

FEBS Letters Volume 580
Subject Index

A

- $\alpha 5\beta 1$, 1376
*aa*₃ oxidase, 5988
 ABA, 5947
 ABC transporter, 137, 1023, 1042, 1049, 1094, 1103, 1139, 1156, 4091, 5500, 6891
 ABC transporters, 1010, 1085, 1131
 ABC-ATPase, 137
 ABC-transporters, 1036, 5588, 5597
 ABCA1, 890, 4551
 ABCA12, 5456
 ABCA7, 1178
 ABCB transporters, 6800
 ABCG1, 4551
 Aberrant chromosomal region, 2774
 Abiotic stress, 1123, 3136, 6537
 Abiotic stresses, 597
 Abl interactor, 6464
 Abscisic acid, 4160, 4691
 Abzymes of MRL/MpJ-lpr mice, 5089
Acanthamoeba castellanii, 1946
 Accessory domain, 1023
 Accessory protein interactions, 677
 Acclimation, 2797
 ACE inhibition, 6943
 Acetic acid, 6880
 Acetyl-L-carnitine, 6612
 Acetylated LDL, 849
 Acetylation, 642, 1911
 Acid ceramidase, 4751
 Acid sphingomyelinase, 4751
 Acid/base catalyst, 4377
 Acidified nitrite, 4031
 ACP labeling, 1654
 Acrosome formation, 4266
 β -Actin, 261
 Actin, 3223, 4801, 4865, 6357
 Actin cytoskeleton, 2495, 4097, 4288, 5313, 6789
 Actin polymerization, 261, 1993
 Actin-binding, 1789
 Actin-binding motif, 261
 Action potential, 3525
 Activating transcription factor 4, 58
 Activation by calcium, 239, 912
 Activator protein, 4667
 Active site, 1447
 Active-transport, 4382
 Acute coronary syndrome, 4469
 Acute lung injury, 2207
 Acute lymphoblastic leukemia, 3539
 Acute-phase SAA, 161
 Acyl-CoA carboxylase, 6898
 Acyl-CoA:cholesterol acyltransferase-1, 2741
 Acyl-CoA:cholesterol acyltransferase-2, 2741
 Acylphosphatase, 6763
 Acyltransferases, 6366
 AD-004 like protein, 3811
 Adaptation, 2853, 5477
 Adaptive insensitivity, 4508
 Adaptive response, 479
 Adaptor, 6464
 Adaptor protein, 2691
 ADARs, 2301
 Adenine methylation, 3179
 Adenovirus, 1553
 Adenovirus vector, 3937
 Adenylate cyclase, 291
 Adenylate kinase activity, 3811
 Adhesin, 2323
 Adhesion, 450, 3649
 Adipocyte, 4771, 6289, 6885
 Adipocyte lipolysis, 6825
 Adipocytes, 2421, 5117
 Adipocytokine, 2917
 Adipogenesis, 4121, 5765, 6885
 Adipokine, 3953
 Adiponectin, 2917
 Adipophilin, 5484
 Adipose tissue, 4889, 6391
 ADP-glucose pyrophosphorylase, 6741
 ADP-ribosyl cyclase, 4857
 ADP-ribosylation, 5232
 ADRP, 5484
 Advanced glycation endproducts, 1565
Aeropyrum pernix, 5351
 Afaf, 4266
 AFM, 505, 4136, 4757
 Age-dependent caspase activation, 3739
 Aged rats, 285
 Ageing, 2910, 6669
 AGEs, 2788
 Agglutinin, 1691
 Aggregation, 1775, 2922, 3657
 Aggregation initiation, 2033
 Aggregation propensity, 2033
 Aggresome, 474
 Aging, 484, 1131, 5753
 AGPase, 5947, 6741
Agrobacterium tumefaciens, 437
 AGS proteins, 1993
 AHR, 890
 AIB1, 5222
 AIDS, 2598
 Aip1, 6707
 Airway hyper-responsiveness, 1883
 Airway inflammation, 6022
 Ajuba, 782
 AKAP proteins, 5690
 Akt, 9, 278, 285, 1294, 3121, 4533, 4889
 Akt1, 3051
 ALCAM, 2637
 Alcohol dehydrogenase, 9, 5084, 6361
 Alcohol effects, 6199
 Aldehyde dehydrogenase superfamily, 1198
 ALDP, 1139
 ALG-2-interacting protein X, 3296
 Alginate, 3883
 Alginate biosynthesis, 3883
 Alginate polymerase, 3883
 Alkali metal cation/H⁺ antiporter, 1971
 Alkaline phosphatase, 199
 Alkaloid, 1183
 Allantoin, 2087
 Allene oxide synthase, 5791
 Allergen, 4895
 Allergy, 6022
 Allicin, 2517
 Allosteric regulation, 6247
 Allosteric, 4709
 ALP, 1509
 (alpha) Glycosynthase, 3905
 Alpha-keto-amide, 6570
 Alphavirus, 1502
 Alternansucrase, 763
 Alternative pathway, 1946
 Alternative splicing, 1339, 6955
 Alternative splicing site A, 1576
Ahu repeats, 2301
 Aluminum, 6543
 Alzheimer disease, 5925, 6269
 Alzheimer's disease, 107, 211, 2922, 3121, 3582, 3973, 4015, 5525, 5941, 6543, 6550, 6587, 6972
 α -Amylase family, 6349
 Amidase, 1959
 Amifostine, 3013
 Amine oxidase, 4317
 Amino acid, 4382
 Amino acid composition, 6169
 Amino acid content, 6961
 Amino acid kinase, 6247
 Amino acid repeats, 763

- Amino acid transport, 2821
 Amino acids, 1672
 Aminoacyl-tRNA synthetase, 6695
 6-Aminohexanoate-dimer hydrolase, 5054
 Aminopeptidase, 1833
 Aminophospholipid, 685
 Ammonium transport, 3931
 AMPA, 831
 Amperometry, 3263
 Amphiphysin, 3263
 Amphotericin B, 2677
 AMT family, 3931
 Amylase, 2646
 Amyloid, 211, 491, 1681, 2451, 3451, 5565, 6199
 Amyloid β peptide, 6543
 Amyloid β -protein, 6587, 6972
 Amyloid peptide, 5525
 Amyloid- β -peptide, 6550
 Anacardic acid, 4353
 Anaerobic, 233
 Anandamide, 568, 613, 1941, 4337
 Ancestral residue, 3867
 Anchorage-independent growth, 3308
 Androgen receptor, 1607, 1659, 2294
 Androgen-independent, 2294
 Androgenote, 5377
 Androgens, 2294
 Aneuploidy, 2888
 Angiogenesis, 2253, 2879, 3395
 Angiotensin II, 41, 497, 1833
 Anion channel, 2141
 ANKRD1, 4182
 Annexin A1, 1431
 Annexin A1-null mice, 1431
 Annexin A6, 3065
 Annexin VII, 6527
Anopheles, 1988
 ANT, 2153
 Antagonist, 1509
 Anthocyanidin synthase, 1642
 Anthocyanins, 1391
 Anthrax, 5572
 Antibacterial agents, 697
 Antibacterial protein, 1877
 Antibodies, 2928, 5612
 Antibody, 505, 2178, 5411
 Antibody cross-reactivity, 87
 Antibody response, 1398
 Anticancer, 4905
 Antifreeze, 3911
 Antifungal activity, 1490
 Antigen presentation, 1156, 1398, 3112
 Antigen processing, 4091, 4195
 Antigen-presentation, 5580
 Antigenicity, 87
 Antimicrobial peptide, 1490
 Antimony, 6891
 Antioxidant mechanism, 5247
 Antioxidative stress, 6690
 Antiphospholipid antibody, 2395
 Antisense, 1451, 6579
 Antisense RNA, 2301
 Antiviral agents, 2577
 Antiviral compound, 2402
 AP-1, 691, 4591, 5241, 6015
 AP-2 α , 6501
 AP-2 complex, 5797
 APC mutations, 3665
 ape1694, 5351
 Apg-2, 168
 Apicularen A, 2723
 Apicularen B, 2723
 Apo-protein, 4667
 APOBEC2, 731
 Apocrine metaplasia, 2935
 Apolipoprotein, 161
 Apolipoprotein A-I, 1178
 Apolipoprotein AI, 4551
 Apomyoglobin aggregation, 1681
 Apoptosis, 245, 278, 311, 553, 627, 703, 741, 813, 849, 940, 1294, 1320, 1439, 1733, 1965, 2547, 2671, 2723, 2779, 2951, 3185, 3270, 3308, 3462, 3469, 3539, 3687, 3699, 3787, 3829, 3921, 4097, 4392, 4582, 4653, 4737, 4746, 4884, 4911, 5247, 5718, 5836, 5875, 5905, 6093, 6109, 6224, 6302, 6513, 6565, 6612, 6730, 6769, 6977, 6981
 Apoptosis protein subcellular localization, 6169
 Apoptosis-inducing factor, 6375
 Apoptosis-linked gene-2, 3296
 Apoptosis-resistant tissues, 3739
 Apoptosome, 5275
 Apoptotic volume decrease, 6513
 2A proteinase, 5713
 3a Protein, 3799
 Apyrase, 1988
 AQP1, 6679
 Aquaporin-7, 4771
 Aquaporins, 923
Aquifex aeolicus, 5934
 β -AR, 4126
 Arabidopsis, 6366, 6891, 6961
Arabidopsis thaliana, 251, 2109, 2630, 3671, 3763, 4154, 4160, 4218, 4851, 5829, 6537, 6783, 6929
Arabidopsis, 649, 789, 932, 1193, 2015, 4718, 5251
 Arabinose, 982
 D-Arabinose dehydrogenase, 6428
 Arachidonic acid, 775
 Archaea, 34, 4827
 Archaeorhodopsin, 6749
 Architecture, 1023
 ARDS, 6807
 Arf proteins, 4296
 Arginase, 6561
 Arginine, 2097
 Arginine metabolism, 2015
 Ark1-Prk1 family, 633
 AroA, 1521
 Arp2/3, 6707
 Arrhythmia, 1999
 ArsA, 3889
 Arsenic, 1771, 3889
 Arsenic trioxide, 4969
Artemisia annua, 1411
 Artemisinin, 1411
 Arthritis, 4607
 Artificial chaperones, 6587
 Artificial induction of 2- 3- and 4-base periodicities in DNA, 6413
 Aryl hydrocarbon receptor, 3721
 Ascorbate, 1269
 Ascorbic acid, 6428
 ASJ, 484
 Asna1, 3889
 Aspartate, 256
 Aspartoacylase, 5899
Aspergillus flavus, 2087
 Asthma, 1883
 Astrocyte, 4865
 Astrocytes, 1571
 Asymmetrical miRNA expression, 2195
 Asymmetry, 685
 Ataxin-3, 3401
 ATF6, 184
AtGLB1 gene, 2015
 Atherosclerosis, 849, 890, 1391, 2788, 5177, 5588
 ATM, 4353
 AtNOS1 ortholog, 455
 Atomic force microscopy, 2451, 5671
 Atomic homology model, 1103
 ATP, 747, 5894
 ATP binding cassette transporters, 6139
 ATP binding site, 6741
 ATP hydrolysis, 1049, 1164
 ATP synthase, 517, 3427, 4131
 ATP synthesis mechanism, 517
 ATP-binding cassette, 1023
 ATP-binding cassette transporter, 4551
 ATP-binding cassette transporter A1, 4371
 ATP-binding cassette transporters, 2903
 ATP-binding proteins, 3818
 ATP-induced ATP release, 239

ATP-synthase, 1257
 ATP/ADP translocator, 775
 ATPase, 2153
 ATPase inhibition, 517
 ATR, 4176
 Atria, 4182
 Atrophy, 2623
 atToc33, 649
 AU-rich element, 510
 Auraptene, 5288
 Autocrine, 6977
 AutoDock, 1447
 Autoimmune peptide, 545
 Autoimmunity, 4195
 Autolysis, 3493, 6007
 Autophagy, 2623, 4632
 Autoreduction, 1729
 Autoregulation, 5328
 Autoxidation, 2265
 Auxin, 1094
 Avian influenza virus, 4274
 Axon growth, 3525
 8-Azaxanthin, 2087
 Azurin, 1729

B

B7-H1, 755
 γ b protein, 5077
 b Subunit, 5934
 4-1BB-Fc, 1601
 4-1BB ligand, 1601
 BACE1, 6550
 BACE2, 6550
Bacillus subtilis, 1822
 Back-to-back dimerization, 3018
 Bacteria, 2567
 Bacterial cell division, 4941
 Bacterial conjugation, 3075
 Bacterial photosynthetic reaction center, 4567
 Bacterial respiration, 4823
 Bacteriochlorophyll, 3841
 Bacteriochlorophyll biosynthesis, 6151
 Bacteriochlorophyll-*a*, 6644
 Bacterioferritin, 6275
 Bacteriophytochrome, 437
 Bacteriorhodopsin, 1350, 6749
 Baculovirus, 3829, 4047, 6777
 BAD, 813
 Bafilomycin A₁, 2723
 Barley α -amylase, 5049
 Barrier, 2160, 5456
 Basal lamina, 4463
 Base excision, 4916
 Bax, 1597, 2311, 5125
 Bay 41-2272, 4205
 BAY 58-2667, 4205
 BchL, 6151
 Bcl-2 proteins, 1320
 Bcl-2/Bcl-x_L, 5125
 Bcl2, 2021
 Bcr, 1227
 α B-Crystallin, 5941
 BCSL gene, 2281
 Benign apocrine metaplasia signature, 2935
 Benzodiazepines, 1616
Besnoitia besnoiti, 4673
 Bestatin, 6943
 Bestrophen, 2141
 beta-Amyloid, 5941
 Beta₄ binding protein (p27BBP), 1983
 BH3 domain, 5125
 BH4-responsiveness, 1697
 BHC80, 3129
 BHK cells, 4261
 bHLH, 5251
 Biacore, 6322
 Bicarbonate transport, 4865
 Bidirectional regulation, 469
 Bik, 5905
 Bikunin, 245
 Bilin reductase, 1333
 BIM, 3539
 Bimodular structure, 4900
 Binding, 3386
 Binding assay, 1531
 Binding change, 4131
 Binding epitope, 115
 Binding fragment, 5411
 Binding motif, 1531
 Binding pocket, 1447
 Binding properties, 4508
 Binding protein, 1376
 Binding site, 1822
 Bioactive peptides, 6943
 Biochemistry, 3344
 Bioenergetics, 1345
 Bioinformatics, 3677, 4005, 4764, 6909
 Biological clock, 2830
 Biological relevance, 844
 Bioluminescence, 1977, 5283
 Bioluminescence resonance energy transfer, 41
 Biomarker, 6837
 Biomembrane potentials, 2951
 Biomembranes, 2677
 Biomineralization, 1846, 2435
 Biosensor, 5885
 Biosynthesis, 5283, 6175
 Biotic stress, 1123
 Biotin carboxyl carrier protein, 1536
 Biotin protein ligase, 1536
 Biotinylation, 1536
 Bipolar disorder, 5295
 Bisphenol, 3900
 Bisphosphonates, 5723
 Bisulfite treatment, 6521
 Blc, 4877
 Blood pressure, 497, 2317
 Blood-feeding, 2
 Blue copper protein, 1729
 Blue-light photoreceptor, 3818
 BMP, 6603
 BnDREBIII, 1303
 Bond cleavage frequencies, 5049
 Bone, 1509
 Bone marrow transplantation, 4463
 Bone resorption, 5661
 Born energy, 2534
 Botrytis, 1123
 Botulinum neurotoxin, 2011
 Bound structure, 5411
 Bovine, 3477
 Bovine IgG2, 1383
 Bovine IgG2 receptor, 1383
 Bradykinin, 4857
 Brain, 2994
 Brain endothelial cell, 4252
 Brain-specific angiogenesis inhibitor 2, 669
 Branched-chain fatty acid, 3794
 Branchio-oto-renal syndrome, 3853
Brassica napus, 1303, 6366
Brassica rapa, 425
 BRCA1, 5268
 Breast cancer, 5268, 5647, 6076
 Breast cancer cells, 2371, 4105
 Bright Yellow-2 cells, 6329
 Brown adipocytes, 4661
 Bryophyte, 149
 BSE, 2033
 BTB/POZ domain, 4073
 BTK, 2691
 Bulge, 6496
Buthus martensii, 6825

