

Index

A

Acute myeloid leukaemia (AML), 57, 58, 64, 66, 69, 174
Adamantyl sulfogalactosyl ceramide (adaSGC), 105
ADD70, 64, 69, 81, 106, 140
Aha1, 21, 37, 39, 133
AIF-derived peptide 69
Allosteric interactions, 89
 inhibitors, 131
 modulators, 146
17-*N*-Allylamino-17-demethoxygeldanamycin (17-AAG), 2, 7, 14, 22, 30, 56, 61, 67–70, 85, 106, 113, 148
Alzheimer's disease, 22, 81, 85, 98, 107, 111, 175, 227, 230
8-Aminoadenosine, 108
Amyotrophic lateral sclerosis (ALS), 227
Andrographolide, 178
Ansamycin, 56
Antennapedia homeodomain protein (Antp), 11
Antimalarials, 181, 184
Antioxidants, 225
Antisense oligonucleotides, 227
Antp-TPR, 11
APAF-1, 137
Apoptosis, 4, 36, 96, 136, 224
Apoptosis-inducing factor (AIF), 5, 65, 70, 96, 106
Apoptosome, 137
Apoptozole, 81, 107, 144
Atherosclerosis, 226

ATP, 1, 22, 36, 56
 binding, 1, 22, 36, 56, 222
 hydrolysis, 23, 37, 56, 185
ATP/ADP competitive inhibitors, 144
ATPase, 21, 23, 37, 68, 83, 132, 142, 144, 147, 164, 176, 184
ATP independent, 221
Atrial fibrillation, 226
AUY922, 23, 37, 84, 133
Azure C, 110

B

Benzothiazole, 149
Biginelli dihydropyrimidinone synthesis, 102
Bleomycin, 209
Breast cancer, 2, 11, 26, 29, 41, 57, 64, 102, 148, 169
Bromovinyl-deoxyuridine (RP101), 228
Butyl 3-[2-(2,4-dichlorophenoxy)acetamido] benzoate, 180
BXPC3, 14

C

C-terminus, 1
Cancer, 1, 55, 163, 197, 221, 226
Cardiac diseases, 198, 226, 230
Cardiomyopathy, 173, 226
Caspases, 8, 67, 96, 145, 225
 caspase-3, 8, 12, 14, 30, 67, 96, 111
 caspase-7, 8, 12, 14, 30, 43, 67, 111

Caspases (*cont.*)

- caspase-9, 96, 137
- Castrate-resistant prostate cancer (CRPC), 2, 57
- Cdc37. *See* Cell division cycle 37 (Cdc37)
- Celastrrol, 36, 42
- Cell division cycle 37 (Cdc37), 21, 32
- Chaperones, 131, 198
- Chronic myelogenous leukaemia (CML), 39
- Cisplatin, 229
- Client proteins, 21
- Co-chaperones, 21, 163
- Collagen, 197, 200
 - tertiary structure, 206
- Colligin, 198
- Colon cancer, 66
- Coumarin antibiotics, 6
- Coumermycin A1, 6
- Cucurbitacin D, 42
- CUDC-305, 23
- Curcumin, 178
- Cyclin-dependent kinase (CDK), 12, 33, 36
- Cystic fibrosis, 81, 85, 105, 107
 - transmembrane conductance regulator (CFTR), 85, 107, 171
- Cytochrome *c*, 225

D

- D-peptides, 179
- 15-Deoxyspergualin (15-DSG), 81, 99, 141
- Dephosphorylation, 208, 224
- Dihydropyrimidines, 131, 147, 176
- Dihydropyrimidinone, 102
- (2,4-Dihydroxy-5-isopropylphenyl)-[5-(4-methylpiperazin-1-ylmethyl)-1,3-dihydroisoindol-2-yl]methanone (AT13387), 23, 57, 59, 63
- 17-(Dimethylaminoethylamino)-17-demethoxygeldanamycin (17-DMAG), 2, 22, 57, 66, 68, 84, 109
- Dimethylnitrosamine (DMN), 208
- DnaJ, 90, 102, 110, 163
- DnaK, 85, 88, 102, 110, 177
- Doxorubicin, 229
- Dual inhibitors, 55

E

- Epicatechin gallate, 178
- Epidermal growth factor receptor (EGFR), 33, 61
 - inhibitors, 2
- 5-(5-Ethyl-2-hydroxy-4-methoxyphenyl)-4-(4-methoxyphenyl)isoxazole (KRIBB), 228
- Extracellular matrix (ECM) proteins, 207

F

- F-actin, 225
- Fibrosis, 197, 207
- FKBP52, 8

G

- Ganetespib (STA-9090), 2, 23, 84
- Gastrointestinal stromal tumour (GIST), 57
- Gedunin, 42
- Geldanamycin, 2, 14, 22, 56, 84, 133
- Glioblastoma, 15
- Glutathione peroxidase, 226
- 7-Guanidinoheptanoic acid, 99
- 4-Guanidinophenylbutyric acid, 142

