

Index

- ABC transporters 102, 105
Absidia 120, 305
Acid phosphatase 21
Actin curve 178
Adherence 13, 51
Adhesion 70–73
Agrobacterium-mediated
 transformation 217, 316
Amphotericin B 44, 94, 101, 120,
 201, 306
Amplicons 182
Animal models of infection 115–135
Antibodies 28, 30, 32, 34, 35
 Monoclonal 3, 4, 5, 66
 Polyclonal 9
Antifungal(s) 43, 44, 45, 67, 93, 96, 110,
 115, 120, 130 200
Antigen detection 33, 37
Aspergillosis 2, 115, 125, 211
Aspergillus fumigatus 43, 44, 47, 67, 95,
 115, 211–229, 231
 Conidia 23, 44, 47, 211, 218, 225
 Virulence 258
Aspergillus nidulans 217, 246
Aspergillus niger 232, 253
Azoles 94

Beta-galactosidase activity 237, 239
Beta-lymphocytes 51
Blastospores (*Candida albicans*) 5, 21,
Blood (whole) 48
Buccal epithelial cells (BEC) 70, 72
Bud scar 7
Blastospore 5

Candida albicans 67, 72
 Commensal 8
 Differentiation 77
 Microarrays 181
 Morphological forms 6, 7, 21
 Oral cavity 2, 10, 11
 Virulence factors 69
Candida dubliniensis 94
Candida glabrata 4, 11, 16, 95
Candida krusei 4, 11, 101
Candida lusitaniae 4, 11
Candida parapsilosis 4, 11
Candida tropicalis 4, 11, 76
Candidosis 8, 43
Capillary transfer 166, 167
Capsule 276, 297
Caspofungin 96, 120
Catheter surfaces 76
cDNA synthesis 62, 188, 190
CDR 102
Cell wall (fungal) 13, 14, 16, 23,
 28, 258
Chemically assisted fragmentation 150
Chemiluminescent detection 65
Chitin 15, 28
Coenzyme C 53
Coenzyme Q 52
Colony forming units (CFU) 129
Cryofixation 36
Cryptococcosis 277, 298
Cryptococcus neoformans 275
Cryptococcus 95
Cyanine labeled DNA 190, 195, 263
Cytochemistry 30, 38

- Cytokines 44, 66
 Cytoskeletal changes in *Aspergillus* 227

 Data validation 199
 Databases 141
 Deletion strains (screening) 292
 Denture acrylic 75
 Diagnosis (periodontal disease) 7
 Differentiation of strains 77
 Phenotypic switching 81
 Resistogram 77
 Serotyping 79
 DNA 159
 Extraction 161, 164, 287, 291
 Hybridization 194
 Microarrays 182
 Purification 162, 289
 Quality/Quantity 163
 Double jointed PCR gene deletion 215
 Drug administration 123
 Drug resistance 93, 100

 Ectopic integration 296
 Electronmicroscopy 8, 13, 20, 23
 Electrophoresis 61
 Endoplasmic reticulum 16, 19
 Enzymes 15, 83, 258
 Cell wall degrading 13, 159, 244, 289, 308
 Epithelial cells 72, 74
Erg genes 106
 Erythrocytes 50

 Ferritin 23–25
 Ficoll 49, 50
 Filamentous fungi 115, 117, 122
 Filter membrane 73
 Flow cytometer 55, 80
 Fluconazole 94, 97, 99
 Fluorocytosine 94, 201
 Fungal infections 43, 69
Fusarium 43, 116

 Galactose 28
 Gene disruption cassettes 278
 Gene disruption in *Aspergillus* 213

 Gene expression 58, 63, 105, 174–179, 203, 251
 Germ tube (*C. albicans*) 31, 88
 Gingival tissue 3
 Glucans 15, 29
 Glucuronoxylomannan (GXM) 298, 299
 Glycoconjugates 26, 27, 31
 Gold complexes 15, 30, 33, 36
 Gram (+)/Gram(–) bacteria 7
 Green fluorescent protein (GFP) 231

 Heparin 48, 49
 Histopaque (Ficoll) 49
 Host tissue colonization 13, 38
 Hybridization 65, 266, 288
 Hydrophobicity 71, 225, 258
 Hygromycin B 232, 246
 Hyphae 6, 47, 53, 54