C

- c-Abl, 2547, 4288, 6464
 c-jun, 691
 c-Jun amino terminal MAPK, 4984
 c-Jun N-terminal kinase, 3296
 c-Jun N-terminal protein kinase, 1320
 c-Jun NH₂-terminal kinase, 9
 c-Myc, 431
 C-PTH-fragments, 1509
 C-reactive protein, 5155
 c-Src kinase, 3042
 C-terminal, 1531
C-terminus extension, 862
 C-type lectins, 6123
C. elegans, 3161
 C/EBP homologues protein, 3462
 C₁ metabolism, 561
 C₂H₂-zinc finger, 6537
 C-type cytochrome, 4827
 Ca²⁺, 831, 4114
 Ca²⁺ apparent affinity, 1576
 Ca²⁺ sensitization, 5779
 Ca²⁺ signaling, 2201, 4979
 Ca²⁺ store, 4979
 Ca²⁺-sensing receptor, 1795
 Ca²⁺/K⁺ exchange, 2201
 Cachexia, 691, 5172
 Caco-2, 6865
 Caco-2 cells, 155
 Cadherins, 3649, 5295
 Cadmium chloride, 6865
Caenorhabditis elegans, 1740, 3811
 Caffeoylputrescine, 2540
 Calcein leakage, 3201
 Calcitropic, 291
 Calcitriol, 4653
 Calcium, 463, 904, 1509, 2247, 2430, 5251, 5510, 5653, 6145
 Calcium channel, 5959
 Calcium homeostasis, 6783
 Calcium influx, 6623
 Calcium ion, 597
 Calcium mobilization assay, 5003
 Calcium signaling, 2686
 Calcium wave, 239
 Calcium-dependent binding, 3065
 Calconectin, 2435
 Caldesmon, 63
 Calmodulin, 3589
 Calmodulin isoform-specific activation, 4325
 Calmodulin-binding protein kinase, 4325
 Calnexin, 2081
 Calpain, 3246, 5313
 Calponin, 4801
 CaMK 14-3-3, 5096
 cAMP, 1515, 2853, 3344, 3943, 4126, 4539, 6033
 cAMP-dependent protein kinase, 894, 6269
 CaN-NFAT signaling pathway, 5965
 Cancer, 2531, 2811, 2850, 2869, 2945, 5023, 5467
 Cancer cells, 3368, 6981
 Cancer chemotherapy, 2903
 Cancer gene therapy, 5033
 Cancer signaling, 1531
Candida albicans, 2615
 Cannabinoid, 5392
 Cannabinoid receptor, 613, 4337
 Cannabinoids, 1733
 Canonical Wnt signaling, 393
 Cantilever modification, 3961
 CAP, 4889
 Cap-independent translation, 2591, 2630
 Capsid protein, 4047, 5822, 5829
 CAR, 3937
 Carbachol, 2686
 Carbohydrate recognition, 6123
 Carbohydrate-binding module family 20, 6349
 Carbohydrate-binding module family 21, 6349
 Carbohydrates, 2402
 Carbon-13, 4282
 Carbonyl reductase, 67
 Carboxypeptidase B, 5137
 Carcinogenesis, 6981
 Carcinoma, 3368
 Cardiac apoptosis, 1932
 Cardiac chambers, 4182
 Cardiac fibroblasts, 4737
 Cardiac hypertrophy, 5965
 Cardiac myocytes, 3617, 6039
 Cardiolipin, 2395, 5125
 Cardiolipin synthase, 3059
 Cardiomyocyte, 2247, 3532, 4495
 Cardiomyocytes, 5189, 5690
 Cardiomyopathy, 5450
 Cardiotoxin III, 656
 Carotene hydroxylases, 4718
 Carotenoid, 3841, 5257
 Carotenoid biosynthesis, 4718
 Cartilage and bone development, 4214
 Casein kinase, 2388
 Casein kinase 2, 894
 Caspase, 131, 940, 1597, 3185, 3469, 4495, 5275, 5875, 6375, 6880
 Caspase-3, 741, 2021, 2233, 4737, 5718, 6623
 Caspases, 6109
 Castanospermine, 2081
 Catalase-deficient *E. coli*, 6690
 Catalysis, 2741
 Catalytic region, 6322
 Catalytic sites, 4131
 Catalytic triad, 1465
 Cataract, 5071
 (+)-Catechin, 1642
 Catechin, 741, 6623
 β-catenin, 393, 1227, 3042, 5653
 β-Catenin oncogenic protein, 5411
Catharanthus roseus, 4501
 Cathepsin, 4195, 6295
 Cathepsin B, 245, 6047
 Cathepsin D, 6543
 Cation efflux, 1971
 Cationic amphiphilic drug, 5533
 Cationic amphiphilic drugs, 4751
 Cauliflower, 4443
 Caveolae, 2769, 5268
 Caveolin, 5559, 6039
 Caveolin scaffolding domain, 5301
 Caveolin-1, 5268
 CB1 receptor, 1941
 Cbl, 4889
 Ccm, 4827
 ccmC, 5641
 CCN family, 1376
 CCN family protein 2/connective tissue growth factor, 1376
 cCtaA, 5351
 CD1, 5580
 CD36, 2421
 CD8⁺ T lymphocyte, 2183
 Cdc15, 223
 Cdc25C, 3624
 CDK, 1716
 CDK inhibitor, 336
 CDK inhibitors, 2523
 CDK2, 399
 CDK2 activity, 3687
 CDKB, 336
 cDNA cloning, 5143
 cDNA library, 2435
 cDNA-AFLP, 5947
 CDP-diacylglycerol, 3059
 Cdx2, 1801
 Cell adhesion, 1376, 3489, 4435, 4457
 Cell cycle, 336, 597, 1631, 1716, 2465, 2523, 2598, 2811, 3308, 4097,
 4727, 5167, 5177, 6100, 6302
 Cell cycle arrest, 4073
 Cell cycle regulation, 1205
 Cell cycle-dependent element, 5167
 Cell death, 960, 1723, 2311, 3161, 3287, 3296, 3469, 3746, 6447

- Cell death inducible peptide, 885
 Cell imaging, 2951
 Cell markers, 331
 Cell metabolism, 2465
 Cell migration, 1993, 3246
 Cell penetrating peptide, 1451
 Cell penetrating peptides, 3201
 Cell proliferation, 3368, 3845
 Cell regulation, 6789
 Cell signaling, 175
 Cell signalling, 4801
 Cell size, 2623
 Cell spreading, 2253
 Cell surface antigens, 2945
 Cell viability, 4737
 Cell wall, 3136, 3329
 Cell wall binding repeats, 763
 Cell wall hydrolase, 1959
 Cell wall proteins, 4457
 Cell-based receptor binding assay, 5612
 Cell-death, 131
 β cells, 553
 Cell-suspension, 4934
 Cellular Ca²⁺ homeostasis, 5635
 Cellular infection, 2365
 Cellular respiration, 4539
 Cellular response, 6871
 Cellular senescence, 6093
 Central nervous system, 545
 Centrosome, 782, 6489
 Cephalosporins, 1465
 Cepharanthine, 703
 Ceramide, 131, 4751, 5456, 5467, 6224
 Cereal, 5803
 Cerebellum, 4057, 6145
 Cerebral ischemia, 669
 Cervical cancer suppressor 3, 4073
 Cetuximab, 4793
 Cf-9, 4236
 CFTR exon 9, 1339
 cGMP, 2059
 Chagasin, 5306
 Channel, 568
 Channel activation, 2141
 Channel block, 1360, 6027
 Channelopathy, 2853
 Chaperone, 168, 351, 5023, 5423, 5941
 Chaperone activity, 2761
 Chaperonin, 34
 Charge recombination, 2797
 CHD family, 5851
 Checkpoint, 4176, 4727
 Chemical chaperon, 1697
 Chemical cross-linking, peptide analysis, 345
 Chemical genetics, 179
 Chemical shift, 6685
 Chemical shift perturbation, 6714
 Chemical switch, 3589
 Chemoattractant, 373
 Chemoprevention, 1771, 2935, 4587, 5467
 Chemosensitivity, 6981
 Chemotaxis, 2059, 4515, 6707
 Chemotherapy, 998, 5467, 5905
 Chicken, 1607, 3610, 4815
 Chicken CD25, 4274
 Chicken gizzard, 5779
 Chignolin, 3422
 Chitin biosynthesis, 1846
 Chitin-binding, 1541
 Chitooligosaccharide, 2661
 Chk1, 4176, 6076
 Chlamydomonas reinhardtii, 3013, 4527
 Chlamydomonas, 233, 6357
 Chloride channel, 2141
 Chloride channels, 2081
 2-Chloro-4-nitrophenyl β-D-maltooligosaccharides, 5049
 Chlorogenic acid, 2317
 Chlorophyll, 5257
 Chlorophyll biosynthesis, 6644
 Chloroplast, 789, 3107, 3966
 Chloroplast biogenesis, 4527
 Chloroplast protein import, 649
 Chloroplast transcription, 6617
 Chloroquine, 6972
 Cholecystokinin-A receptor, 127
 Cholera toxin, 5572
 Cholestatrienol, 2471
 Cholesterol, 2677, 4551, 4746, 4929, 5430, 5436, 5442, 5492, 5518, 5525, 5588, 6730
 Cholesterol metabolism, 4835
 Choline-binding protein, 1959
 Chondroblast differentiation, 1215
 Chondrocytes, 2495
 Chorismate mutase, 2170
 Chromatin, 2843, 4757
 Chromatin fiber, 368
 Chromatin remodeling, 5851
 Chromatin remodelling, 6903
 Chromium, 206
 Chromodomain, 3107
 Chromophore, 1333
 Chromosome, 368
 Chromosome segregation, 3375, 6489
 Chronological life-span, 1903
 Chymotrypsin-like enzyme, 5713
 Cilostamide, 4126
 Circadian, 6665
 Circadian biology, 4469
 Circadian rhythm, 127
 Circadian rhythms, 2, 4618
 Circadian system, 2836
 Circular dichroism, 23, 1780, 3083, 3726, 4703, 5993, 6846
 Cirrhosis, 2123
 Cisplatin, 311
 Cisplatin sensitivity, 4793
 Citric acid cycle, 4282
 CK1δ, 6477
 CK2 activity assay, 3948
 CK2 holoenzyme, 3948
 CK2 peptide substrate, 3948
 CK2-activated PKA, 894
 Claspin, 4176
 Class II aaRSs, 1672
 Clathrin, 633
 Clathrin light chain, 1425
 Clathrin-coated vesicle, 1425
 Claudin-19, 923
 Cleavage, 3246
 CLIP-170, 1327
 clk-1 mutant phenotype, 1740
 Clock, 2, 127
 Clock genes, 4469
 Clodronate, 5723
 Clone, 3610
 Cloned bacterial protein as template, 2750
 Clostridium difficile toxin B, 3565
 Cluster analysis, 5241
 cMyc, 6819
 CNGV, 4473
 Cnidaria, 5728
 Cobalt/manganese ion, 34
 Codon usage, 2495
 Codon usage frequency, 6413
 Coenzyme Q, 1740, 6391
 Coenzyme Q₁₀, 2534
 Cofactor, 4317
 Coffee, 4081
 Cofilin, 1789
 Cold acclimation, 4959
 Cold sensing, 4218
 Cold shock, 539
 Cold stress, 5477
 Cold-adaptation, 4639
 Colicin, 6115
 Collagen, 6281
 Collagen receptor, 15
 Colloidal force microscopy, 450
 Colon, 3368, 6565
 Colon carcinoma cells, 6302
 Colonic epithelial cell, 3035

- Colubridae, 4417
 Comet assay, 533
 Commensal flora, 2976
 Community-acquired MRSA, 2323
 Compact intermediate, 4166
 Comparative analysis, 801
 Comparative genomic hybridization, 3571
 Comparative genomics, 3344
 Compartment, 2160
 Compartmentalization, 5227
 Compatible osmolytes, 720
 Competition dialysis, 5399
 Complex I, 4539, 6105
 Component-coupled algorithm, 6169
 Comprehensive perturbation, 415
 Computational, 6800
 Computational modeling, 1457
 Computational simulation, 822
 Computer simulations, 5965
 Cone pigment, 229
 Cone snail, 3860
 Conformation, 4613
 Conformational analysis, 3167
 Conformational change, 5137
 Conformational flexibility, 1685
 Conformational folding, 5029
 Conformational switching, 2653
 Conjugated dienes, 5155
 Conotoxin, 1360, 3860
 Constitutive activation, 229
 Constitutive activity, 5392
 Context-dependent codon bias, 6413
 Continuous culture, 5084
 Cooperation, 415
 Coordinated gene expression, 3136
 COPII, 5215
 Copper, 4317, 6730
 Copper complexes, 4703
 Copper-mediated oxidation, 5155
 CoQ10, ubiquinone, 955
 Core structure, 4807
 Coronavirus, 3643, 3799, 5993
 Coronin, 6707
 Cortical actin, 633
 Cortisol, 4081
 Corytuberine, 697
 COT, 4010
 Coupling proteins, 3075
cox2, 4443
 CpG oligodeoxynucleotide, 4533
 cpSRP43, 3107
 Cr^{3+} , 491
 Cre recombinase, 4346
 Creatine kinase, 3835
 CRM1, 5096
 CRMP-1, 6649
 Cross-linking, 6485
 Crowding, 720
 CRP, 2788, 5155
 CRSBP-1, 6259
 CRSBP-1/LYVE-1 null mice, 6259
 CRTH2, 373
 Cryptochromes, 4618
 α -Crystallin, 3029
 Crystal structure, 99, 137, 982, 2483, 2653, 3018, 3344, 3763, 4877
 Crystal structures, 1036
 Crystallography, 3841, 4576, 5959
 CtaA, 5351
 CTRP, 3953
 CTS, 1139
 CTX-III, 656
 CueO, 4069
 Culture, 2875
 Curcumin, 3746, 4653, 6623
 Cvt pathway, 4632
 Cy dyes, 3229
 Cyanobacteria, 2117, 3439, 3457, 4900, 5044
 Cyanobacterium, 319, 3029
 Cyanogen bromide, 1872
 Cyclic adenosine monophosphate, 3153
 Cyclic ADP-ribose, 4857
 cyclic AMP, 4582, 6635
 Cyclic AMP response element, 58
 Cyclic GMP, 4205
 Cyclin A, 1716
 Cyclin A2, 4073
 Cyclin D1, 2512
 Cyclin D1, ATF-2, PI(3)K, 585
 Cyclin dependent kinase 2, 6076
 Cyclin E, 399
 Cyclin-dependent kinase, 2811
 Cyclin-dependent protein kinase 5, 6269
 Cyclin-dependent protein kinase-5, 5925
 Cyclooxygenase, 6885
 Cyclooxygenase-2, 385, 443, 1391, 2523, 6533
 Cyclophilin, 3671
 Cyclophilin 40, 2761
 Cyclophosphamide, 1597
 Cyclosporin A, 6846
 Cyclosporine A, 4021
 CyHV-3, 4473
 2-Cys peroxiredoxin, 351
 Cystatin, 6295
 Cystatins, 4195
 Cysteine, 839, 1775, 5071, 5803
 Cysteine labelling, 3229
 Cysteine protease, 1502, 5306
 Cysteine proteinase, 5713
 Cysteine residues, 3391
 Cysteine-rich polypeptide, 1541
 Cysteine-sulfenic acid, 4667
 Cysteine-sulfinic acid, 4667
 Cystic fibrosis, 982, 1339
 Cystic fibrosis transmembrane conductance regulator, 2081
 Cytochrome *b5*, 1946, 2265
 Cytochrome *b5*, 4884
 Cytochrome *ba3*, 3417
 Cytochrome *c*, 1320, 4884, 5125
 Cytochrome *c* maturation, 216, 4827
 Cytochrome *c* oxidase, 1345, 1350
 Cytochrome *c* oxidase subunit II (*cox2*), 862
 Cytochrome *c* oxidases, 3417
 Cytochrome *c* peroxidase, 6655
 Cytochrome *c* release, 6311
 Cytochrome *c*-554 (CycA), 2191
 Cytochrome *c*/2'-deoxyadenosine 5'-triphosphate activation, 3739
 Cytochrome *c*₅₅₂, 5988
 Cytochrome *c*₆, 3023
 Cytochrome *c*_{6A}, 2166, 3763
 Cytochrome *c*_z, 2191
 Cytochrome P450, 1411, 3361, 3721, 3794, 6338
 Cytokine, 161, 613, 1251, 4625, 6871
 Cytokines, 553, 1883, 3153
 Cytokinesis, 3099, 3375
 Cytomegalovirus, 2779
 Cytoplasm, 4231
 Cytoskeleton, 1709, 2430, 3246, 3335, 4673, 4801, 5959, 6921
 Cytosolic delivery, 2183
 Cytostasis, 2811
 Cytotoxicity, 479, 2451
- ## D
- D1 degradation, 2117
 D1 protein turnover, 6929
 2D electrophoresis, 4417
 3-(4,5-Dimethylthiazol-2-yl)-2,5-diphenyltetrazolium bromide, 2769
 Daidzin, 4905
 (20S)-dammarenediol, 5143
 Dammarenediol-II, 5143
 Dansyl, 2097
 DAP3, 6093