H

- Hch1, 37
- Heat shock cognate 70 (Hsc70), 70, 81, 135, 144, 150, 165
 - inhibitor, 152
 - organizing protein (HOP), 135
- Heat shock elements (HSE), 58, 222
- Heat shock factor 1 (HSF1), 4, 58, 208, 222
- Heat shock interacting protein (HIP), 224
- Heat shock organising protein (HOP), 21, 26, 224
- Heat shock proteins, 1, 21, 55, 81, 131, 163, 197, 221
- Heat shock response, 55
- Hepatitis B, 85
- Hepatotoxicity, 22
- Histone deacetylase (HDAC), 176
- HOP. *See* Heat shock organising protein (HOP)
- HS-72 (allosteric Hsp70 inhibitor), 152
- Hsc70. *See* Heat shock cognate 70 (Hsc70)
- Hsp27, 4, 23, 30, 43, 58–62, 68, 221
 - inhibitors, 227
- Hsp40, 58, 163
- Hsp47, 197, 198, 229
 - inhibitors, 212
- Hsp70, 4, 55, 58, 81, 85, 131, 133, 163
 - expression, 91
 - function, 94
 - heat shock-induced, 92
 - modulators, 98
- Hsp72, 70, 136, 144, 150, 152
- Hsp90, 1, 21, 55, 131
 - inhibitors, 3, 61, 71, 83
- HSPA5 (BiP), 136
- HSPA9 (mortalin), 136
- HSV, 85
- Human epidermal growth factor receptor 2 (HER2), 2

Huntington's disease, 81, 85, 98, 170, 175, 227, 230
 α -Hydroxyglycine, 99, 142

I

Idiopathic pulmonary fibrosis (IPF), 209
IPI-504, 2, 57

J

J proteins (J domain), 90, 134, 147, 169, 172

K

Kasumi-1 acute myeloid leukemia, 111
Kinases, 22, 29, 61, 83, 132, 229
 cyclin-dependent (CDK), 12, 33, 36
 oncogenic, 22
KNK437, 113

L

L8, 144, 145
Leukaemia, 57, 58, 64, 66, 69, 172, 174
Limb-girdle muscular dystrophy (LGMD), 175
Liver cirrhosis, 207
Lung cancer, 226

M

MAL3-39, 176, 184
MAL3-101, 65, 68, 81, 102, 147, 177
Malaria, 163, 169, 181
Matrix metalloproteinases (MMPs), 208
Melanoma, 57
Metalloproteinases, 208
2'-*O*-Methoxyethyl phosphorothioate
 (OGX-427), 227
Methylene blue, 110
Methylpiperazine, 150
MKT-077, 105, 131, 148
Mortalin, 136, 138
Multiple myeloma (MM), 57
Myeloid suppressive cells (MDSC), 62
Myricetin, 110, 112, 177, 178

N

Natural products, 1, 221
 small molecules, 1, 221
Neurodegenerative diseases, 163, 171, 227
Niemann-Pick disease, 85
Non-small cell lung cancer (NSCLC), 57
Novobiocin, 6

Novolactone, 142
NSC 630668-R/1, 101
NVP-AUY922, 23, 65

O

Oncogenic kinases, 22
Oral squamous cell carcinoma (OSCC), 229

P

p23. *See* Prostaglandin E synthase 3 (p23)
P₄₅₀ enzymes, 149
Pancreatic cancer, 12, 27, 36, 67, 114, 115, 207
Pancreatic fibrosis, 209
Papillomavirus, 85
Parkinson's disease, 22, 82, 85, 98, 107, 175
Peptide aptamers, 229
Peptide inhibitors, 9
PES-Cl, 109
Phenoxy-*N*-arylamides, 180
2-Phenylethanesulfonamide (PES, PFT μ), 64, 69, 109, 138
5-(Phenylthio)pyrimidine acrylamides, 111
Phosphorylation, 221
pH sensitivity, 205
Pifithrin- μ (PFT- μ), 64, 69, 109, 138
Pirfenidone, 209, 213
Plasmodium falciparum, 100, 181
Polyomavirus, 85
Procollagen, 200
Prostaglandin E synthase 3 (p23), 21, 24, 40, 133
Protein folding, 131
Protein phosphatase 5 (PP5), 135
Protein-protein interactions, 131
PSCs, 209
Pulmonary fibrosis, 208

Q

Quercetin, 112, 177, 178, 228
Quinone methide triterpene, 36

R

Reactive oxygen species (ROS), 225
Renal cell carcinoma (RCC), 57

S

Sansalvamide A (San-A), 30
Serine protease inhibitors (serpin), 198
Serpin, 197
SERPINH1, 198

SM122, 7, 66
Small interfering RNA (siRNAs), 228
Small molecules, 1, 5, 212, 221
Spergualin, 99, 131, 141
Spermidine, 99
SSA1, 142
STI1, 26
STIP1, 26
Sulfogalactolipids (SGL), 105
Sulfogalactosylglycerolipid (SGG), 105
Survivin, 12, 14, 34, 176

T

Tanespimycin (17-AAG), 56, 68
Terutroban, 213
Tetratricopeptide, 86
Thiodipyrimidine, 111, 150

Thioredoxin A, 229
Tissue inhibitor of metalloproteinase
(TIMP), 208
Trastuzumab, 153
Tresperimus, 100
Triazole nucleosides, 114
Tripterygium, 114
Triptolide, 114
Trypanosoma, 85, 104

V

VER-155008, 64, 66, 81, 107, 145, 153

Y

YK5, 111, 150