysis 153
- ATP-binding cassette (ABC) transporter 84, 153, 228
- *abcZ* 46
 - accessory protein 153

- ATPase associated with various cellular activities (AAA ATPase) 241
- attachment 258 ff.
- auto-aggregation 247
- autolysis 126
- autotransporter 199, 384
- translocator domain 205
- azithromycin 67
- b**
- B-cell 308 ff.
- receptor 311, 344
- B-lymphocyte 308, 344
- bacteremia 482 ff.
- bacteremic phase 434
- bacterial evolution 24
- mutation 24 ff.
- recombination 24 ff.
- sepsis 488
- bactericidal permeability increasing protein
- recombinant (rBPI) 503
- bacterioferritin 230
- base excision repair (BER) 105, 130 ff.
- based upon related sequence type (BURST) 47
- BER, *see* base excision repair
- blood 433
- coagulation 444
- culture 522
- blood-brain barrier 219
- Bordetella pertussis* 78, 283
- Borrelia burgdorferi* 283
- bottlenecking 25
- bradykinin 455
- breakpoint 56 ff.
- brute force method 113
- Bruton's tyrosine kinase (btk) 311
- Burkholderia* 80
- BURST, *see* based upon related sequence type
- c**
- Ca²⁺ flux 262, 311
- Candida albicans* 283 f.
- candidate antigen prediction 393
- capillary leak syndrome 457
- capillary zone electrophoresis 356
- capsular polysaccharide 38, 90, 145 ff., 281 ff., 305, 344, 441 f.
- antibody 325, 344
- biosynthesis 149 f.
- *cps* locus 149
- serogroup 371
- structure 145
- transport 152 ff.
- capsulate phenotype 197
- capsule 21 ff., 44, 129, 145 ff., 303 ff.
- antigen 146
- biochemistry 150
- biosynthesis operon 44
- genetics 150
- group II 152
- null locus (*cnl* meningococcus) 27, 44
- phase variation 156
- sialylated polysaccharide 44
- switching 157, 364
- synthesis island 148
- carcinoembryonic antigen (CEA)-related cell adhesion molecule (CEACAM) 194, 260, 308 f., 374
- targeting 195
- cardiac dysfunction 455
- cardiovascular shock 490
- cardiovascular system 454
- carriage 27, 331, 414, 486
- carrier
- population 27
- protein 345 ff., 357 f.
- CD14 174, 444 f.
- CD14-TLR4-MD2 pathway 447
- CD19 311 ff.
- CD21 311 ff.
- CD35 275
- CD44 250
- CD46 249 f., 259, 277, 429
- CD55 277
- CD66 260, 374
- Cdc42 250, 264
- CDS, *see* coding sequences
- CEACAM, *see* carcinoembryonic antigen (CEA)-related cell adhesion molecule
- cefotaxime 56
- ceftriaxone 56, 527
- cell surface protein 364
- cell wall biosynthesis 84
- cell-expressed receptor 194
- central genotype 47
- cephalosporin 62
- cerebrospinal fluid (CSF) 250 f., 257, 433, 523
- chemokine 306
- chemoprophylaxis 60, 525 ff.
- chloramphenicol 66
- acetyl transferase (*catP*) 66
- ciprofloxacin 527
- circulation 430 ff., 497