- Daucus carota*, 5009
 DC-SIGN, 2402, 6123
 Decaprenyl diphosphate synthase, 955
 Defense signalling, 3498
 Defensins, 5344
 Deficient mice, 1251
 Deg2 protease, 6929
 Dehydration-responsive element, 1303
 DEK, 3217
 Delayed signaling kinetics, 1457
 Deleted in liver cancer 2, 191
 Deleterious nsSNPs, 6800
 delF508-mice, 2081
 Dementia, 2994
 Demetallation, 6275
 Demethoxy-coenzyme Q, 1740
 Dendrite, 6145
 Dendritic cell, 747
 Dendritic cells, 3335, 6123, 6295
 1-Deoxy-D-xylulose 5-phosphate synthase, 736
 15-Deoxy- $\Delta^{12,14}$ -prostaglandin J₂, 6885
 Deoxyribosephosphate lyase, 4916
 Derivation, 2875
 Dermal fibroblast, 4560
 Dermis, 5456
 Desaturase, 1946
 Desaturases, 4934
 Descending facilitation, 6629
 Desensitization, 5728
 Desferoxamine, 2233
 Desipramine, 4751
 Desmoglein 3, 3276
 Desmosome, 3276
 Detergent, 4188
 Detergent-resistant membranes, 5705
 Detoxification, 1112, 1131
 Deuterium exchange, 175
 Development, 1607, 1941, 2531, 3753, 4984, 5167, 5371, 5442, 6701
 Dexamethasone, 3539
 DHEA, 285
 Di-K19Hc, 1490
 Diabetes, 1565, 1932, 4081, 4771, 5953, 6289, 6701
 Diabetes mellitus, 711
 Diacylglycerol *O*-acyltransferase 1, 5117
 Diacylglycerol kinase, 4218
 Diapedesis, 2637
 Diastolic dysfunction, 4182
 Dicer, 1553, 2442
 Dictyostelium, 2059
Dictyostelium discoideum, 4923
Dictyostelium, 6707
 DIDS, 5894
 Dietary cholesterol, 3601
 Difference spectroscopy, 437
 Differentiation, 27, 2421, 2860, 5203, 5869
 Diffusion, 3911
 Digalactosyl-diacylglycerol, 4959
 Digenean, 3769
 Digestibility, 5803
 Digoxigenin, 505
 Dihexadecylphosphatidylcholine, 2471
 Dihydrogeranylgeranyl, 6644
 Dihydrouridine, 5198
 Dihydrouridine synthase, 5198
 Dimer, 3427
 Dimerization, 305, 1036, 1775, 6570
 Dimorphic fungus, 3409
 Dinucleoside polyphosphates, 5723
 Dioxin responsive element, 3721
 Dioxigenase, 3445
 Direct repeat units, 5328
 Directed mutagenesis, 1576
 Discoidin domain, 15
 Disease, 2071
 Diseases, 2879
 Disordered regions, 2041
 Dissociation constant, 4325
 Dissociation constants, 3167
 Distance matrix, 5321
 Distended lumens, 6259
 Disulfide bridge, 5979, 6763
 Disulfide exchange, 2166
 Disulfide formation, 2166
 Diterpenes, 1123
 Diurnal rhythms, 4618
 DLP, 1587
 DMBA, 3995
 Dmrt7, 6442
 DMSO, 121, 4261
 DNA, 368, 1919, 3726, 6496
 DNA arrays, 1571
 DNA binding, 1665
 DNA damage, 642, 890, 3995, 4136, 4176, 4727, 6669
 DNA double strand-breaks, 6161
 DNA fragmentation, 1965
 DNA interstrand crosslink, 1631
 DNA meltings, 3726
 DNA methylation, 3179, 4560, 6521
 DNA microarray, 6871
 DNA periodicity and triplet clustering, 6413
 DNA polymerase, 1497
 DNA polymerase β , 4916
 DNA repair, 3787, 4353, 4916
 DNA repair and replication, 5208
 DNA sequence selectivity, 3726
 DNA synthesis, 5363
 DNA-protein interaction, 1839
 DNA-protein interactions, 5328
 DNA-damage, 6981
 DNase, 2046
 Docking, 1649, 5059, 5130
 Docosahexaenoic acid, 4423
 Dolichol, 6343
 Domain, 1239, 2736
 Domain arrangement, 1017
 Domain movement, 2698
 Domain swapping, 216
 Domain truncation, 763
 Domain-domain interactions, 3835
 Dominant mutation, 4691
 Dominant negative G β , 3879
 Donor-acceptor ratio, 1654
 Dopamine, 2147, 4337, 5067
 Dopaminergic cells, 6105
 Double strand break, 6361
 Double-strand breaks, 4136
 Double-stranded DNA, 5671
 Down syndrome, 3179
 Doxorubicin, 2258, 4182
 DR4, 1925
 DR5, 1925
 DraG, 5232
 DraT, 5232
 1A6/DRIM, 1405
Drosophila, 4602
Drosophila melanogaster, 6938
Drosophila, 642, 2269, 5406
 Drug design, 3018, 4576
 Drug discovery, 2928, 6679
 Drug resistance, 1131, 5467
 Drug target, 5552
 Drug-binding, 1056
 Drug-induced phospholipidosis, 5533
 Drug-protein interaction, 1056
 Drug-resistance, 2258
 DSC, 4224
 dsRNA, 4401
 α -Dystroglycan, 3381
 Dual function, 351
 Dual role, 5965
DUI, 862
 Duox, 5150
 Duox2, 5150
dy mouse, 4463
 Dynamical analysis, 5965
 Dynamics, 795, 822
 Dynorphin, 3201
 Dystroglycan, 1759
 3' EST, 6721

E

- E-cadherin, 5222, 5653
E. coli, 5858
 E2 protein, 1919
 E2F, 5167, 5905
 E3 ubiquitin ligase, 940
 E47/ β 2 insulin gene, 711
 EAG, 2850
 EAR motif, 6537
 Early embryo, 6521
 Early endosome, 4266
 Easter, 2269
 EB1, 1327
 EBP50, 4865
 Ecdysteroid, 2667
EcoRII, 1665
 ECV304 cell, 6224
 Edge-to-edge aggregation, 2488
 Edman, 2306
 Edn1, 4560
 EEA1, 4266
 eEF1B, 2755
 EF-hand, 2435
 Efflux pump, 5339
 EGFR, 4793
 Egg cell, 1747
 Eglin c, 2227
 Ehlers-Danlos syndrome, 6281
 Eicosapentaenoic acid, 2731, 4423
 eIF3, 6375
 Elasticity, 450
 ELAV proteins, 4947
 Electron microscopic single particle analysis, 5934
 Electron microscopy, 2006, 3427
 Electron paramagnetic resonance spectroscopy, 1345
 Electron transfer, 1350, 2265, 2534, 3417, 3763, 4567, 5988, 6187
 Electrophile-responsive element, 4587
 Electrophoretic mobility shift assays, 4544
 Elongation factor, 2755
 Elongation factor Tu, 4576
 Embryogenesis, 1702, 5442
 Embryogenic calli, 5111
 Embryonic germ layers, 5869
 Embryonic lethality, 3889
 Embryonic stem cell, 2869
 Emodin, 469
 EMT, 5385
 Enantiomer, 5283
 Encoding based on grouped weight, 6169
endo-(1 \rightarrow 3)- α -Glucanase, 3780
 Endocannabinoid, 568
 Endocannabinoids, 6076
 Endocytic vesicle, 633
 Endocytosis, 41, 2769, 2962, 3263, 5067, 5565, 5697, 5797
 Endogenous copper, 533
 Endopin 1A, 3477
 Endopin 1B, 3477
 Endoplasmic reticulum, 463, 603, 2160, 4000, 4057, 5635
 Endoplasmic reticulum stress, 3462
 Endoplasmic reticulum stress response, 9
 Endosomal protease, 5697
 Endosome, 6972
 Endosperm-specific expression, 3315
 Endothelial cell, 1597, 2388, 3395, 6871
 Endothelial cells, 1565, 3211, 4172
 Endothelial precursor cells, 4409
 Endothelin-1, 4560, 5765
 Endothelium, 2637, 2779
 Endotoxic shock, 1257
 Energy transfer, 3457, 5257
 Engrailed, 2531
 2-Enoyl-CoA reductase, 2092
 ENP1, 6062
 Enrichment of authentic aim protein, 2750
ent-kaurene synthase, 6175
Entamoeba histolytica, 5306
 Entropy, 4861
 Envelope protein, 3192
 Envenomation, 5728
 Environmental stress, 2409
 Enzymatic activity, 6561
 Enzyme activation, 46
 Enzyme active site, 2741
 Enzyme activity, 6763
 Enzyme catalysis, 1685
 Enzyme efficiency, 2170
 Enzyme enhancement, 4365
 Enzyme evolution, 67
 Enzyme inhibition, 521, 2227
 Enzyme inhibitors, 5910
 Enzyme kinetics, 3595, 6741
 Enzyme mechanism, 3445, 4131
 Enzyme replacement therapy, 87
 Enzyme stability, 4365, 6007
 Enzyme turnover, 6533
 Enzyme-product complex, 1977
 Enzymology, 6570
 Eosinophil, 373
 EPA, 6690
 Epidermal growth factor, 1859, 5765
 epidermal growth factor receptor, 3042, 5161
 Epidermal growth factor receptor transactivation, 6674
 Epidermal-growth-factor receptor, 443
 Epidermis, 5456
 Epigallocatechin gallate, 278
 Epigallocatechin-3-gallate, 1883
 Epigenetic, 6521
 Epithelial barrier, 6921
 Epithelial cells, 1431, 5705
 Epithelial-mesenchymal transition, 4021
 Epithelial-cadherin, 3042
 Epithelium, 2976
 Epitope mapping, 5411
 Epitope reactivity, 87
 Epoxy silane, 505
 EPR, 3605
 Epstein-Barr virus, 6570
 Equilibrium unfolding, 4166
 ER exit sites, 5215
 ER stress, 184
 ER targeting and translocation, 1953
 ErbB receptors, 1859
 ErbB2, 6501
 ERF/AP2 domain, 1303
 Ergosterol, 2677
 ERK, 121, 2691, 6565, 6629, 6665
 ERK₁₋₂, 2512
 ERp57, 199, 1897
Erwinia herbicola, 4491
 Erythroascorbic acid, 6428
 Erythrocytic-stage, 6083
 Erythroid cells, 2285
 Erythroid differentiation, 1965
 Erythropoietin, 3153
 ES cell, 4121
Escherichia coli, 6471, 6763
 EST, 5772
 Est3p, 4683
 Esterase, 5054, 5815
 Estrogen, 5647
 Et1, 4560
 Ethanol, 9
 Ether à go-go, 5059
 Ethylene receptor, 1239
 Etidronate, 5723
 Etoposide, 6447
 ETS, 1865
 Eukaryotic genomes, 1277
 Eukaryotic ribosomal protein, 3804
 EVH1 ligand, 5295
 Evolution, 358, 717, 1672, 2442
 Evolutionary rate, 380
 Evolutionary tree, 6349
 Ewing's sarcoma/peripheral primitive neuroectodermal tumor, 4969
 Exencephaly, 2803

Exocytosis, 3263, 4923
 Exogenous DNA, 918
 Exon-shuffling, 1621
 Exonic splicing enhancers, 4449
 Experiment-backed prediction, 1017
 Expressed sequence tags, 4501
 Expression level, 5772
 Expression pattern, 849, 5111
 Extracellular Hsp70, 6674
 Extracellular matrix, 497, 6281
 Extracellular polysaccharides, 4491
 Extracellular signal regulated protein kinase, 4984
 Extracellular signal-regulated kinase, 4242, 5288
 Extracellular signal-regulated kinases, 3845
 Eya, 3853
 Eye development, 3853
 Eyes Absent, 3853
 Ezrin, 4865

F

F box protein, 431
 F-box protein, 6813
 F-Box, 3921
 F₁-ATPase, 4131
 F₁F₀ ATPase, 5934
 FABPpm, 3617
 Fabry disease, 5430
 σ factor, 3439
 FAD-dependent monooxygenase, 1625
 FAM3 superfamily, 581
 Familial amyloidotic polyneuropathy, 491
 Family, 2736
 Family GH-13, 3905
 Farnesoid X receptor, 5492
 Fas, 553, 4387
 Fas ligand, 443
 Fas-associated phosphatase-1, 4387
 Fascin, 3223
Fasciola hepatica, 5016
 Fast fibres, 878
 Fasting, 199, 4815
 Fat body, 5406
 FAT/CD36, 3617
 Fat1 protein, 5295
 Fatty acid, 3287, 5450
 Fatty acid biosynthesis, 697, 2653
 Fatty acid desaturation, 5477
 Fatty acid elongase, 149
 Fatty acid hydroxylase, 3361
 Fatty acid oxidation, 4815
 Fatty acid profiling, 6837
 Fatty acid synthesis, 5552
 Fatty acids, 4282, 4877
 Fc-binding epitope, 1383
 FCH, 223
 FDBR family, 3823
 Fe-S cluster, 6151
 [2Fe-2S] Ferredoxin, 6714
 Ferredoxin, 1547
 Ferredoxin-thioredoxin reductase, 6714
 Ferric, 6195
 Ferritin, 6275
 Fertilization, 1747
 Fetal development, 161
 Fetal programming, 4150
 Fibrillization, 211, 3657
 Fibrinolysis, 4469
 Fibroblast, 900
 Fibroblast growth factor, 4242
 Fibroblast growth factor 2, 2869
 Fibroblast growth factor receptor, 3386
 Fibroblasts, 3565, 6455
 Fibronectin, 273, 1376
 Fifth transmembrane segment M5, 4777
 Filamin A, 1795
 Filopodia, 3223
 Firefly, 5283
 Fission yeast, 3099
 FKBP, 3671, 4357
 FKBP38, 4392
 FKBP42, 251
 Fkbp6, 3237
 Fkbp7, 3237
 Flagellar bending, 1515
 Flagellar chaperone, 3916
 Flagellar export, 3916
 Flagellin, 2976, 3916
 Flap endonuclease 1, 5208
 Flavocytochrome c₃, 1677
 Flavohemoglobin, 1817
 Flavonoid, 6915
 Flavonoid biosynthesis, 1642
 Flavoprotein, 2358
 Flexible docking, 6199
 Flippase, 1171
 FliS, 3916
 Flotillin, 5559
 Flotillin-1, 6561
 Flow cytometry, 6612
 Flowering time, 1193
 Fluorescence, 2129, 3065, 3083, 3201, 3818, 6846
 Fluorescence anisotropy, 1531, 2097
 Fluorescence energy transfer, 5885
 Fluorescence microscopy, 5628
 Fluorescence quenching, 63
 Fluorescence recovery after photobleaching, 5227, 6933
 Fluorescence resonance energy transfer, 3065, 5067
 Fluorescence sensing, 2951
 Fluorescence spectroscopy, 867
 Fluorescent protein, 2495
 Fluorogenic substrate, 2577
 Flutamide, 1607
 Fluxes, 463
 FMF diseases, 99
 Foam cells, 849
 Focal adhesion, 3649
 Folate, 2994
 Fold asymmetry, 5263
 Folding core, 4861
 Folding intermediate, 656, 3835
 Folding kinetics, 5029
 Folding simulation, 3422
 Food intake, 4625
 Force spectroscopy, 505
 Four electron reduction of dioxygen, 4069
 Fourier transform infrared, 6846
 Fourier transformed infrared, 4703
 FOXC2, 4126
 FOXMI, 1716
 Fractalkine, 4306
 Fragment complementation, 1521
 Fragmentation, 918
 Free folding energy, 3895
 Free radicals, 4136, 4823
 French bean, 1541
 Frequency distribution of distances, 6413
 FRET microscopy, 1654
 FRRGT motif, 4632
 FSH, 3485
 FTIR, 1350, 4613
 FtsZ, 4941
 Fumagillin, 2598
 Fumarate reductase, 1677
 Function, 4303
 Function prediction, 1891
 Functional domains, 1665
 Functional evolution, 5979
 Functional genomics, 1010
 Functional switch, 6825
 Fusion inhibitor, 2561
 Fusion peptide, 2561
 Fusogenic lipids, 2183
 FUT VI, 6069