 Immuno-detection 36, 38
 Immuno-histochemical staining 5, 8, 13, 15, 38
 Immuno-modulators 57
 In gel digestion 142
 In solution digestion 143
 Inanimate surfaces 75
 Infection 116
 Inflammatory mediators 8
 Innate immunity 67
 Invasive fungal infections 43
 Isoelectric focusing 138
 Itraconazole 95, 98, 120, 124

 Ketoconazole 201
 Knock-out vectors 212, 231

Lac-Z fusion 231, 236–241
 Lanosterol demethylase 106
 Lanosterol 202
 Lectins 15
 Lethal dose (LD_{90%}, LD_{10%}) 122
 Leukocyte 128
 LR white 33, 35, 36
 Lymphocytes 51, 56
 Lysis buffer 66
 Lytic enzymes 13, 159, 244, 289, 308

- Macrophages 44
MALDI-TOF 140
 Interpretating data 152
 Linear 145
 Reflectron 146
Mannoproteins 3, 7, 15
Mass spectrometry 138, 145
Matrix 145, 147
Membrane sterol 108
Microarrays 63,
 A. fumigatus 257
 Antifungals drugs 200
 Biofilms 204
 C. albicans 181
 Image analysis 196, 270–272
 Morphogenesis 202
 Pathogenicity 196
Minimum fungicidal concentration
 (MFC) 100
Minimum inhibitory concentration
 (MIC) 96
Mitochondria 15, 37
Monocytes 48
Mucor 116, 305
Mucorales 305
Mucosal surfaces 43, 69, 71

NADPH-oxidase 44
Nested primers 216
Neurospora 156
Neutropenia 126
Neutrophils 44
Northern blotting 160
Nuclear morphology 226

Oligonucleotide microarrays 183
Organ transplantation 181
Osmium tetroxide 16

Parafin wax 4, 5
Pathogenicity and microarrays 196
PCR 62, 212, 234, 235, 278
Periodontal disease 3, 7, 10
Periodontal macrophages 44
Peroxidase activity 5
Phagocytes 43, 47, 54
Phagocytosis assay 55, 56
Phenotypic switching 81

Phospholipase production 87
Plasma 50
Plasmid pUChph 247
Polysaccharides 14, 26, 28, 29
Posconazole 120
Probe synthesis 64, 107, 165, 190–194
Proteinase production 85, 86
Proteomics 137–156
 Peptide mass fingerprinting 139, 149
 Post source decay 149
Protoplasts 309
Pseudohyphae 6, 9, 10
pyr G as a selection marker 249

Reporter genes 231
Resistogram typing 77
Rhizopus 45, 115, 305
Rhodamine 6G 102
Rhodamine assay 57
RNA 159
 Housekeeping rules 169
 Interference 212
 Isolation 59, 64, 169–172, 185–187, 259
RT-PCR 57, 62, 176

Saccharomyces cerevisiae 75, 107, 156,
 181
Scedosporium 43
SDS-PAGE (2-dimensional) 137–139
Secretory pathway 18–20
Selectable markers 307
Serotyping 79
Serum 6
Site directed mutagenesis 233
Southern blotting 160, 165, 220
Spurr's resin 17
Sterol content 108
Subgingival plaques 8
Superoxide anion 53

Taq polymerase 59, 62
Tetrazolium 51
Time of flight (TOF) 145
Tissue sections 2
T-lymphocytes 51
TOLL-like receptors (TLR)
Toxins(*Aspergillus*) 258
Transformant analysis 221–229, 319

- Transformation 217
 Aspergillus 241–246, 249
 Biolistic 283, 311–313
 Chemically induced 218
 Cryptococcus neoformans 283, 293
 Electroporation 286
 Zygomycetes 308, 318–321
- Transmission electron-microscopy
 13–39
- Transposon-based gene disruption
 214
- Trichosporon* 43, 45
- Ultrastructural studies 36, 38
- Ultrastructure of cell 13, 14, 16, 33
- Ultrathin sections 18, 33
- URA*-blaster 233, 251
- Uranyl acetate 30, 35
- Virulence
 Aspergillus 257
 C. neoformans 275, 276
 Candida 69–89
- Voriconazole 98, 117
- XTT metabolic conversion 51, 52
- Yeast 2, 3, 18, 51, 72
- Zygomycetes 43, 53, 118, 305, 322
- Zygomycosis 118, 125
- Zymolyase 4, 13