- class 5 protein, *see* opacity protein
clearance 437f.
– opsonophagocytic 277
clonal complex 23
clonal population 25
CMP-Neu5Ac synthetase 151
coagulopathy 458, 498
coagulation 459 ff., 488 ff.
– disseminated intravascular coagulation (DIC) 435, 458
– factor 459 ff.
– inhibitor 463
– natural coagulation inhibitor 460
coding sequences (CDS) 78 ff.
coding tandem repeat 86
colonization 121, 172, 257 ff., 304, 429, 486
commensal 99, 172
comparative genomics 90
complement 311, 463
– activation 198, 278, 464
– alternative pathway 275
– C1 complex 273f.
– C2 274
– C3 convertase 274f.
– C4 274f.
– C4b-binding protein (C4bp) 276
– C5 convertase 274f.
–C5a 464
– classical pathway 273f.
– deficiency 277, 361, 371, 482
– membrane attack complex (MAC) 276
– receptor (CR) 275 ff., 311
– regulator 277 ff.
– resistance protein 259
conjugate 354
– Hib 347
– potency 358
– quality control 354
– stability 358
– vaccine 343 ff., 354 ff., 519
conjugation 347 ff.
contact regulatory element *Neisseria* (CREN) 249
contingency gene 99
convergent evolution 103
Correia repeat (CR) 87, 129
correlate of protection 323
cortical plague 250, 262
Corynebacterium diphtheriae 400
CR, *see* Correia repeat
CREN, *see* contact regulatory element *Neisseria*
CRM₁₉₇ 353 ff.
- CSF, *see* cerebrospinal fluid
CTA test, *see* cysteine trypticase agar test
CtrA 153
CtrB 153
CtrC 153
CtrD 153
cysteine trypticase agar (CTA) test 38
cytokine 304 ff., 452 ff.
– CXC-type 306
– proinflammatory 457
– response 465
- d**
DAF, decay-accelerating factor
database 49
– genome 78
– PubMLST 49
decay-accelerating factor (DAF) 277
dendritic cell 297 ff., 450
deoxycholate (DOC) 372, 383
DIC, *see* disseminated intravascular coagulation
diphtheria toxoid 353
disease control 31
disseminated intravascular coagulation (DIC) 435, 458
DNA
– damage reversal 135
– glycosylase 133
– inner membrane transport 126
– integration 126
– microarray analysis 90
– repair 119, 130 ff.
– repetitive sequence 84
– tolerance of DNA damage 130
– uptake sequence (DUS) 85, 120 ff., 247
DOC, *see* deoxycholate
DUS-specific antibody 125
- e**
ECM, *see* extracellular matrix
effectiveness 361, 414
EGFR 250
electromorph 42
electrophoretic type (ET) 42
encapsulation 145
endonuclease 133
endothelial cell 257, 306, 444 ff., 455 f.
– protein C receptor 456 ff., 492
endotoxin 486, 503, 521
– endotoxemia 492
enzyme-linked immunosorbent assay (ELISA) 40 f., 323, 358

epidemiology 26 ff.
 epithelial barrier 295
 epithelial cell 195 ff., 218
 ErbB2 kinase receptor 250, 263
 ERM family, *see* ezrin/radixin/moesin family
Escherichia coli
 – K1 40, 146, 285
 – K12 284
 ET, *see* electrophoretic type
 ET-37 complex 29
 Etest 55
 extracellular matrix (ECM) 192, 267
 – protein 267
 ezrin/radixin/moesin (ERM) family 263

f

factor H 276 ff.
 FbpA, *see* ferric iron-binding protein A
 FepA, *see* ferric enterobactin receptor (*frpB*)
 ferric enterobactin receptor (FepA, *frpB*) 45, 186 f., 229, 375
 ferric iron-binding protein A (FbpA) 226
 ferritin 230, 267
 fibrin formation 461
 fibrinogen 459 ff.
 fibrinolysis 463
 fibrinolytic system 462
 fibrinopeptide A 461
 fibronectin 192
 fluoroquinolone 67
 fumarate hydratase (*fumC*) 46
fumC, *see* fumarate hydratase
 Fur box sequence 228
 fur-dependent gene 86
 fur protein 92, 186, 230
 furylethylene derivative 67

g

GAG, *see* glycosaminoglycan
gal gene 172
 – *galE* 172
 gamma glutamyl aminopeptidase 38
 gangrene 459
 G-CSF, *see* granulocyte colony-stimulating protein
gdh, *see* glucose-6-phosphate dehydrogenase
 gene conversion 129
 gene mosaicism 85
 gene transfer
 – horizontal 26, 86, 119
 – island of horizontally transferred DNA (IHT) 88

general secretory pathway (GSP) 236
 genetic predisposition 301
 genome 77 ff.
 – annotation 78
 – chromosome 78
 – coding sequence 78
 – database 78
 – *in silico* analysis 393
 – metabolic blue-print deduced 83
 – multiple-genome analysis 399
 – plasmid 78
 – rearrangement 81
 – simple sequence repeat 85
 – sequence comparison 80
 – synteny plot 81
 genomic islands 88
 genomics 77 ff.
 – comparative 90
 genosubtyping 44
 genotype
 – central 47
 genotyping 37 ff.
 – nucleotide sequencing 43
 GGI, *see* gonococcal genetic island
 glucose-6-phosphate dehydrogenase (*gdh*) 46
 glycoform 163
 glycosaminoglycan (GAG) 193
 glycosyl transferase 168 ff.
 glycylcycline 67
 GNA33/MltA 396 ff.
 GNA1870 284, 395
 gonococcal genetic island (GGI) 126
 granulocyte colony-stimulating protein (G-CSF) 435, 452
 group, *see also* serogroup
 – group A 28, 331, 349
 – group B 350 f.
 – group B *Streptococcus* (GBS) 399
 – group C 325 ff., 348 ff., 406
 – group W-135 351
 – group Y 351
 GSP, *see* general secretory pathway
gyrA gene 61