G

- G protein β subunit, 3879
 G protein-coupled receptor, 23, 5392
 G-protein, 1993, 5697, 5959
 G-protein-coupled receptor, 5227
 G-quadruplex, 4905
 GA-binding protein, 669
 Gab1, 2477
 GABA, 1616
 GABA_A receptor, 1616
Gadus morhua, 4639
 Galactolipid, 4086
 D-Galactosamine, 741, 3699
 L-Galactose dehydrogenase, 6428
 Galactose, 982
 Galactosylceramide, 4991
 Galectin, 1691
 Gallstones, 5492
 Gamma delta T lymphocytes, 2135
 Gamma-secretase, 4015
 Ganglioside, 2011
 Gangliosides, 5510, 5518
 Gap junction proteins, 2178
 Gastrin, 6195
 Gating, 256
 Gaucher, 5456
 GAV motif, 3657
 GC, 5772
 GC biases, 5772
 GCC box, 1303
 GcpE, 1547
 GD3-replica peptide, 1398
 Gelatin zymography, 2661
 Gelatinase A, 5974
 Gene conversion, 425
 Gene disruption, 3129
 Gene expression, 331, 410, 1431, 1479, 1747, 1839, 2178, 2207, 2247, 2341, 3035, 3395, 3571, 3845, 4618, 5268, 6455, 6871
 Gene expression map, 2774
 Gene expression profile, 5739
 Gene expression regulation, 4214
 Gene functional categories, 3895
 Gene induction, 4587
 Gene network bias, 844
 Gene networks, 844
 Gene polymorphism, 6289
 Gene regulation, 3731
 Gene reporter assay, 2661
 Gene repression, 3129
 Gene silencing, 988
 Gene structure, 5979
 Gene therapy, 2958, 3937, 4746, 5739
 Generalized Born model, 3422
 Genes structure, 3477
 Genetic divergence, 4473
 Genetic diversity, 6825
 Genetic network, 3035
 Genome, 3409
 Genome evolution, 4996
 Genome stability, 6938
 Genome streamlining, 6361
 Genomic context, 4449
 Genomic DNA copy number, 3571
 Genomic island, 801
 Genotoxic drugs, 2547
 Germination, 948
 GFP, 5399
 GG domain, 581
 GGPP, 5203
 GGPP synthase, 5203
 Ghost membrane, 685
 Gibberellin, 6175
 GIGANTEA, 1193
 Ginsenoside, 5143
 Ginsenoside-Rg1, 3211
 GIT1, 4051, 6789
 Glial fibrillary acidic protein, 3943
 Glibenclamide, 6891
 Glioblastoma, 3943
 Glioma, 3746
 Global optimization, 1891
 Globular domain, 5999
Gloeobacter violaceus, 3457
 Glu196, 912
 Glucagon, 5697
 α -Glucanase, 3099
 Glucansucrase, 763
 Glucoamylase, 6349
 Glucocerebrosidase, 3391, 5456
 Glucocorticoid, 4081
 Glucocorticoid receptor, 3211
 Glucocorticoid sensitivity, 974
 Glucokinase, 410, 2065
 Glucokinase regulatory protein, 2065
 Glucose deprivation, 960
 Glucose transporter GLUT1, 4430
 Glucose-6-phosphate translocase, 3746
 α -Glucosidase, 2707, 4365
 Glucosylceramide, 4991
 Glucosylceramides, 5456
 Glucuronoyl esterase, 4597
 GLUT3, 4430
 GLUT4, 4889
 Glutamate, 4613
 Glutamate-5-kinase, 6247
 Glutamic acid, 1350
 γ -glutamyl 5-kinase, 6247
 Glutamyl proteinase inhibitor, 948
 Glutaredoxin, 2273
 Glutaryl-7-aminocephalosporanic acid acylase, 1465
 Glutathione, 1103, 1771, 2273, 5661, 6391
 Glutathione peroxidase, 2517
 Glutathione reductase, 3595
 Glutathione-conjugate degradation, 6384
 Glutelin, 3315
 Glycan, 5815
 Glycan array, 6329
 Glyceraldehyde dehydrogenase, 1198
 Glyceraldehyde-3-phosphate dehydrogenase, 5807
 Glycerol, 4771
 Glycine specificity motif, 1502
 Glycoconjugate vaccines, 2945
 Glycoforms, 6533
 Glycogen synthase kinase, 1932
 Glycogen synthase kinase 3, 3121
 Glycogen synthase kinase 3 β , 4015, 6269
 Glycogen synthase kinase-3, 2503, 5925
 Glycolysis, 3308
 Glycosidase, 87
 Glycoside hydrolase, 3905
 Glycoside hydrolase family 27, 2707
 Glycoside hydrolase family 31, 2707
 Glycoside hydrolase Family 35, 4377
 Glycosphingolipids, 5430, 5510
 Glycosylation, 1685, 6533
 Glycosylphosphatidylinositol, 603
 Glycosylphosphatidylinositol-anchored proteins, 5705
 Glycosyltransferase, 6915
 Glyphosate tolerance, 1521
 GM1 ganglioside, 6972
 GMO, 6777
 GNE, 6649
 GnRH, 3485
 GnT-IX, 627
 GnT-V, 627
 Goat, 3715
 Golgi, 4246
 Good manufacturing practice, 2875
 gp120, 2402
 Gp35, 581
 gp41, 2561, 4807
 GPCR, 1654, 4261
 GPR motif, 1993
 GPR35, 5003
 Grafting, 6579

Green sulfur bacteria, 2191, 4900
 Green tea polyphenols, 4703
 Ground state destabilization, 2170
 Group II intron, 4527
 Group-specific viral protein, 3799
 Growth arrest, 940
 Growth control, 1766
 Growth factor, 300, 2968
 Growth inhibition, 5836
 Growth inhibitory factor, 795
 Growth suppressor protein, 191
 GRP58, 199
 GRP78-binding protein, 3943
 GSK, 6565
 GSK-3 β , 5647
 GSK3 β , 3051
 GTP-binding proteins, 3818
 GTPase, 4941
 GTPases, 4576
 Guanine nucleotide exchange factor, 6322
 Guanylate cyclase, 2123
 Guard cell regulation, 1112
 Gustatory papillae, 5371
 GWD, 4872

H

γ H2AX, 4653, 6161
 HA, 6259
 Haem, 6865
 Haemin, 6275
 β -Haematin, 5105
 Haemozoin, 5105
 β -Hairpin, 3422
 Hairpin silencing, 4154
 Half-life, 3276
Haliotis, 3769
 Halocidin, 1490
 Halophilic, 2646
 Haplo-insufficiency, 2135
 hARD1, 1911
 HAT, 3217, 4353
 HbN, 4031
 HbO, 4031
 HBV, 3571
 Hcc-2, 2216
 H-cluster biosynthesis, 363
 HCP 1, 6865
 HCV, 575
 HDAC4, 4214
 HDJ-1, 3091
 HDL, 4551
 Heart, 3532
 Heart disease, 5430
 Heart metabolism, 4282
 Heat denaturation, 4224
 Heat shock, 319, 510, 5477
 Heat shock protein, 3091
 Heat shock protein 60, 115
 Heat shock protein 60 (HSP60), 2311
 Heat shock protein 70, 3145, 4645
 Heat shock protein 90, 2761
 Heat shock proteins, 6674
 Heat stress, 3282
 Heat-shock protein 27, 1565
 α -Helical peptide, 3911
 Helicase, 6938
Helicobacter pylori, 697
Helicoverpa armigera, 6777
 Helix-loop-helix, 1812
 Helminth, 2968
 Hematopoietic precursor cells, 4409
 Hematopoietic progenitor cell, 2869

Heme, 4827
 Heme A synthesis, 5351
 Heme binding protein, 6447
 Heme chaperone, 216
 Heme oxygenase 1, 1571
 Heme peroxidase, 5150
 Hemifusion, 2238
 Hemochromatosis, 6195
 Hemoglobin, 4031
 Hemostasis, 4709
 HEN1, 3117
 HepaRG, 3361
 Hepatitis B virus, 822
 Hepatitis C virus, 2928, 4392
 Hepatocarcinoma, 2547
 Hepatocellular carcinoma, 191, 2216, 3571
 Hepatocyte, 731
 Hepatocytes, 6069
 Hepatoma, 3185
 Hereditary spherocytosis, 6527
 Herpes virus, 1156
 Heterodimer, 6825
 Heterogen, 1649
 Heterogeneous nuclear ribonucleoprotein K, 1839
 Heterologous expression, 1576, 1971
 Heterotropic cooperativity, 1085
 Hev b 6.0201, 2483
 Hevein, 2483
 Hexadecylphosphocholine, 2471
 HGTD-P, 3270
 hHR23, 3401
 HIF, 6182
 High density lipoproteins, 5974
 High fat diet, 1371
 High phosphorylation of HBV-CP, 894
 High throughput, 5681
 High throughput screening, 2577
 High-affinity site, 4131
 High-density lipoprotein, 1178
 High-fat diet, 4889
 High-throughput data, 844
 Higher plants, 6428
 Highly oriented pyrolytic graphite, 5671
 Hipl, 5275
 Hirsutenone, 385
 Histidine, 2741
 Histidine-aspartate kinase, 77
 Histidine-containing phosphotransfer protein, 77
 Histone, 3217
 Histone acetylation, 2306, 3787
 Histone binding, 6903
 Histone chaperone, 4357
 Histone deacetylase 7 (HDAC7), 5096
 Histone H1t, 5999
 Histone H2A, 6233
 Histone H3, 642
 Histone methylation, 2306
 Histone modification, 2306
 Histones, 4757
 HIV glycoprotein incorporation, 3775
 HIV glycoprotein transport, 3775
 HIV signal peptide, 3775
 HIV-1, 2395, 2561, 4807, 5363, 6155
 HIV-1 gp41, 2395
 HIV-1 neutralization, 2395
 HIV-I, 2598
 HK cell, 3519
 HL-60, 4653
 HNH motif, 6115
 hnRNP, 1339
 hnRNP A1, 1365
 HNSCC, 4793
 HO-1, 6865
 Homer proteins, 5295
 Homocysteine, 2994
 Homogentisate, 5357
 Homolog, 3753
 Homologous peptide, 3657
 Homologous recombination, 6361
 Homology modeling, 1049, 1465, 6027, 6366

Homology modelling, 1780
 Homotropic cooperativity, 1085
 Honeybee, 2667, 4895
 Honokiol, 5177
 Hordeivirus, 5077
 Hormone-inducible, 393
 Horseradish peroxidase, 1439
 Hospital-acquired MRSA, 2323
 Host cell invasion, 4673
 Host defence, 1431
 Host factor, 5785
 Host-parasite relationship, 2968
 Host-pathogen, 5541
 Host-pathogen interaction, 4823
 Host-cell shut-off, 5713
 Hot pepper, 3136
 Housekeeping, 1472
 Hox, 3769
 HR38, 2667
 Hrs, 5241
 Hsc70, 5785
 Hsfl heat shock factor, 3433
 Hsp110, 168
 Hsp70, 168
 hST3Gal IV, 6069
 hTERT, 5033, 6819
 HTPX, 4005
 5-HT_{2B} receptor, 6948
 5-HT_{3A} receptor, 256
 5-Hydroxyisourate, 2087
 6-Hydroxydopa, 4317
 Hubs, 2041
 Human, 5150
 Human breast epithelial cells, 385
 Human cells, 4172
 Human coronary artery smooth muscle cell, 2365
 Human cytomegalovirus, 6132
 Human dermal fibroblasts, 2661
 Human disease, 1472, 5500
 Human embryonic stem cells, 2875, 5869
Human ether-à-go-go-related gene, 1999
 Human fibroblasts, 3989
 Human head and neck squamous cell carcinoma, 311
 Human hepatitis B virus core protein, 894
 Human hepatoma cells, 3361
 Human lung fibroblast, 988
 Human lung fibroblasts, 5753
 Human mutant hemoglobin, 4485
 Human rhinovirus serotypes, 5713
 Human skin fibroblast, 769
 Human spermatozoa, 6161
 Human transcriptome, 2301
 Human umbilical vein endothelial cells, 2769
 Huntingtin, 5275
 Huntington disease, 5275
 HVJ-E vector, 2717
 hVPS34, 2821
 Hydrodynamic delivery, 4346
 Hydrodynamics-based injection, 918
 Hydrogen fluoride, 199
 Hydrogen peroxide, 1439, 2731, 2779, 5161, 5247
 Hydrogen/deuterium exchange, 3638
 [NiFe]-hydrogenase, 4065
 Hydrogenase, 363, 677
 α/β -Hydrolase, 1465
 Hydrophathy profile, 5321
 Hydroperoxide, 4188
 Hydrostatic pressure, 6033
 β -Hydroxyacyl ACP dehydratase, 2653
 γ -Hydroxybutyrate, 2347
 ω -Hydroxylation, 3794
 D -2-Hydroxyglutarate, 2347
 11 β -Hydroxysteroid dehydrogenase, 4081
 Hydroxylation, 1911
 Hydroxyphenylglycine, 3445
 Hygromycin B, 2409
 Hymenoptera, 4895
 HypD, 4065

Hyperglycemia, 2311
 Hyperomorphic, 4691
 Hyperosmotic stress, 4495
 Hyperphosphorylation, 2503
 Hypersensitive response, 3498
 Hypertension, 3315
 Hyperthermophile, 4224
 Hypertriglyceridemia, 5492
 Hypertrophy, 1932
 Hyphal development, 2615
 Hypoxia, 900, 3395, 3532, 3617, 4105, 5718, 6182
 Hypoxia inducible factor, 1911
 Hypoxia-induced mitogenic factor, 2207
 Hypoxia-inducible factor 1, 6399
 Hypoxia-inducible factor-1, 5718
 Hypoxia-inducible factor-1 α , 4105
 Hypoxic-induced mitogenic factor, 900

I

I-Smad, 6603
 IL-receptor, 3070
 IBMX, 4126
 IBV, 5993
 Icarapin, 4895
 Ichthyosis, 5456
 Id1, 1812
 Id2, 1812
 Identification system, 2736
 IFI16, 1659
 IFN- β , 1601
 IFN- γ , 755
 IgE, 4895
 IgE-epitope, 2483
 IGF-1, 3051, 4495
 IKK, 4010
 IL-1 β , 3519
 IL-6, 5880
 IL-8, 6807
 Immunoglobulin chain binding protein, Grp170, 5237
 Immunoglobulin E, 2129
 Immunopanning, 331
 Immunophilin, 3671
 Immunophilins, 6182
 Immunoproteasome, 3989
 Implantation, 5653
 Implantation failure, 2717
 Importin α , 3961
 Importin β , 3961
 Imprinted genes, 5377
 In organello editing, 4443
 In situ hybridisation, 2195
In vitro transcription, 5044
 In vivo, 4746
 In vivo gene transfer, 2717
 Inborn errors, 5442
 Inclusion bodies, 6471
 Indole-3-acetic acid, 1439
 Indole-diterpenes, 1625
 Indoleamine 2,3-dioxygenase, 2265
 Induced disease resistance, 4491
 Induced fit, 5137
 Induced-fit, 3823
 Inducible gene expression, 1766
infA, 539
 Infection, 2341
 Infections, 2945
 Infertility, 2717
 Inflammation, 161, 373, 568, 2843, 3532, 4515, 4607, 6807
 Inflammatory response, 849
 Influenza virus, 5785

ING2, 3787
 ING4, 6903
 Inhibition, 697, 6543
 Inhibition of SCoV reproduction, 2414
 Inhibitor, 1581, 5306, 5791, 6679
 Inhibitor-2 of PP2A, 3973
 Initiation factor 1, 539
 Innate immunity, 2341, 2976, 5344, 5406
 Inner arm dynein, 6357
 Inner membrane, 5628
 Inner nuclear membrane, 1263, 6435
 iNOS activity, 3287
 iNOS expression, 3287
 Inositol, 3980
 Inositol 1,4,5,6-tetrakisphosphate, 324
 Inositol 3,4,5,6-terakisphosphate, 324
 Inositol-containing molecules, 6789
 Inositolphosphate, 1709
 InsP₃, 2686
 Insect cell, 3829
 Insect vector, 2
 Inside-out patch, 5733
 Insomnia, 4337
 InsP₃, 2201
 InsP5, 1709
 Insulin, 410, 4625, 6701, 6977
 Insulin resistance, 5117, 6289
 Insulin secretion, 285
 Insulin-like growth factor, 5161
 Insulin/IGF-1 signaling, 5753
 Integrin, 1376, 1759, 2027
 Integrin α IIb β 3, 5313
 Integrins, 4435
 Intein, 1853
 Interaction, 3386
 Interaction domains, 345
 Interaction networks, 2041
 Interface, 5105
 Interferon, 1659, 2341, 4521
 Interferon- α , 3335
 Interferon- γ , 3989
 Interferon-inducible, 1205
 Interferon-stimulated gene 15 kDa, 4521
 Interleukin 1, 3153
 Interleukin 10, 6399
 Interleukin 4, 6399
 Interleukin-1, 4010, 4697
 Interleukin-1 receptor antagonist, 6289
 Interleukin-1 β , 6069
 Interleukin-4, 3335
 Intermediate filaments, 6211
 Intermediate structure, 6861
 Intermolecular disulfide bond, 603
 Internal initiation, 1309
 Internal ribosome entry site (IRES), 2630
 Internalization, 41
 Interstitial-lymphatic flow, 6259
 Intestinal epithelia, 155
 Intestinal epithelium, 6399
 Intestine, 5344
 Intracellular adhesion molecule-1, 1391
 Intracellular calcium, 3900
 Intracellular distribution, 968
 Intracellular signalling, 5697
 Intracellular vesicle transport, 1425
 Intramolecular interaction, 6322
 Intranuclear disposition, 918
 Intrinsic pathway, 3739
 Intron exclusion, 6361
 Intron loss, 6361
 Intronless, 1472, 4303
 Invariant chain, 3112
 Invasion, 385
 Invasive apocrine carcinomas, 2935
 Invertebrate fertilization, 3900
 Inverted repeat silencing, 4154
 Inverting, 3905
 Inverting enzymes, 3780