h

Haemophilus adhesion and penetration protein (Hap) 199, 397
Haemophilus influenzae 78 ff., 199, 285, 377 ff., 501
 Hap, *see* Haemophilus adhesion and penetration protein
 haptoglobin 218 ff.

- HAS, *see* human albumin solution
 health care worker 523 ff.
 hematogenic dissemination 91
 heme 227
 – oxygenase (hemO) 228
 hemoglobin 218 ff.
 – receptor (HmbR) 104, 186, 207, 227 f.
 hemoglobin-haptoglobin utilization (Hpu) 227 f.
 hemopexin 220
 hemorrhage 457 ff.
 – skin lesion 458
 hemostasis 492
 Henoch Schonlein purpura 488
 heparan sulfate proteoglycan (HSPG) 193, 260
 herd immunity 362, 414
 Hia/Hsf adhesin 199, 377 ff.
 high performance
 – anion exchange chromatography with conductivity detection (HPAEC-CD) 356
 – anion exchange chromatography with pulsed amperometric detection (HPAEC-PAD) 356
 – size-exclusion chromatography (SEC-HPLC) 356
 HIV, *see* human immunodeficiency virus
 horizontal gene transfer 26, 86, 119, 150 ff.
 host cell interaction 91
 housekeeping gene 46
 Hpu, *see* hemoglobin-haptoglobin utilization
 HSPG, *see* heparan sulfate proteoglycan
 human albumin solution (HAS) 497
 human immunodeficiency virus (HIV) 361
 hyperglycemia 498
 hyperinvasive lineage 27
 hypermutability 113
 hypermutation 129 ff.
 hypervirulent strain 406
 hypogammaglobulinemia 482
 hypoglycaemia 498
 hyporesponsiveness 344, 362, 408
 hyposplenism 482
- i**
 ICAM-1, *see* intercellular adhesion molecule 1
 IgA1 protease 430
 IHF, *see* integration host factor
 immune
 – deficiency 40, 361
 – response 295 ff., 327
 – system 184, 439 ff.
 – tolerance 441
 immunity 330
 – adaptive 297 ff.
 – age-related 359
 – herd 362, 414
 – humoral 310
 – innate 295 ff., 439 ff.
 – mucosal 362 ff.
 – protective 296 f.
 – subtype-specific 184
 immunization 409 f.
 immunodominant protein 382
 immunogenicity 175, 350 ff., 379 ff.
 immunoglobulin 265
 – superfamily 194
 immunological memory 360, 416
 immunomodulation 184
 immunoprophylaxis 343
 immunoreceptor tyrosine-based inhibitory motif (ITIM) 195
 immunoselection 364
 immunotype 22, 38 ff., 163 ff., 352, 441
 infection
 – oropharyngeal 429
 – susceptibility 482
 inflammation 427
 – cytokine 453
 – mediator 444 ff.
 – process 486
 – response 450, 467
 inner membrane
 – protein 241
 – transport 126
 insertion sequence (IS) 87, 103, 156, 489
 – IS1301 103, 156
 integration host factor (IHF) 87, 109
 integrin 192
 intercellular adhesion molecule 1 (ICAM-1) 250, 263, 456
 interferon 450
 interleukin 431 ff., 450 ff., 465
 intracellular survival 265
 intracranial pressure (ICP) 500
 invasion 172 ff., 257 ff.
 iron 84, 217 ff.
 – acquisition 186, 220 ff.
 – ferric iron-binding protein A (FbpA) 226
 – heme 227
 – homeostasis 217
 – import 229
 – iron-dependent dioxygenase 135

- iron-regulated protein 186, 207, 375
- metabolism 217 ff.
- response 92
- secretion 229
- storage 229
- transport 105
- IS, *see* insertion sequence
- ITIM, *see* immunoreceptor tyrosine-based inhibitory motif

j

JNK kinase 250

k

- 2-keto-3-deoxy-octulosonic acid (KDO) 165, 439
 - synthesis 148
- Kupffer cell 437 f., 453

l

- laboratory investigation 522
- β -lactamase 63
- lactate permease gene (*lctP*) 284
- lacto-N-neotetraose 165
- lactoferrin (Lf) 220
 - binding protein (Lbp) 222 ff.
 - receptor 186 f., 385
- LAL assay, *see* limulus amaebocyte lysate assay
- LAMP, *see* lysosome-associated membrane protein
- latex agglutination 523
- lctP*, *see* lactate permease gene
- lectin pathway 275
- Leloir pathway 172
- leukocyte 446 ff., 464 ff.
- leukocytosis 465
- lf, *see* lactoferrin
- Lgt region 168 ff.
- lgt* genes 168 ff.
- limulus amaebocyte lysate (LAL) assay 438 f.
- lipid A 163 ff., 439
 - antagonist RsDPLA 448
 - lipid IV_A 167
 - monophosphoryl 353
 - structure 164 ff.
- lipooligosaccharide (LOS), *see also*
 - LPS 38 ff., 129, 163 ff., 261, 279 ff., 352, 439 ff., 453
 - conjugate vaccine 352
 - meningococcal 432
 - sialylation 282

- sialyltransferase (*lst*) 282
- lipopolysaccharide (LPS), *see also*
 - LOS 163 ff., 181 ff., 261, 299 ff., 372 ff., 427, 439 ff., 453 ff., 486
- biosynthesis 149
- clearance 438
- immunogen 373
- inner core structure 175
- LPS-binding protein (LBP) 299, 444
- LPS-deficient mutant 449
- LPS-depleted OMV 383
- nonLPS molecule 449 f.
- receptor complex 445
- toxicity 174
- vaccine 174 ff.
- lipoprotein 451
 - GNA1870 284
- Listeria monocytogenes* 285
- localized sex 25
- LOS, *see* lipooligosaccharide
- LPS, *see* lipopolysaccharide
- lpx* genes 167
- lumbar puncture 490
- lysosome-associated membrane protein (LAMP) 266

m

- macrophage 304 ff.
 - collagen receptor (MARCO) 304
 - inflammatory protein 1a (MIP-1a) 435, 465
- major outer membrane protein (MOMP) 181 ff.
 - immunological property 182
- MALLS, *see* multiangle laser light scattering
- mannose-binding lectin (MBL) 198, 275 ff.
 - MBL-associated serine protease (MASP) 275
 - pathway 284, 465
- MAP kinase 250
- MBL, *see* mannose-binding lectin
- MCC, *see* meningococcal group C conjugate
- MCP-1, *see* monocyte chemoattractant protein 1
- MD2, *see* myeloid differentiation protein 2
- MDA island, *see* meningococcal disease-associated island
- membrane
 - attack complex (MAC) 276
 - biosynthesis 84