Ion binding, 4777
 Ion channel, 2141, 5979
 Ion channels, 2850
 Ion pairs, 4224
 Ion permeation, 6027
 Ionic lock, 5392
 Ionizing radiation, 4387
 IPMK, 324
 IRAK-1, 4697
 IRF-1, 755
 Iron, 1123, 1911, 2233, 2567, 6195
 Iron-sulfur cluster, 137, 2273
 Irradiance, 2797
 IRS proteins, 285
 Ischemia/reperfusion injury, 5974
 Ischemic reperfusion injury, 1391
 Islet, 6701
 Isoallergens, 2483
 Isoelectric focusing, 4485
 Isoflavones, 4905
 Isoflavonoid, 6915
 Isoflavonoid biosynthesis, 5666
 Isoform, 1780
 Isoprenoid, 5442
 Isoprenoid biosynthesis, 1547
 Isoprenoids, 736
 3-Isopropylmalate dehydrogenase, 3867
 Isotopomer analysis, 4282
 IspG, 1547
 ITGB4PB gene, 1983
 ITPK1, 324

J

J1 acylase, 1465
 Jab1, 5836, 6015
 JAK/STAT pathway, 755
 Jasmonic acid, 2540
 Jasmonic acid biosynthesis, 5791
 JNK, 4591, 5385
 JNK interacting protein 1, 9
 Justicidin A, 3185
 66.3-kDa protein, 5747
 90-kDa heat shock protein, 3270
 90 kDa ribosomal S6 kinases, 1417

K

K⁺ channel, 5009
 Kallidin, 1833
 Kaposi's sarcoma-associated herpesvirus, 93
 KDR/Flk-1, 4332
 Keratin, 2351
 Keratinocyte, 4544
 Keratinocytes, 1859, 3276, 5385
 Ketoconazole, 1999
 α -Ketoglutarate, 2347
 Ketosteroid isomerase, 4166
 KHV, 4473
 KIAA1199, 581
 Kidney, 923
 Kinase, 904, 4236, 5845, 6489

Kinase activity, 813
 Kinesin, 3589
 Kinetic binding analysis, 6405
 Kinetic models, 2170
 Kinetics, 211, 3493, 4639
 Kinetoplastid, 5552
 Kir3 channel, 3879
 Kiss-and-run, 2238
 KLF6, 6981
 Klotho, 5753
 Knockdown, 2365
 Knockout mouse, 585, 3889, 4057, 6442
 Kojic acid, 1877
 39K promoter, 6777
 Krüppel-like factor, 6981
 α -KTx 8.5, 6254
 α -KTx20.1, 592
 Kv channel, 6039

L

L2 loop, 1592
 Label-free, 5681
 β -Lactamase, 1592, 5054
 Lactoferrin, 3699, 4332
 Lamellar body, 5533
 Lamellipodia, 3223
 Lamin, 1263
 Lamin B₂, 6211
 Laminin, 1759, 3381
 Laminin α 2, 4463
 Lamp3, 4266
 Langmuir–Blodgett, 4953
 Large subunit, 6741
 Lasp, 3223
 Late endosomes, 4923, 5518
 Latency, 2160
 Latency-associated nuclear antigen, 93
 Lateral diffusion, 5227
 LATS2, 782
 LDL, 5155
 Lectin, 982, 1691, 6329
 Leguminosae, 5666
 Lens, 5071
 LEOPARD syndrome, 2477
 Leptin, 2928
 Leptin receptor, 3301
 β -less mice, 4661
 Lethal toxin, 4172
 Leucine, 2821
 Leucine aminopeptidase, 912
 Leucine zipper, 58
 Leucine zipper-like domain, 3787
 Leukemia, 3217
 Leukotriene C₄, 1103
 Lewy body, 474, 5807
 LH, 3485
 Lhca5, 6485
 Lidocaine, 6027
 Ligand–DNA interactions, 3726
 Ligases, 5723
 Light, 4934
 Light chain, 6357
 Light harvesting, 6967
 Light reaction, 3282
 Light-driven proton pump, 6749
 Light-harvesting, 5257
 Light-harvesting complex, 2053
 Light-harvesting complex I, 6485
 Light-harvesting pigment, 3823
 Light-scattering, 1222

Lignin, 4311
 Lignin-carbohydrate complex, 4597
 Limb, 4242
 LINE-1, 661
 Linear interaction energy method, 5910
 Linker protein, 3457
 Lipid, 358, 4959
 Lipid asymmetry, 1171
 Lipid binding, 4632
 Lipid digestion, 127
 Lipid domain, 5565
 Lipid droplet, 4479, 5484
 Lipid droplets, 191
 Lipid membrane, 2534, 4953
 Lipid membranes, 2677
 Lipid modification, 2021
 Lipid peroxidation, 4485, 4587, 5172
 Lipid peroxidation products, 479
 Lipid rafts, 6039
 Lipid trafficking disorders, 5597
 Lipid transfer proteins, 5580
 Lipid translocation, 1171
 Lipid–protein interactions, 607
 Lipidomics, 5541, 5597
 Lipids, 3617, 5105
 Lipocalin, 2102
 Lipocalins, 4877
 Lipogenesis, 127
 Lipopolysaccharide, 450, 1257, 2207, 3145
 Liposomes, 2183
 Lipotoxicity, 1371, 5172
Listeria monocytogenes, 2962
 Liver, 2065, 3361, 4346
 Liver cancer, 184
 Liver disease, 5430
 Liver X receptor, 4835, 4929
 LmrA, 1042
 LNA in situ, 4214
 Loading rate, 505
 Localization, 904, 4261, 6329
 Lon protease, 2910
 Long chain, 1946
 Long chain acyl-CoA, 3551
 Long inverted repeat, 1277
 Longevity, 4150, 4713
Lotus japonicus, 5666
 LOV-proteins, 3818
 Low abundance, 6721
 Low fidelity polymerase, 6496
 Low-density lipoprotein, 5155
 Low-density lipoprotein receptor, 4929
 Low-density lipoproteins, 849
 LOX-1, 3321
 LPA, 4737
 LRAT, 4200
 LRP6, 5423
 Lst1, 5215
 LTF apparatus, 581
 Luciferase, 72, 1451, 1977, 5283
 Luciferase assay, 890
 Luciferase reporter construct, 6217
 Luciferin, 1977, 5283
 Lumen, 2160
 Lung cancer, 2258
Luzomyia longipalpis, 2
 LXR response element, 4929
 Lymph gland, 5406
 Lysenin, 5572
 Lysophosphatidic acid, 443
 Lysophospholipids, 4877, 6317
 Lysosomal localisation, 5747
 Lysosomal processing, 5747
 Lysosomal storage diseases, 5510, 5747
 Lysosomal storage disorders, 87
 Lysosome, 3699, 5533
 Lysosomes, 5518, 5747
 Lysozyme, 5137
 Lysozyme aggregation, 2097
 LYVE-1, 6259
 LZ complexity, 5321

M

- M-PTH-fragments, 1509
m-Calpain, 2021
 M1, 5785
 M13 peptide, 3589
 M2-M3 linker, 256
 Mab2F5, 2395
 Macromolecular crowding, 2584
 Macrophage, 131, 450, 2046, 2341, 3706
 Macrophage migration inhibitory factor, 1251
 Macrophages, 115, 849, 3042, 4172, 5588, 6295
 Macropinocytosis, 4923
 MafA, 711
 Magi1, 4051
 Magnesium fluoride, 517
 Magnetic bacteria, 801
 Magnetic resonance imaging, 2958
 Magnetic resonance spectroscopy, 4746
 Magnetosome synthesis, 801
Magnetospirillum sp. strain AMB-1, 801
 Main hinge, 2698
 Maize, 3753
 Major urinary protein, 682
 Malaria, 5105, 5185, 5910, 6083
 MALDI-TOF-MS, 199
 Male infertility, 6442
 Malignant mesothelioma, 1925, 2671
 Mallory body, 2351
 Mammalian target of rapamycin, 5288
 Mammary epithelial cell, 6501, 6635
 Mammary hyperplasia, 5222
 Manganese cluster, 3605
 Mannose 6-phosphate, 5747
 Mannose receptor, 3706
 Mannosylated cationic liposome, 3706
 MAP kinase, 1795, 2409, 4010, 6665
 MAPK, 703, 2512, 3070, 6921
 MAPPIT, 3301
 Marinesco-Sjögren syndrome, 5237
 Markov model, 723
 Maslinic acid, 6302
 Mass spectrometric identification, 5934
 Mass spectrometry, 175, 2306, 3229, 3638, 4764, 5541, 6275, 6527
 Mathematical modeling, 3665, 5965
 Mating, 4457
 Mating type genes, 3409
 Matrigel, 2253
 Matriptase, 2227
 Matrix metalloproteinase, 1883, 4533
 Matrix metalloproteinase-1, 769
 Matrix metalloproteinase-2, 2661
 Matrix metalloproteinase-7, 5288
 Matrix metalloproteinase-9, 385
 Matrix metalloproteinases, 5130, 5974
 Matrix vesicles, 5676
 Maturation, 4065
 MC, 890
 MCAM, 3649
 MCIP, 5965
 Mcl-1, 4582, 6565
 MDA, 3995
 Mdm2, 300, 1753
 MdmX, 1753
 MDR1, 998
mdx mouse, 4463
 Mechanism of action, 3780
 Meiosis, 2888
 Melanoma, 1439
 Melanophilin, 5863
 mE1f3, 1865
 Memantine, 3973
 Membrane, 358, 1350, 2160
 Membrane anchor, 216, 1164
 Membrane binding, 2430
 Membrane fluidity, 4218
 Membrane fusion, 2238, 2561
 Membrane interface, 5301
 Membrane lipid asymmetry, 5588
 Membrane lipids, 5477
 Membrane localization, 1164
 Membrane permeability, 775
 Membrane protease, 789
 Membrane protein, 1042, 1064, 1953, 3829, 4777, 5339, 6961, 6967
 Membrane protein integration, 3353
 Membrane protein structure, 358
 Membrane proteins, 3075, 6527
 Membrane rafts, 5525
 Membrane ruffles, 4288
 Membrane ruffling, 1709
 Membrane simulation, 144
 Membrane topology, 3192
 Membrane traffic, 5541
 Membrane transport, 1056, 1156, 2006
 Memory, 2335
 Memory polymer chain, 2750
 Menadione, 1859
 Mental retardation, 2335
 Mesaconate, 1677
 Mesangial cells, 2523
 Mesd, 5423
 Mesophiles, 1672
 Metabolic channelling, 5084
 Metabolic engineering, 955, 2540
 Metabolic syndrome, 5492
 Metabolism, 4188
 Metal chelation, 3173
 Metal homeostasis, 3173
 Metal remediator, 206
 Metal tolerance, 3173
 Metallocenter assembly, 677
 Metalloenzyme, 5899
 Metalloproteins, 6187
 Metallothionein, 1235
 Metallothionein-3, 795
 Metastasis, 2811, 3042
 Metazoa, 5436
 Methionine, 2803
 Methionine scan, 1872
 Methionine sulfoxide reductase, 2910
 1-Methyl-4-phenylpyridinium iodide, 155
 2-C-methyl-D-erythritol 4-phosphate pathway, 736
 2-Methyl-6-solaneyl-1,4-benzoquinol, 5357
 2-Methylfumarate, 1677
 2-Methylsuccinate, 1677
 Methyl ester of 4-O-methyl-D-glucuronic acid, 4597
 Methylation, 918, 3117
 Methylenebisphosphonate, 5723
 Methylglyoxal, 1565
 Methylmercury, 6813
 Methylotroph, 561
 MGDG synthase, 4086
 MHC class I, 3112
 Mica, 5671
 Mice, 5371
 Micelle, 4188, 4777
 Micro-CT, 5759
 Microarray, 849, 1733, 2667, 2774, 2985, 4154, 5739
 Microbial esterase, 2736
 Microbial lipase, 2736
 Microcystins, 6943
 Microglia, 4306
 β_2 -microglobulin, 6199
 Microparticles, 5313
 MicroRNA, 2195, 3610, 3753, 5111, 5185
 microRNA/microRNA*, 3117
 Microsatellite, 5208
 Microtubule, 5807
 Microtubule assembly, 3582
 Microtubule sliding, 1515
 Microtubule stability, 3505
 Microtubule-associated protein 4, 3505
 Microtubule-binding proteins, 1327
 Microtubules, 1425, 3505, 3589, 4673

- MIEP, 415
 MIF, 974
 Miglustat, 2081
 Migration, 385, 4332
 Milk, 6635
 Milk suckling, 3129
 Mind bomb, 4409
 Mineralization, 5676
 Minocycline, 4306
 MIPS, 3980
 Miraculin, 620
 MiRNA, 1553, 3694, 4214, 4401
 Mirror orientation selection, 1747
 Misalignment, 6496
 Miss-sorting, 3966
 Missense mutation, 2071
 Mistranslation, 1775
 Mitocan, 5125
 Mitochondria, 191, 775, 813, 1257, 2065, 2147, 2273, 2547, 2553, 3185, 3270, 3427, 3966, 4443, 4539, 5275, 5628, 6596
 Mitochondrial disease, 5450
 Mitochondrial DNA, 6242
 Mitochondrial dysfunction, 4737
 Mitochondrial import, 1839
 Mitochondrial membrane potential, 6612
 Mitochondrial nitric oxide synthase, 455
 Mitochondrial pathway, 3739
 Mitochondrial permeability transition, 6447
 Mitochondrial RNA, 268
 Mitochondrial ROS, 6105
 Mitochondriogenesis, 4661
 Mitochondrion, 1371, 2153, 2830
 Mitogen activated protein kinase, 4242, 4984
 Mitogen-activated protein kinase, 300
 Mitogen-activated protein kinase signaling pathways, 3677
 Mitogen-activated protein/extracellular signal-regulated kinase kinase, 58
 Mitosis, 782, 2888, 3375
 Mitosis arrest, 3624
 MK571, 6891
 MKP-1, 974
 MKP-3/Pyst1, 4242
 MLDP, 5484
 mLRH-1, 1702
 MMLV RT, 1497
 MMPs, 5130
 MnlI, 6115
 Mode III, 1531
 Mode of candidacidal action, 1490
 Modeled microgravity, 2465
 Modular structure, 6115
 Modules, 2567
 MODY, 6701
 Molecular chaperones, 72
 Molecular dynamics, 144, 2488, 3422
 Molecular dynamics simulation, 682
 Molecular evolution, 4417, 6366
 Molecular interaction, 1447
 Molecular modelling, 5899
 Molecular motion, 682
 Molecular perception, 1649
 Molecular phylogeny, 6655
 Molecular recognition, 1919
 Molecular therapy, 2717
 Molecular-crowding conditions, 4905
 Mollusk larvae in situ hybridization, 1846
 Mollusk shell, 1846
 Molten globule, 2129
 Mollusc selective bioactive, 3860
 Mono- and dicotyledonous-specific RNA editing, 4443
 Monochloro-bimane, 6384
 Monoclonal antibody, 2027, 4274
 Monocots, 4491
 Monocyte, 747
 Monocyte chemoattractant protein-1, 747
 Monocytes, 2637
 Monogalactosyl-diaclyglycerol, 4959
 Monolignols, 4311
 Monomeric RFP, 2495
 Monophenol, dihydroxy-L-phenylalanin: oxygen oxidoreductase, EC 1.14.18.1, 1877
 Monophosphatase, 1807
 Monovalent cations, 4941
 Monte Carlo-minimization, 6027
Moritella marina strain MP-1, 4423
 Moss, 6175
 Mother-of-pearl, 2435
 Motif, 2736, 4807
 Motility, 1515
 Motor protein, 3589
 Mouse, 1801, 3129, 3715, 4346, 5377, 5621
 Mouse adenovirus, 3937
 Mouse brain, 2195
 Mouse hepatitis virus, 4143
 Mouse models, 1472
 Moving-median method, 2774
 MPP⁺, 3091
 MPT, 6311
 mRFPruby, 2495
 MRI-guided therapy, 2958
 mRNA splicing, 399
 mRNA stability, 510
 MRP1/ABCC1, 6891
 MRPs, 1085
 MsbA, 1042
 MSN1, 206
 Msn2, 6033
 Msn4, 6033
 Msn4 transcription factor, 3433
 mTOR, 2821
 Mucosal restitution, 27
 Multicanonical, 3422
 Multicopper oxidase, 4069
 Multidrug resistance, 998, 1042, 1049, 1094, 1103, 2903, 4953, 5339
 Multidrug resistance inhibitors, 2903
 Multidrug resistance protein 1, 1103
 Multiline signal, 3605
 Multiple sequence alignments, 380
 Multiple wavelength anomalous dispersion, 99
 Multipolar spindle, 6489
 Multivalency, 2402
 Muramidase, 1877
 Murine embryonic fibroblast, 3257
 Musashi-1, 27
 Muscle, 3477, 5172
 Muscle differentiation, 878
 Muscle FBPase, 4042
 Muscle-eye-brain disease, 581
 Muscular atrophy, 5621
 Muscular dystrophy, 1759, 4463, 5430
 Mushroom body, 2667
 Mutagenesis, 1665, 5059, 5392, 5733, 6322
 Mutanase, 3780
 Mutation, 4000
 Mutational analysis, 3344
 MYB transcription factor, 3498
 MYC, 5647, 5836, 6062
Mycobacterium tuberculosis, 6898
Mycobacterium, 2712
Mycobacterium smegmatis, 4031
Mycobacterium tuberculosis, 1285, 3018, 5328
Mycobacterium, 2567
 Mycothiol, 2712
 Mycothiol disulfide, 2712
 MyD88 knockouts, 1457
 Myelin degradation, 545
 Myoblasts, 4042
 Myocardial ischemia, 5974
 Myocyte, 878
 Myogenic regulatory factors, 4996
 Myosin, 2059, 6707
 Myosin light chain phosphatase, 5779
 Myosin Mg²⁺-ATPase activity, 469
 Myosin phosphorylation, 469
 Myosin Va, 5863
 Myotonic dystrophy, 5208
 MYPT1, 5779
 Myristoylated N-terminus of Arf6, 4296

N

- N-glycosylation site, 968
 N-linked glycosylation, 2281
 N-terminal folding, 5263
 N-use efficiency, 3931
 N-acetyl-L-glutamate kinase, 2015
 N-myristoyltransferase 2, 2021
n - 3 Polyunsaturated fatty acid, 4423
 N6-methyladenine, 3179
 Na,K-ATPase, 3558, 6685
 Na/K-ATPase, 2769
 Na⁺,K⁺-ATPase, 4777
 Na⁺/H⁺ exchanger, 2686, 6513
 NAC, 4136
 NAD, 4857
 nad6, 5641
 NADPH oxidase, 261, 497, 6206
 Nanogel, 6587
 Nanoparticles, 5759
 Nanosensors, 2951
 Nanostructure, 505
 Natriuretic peptide, 4417
 Natural killer cells, 6295
 NCBE, 4865
NDII, 6105
 Near-infrared imaging, 2850
 Necrosis, 3161, 3845, 6447
 Negative feedback, 4242, 5965
 NEIL, 4916
 Neonatal lethality, 3129
 Nerve growth factor, 4991
 Nervous system growth, 3525
 NES, 1365
 NESH, 6464
 Neural, 2531
 Neural cell adhesion molecule, 3386
 Neural cells, 3505
 Neural stem cell, 4430
 Neural tube defect, 2803
 Neurite outgrowth, 3489
 Neuritic length, 4723
 Neuroblastoma, 627
 Neurodegeneration, 2147, 3551, 5518, 5565
 Neurodegenerative, 5399
 Neurofibrillary degeneration, 3582, 5925, 6269
 Neurofibrillary tangles, 6550
 Neuroglobin, 4884
 Neuromedin U, 3485
 Neuromuscular junction, 6317
 Neuron, 484, 4306, 5565
 Neuron degeneration, 4842
 Neuronal, 2603
 Neuronal development, 1723, 6145
 Neurons, 5869
 Neuropathic, 4306
 Neuropeptide, 6955
 Neuropeptide FF2 receptor, 6955
 Neurosphere, 4430
Neurospora, 3282
 Neurotoxicity, 6730
 Neurotoxin, 1360, 6777, 6825
 Neurotransmission, 2358
 Neurotrophic factor, 3462
 Neurotrophins, 1723
 Neutral glycosphingolipids, 4991
 Neutralizing activities, 3799
 Neutrophil, 6206
 Neutrophils, 4582
 NFκB, 278, 3469, 4495, 6819
 NFκB decoy, 3706
 NF-κB, 311, 613, 731, 822, 1391, 2517, 2843, 3006, 3145, 3153, 3287, 4697, 6807
 NF-κB activity, 1457
 NF-κB, 3519
 NF-X1, 4851
NFI, 4449
 NH₄⁺ uniport, 3931
 Nickel, 677
Nicotiana tabacum agglutinin, 6329
 α7 Nicotinic receptor, 256
 Nidogen, 2253
 Niemann-Pick, 5456
 NIH 3T3, 2495
 NIMA, 6489
 Nischarin, 3070
 Nitric oxide, 223, 2046, 2123, 2317, 3211, 3287, 4031, 4205, 4625
 Nitric oxide synthase, 4625
 Nitrile hydratase, 4667
 Nitrogenase, 5232, 6151
 Nitrosative stress, 1817, 4031
 NKA, 5067
 NLS, 1365
 NMDA, 831
 NMR, 273, 795, 1853, 2129, 5301, 6496, 6644
 NMR spectroscopy, 3911, 5941
 NMR structure, 1822, 6967
 NMR structure determination, 4296
 nNOS, 6948
 NO metabolism, 4823
 NO synthase, 223
 Nobiletin, 3321
 Nociception, 6629
 Non-alcoholic fatty liver, 2153
 Non-corrin cobalt, 4667
 Non-disjunction, 2888
 Non-heme iron, 4567
 Non-LTR retrotransposons, 661
 Non-phosphorylative Entner-Doudoroff pathway, 1198
 Non-photosynthetic, 6509
 Non-polysialylated neurons, 4723
 Non-proteinogenic amino acids, 3445
 Non-ribosomal peptide synthesis, 3445
 Non-stop RNA, 5641
 Non-structural protein, 4143
 Non-syndromic hearing loss, 581
 Non-synonymous single nucleotide polymorphism, 1231
 Non-synonymous substitution, 3895
 Noncompetitive inhibition, 4703
 Nonphotochemical quenching, 2053
 Normal mode analysis (NMA), 5130
 Nosocomial outbreak, 2323
 NOSTRIN, 223
 Notch signaling, 2860, 4409
 NOX1, 497
 NRBP, 6015
 Nrf2, 1771
 NRTIs, 6612
 NSSA, 575, 4392
 Nsp10, 4143
 nsP2 protease, 1502
 NT-3, 1723
 Nuclear bodies, 1215
 Nuclear envelope, 1263, 6211, 6435
 Nuclear export, 5096
 Nuclear export signal, 1812
 Nuclear factor κB, 4521
 Nuclear factor kappa B, 385
 Nuclear factor of activated T cells, 1932
 Nuclear factor-κB p65 subunit, 3257
 Nuclear localization, 3811
 Nuclear localization signal, 1405, 1812, 1865, 3804
 Nuclear magnetic resonance, 4777
 Nuclear matrix, 1631
 Nuclear microbody, 3804
 nuclear morphology, 6435
 Nuclear receptor, 4929
 Nuclear speckles, 399
 Nuclear transfer, 1801
 Nuclear transport, 3961, 5222
 Nuclei, 4042
 Nucleocapsid protein, 5993
 Nucleocytoplasmic transport, 1365
 Nucleolar localization signal, 1405

Nucleolar targeting sequence, 1405
 Nucleolus, 1983
 Nucleophosmin, 345, 399
 Nucleoside analogs, 5363
 Nucleoside diphosphate kinase, 3282
 Nucleosome, 368, 4757
 Nucleosome assembly, 4357
 Nucleosome binding property, 5999
 Nucleotide, 5959
 Nucleotide binding, 6685
 Nucleotide exchange factor, 5237
 Nucleotide sugar transporters, 4246
 Nucleotide-binding, 3075
 Nucleotide-binding domain, 1036, 1049
 Nucleotides hydrolysis activity, 34
 Nucleus, 904
 Numb, 5797
 Nylon oligomer, 5054
 NZF, 6233

O

O-GlcNAc, 3051, 4645
 O-glycosylation, 5822
 O-GlcNAc, 5829
 O-GlcNAc transferase, 5829
 O-linked *N*-acetylglucosamine (*O*-GlcNAc), 2311
 Obesity, 127, 2421, 4771, 5765, 5953, 6289, 6391
 Occludin, 2388
 Oct4, 1801
 Octadecylmethylphosphatidylcholine, 2471
Odonthubuthus doriae, 6254
 Odorant-binding protein, 2102
 Olfaction, 2102, 2853
 Olfactory mucus, 2102
 Oligomeric proanthocyanidins, 1642
 Oligomerisation, 4947
 Oligomerization, 2646, 4051
 Oligomers, 2451
 Oligosaccharide hydrolysis, 5089
 Oligosaccharide structure, 3381
 Oligosaccharide synthesis, 2945
 Oligosaccharyl transferase, 2281
 Oncogene, 2850, 2860
 Oncostatin M, 5880
 Ontogenesis, 2836
 Ontology, 4303
 Operon, 6909
 Optical biosensor, 5681
 Optical sectioning, 2201
 Optimal growth temperature, 3895
 Order parameter, 682
 Organic acidurias, 2347
 Organic anion transport, 1103
 Organic cation, 155
 Orphan G-protein-coupled receptor, 5003
 Orphan receptor, 2667
 Ortholog, 1472
Oryza sativa, 3315
 Osage orange fruit, 6915
 Oscillation, 4979
 Osmofragility, 1691
 Osmoregulatory thermodynamics, 720
 Osmotic stress, 77, 3469
 OST1 kinase, 4160
 Osteoblast, 5203
 Osteoblasts, 121
 Osteoclast differentiation, 5661
 Osteoclastogenesis, 1601
 Osteogenesis, 4121
 Osteoporosis, 1251, 5723
 Ouabain, 2769
 OV-90 cells, 245

Ovarian cancer, 443
 Ovarian dysgenesis, 4195
 Ovariectomy, 1251
 Ovary, 1607
 Over-expression, 1723
 Overexpression, 4261
 Overlapping genes, 6909
 Oxidase, 4613
 β -Oxidation, 1139
 ω -Oxidation, 3794
 Oxidative burst, 4491
 Oxidative phosphorylation, 517, 2153
 Oxidative stress, 9, 479, 1485, 1571, 1903, 2117, 2731, 2788, 2910, 2994, 3282, 3845, 6093, 6161, 6455, 6596, 6669
 Oxidized LDL, 849, 3321
 Oxidized phospholipids, 5155
 Oxidized protein, 2910
 Oxidoreductase, 1897
 Oxidosqualene cyclase, 5143
 Oximolysis, 3167
 OxLDL, 2421
 2-Oxo acid dehydrogenase complex, 3551
 2-Oxoglutarate-dependent dioxygenase, 1642
 Oxoproline, 4382
 OXPAT, 5484
 Oxyanion-hole, 1465
 Oxygen, 1911, 3731
 Oxygen evolving complex, 3605
 Oxygen uptake, 4031
 Oxygenase, 1911
 Oxylinin, 4188
 4G/5G polymorphism, 4469
 6-Pyruvoyltetrahydropterin synthase, 4900
 14-3-3, 1531
 14-3-3 and phosphopeptide, 5681
 14-3-3 protein, 1932
 14-3-3 ζ , 305

P

P- β -Catenin phosphorylated peptide, 5411
 P- β -Catenin/antibody complex, 5411
 P-glycoprotein, 998, 1042, 1056, 1094, 4953
 P-type ATPase, 5500
 P-type ATPases, 607
 P/Q-type calcium channels, 5733
 P_{II} protein, 5232
 pI, 717
 p110C, 813
 p130Cas, 175
 p150^{GluE}, 1327
 p205, 1205
 p21, 1205
 p21 induction, 3687
 p21 waf, 2371
 p21-CDK2 interaction, 3687
 p21-Activated kinase 1, 813
 p21^{WAF1/CIP1}, 6100
 p21WAF1, 5177
 p27, 1716
 p28, 6357
 p38, 974, 4984
 p38 MAP kinase, 5177
 p38 MAPK, 1571
 p38-MAPK, 3539
 p38^{MAPK}, 2512, 6455
 P450, 4188
 p47^{phox}, 261
 p53, 300, 345, 642, 940, 1205, 1235, 1753, 1766, 1925, 2021, 2371, 3006, 3013, 3624, 3787, 4387, 4401, 4911, 5753, 6501
 p53RFP, 940
 p63, 4544
 p70 S6 kinase, 107

- P700, 4959
 p8, 1571
 PAAD/PYRIN/DAPIN, 3083
 Packaging, 6132
 PAF, 3006
 PAH gene expression, 1697
 PAI-1, 2917
 Pain, 1360, 4306, 5728
 Palmitoyloleoylphosphatidylglycerol, 144
 Pan-genome, 2985
Panax ginseng, 5143
 Pancreas, 6701
 Pancreatic β -cell, 585, 6977
 Pancreatic cancer, 1733, 5836
 Pancreatic islet, 285
 Panicovirus, 2591
 Pannexin, 239
 Pannexin family, 2178
 Panton-Valentine leukocidin, 2323
 Papillomavirus, 1919
 Parabutopirin, 6206
Paracoccus denitrificans, 5988
 Paralog, 4900
 Paralysis, 6317
 Paraquat, 3845
 Parasite, 2968, 5023
 Parasitic protozoan, 5306
 Parathyroid hormone, 291
 Parathyroid hormone receptor-1, 1872
 Parathyroid hormone-related peptide, 291
 Parkinson's disease, 474, 2147, 3657, 4479, 5807
 PARP, 703
 Parthenogenote, 5377
 Partial least squares-linear discrimination analysis (PLS-LDA), 6837
 PAS proteins, 3731
 Paspaline, 1625
 PAT proteins, 5484
 PAT-1, 5484
 Patch clamp, 1360, 2141
 Pathogen, 2567
 Pathogenesis, 5467
 Pathogenic bacteria, 2976
 Pathogens, 2962
 Pausing, 661
 Pax, 3769
 Paxilline, 1625
 PBI domain, 341
 PC-TP, 5436
 PCD, 6880
 PcINO1 gene, 3980
 PCWH, 1635
 PDE, 4126
 PDGF, 2523, 6259
 PDGF-BB, 6259
 PDGFRA, 6769
 PDK1, 2135, 5845
 PDX-1, 711
 PDZ, 6948
 PE/PPE, 1285
 Pectin methylesterase, 3329, 3872
 PEDF, 2788
 PEG, 505
 Pemphigus, 3276
Penicillium marneffeii, 3409
Penicillium paxilli, 1625
 PEP-1 peptide, 6755
 Peptide, 1919
 Peptide array, 885
 Peptide flip, 2653
 Peptide isomerase, 1587
 Peptide loading complex, 3112
 Peptide motif, 6948
 Peptide nucleic acid, 1451
 Peptide scaffold, 5979
 Peptide-loading complex, 1156, 4091
 Peptidoglycan *N*-acetylmuramoylhydrolase, EC 3.2.1.17, 1877
 Peptidyl-prolyl *cis*-*trans* isomerase A of *Mycobacterium tuberculosis*, 6846
 Peptidyl-prolyl isomerase, 1822, 3671
 Peptidylglycine α -amidating enzyme, 521
 Peptidylprolyl isomerase, 2761
 Perilipin, 5484
Period, 2
 Periodontitis, 613, 3601
 Peripheral circadian clocks, 2836
 Periplasmic proteins, 216
 Permeability, 2160
 Peroxidase, 4311
 Peroxidation, 685
 Peroxidized cardiolipin, 6311
 Peroxiredoxin, 1269, 5016, 6055
 Peroxisomal inherited disorder, 3551
 Peroxisome, 46, 1139, 2092
 Peroxisome proliferator-activated receptor γ , 4121, 6885
 Peroxisomes, 5917
 Perturbed angular correlation of γ -rays, 6861
 PEST sequence, 2285
 Pex5p, 46
pfa genes, 6690
pfaE gene, 4423
 Pfam, 4005
 PFK-2, 3308
pfkfb3, 3308
 PGC-1 α , 4661
 PGSE, 3911
 pH, 717
 pH homeostasis, 3161
 pH-dependence, 6861
Phaeocystis, 2201
 Phage display, 4807
 Phagocytosis, 4923, 5306
 Pharmacophore, 1447
 Phase I introns, 1621
 Phase II detoxification, 4587
 Phase portraits, 3511
 Phase separation, 720
Phaseolus vulgaris, 1541
 PHD, 6903
 Phenol, 1183
 Phenylketonuria, 1697
 Phenylpropanoid metabolism, 6366
 Pheromone-protein interaction, 682
 PHI-1, 5779
 PhoP-binding site, 5328
 Phosphagen kinase, 3835
 Phosphatase, 1789
 Phosphatase and tensin homolog deleted on chromosome 1, 3121
 Phosphate starvation, 5885
 Phosphate translocator, 4246
 Phosphatidic acid, 82
 Phosphatidylcholine, 5430
 Phosphatidylcholine-specific phospholipase C, 4911
 Phosphatidylglycerol, 144, 3059, 4959
 Phosphatidylinositol 4-phosphate, 6933
 Phosphatidylinositol 4-phosphate 5-kinase, 6933
 Phosphatidylinositol kinases, 5917
 Phosphatidylinositol phosphatases, 5917
 Phosphatidylinositol polyphosphates, 82
 Phosphatidylinositol-3-kinase, 6399
 Phosphatidylinositolphosphate, 4632
 Phosphoglycerate kinase, 2698
 Phosphoinositide binding, 6903
 Phosphoinositide bisphosphate, 5917
 Phosphoinositide metabolism, 6789
 Phosphoinositide monophosphate, 5917
 Phosphoinositides, 2430, 5917
 Phospholipase A₂, 4114
 Phospholipase A₂, 6317
 Phospholipase C, 291, 4114, 5676
 Phospholipase D, 5647, 5676, 6224
 Phospholipid, 82, 4479
 Phospholipid membranes, 3201
 Phospholipid transfer proteins, 5436
 Phospholipids, 5450
 Phosphopantetheinyl transferase, 4423
 Phosphoproteins, 2553
 Phosphoproteomics, 4764
 Phosphoryl group transfer, 6247
 Phosphorylation, 107, 179, 199, 305, 351, 649, 932, 1417, 1531, 2059, 2922, 3206, 4015, 4602, 4764, 4835, 5067, 5096, 5676, 5797, 6477