- cofactor protein (MCP) 259, 277, 465
- inner membrane protein 241
- lysosome-associated membrane protein (LAMP) 266
- mitochondrial 185
- outer membrane opacity protein (Opa, Opc) 188
- outer membrane protein (OMP) 38 ff., 129, 181 ff., 200, 222, 241, 332
- outer membrane vesicle (OMV) 184, 310, 332
- meningeal cell 257
- meninges 466
- meningitis 435, 466 f., 487
 - bacterial 501
 - distinct 428
 - meningococcal 465 ff., 487, 501
 - mortality 501
 - pneumococcal 501
 - vaccine project 29, 363
- meningococcal bacteremia 92
- meningococcal carriage 27
- meningococcal conjugate vaccine 343 ff.
- meningococcal disease 17 ff., 28 ff., 403 ff., 519 ff.
 - antibiotic resistance 60 ff.
 - clinical management 481, 493
 - clinical presentation 428, 487
 - coagulopathy 458
 - epidemiology 28, 406 ff.
 - history 1 ff.
 - infection 273
 - invasive 427 ff., 463, 520
 - laboratory feature 488
 - mild systemic 436, 465
 - mortality 487 ff., 520
 - pathogenesis 427
 - pathophysiology 427 ff.
 - severity 465, 482
 - treatment 5, 63
 - typing 7
 - vaccine 7, 403 ff.
- meningococcal disease-associated (MDA) island 32, 91
- meningococcal diversity 21, 416
- meningococcal DNA 433 ff., 489
 - repair profile 130
- meningococcal endotoxin 278
- meningococcal genotype 27
- meningococcal group B capsular polysaccharide 371
- meningococcal group C conjugate (MCC) 325 ff., 410 ff.
- meningococcal infection 273
 - defense 273
 - mild systemic 428
- meningococcal isolate 42
 - not-typable (NT) 42
- meningococcal lipooligosaccharide 432, 451
- meningococcal meningitis 465 ff., 487, 501
- meningococcal polysaccharide vaccine 344
 - hyporesponsiveness 362
- meningococcal population 21, 31
 - clonal complex 23
 - disease control 31
 - diversity 21
 - recombination 25
 - structure 26
- meningococcal septicemia, *see also* meningococemia 428, 492
 - fulminant 428, 446 ff., 460 ff.
- meningococcal septic shock 460
- meningococcal transformation 119
- meningococcal vaccine 371 ff., 419
- meningococemia, *see also* meningococcal septicemia 431 ff., 465 ff.
 - chronic 468
- meningococcus 77
 - capsule 145 ff.
 - genetic typing 43
 - genome instability 127
 - β -lactamase-producing 56
 - MenB outer membrane vesicle (OMV) 383
 - outer membrane protein (OMP) 181 ff., 200
 - proliferation 431
 - serogrouping 39 ff.
 - typing 37 ff.
- 3-methyladenine DNA glycosylase 135
- methyltransferase 135
- MIC value, *see* minimum inhibitory concentration value
- minimum inhibitory concentration (MIC) value 54 ff.
- minocycline 62
- mismatch repair (MMR) 105, 127 ff.
- MLEE, *see* multilocus enzyme electrophoresis
- MLST, *see* multilocus sequence typing
- MMR, *see* mismatch repair
- MOMP, *see* major outer membrane protein
- monocyte chemoattractant protein 1 (MCP-1) 435, 452
- Moraxella catarrhalis* 283

- mtrR system 68
 - mucosal barrier 297 ff., 429
 - multiangle laser light scattering (MALLS) 349 ff.
 - multilocus enzyme electrophoresis (MLEE) 22 f., 42 ff.
 - nomenclature 23
 - multilocus sequence typing (MLST) 7, 42 ff.
 - PubMLST database 49
 - nomenclature 23
 - mutability 133
 - mutagenicity 134
 - mutational analysis 89
 - mutator
 - activity 127
 - allele 136
 - state 104
 - MyD88-dependent pathway 447
 - MyD88-independent pathway 447
 - myeloid differentiation protein 2 (MD2) 446
 - myocardial dysfunction 493
- n**
- N19 353
 - nad*, *see* neisserial adhesin A
 - NAD glycohydrolase 399
 - NCAM, *see* neural cell adhesion molecule
 - Neisseria gonorrhoeae* 53 ff., 283 f.
 - Neisseria lactamica* 526
 - Neisseria meningitidis* 18 ff., 37 ff., 53 ff., 67, 217 ff., 285, 419, 466 ff.
 - antibiotic 54 ff.
 - antibiotic susceptibility 67
 - complement system 463
 - genome 78
 - genome sequencing project 77 ff.
 - iron metabolism 217 ff.
 - lipopolysaccharide (LPS) 439 ff.
 - phase variation 99
 - septicemia 307
 - susceptibility testing 54
 - Toll-like receptor (TLR) 427
 - neisserial adhesin A (*nadA*) 109, 261, 397 f.
 - neisserial intergenic mosaic element (NIME) 129
 - neisserial surface protein A (NspA) 199 ff., 377
 - NER, *see* nucleotide excision repair
 - neural cell adhesion molecule (NCAM) 146
 - neutrophil
 - extracellular trap (NET) 306
 - granulocyte 306
 - polymorphonuclear neutrophil (PMN) 333
 - NF κ B, *see* nuclear factor κ B
 - NhhA 377 ff.
 - NIME, *see* neisserial intergenic mosaic element
 - nitric oxide (NO) 455
 - antagonist 497
 - inducible synthase (iNOS) 455
 - NMB1343/NarE 399
 - NMB1985/App 396 f.
 - NMB1994/NadA 397 f.
 - NOD, *see* nucleotide-binding oligomerization domain
 - nonLPS molecule 449 ff.
 - nonNF- κ B pathway 456
 - NspA, *see* neisserial surface protein A
 - NTPase 123
 - traffic 123 ff.
 - nuclear factor (NF) κ B 446
 - nucleotide excision repair (NER) 130 ff.
 - nucleotide binding protein 241
 - nucleotide-binding oligomerization domain (NOD) 446
- o**
- oca family, *see* oligomeric coiled coil adhesion (oca) family
 - oligomeric coiled coil adhesion (oca) family 199, 398
 - oligosaccharide
 - core structure 165
 - OMP, *see* outer membrane protein
 - OMV, *see* outer membrane vesicle
 - Onchocerca volvulus* 283
 - opacity (associated) protein (Opa, Opc) 108, 129, 189 ff., 201 ff., 260 f., 285, 307 f., 374 f., 465
 - hypervariable (HV) 191
 - immunogenicity 198
 - Opa_{CEA} 308
 - semivariable (SV) 191
 - opsonization 307
 - opsonophagocytis 333
 - assay (OPA) 333
 - organ perfusion 499
 - oropharynx 429
 - outbreak 528
 - outer membrane protein (OMP) 38 ff., 129, 181 ff., 220, 241, 286, 332, 371 ff.

- macromolecular-complex (OMP-MC) 376
 - major 374
 - minor 374 ff.
 - OMP85 377
 - PilQ/OMC 376
 - outer membrane vesicle (OMV) 184, 310, 332 f., 371 ff., 448
 - adapted OMV vaccine 380
 - meningococcal vaccine 371 ff.
 - native (NOMV) 383
 - vaccine 419
- p**
- P64 353
- PAI-1, *see* plasminogen activator inhibitor 1
- pandemic clone 42
- parC* gene 61
- pathogen 99
- associated molecular pattern (PAMP) 298
 - recognition receptor 297
- pathogenicity island 88 ff.
- PCR, *see* polymerase chain reaction
- pdhC*, *see* pyruvate dehydrogenase subunit
- PEA, *see* phosphoethanolamine
- penA* gene 68
- penicillin 63
- binding protein (PBP) 64 ff.
- peptide deformylase (PDF) inhibitor 67
- peptidoglycan 446
- hydrolase 68
- periodic selection 25
- periplasmic interaction 125
- permeability change 68
- PEtn, *see* phosphoethanolamine
- PFGE, *see* pulsed field gel electrophoresis
- Pgm*, *see* phosphoglucomutase
- phage CTX ϕ 91
- pgacowtsorir 303uu.
- *opromifasiom-imdepemdems* 304
 - *opromopgacowtsorir* 333
- pgare xaqiabke ceme 85
- pgare xaqiasiom 99, 103uu., 129uu.
- *wir*-acting factor 107
 - classical gene regulation 109
 - context of repeat tract 107
 - fitness 113
 - mathematical model 113
 - molecular mechanism 100 ff.
 - repeat unit length 107
 - repetitive DNA 101
 - *trans*-acting factor 104 ff.
- phenotypic typing 38 ff.
 - phosphoethanolamine (PEtn, PEA) 165 ff., 279
 - phosphoglucomutase (*pgm*) 46
 - phospholipid substitution 154
 - phosphorylcholine (PC) 111, 240
 - photolyase 135
 - phylogenetic tree 25
 - PI3-K/Rac1 GTPase signaling pathway 264 f.
 - PII, *see* opacity protein
 - PIII, *see* reduction-modifiable protein (Rmp)
 - pil* genes 238 ff., 258 f.
 - *pilQ/omc* 208, 376 ff.
 - pilin silent (*pilS*) 238
 - pilin 110, 121, 238
 - glycosylation (*pgl*) 111, 240
 - phosphorylcholine transferase A (*pptA*) 240
 - prepilin 121, 238
 - soluble (S-pilin) 238
 - pilot protein 122 ff.
 - pilus 103 ff., 129, 208, 235 ff.
 - accessory protein 110
 - adhesion 248
 - anchorage 245
 - antigenic variation 235
 - assembly 237 ff.
 - auto-aggregation 247
 - biogenesis 236
 - class I 238
 - class II 238
 - genetics 235
 - glycosylation 110 ff., 238
 - invasion 250
 - phase variation 103 ff., 235 ff.
 - pilus-induced signaling pathway 250
 - post-translational modification 110 ff.
 - retraction 237 ff.
 - structure 236 ff.
 - subclass 235
 - transformation competence 247
 - twitching motility 246 f.
 - type IV (*tfp*) 121, 208, 218, 235 ff., 250, 258 ff., 429
 - pilus-like structure 124, 400
 - plasmin 462
 - plasminogen activator inhibitor 1 (PAI-1) 456 ff.
 - PMN, *see* polymorphonuclear neutrophil
 - polymerase chain reaction (PCR) 522
 - polymorphonuclear neutrophil (PMN) 333