- Phosphotyrosine, 15
 Photo-crosslinking, 63
 Photoactivatable phospholipid, 607
 Photoaffinity crosslinking, 1872
 Photoaffinity labeling, 6741
 Photochemical damage, 3229
 Photochemical internalisation, 5739
 Photochemical internalization, 1451
 Photodynamic therapy, 5739
 Photoinhibition, 6929
 Photoperiodism, 1193
 Photoprotection, 2053
 Photoprotein, 1977
 Photoreceptor, 437, 1479
 Photoreceptors, 4618
 Photosynthesis, 1547, 3457, 3841, 4959, 5257, 6055, 6967
 Photosynthetic, 6509
 Photosynthetic bacteria, 6644
 Photosystem, 2166
 Photosystem I, 3023, 4959, 6485
 Photosystem II, 3605, 4567, 4959, 6929
 Phrenic nerve, 2011
 Phycobilisome, 3029, 3457, 3823
 Phycocyanin, 3029
 Phycocyanobilin, 1333
 Phycoerythrobilin, 1333
 Phylogenetic tree, 380
 Phylogeny, 3344
Physcomitrella patens, 6175
 Phytanic acid, 2092, 3551, 3794
 Phytoalexin, 5666
 Phytobilin, 3823
 Phytochelatin synthase, 6384
 Phytochrome, 1333
 Phytochromobilin, 1333
 Phytohemagglutinin, 6819
 Phytol, 2092
 PI-3 kinase, 6977
 PI-TP, 5436
 PI3-K, 4889
 PI3K, 2477, 6769
Pichia pastoris, 149, 5215
Picrophilus torridus, 1198
 Pifithrin- α , 3013
 Pig kidney, 4317
 Pigment-protein, 3841
 PII T-DNA insertion mutant, 2015
 PIKfyve, 6948
 Pin1, 3237
Pinctada margaritifera, 2435
 PIP₂, 5733
pipe, 2269
Pisum sativum, 6509
 PKA, 4865, 5690
 PKC, 6623
 PKC delta, 2547
 PKD, 121
 PKU mutations, 1697
 Plant ABC transporter, 1183
 Plant defensin, 1903
 Plant development, 1010, 1094
 Plant disease resistance, 4236
 Plant mitochondria, 268, 5641
 Plant polyphenols, 533
 Plant sigma factors, 6617
 Plants, 5167
 Plasma membrane, 1112, 1740, 2409
 Plasma membrane Ca²⁺ pump (PMCA), 1576
 Plasma proteins, 3229
 Plasmepsin, 5910
 Plasmid pOAD2, 5054
 Plasminogen activator inhibitor-1, 4469
Plasmodium falciparum, 2653, 6343
Plasmodium, 1988, 6083
 Plastocyanin, 1729, 2166, 6187, 6861
 Plastoquinone-9, 5357
 Platelet-derived growth factor, 4371
 Platypus venom peptide, 1587
 Pleiotrophin, 4051
 Plenty of SH3s, 3296
 Plexin B3, 3489
 Ploidy, 4727
Plum pox virus, 5822, 5829
 PLZF, 4073, 6649
 PMCA, 3900
³¹P NMR, 4872
 Poikilotherms, 5477
 Point mutation, 2741, 4069
 Polarity, 4382, 5705
 Pollen-stigma interaction, 425
 Polo-like kinase 1, 3624
 Poly-extreme, 2646
 Poly-proline II, 2033
 Polyamine, 6783
 Polyamines, 5363
 Polycomb group, 6233
 Polycystic disease, 923
 Polyene antibiotics, 2677
 Polygalactouronases, 723
 Polyglutamine, 2335
 Polymorphism, 1833
 Polymorphisms, 1064
 Polypeptide chain initiation, 1766
 Polyphenolic, 5247
 Polyphosphoinositide 5'-phosphatase, 633
 Polypurine tract, 3545
 Polysaccharide, 1649
 Polysialic acid, 4723
Polytomella, 3427
 Polyunsaturated fatty acid, 149
 Polyunsaturated fatty acids, 1946, 4587
 POMGnT1, 581
 Pompe disease, 4365
Populus, 77
 Pore-forming, 5572
 Portal protein, 6132
 Post-transcriptional gene silencing, 6579
 Post-translational modification, 603, 3860, 4667, 4827
 Post-translational regulation, 6533
 Post-translational translocation, 3353
 Potassium channel, 1999, 3525
 Potassium channels, 5059
 Potyvirus, 5822
 POU, 3769
 Pox-like genes, 4473
 PP1c, 5779
 PP2C γ , 6100
 pp60^{Src}, 1227
ppil, 649
 PPIase, 3237
 PQ oxidized, 233
 PQ reduced, 233
 PQBP-1/PQBP1, 2335
 pRB, 1753
 Pre T cell receptor, 5845
 Pre-B-cell colony-enhancing factor, 4105
 Pre-malignant apocrine lesions, 2935
 Preadipocyte factor-1, 2421
 Prebiotic chemistry, 363
 Prediction, 2567, 6800
 Prediction constrains, 1017
 Preimplantation, 1801
 Preimplantation development, 6521
 Prenyl transferase, 1625
 Prenyltransferases, 5357
 Presenilin-1, 4015
 Primary afferent, 6629
 Primary transport, 1183
 Primer-template, 6496
 Priming, 4491
 Prion, 2603, 4097, 4231
 Prion protein, 878, 2033, 2488, 5565
 PRMT1, 6603
 Pro-inflammatory cytokine, 731
 Pro-rich region, 3505
 Proaminopeptidase I, 4632
proB, 6247
 Procaspase-3, 3699
 Processing, 1064, 3699
 Processivity, 661, 3780

- Procoagulant activity, 5313
 Procyanidins, 155
 Programmed cell death, 2381, 3013, 3498, 4746
 Proinflammatory cytokine, 4010
 Proinflammatory cytokines, 3953
 Prokaryotes, 6763
 Prokaryotic expression, 4895
 Proliferation, 121, 900, 2523, 4332, 4737, 4793, 5203, 6977
 Proline isomerization, 5029
 Proline synthesis, 6247
 Proline-rich protein, 1541
 Prolyl hydroxylation, 3731
 Prolyl peptidase, 1581
 Promoter, 539, 1479, 1702, 5044
 Promoter cluster, 6617
 Prooxidant action, 533
 Prosaposin, 5456
 Prostaglandin, 373
 Prostaglandin D₂, 6885
 Prostaglandin F_{2α}, 2512
 Prostate cancer, 1659, 2294
 Protease, 1581, 4709
 Protease inhibitor, 6570
 Proteases, 6047
 Proteasomal degradation, 3565, 6981
 Proteasome, 2503, 2609, 2910, 3401, 3731, 3921, 4582, 6100
 Proteasome expression, 3989
 Protective antigen, 4172
 Protein, 5803
 Protein aggregation, 5941, 6471
 Protein aggregation rate, 1681
 Protein biosynthesis, 4576
 Protein carbonylation, 2731
 Protein complex reconstitution, 6898
 Protein crystallography, 6423
 Protein degradation, 3921
 Protein denaturation, 6763
 Protein disulfide isomerase, 2233
 Protein disulphide isomerase, 2216
 Protein dolichylation, 6343
 Protein dynamics, 1685
 Protein engineering, 3445
 Protein evolution, 5351
 Protein feature sequences, 5321
 Protein folding, 2129, 2584, 4861, 5029, 6338, 6471
 Protein hydration, 2488
 Protein import, 3966, 6509
 Protein interaction, 1235
 Protein interaction network, 1891
 Protein interaction sites, 380
 Protein kinase, 179, 6083
 Protein kinase I, 51
 Protein kinase A, 305, 6501
 Protein kinase B, 4371
 Protein kinase C, 121, 2458, 2686, 4057, 6206
 Protein kinase CKII, 988
 Protein localization, 2388
 Protein matrix, 6187
 Protein misfolding, 4231
 Protein modelling, 2928
 Protein oxidative folding, 656
 Protein phosphatase, 4521
 Protein phosphatase 2C, 4691
 Protein phosphatase type 2A, 3631
 Protein phosphatase-1, 1425
 Protein phosphatase-2A, 2503, 3973
 Protein phosphorylation, 1239, 2388
 Protein polymerization, 4941
 Protein prenylation, 6343
 Protein primary structures, 5321
 Protein receptor, 2011
 Protein regulation, 2609
 Protein restriction, 4150
 Protein S7, 5858
 Protein sequence, 723
 Protein splicing, 1853
 Protein stability, 1685, 2584, 3083, 3867, 4224
 Protein structure, 1231, 2071, 4224, 5953
 Protein subunit of telomerase complex, 4683
 Protein superfamily, 1010
 Protein synthesis, 6375
 Protein targeting, 649
 Protein therapy, 6755
 Protein topography, 6797
 Protein topology, 5263
 Protein trafficking, 968
 Protein transduction, 6755
 Protein translation, 2755
 Protein translocation, 46
 Protein transport, 3107
 Protein tyrosine kinase, 839
 Protein–DNA interaction, 2109
 Protein–lipid interaction, 6749
 Protein–protein interaction, 58, 261, 1285, 2129, 3631, 4392, 6561, 6649
 Protein–protein interactions, 2041
 Protein-imprinted polymer, 2750
 Protein-kinase-C, 2258
 Proteinase, 1269, 2577
 Proteinase inhibitor gene, 948
 Proteinase K, 72
 Proteinase specificity, 5713
 Proteolysis, 211, 545, 4176, 6929
 Proteome, 717
 Proteomics, 1257, 2935, 2985, 3229, 6527
 Proto-splice site, 1621
 Protochlorophyllide reductase, 6151
 Proton pump, 4613
 Proton translocation, 1350
 Protoporphyrin IX, 6275
 PrP^C, 4097
 PrrB, 3206
 PRYSPRY, 99
 PsbU, 2117
Pseudomonas aeruginosa, 982, 3883, 6921
 Pseudopod, 4923
 PSI–LHCI Supercomplex, 233
 PSII, 2797, 6055
 Psychrophilic, 4639
 Pterocarpan reductase, 5666
PTPN11, 2477
 Ptpz/PTP ζ /RPTP β , 4051
 Puberty, 3485
 PUGNAc, 3051
 Pulmonary artery, 900
 Pulmonary fibrosis, 4515
 Pulse field gradient NMR, 4166
 Pulse radiolysis, 3417
pur cluster, 1807
pur3 gene, 1807
 Purinergic P2X7 receptor, 131
 Purinergic receptor, 239
 Purkinje cell, 6145
 Puromycin biosynthesis, 1807
 Putative starch-binding domain, 6349
 PWD, 4872
 PXA1, 1139
 Pyridinium aldoxime, 3167
Pyrococcus furiosus, 34
 Pyrrolysine, 6695
 Pyrrolysyl-tRNA synthetase, 6695
 Pyruvate dehydrogenase, 736
 Pyruvate dehydrogenase complex, 2553
 Qilang Mountain, 6242
 QT prolongation, 1999
 QT-interval, 1999
 Quantal release, 463
 'Quantal' Ca²⁺ release, 4979
 Quantitative biology, 368
 Quantitative cytochemistry, 2123
 Quantitative RT-PCR, 890
 Quantitative trait locus, 5953
 Quantitative-structure–activity-relationship, 723
 Quaternary structure, 1485
 Quenching, 2471
 Quercetin, 469
 Quinol oxidoreductase (cytochrome *bc* complex), 2191
 Quinone, 2147, 4567
 Quorum sensing, 561, 6921
 QX-314, 6027

R

- Rab5, 6972
- Rab14, 5241
- Rab27a, 5863
- Rac-1, 3335
- Rac1, 3565
- Radical SAM, 363
- Radiosensitivity, 4353
- Raf kinase inhibitory protein, 6405
- Raf-1, 575, 6405
- Raft, 5572
- Rafts, 5705
- Raman spectroscopy, 3841, 4953
- Random mutagenesis, 5054
- Rapeseed, 948
- Rapid delayed rectifier, 1999
- Rat, 4150, 4889
- Rat brain subventricular zone, 4430
- Rat heart mitochondria, 6311
- Rat tissue, 988
- Rate-constants, 4639
- Rational design, 1447
- RAW 264.7, 2723
- Rb, 1205
- RBCK, 2609
- Reaction center, 2191
- Reaction centre, 6967
- Reactive oxidative species, 5189
- Reactive oxygen species, 1371, 2517, 2523, 4495, 5125, 5661
- Real time PCR, 3237
- Real-time RT-PCR, 849
- Receptor, 115, 291, 568, 3937, 4737
- Receptor for advanced glycation end products, 3451
- Receptor kinase, 2968
- Receptor regulation, 41
- Receptor serine/threonine kinase, 2811
- Receptor site, 4508
- Receptors, 4172
- Recognition specificity, 425
- Recombinant protein expression, 6471
- Recombination, 1631
- Recombinogenic LIRs, 1277
- Reconstitution, 1164
- RecQ, 6938
- Recurrence quantification, 4861
- Red blood cell, 5185, 6527
- Red blood cell membrane, 4485
- Redox, 484, 839, 3823, 6596
- Redox balance, 2712
- Redox potential, 3206, 4567
- Redox regulation, 2273, 2830, 3631
- Redox signalling, 1269
- Redox state, 6391
- Redox status, 5661
- Redox-regulation, 4086
- Refolding, 5815
- Refsum disease, 3794
- Reg, 585
- RegB, 3206
- Region 1.1, 3439
- Regulation, 1827, 2584, 4382
- Regulation of transport, 1023
- Regulation of visfatin expression, 6635
- Regulatory light chain, 2059
- Regulatory networks, 3511
- Regulatory T cell, 4274
- Regulatory volume increase, 6513
- Regulon, 2567
- Release factor, 5641
- Remodeling, 4757
- Renal fibrosis, 4021
- Repair, 1631, 6938
- Repetitive stress, 278
- Replication, 575
- Replicative senescence, 3989
- Reporter, 393
- Resistance, 2323, 6813
- Resistin like molecule β , 900
- Resonant waveguide grating, 5681
- Respiration, 1350, 2830, 5084
- Respiratory tract, 5150
- Restrained molecular dynamics, 5411, 6199
- Restraint stress, 3995
- Restriction endonuclease, 1665, 6115
- RET, 839
- Retaining, 3905
- Reticulon, 5559
- Retina, 331, 1479, 2178
- Retinal degeneration, 4200
- Retinal ganglion cells, 331, 2178
- Retinoic acid, 627, 3361
- Retinoid, 3687, 4200
- Retroviruses, 661
- Rev, 6155
- Reverse engineering, 3511
- Reverse signaling, 1601
- Reverse transcriptase, 661, 5363
- Reverse transcriptase-RNase H, 3545
- Reverse vaccinology, 2985
- Reversible phosphorylation, 3631
- Rhizobia, 1780
- Rho GTPase, 3375
- Rho-independent terminator, 6909
- Rho/ROCK, 4252
- RhoA, 3565
- Rhodamine, 2577
- Rhodobacter capsulatus*, 6151
- Rhodobacter sphaeroides*, 6967
- Rhodopsin, 229
- Ribonuclease A, 4703
- Ribonuclease family, 5029
- Ribonucleotide reductase, 5167
- Ribosomal protein, 2630
- Ribosomal protein L32, 1827
- Ribosomal protein S1, 6797
- Ribosomal protein S3, 6755
- Ribosome, 1222, 6797
- Ribosome assembly, 3804
- Ribosome biogenesis, 5858
- Ribosome expansion segment, 3804
- Ribosome nascent chain complex, 72
- Ribosomes, 6062
- Rice, 955, 5111
- Rilmemidine, 3070
- Ring1B, 6233
- RLIP76, 2258
- 18S rRNA, 2630
- RNA amplification, 331
- RNA binding, 867, 4947, 5993
- RNA binding protein, 4160, 4527
- RNA editing, 268, 2301
- RNA export, 6155
- RNA interference, 2414, 2896, 3246, 3375, 5185, 5406, 6132
- RNA polymerase, 1497, 3439, 5044
- RNA polymerase switch, 6617
- RNA processing, 4527
- RNA replacement, 5033
- RNA silencing, 3872
- RNA structure, 2591
- RNA triphosphatase, 867
- RNA-protein interactions, 5858
- RNA-binding, 5077
- RNA/DNA binding protein, 4143
- RNAi, 1988, 2195, 2365, 2442, 3694, 3811, 4154, 4723, 5836
- RNA Motif, 6909
- Rolipram, 4126
- Root plastids, 6509
- ROS, 4815, 4911, 6612
- ROS balance, 4539
- Rosiglitazone, 6837
- Rotenone, 6105
- RPE, 4200
- RPE65, 4200
- Rsp5 ubiquitin ligase, 3433
- Rundown, 5733