- polysaccharide 350 ff.
 - chain translocation 149
 - polysialic acid biosynthesis 151
 - polysialyltransferase 146
 - population biology 17 ff., 31
 - porin (Por) 41, 182 ff., 198 ff., 283 ff., 353, 374
 - mitochondrial VDAC 185
 - *porA* 38 ff., 129, 182, 302, 332 f., 374 ff.
 - *porB* 38 ff., 182, 302 ff., 374, 465
 - semivariable region (SV) 183
 - variable region (VR) 183
 - prepilin-like protein 244
 - prophage 88
 - prophylaxis 520 ff.
 - antibiotic 527
 - contact 523 ff.
 - cost 526
 - policy 526
 - vaccination 527
 - prostaglandin 431, 453
 - protease
 - IgA1 430
 - protection 323 ff.
 - carriage 331
 - natural 325
 - vaccine-induced 327
 - protein C (PC) 460 ff., 492 ff.
 - proteoglycan (PG) 193
 - heparan sulfate proteoglycan (HSPG) 193, 260
 - protonophore 228
 - pseudogene 84, 192
 - pseudopilin, *see* prepilin-like protein
 - public awareness 520
 - public health management 519 ff.
 - pulsed field gel electrophoresis (PFGE) 43 ff.
 - pyruvate dehydrogenase subunit (*pdhC*) 46
- q**
- quinolone 61 ff.
 - resistance determining region (QRDR) 61
- r**
- rhabdomyolysis 459
 - rate nephelometry 358
 - rec* gene 126
 - recombination
 - homologous 103, 120, 380
 - RecA-dependent 129 ff.
 - site-specific 126
 - unidirectional 110
 - recombinational repair 130 ff.
 - reduction-modifiable protein (Rmp) 185, 286
 - renal failure 457
 - REP2 repeat, *see* repetitive extragenic palindrome sequence
 - repeat sequence element 128
 - repetitive DNA sequence 84, 101
 - repetitive extragenic palindrome sequence (REP2 repeat) 87, 129
 - replication 265 f.
 - replicative plasmid 381
 - respiratory support 497
 - restriction fragment length polymorphism (RFLP) 43
 - reverse vaccinology 391 ff.
 - RFLP, *see* restriction fragment length polymorphism
 - Rho 250, 264
 - Rhodobacter spheroides* 448
 - ribotyping 43
 - rifampicin 60, 527
 - Rmp, *see* reduction-modifiable protein
 - RNA polymerase (*rpoB*)
 - DNA-dependent 60 f.
 - rpoB*, *see* RNA polymerase
- s**
- Saccharomyces cerevisiae* 284
 - saccharide
 - activated 356
 - Salmonella enterica* 108
 - Salmonella Montevideo* 284
 - Salmonella typhimurium* 284
 - scavenger receptor (SR) 303 ff., 438
 - SRA 304 ff.
 - SEC, *see* size exclusion chromatography
 - secretin 122 ff., 208, 241
 - secretion 126, 241
 - type IV 126
 - selectin 456
 - P-selectin 437
 - selective event 25
 - sepsis 173 f., 503
 - mortality 497 f.
 - septic shock 428 ff., 450 ff., 496
 - septicemia 307, 436 f., 487
 - fulminant 436 ff., 450 ff., 461 ff.
 - sequence conservation 395
 - sequence type (ST) number 47

- serogroup, *see also* group 4, 29 ff., 146, 344
- A 28, 42, 349
 - B 29, 43, 175, 350 ff., 441
 - C 29, 43, 348, 406
 - W-135 29, 351
 - Y 29, 351
 - subgroup 28
- serotyping 22, 38 ff.
- serum
- bactericidal activity 371 ff.
 - bactericidal antibody (SBA) 323 ff.
 - resistance 281 f.
- shikimate dehydrogenase 46
- shock 496 f.
- cold 492
 - compensated 492
 - decompensated 492
 - warm 492
- sia* gene 150 f.
- sialic acid 151, 188, 348 ff.
- biosynthesis 284
 - CMP 151
- sialylation 167 ff., 282 ff.
- siderophore 186, 207, 219 ff.
- signaling pathway 250
- signature-tagged mutagenesis (STM) 89 ff.
- simple sequence contingency locus 85
- Sip protein 400
- size exclusion chromatography (SEC) 349 ff.
- slipped-strand mispairing 157
- SodC, *see* superoxide dismutase
- solid phase immunoradioassay (SPIRA) 40
- SOS response 133 f.
- SPIRA, *see* solid phase immunoradioassay
- spiramycin 62
- split decomposition 47
- SR, *see* scavenger receptor
- Src kinase 250
- ST number, *see* sequence type number
- ST-8 complex
- ST-11 (ET-37) complex
- epidemic 29
- ST-23 complex 31
- ST-32 (ET-5) 30
- ST-41/44 complex 30
- steroid 501
- STM, *see* signature-tagged mutagenesis
- stochastic event 25
- Streptococcus pneumoniae* 56, 78, 283 ff., 450, 481
- subarachnoid space 467
- sulfonamide 5, 62
- superoxide dismutase (SodC) 120
- surface
- ligand 188
 - structure 103
- surveillance system 521
- †**
- T-cell 297, 308 ff., 344
- Tf, *see* transferrin
- T-lymphocyte 308
- terminal inverted repeat (TIR) 87
- tetanus toxoid 357
- tetracycline 62
- tfp machinery, *see also* pilus type IV 236
- thrombin 461
- thrombocytopenia 498
- thrombomodulin 456 ff., 492
- thrombose 459
- thyroid-stimulating hormone (TSH) 458
- TIR, *see* terminal inverted repeat *and* Toll-interleukin 1-resistance domain
- tissue factor 460 f.
- pathway inhibitor (TFPI) 456 ff.
- tissue plasminogen activator (tPA) 462
- tissue tropism 113
- Toll-interleukin 1-resistance domain (TIR) 299
- TLR, *see* Toll-like receptor
- TNF- α , *see* tumor necrosis factor α
- Toll-like receptor (TLR) 298, 311, 427, 445
- TLR2 298 ff., 311, 449
 - TLR4 174, 298 ff., 448
 - TLR5 298
 - TLR9 298, 311
- TonB 219 ff., 267
- TonB-dependent receptor 207, 224 ff., 375
- toxoid 353 ff.
- tPA, *see* tissue plasminogen activator
- trans*-acting factor 104 ff.
- transcription 108
- control of capsule expression 157
 - regulator 157
- transcriptomics 91
- transcytosis pathway 262
- transferrin (Tf) 217 ff.
- binding protein (Tbp) 222 ff.
 - receptor 186, 217, 375 ff.
- transformasome 120
- transformation 105, 120 ff., 157
- competence 247

translesion DNA polymerase 135
 transport 84
 trimethoprim-sulfamethoxazole 62
 TSH, *see* thyroid-stimulating hormone
 tumor necrosis factor α (TNF- α) 431 ff.,
 444 ff.
 twitching motility 121, 246 f.

u

UDP-GlcNAc acyltransferase 167, 449
 UDP-glucose-4-epimerase 172
 UP, *see* undecaprenol phosphate
 UTP-glucose-1-phosphate uridylyltrans-
 ferase 172
 undecaprenol phosphate (UP) 152

v

vaccine 7, 27, 174, 205, 223, 284, 323 ff.,
 343 ff.
 – bivalent 352
 – candidate 384, 396
 – conjugate 343 ff., 354 ff., 519
 – design 391 ff.
 – effectiveness 414
 – functional characterization 396 f.
 – group A 331, 349
 – group B 350
 – meningococcal 371 ff., 403 ff.
 – meningococcal group C conjugate
 (MCC) 328 ff., 348 f., 406 ff.
 – multivalent 184 ff.

– outer membrane vesicle (OMV) 184,
 307, 332 ff., 419
 – reverse vaccinology 391 ff.
 – serogroup-specific 39
 – subcapsular 332
 – tetravalent 332, 352
 – WHO recommendation 348
 vaccination 525 ff.
 vascular cellular adhesion molecule 1
 (VCAM-1) 456
 vasoconstriction 492
 vasodilatation 492
 vasoplegia 455
 vasopressin 497
 variable-number tandem repeats
 (VNTR) 48
 VCAM-1, *see* vascular cellular adhesion
 molecule 1
 virulence 89, 133, 172, 205
 – factor 136
 – putative virulence gene 84 ff.
 vitronectin 192
 VNTR, *see* variable-number tandem repeats
 volume control 108

w

Waterhouse-Friderichsen syndrome 457

y

Yersinia enterocolitica 283