Rv2430c, 1285
 Rv2431c, 1285
 Rybp, 6233

S

- S3–12, 5484
 S6, 5733
 S6K1, 5845
 S-Adenosylhomocysteine, 2803
 S-Adenosylmethionine, 2803
Saccharomyces cerevisiae, 82, 1971, 3427, 3433, 6428, 6880
 Safety, 6777
 SAGE tag, 6721
 Salicylic acid, 3498
 Salinity stress, 3980
 Salivary gland, 1988
Salmonella, 1709
 Salt bridge, 5392
 Salt stress, 4851, 5251, 6783
 Salt tolerance, 1971
 Salt-stress response, 1239
 Saposins, 5456
 Sarcoplasmic reticulum, 2247
 Sarcosyl insoluble tau, 3582
 SARS, 2577, 5612, 6807
 SARS 8b, 3643
 SARS ORF 8, 3643
 SARS-associated coronavirus, 2414
 SARS-CoV, 3192, 3829
 SARS-CoV membrane protein, 968
 Satellite cells, 4042
 Saturation mutagenesis, 912
 Saturation transfer difference (STD), 5941
 Scaffolding protein, 4591
 Scanning probe microscope, 3961
 Scavenger receptors, 3321, 5588
S. cerevisiae, 2553
Schistosoma japonicum, 3677
 Schizophrenia, 2358
Schizophyllum commune, 4597
Schizosaccharomyces pombe, 1827, 2409, 4457
 Sclareol, 1123
 Scorpion toxins, 4508
 SCP-2, 5436
 Scrambled isomer of CTX-III, 656
 Scrapie, 2603
 Sea urchin, 4713
 Sea urchin egg, 2755
 Sec insertion sequence element, 5189
 Sec23, 5215
 SecA, 3353
 2-sec-butyl-4,5-dihydrothiazol, 682
 SECIS-binding protein, 5189
 Secondary metabolism, 4501
 Secondary metabolite, 1183
 Secondary structure, 23
 SECRET AGENT, 5829
 β -Secretase kinetics, 6550
 Secretory granules, 2201
 Segmental isotopic labelling, 1853
 Seipin, 2281
 SELDI, 345, 3391
 Selective constraint, 1231
 Selenoprotein K, 5189
 Self-assembly, 1592, 5105, 6749
 Self-incompatibility, 425
 Semiquinone, 2534
 Semliki Forest virus, 1502
 Senescence, 988, 1269, 4911, 5753, 6455, 6669
 Sense post-transcriptional gene silencing, 4154
 Sensory, 2853
 Sepsis, 5172
 Sequence alignment, 1049
 Sequence maps, 723
 Sequence-specific RNA degradation, 3545
 Ser/Thr protein kinase-inhibitor complex, 3018
 Serine carboxypeptidases, 6366
 Serine palmitoyltransferase, 6217
 Serine phosphorylation, 5880
 Serine protease, 545, 1685, 2227, 2269, 5406, 6570
 Serine protease inhibitor, clade E, member 2, 3257
 Serine proteinase, 4639
 Serotonin, 5371, 6629
 Serpin, 3477, 4709
 Serum aminotransferase, 741
 Sesquiterpene, 1411
 Severe acute respiratory syndrome, 1417, 3643, 3799
 Sex determination, 3715
 Sexual character, 1607
 Sexual cycle, 3409
Sfi I, 5772
 SH2-domain ITIM motif, 15
 SH3, 4288
Shaker, 5009
S haplotype, 425
 SHEP1, 175
 Short hairpin RNA, 6132
 Short-chain dehydrogenase/reductase, 5666
 SHP-2 phosphatase activity, 2477
 sHSP, 5941
 Sialyl Lewis X, 6069
 Sialylation, 6649
sigB gene, 319
sigD gene, 319
 Sigma (σ) factor, 319
 Signal peptide, 1621
 Signal recognition particle, 3107
 Signal sequence, 3353
 Signal transducer and activator of transcription 3, 93
 Signal transducer and activators of transcription 3, 3943
 Signal transduction, 341, 2341, 3301, 4591, 5023, 5845, 6015
 Signaling, 904, 1795, 2869, 2879, 4435
 Signalling, 1911, 2962, 2968
 Sill, 5237
 Silencing, 918
 Single cell gel electrophoresis, 3995
 Single exonic genes, 1472, 4303
 Single molecule spectroscopy, 5257
 Single-molecule force measurement, 3961
 Single-stranded DNA, 5671
 Sir2, 5875
 siRNA, 1553, 1795, 2258, 2414, 3545, 3694, 4401, 6069, 6224, 6579
 Site specificity, 6391
 Site-directed mutagenesis, 1064, 1103, 1833, 1872, 2707, 3595, 4065, 5198, 5899, 6247, 6338, 6533, 6741
 Site-specific recombination, 4346
 Sitosterolemia, 6139
 Size measurement, 4166
 Skeletal muscle, 691, 878, 4889, 5450
 Skp1-Cullin1-F box protein complex, 431
 Skp2, 431
 Slingshot, 1789
 Slow fibres, 878
 Slow inactivation, 6027
 Smad transcription factor, 2811
 Smad6, 6603
 Smad7, 6603
 Small angle X-ray scattering, 4166
 Small cell lung cancer, 4252
 Small GTPase, 4097
 Small GTPases, 3335
 Small heat shock protein, 3029
 Small interfering RNA, 410, 553, 4121
 Small molecule, 1649, 2598
 Small ubiquitin-like modifier, 1635
 Small ubiquitin-related modifier, 1215
 Small-angle X-ray scattering, 2698
 Smooth muscle, 63
 Smooth muscle cell, 4371
 Smooth muscle cells, 900
 Snake neurotoxins, 6317

- Snake venom, 4417
 Snapin, 6477
 SNAREs, 2238
SNF2, 2615
 SNPs, 2071
 SOCS, 2609
 Sodium butyrate, 3035
 Sodium channel, 1360, 3525, 4508, 6825
 Sodium dodecyl sulfate, 4777
 Sodium pump, 607
 Solid-state NMR, 6685
 Solubility, 720
 Soluble *N*-ethylmaleimide-sensitive fusion protein attachment protein receptor, 6477
 Soluble guanylyl cyclase, 4205
 Soluble RAGE, 3451
 Somatic cell genetics, 998
 Somatic embryogenesis, 5009
 Somatic instability, 5208
 SopE, 1709
 Sorting, 5705
 Sorting nexin 5, 4409
 Sorting nexin 6, 3558
 Sorting signal, 1164
 SOS transcripts, 6617
 SOUL, 6447
 Sox, 3769
 SOX6, 1215
 Soybean, 4934
 Spätzle-processing enzyme, 5406
 Sp1, 4645
 SP600125, 703
 SPAG4, 1263
 Spatial sequence profile, 380
 SPCA, 3900
 Specificity, 1581, 2160
 Spectrophotometry, 3167
 Sperm, 1515
 Sperm cells, 3731
 Spermatogenesis, 2458, 6442
 Spermatosome, 2183
 Spermidine, 1222
 Spermine, 6783
 S-phase, 2512
 S-phase arrest, 6100
 S phase arrest, 6076
 Sphingolipid, 1903, 5456, 5467
 Sphingolipid biosynthesis, 6217
 Sphingolipids, 4607, 5430, 5510
 Sphingomyelin, 4751, 5456
 Sphingomyelinase, 5456
 Sphingosine, 5467
 Sphingosine kinase, 4607, 6047
 Spike protein, 5612
 Spinal cord, 6629
 Spindle assembly checkpoint, 2888
 Spindle organization, 782
 Spindle-assembly, 4727
 Splicing, 4449
 Splicing activity, 1592
 Splicing factor, 399
 Splicing regulation, 1339
 SPM, 4757
 Spontaneous mutations, 736
 Spontaneously hypertensive rat, 2317
 Squamous cell carcinoma, 2774
 Src, 2603, 6769
 SREBP, 4929
 70S ribosomal proteins, 3638
 SRY, 3715
 SRY-related HMG box-containing factor 10, 1635
 Sse1, 168
 Stabilisation, 345
 Stability, 1780
 Stable dissociation, 1222
Staphylococcus aureus, 273, 1817
 Starch, 5947
 Starch phosphorylation, 4872
 Starch synthesis, 6741
 START domain, 5953
 Starvation, 2623
 STAS domain, 3818
 STAT-3, 2717
 Stat3, 199, 5880
 State I and II, 233
 State transitions, 233
 Statistical mechanics, 720
 STD NMR, 5411
 Steady-state, 5137
 Stefin A, 4195
 Stem cell, 27, 2860
 Stem cells, 5759, 6109
 Stereoselective, 324
 Steroid hormones, 6139
 Steroidogenic acute regulatory protein-related lipid transfer domain, 191
 Sterol regulatory element binding protein, 410
 Sterol synthesis, 5552
 Stochastic variation, 6521
 Stop transfer sequence, 1953
 Stores, 463
 Strain-dependent caspase activation, 3739
 Strategy, 415
 Stratum corneum, 5456
Streptococcus mitis, 1959
Streptococcus pneumoniae, 1959
Streptomyces, 912, 1807, 6338
 Streptomycin operon, 5858
 Stress, 960, 1320, 6033
 Stress protein, 3433
 Stress response, 2409, 3433
 Stress tolerance, 6537
 Structural biology, 2071, 2985
 Structural change, 351
 Structural comparison, 2488
 Structural domain, 6961
 Structural genomics, 4005
 Structural proteomics, 6898
 Structural stability, 3835
 Structural transition, 2584
 Structurally homologous proteins, 5029
 Structure, 5815
 Structure determination, 4576
 Structure–flexibility–function relationship, 3638
 Structure–function, 6961
 Structure–function analysis, 168
 Structure–function relationship, 3595
 Structure-function relationship, 6655
 Structures, 795
 Sub-compartmentalization, 5628
 Subcellular compartment, 717
 Subcellular localization, 955
 Subsite maps, 5049
 Subsite mutants, 5049
 Substrate conformational selection, 2170
 Substrate effects, 2698
 Substrate specificity, 912, 1536, 2707, 3059, 3595, 5357
 Substrate-assisted catalysis, 1036
 Subtilisin, 6007
 Subunit C, 2006
 Subventricular zone, 3462
 Sucrose, 5947
 Sucrose density gradient centrifugation, 1222
 Sucrose phosphorylase, 3905
Suf, 5044
SufC, 137
 Sugar transport protein, 2381
 Sulfate transporter, 206
Sulfolobus tokodaii, 1536
 Sulforaphane, 1771
 SUMO-1, 6155
 SUN domain, 1263
 Supercomplex, 5988
 Superfamily of bacterial, fungal, and plant heme peroxidases, 6655
 Superoxide, 261
 Superoxide dismutase, 1257, 1485
 Superoxide radical, 1691
 Support vector machine, 6169
 Support vector machines, 380
 Suppression subtractive hybridization, 1747

Suprachiasmatic nucleus, 2836
 Suprachiasmatic, 6665
 Surface charge, 2041
 Surface plasmon resonance, 2402, 3386, 5993, 6405
 Survival, 6224
 Suspension cell cultures, 4311
 SV2, 2011
 Sweetness-inducing activity, 620
 Swi-Snf, 4757
 SWI/SNF, 5851
 Swi/Snf complex, 2615
SWI1, 2615
 Switching mechanism, 5965
 SWTY, 1531
 Symmetric restraints, 6199
 Synaptic vesicles, 5894
 Synaptogenesis, 4723
 Synaptotagmin, 2238
 Synchronization, 4979
Synechococcus, 5885
 Synergism, 1733
 SynGAP, 831
 Synonymous codon usage, 3895
 Synonymous substitution, 3895
 Synphilin-1, 4479
 Synthetic gene, 2495
 Synthetic peptide, 63
 Synthetic peptides, 1383
 α -Synuclein, 72, 1775, 2147, 3091, 3657, 4479
 Systematic evolution of ligands by exponential enrichment, 4544
 Systemin, 2540
 Systems biology, 822, 3665

T

τ , 211
 T cell receptor, 5845
 T lymphocytes, 6819
 T-fluorescein, 6423
 T-lymphocytes, 5580
 Tafazzin, 5450
 Talin, 2027
 TAM67, 691
 Tannic acid, 6623
 Tapasin, 4091
 Target flexibility, 5130
 Target selection, 4005
 Targeting, 3649
 Targeting peptide, 3966
 Taste buds, 5371
 Taste-modifying protein, 620
 Tau, 107, 2503, 2922, 3973, 4602, 6269
 Tau cascade, 3582
 Tau hyperphosphorylation, 5925
 Tau kinases, 5925
 Tau phosphorylation, 3121
 Tau protein, 4842
 Tauopathies, 2922
 Taxol, 2371
 TC1(C8orf4), 3519
 Tcf1, 1227
 Tcf4, 1227
 TCR signaling, 5845
 TDP43, 1339
 Tec kinase, 2691
 Teleost fish, 4996
 Telomerase, 4683, 4713, 6455, 6819
 Telomere, 4713
 Tem cells, 6062
 Temperature, 2797
 Temperature-sensitive mutants, 1502
 Tenascin-X, 6281
 Terpenoid, 1183
 Testis, 1607, 2458, 4266, 6109, 6442
 Tetrahydrobiopterin, 1697, 4900
 Tetrahydrogeranylgeranyl, 6644
Tetrahymena group I intron ribozyme, 1592
 Tetratricopeptide repeat domain, 2761
 TGF β , 2811, 4784
 Tgf β 2, 4560
 Tgf β 3, 4560
 TGF- β 1, 5385
 Therapy, 5510
 Thermal adaptation, 1672
 Thermal aggregation, 4645
 Thermal denaturation, 3083
 Thermal stability, 5815
 Thermodynamics, 867, 982, 3726
 Thermophiles, 1672
 Thermophilic, 2646
 Thermophilic oligopeptidase, 3493
Thermoplasma acidophilum, 1198
 Thermosome, 34
 Thermotolerance, 4645
Thermus thermophilus, 3417, 3867
 Thiamine, 3551
 Thiocyanate hydrolase, 4667
 Thioglycoligase, 4377
 Thioglycosides, 4377
 Thioredoxin, 216, 484, 960, 2216, 4086, 4236, 6596
 Thioredoxin peroxidase, 5016
 Thioredoxin reductase, 3595, 6596
 Thioredoxin-1, 2671
 Thiorphan, 521
 Three-base periodicity, 6413
 Threshold, 6579
 Thrombosis, 4709
 Thrombospondin-1, 510, 2365
 Thromboxane, 3368
 Thylakoid, 2166
 Thylakoid lumen, 3671
 Thylakoid membrane, 2053
 Thymidine phosphorylase, 1294
 Thymocyte, 5845
 Thymus, 5845
 Thyroid hormone, 2247
 Thyroxine, 491
 Tie2, 1309
 Tight junction, 923, 2388, 4252, 6921
 Time-resolved spectroscopy, 4823
 Time-series expression profiles, 3511
Timeless, 2
 Tiopronin, 521
 TIP47, 5484
 Tip60, 4353
 Tissue distribution, 1485
 Tissue oxidative damage, 3601
 Tissue specificity, 4602
 Tissue-specific promoter, 5033
 Titin, 341
 Titration, 3167
Tityus trivittatus, 592
 TLR, 6674
 TNF, 974
 TNF receptor, 4591
 TNF α , 311, 1597
 TNF- α , 731, 2517, 3519
 TNF-related apoptosis-inducing ligand, 2671
 Tobacco BY-2 cells, 597
 Tobacco mosaic virus, 3872
 Tocopherol, 5357
 α -Tocopheryl succinate, 2671, 5125
 Toll, 5406
 Toll-like receptor, 2976, 4533, 4697
 Toll-like receptor 4 pathway, 1457
 Toluene diisocyanate, 1883
 Tomato, 2540, 4618
 Tonoplast, 1112
 Topoisomerase II, 51
 Topology, 358, 368
 Topology mapping, 2281
torsade de pointes, 1999

- α -TOS, 1925
 Total internal reflection fluorescence microscopy, 5863
 Toxicity, 2922, 4842
 Toxin origin, 5979
 Toxins, 5572
 TPPP/p25, 5807
 TRAIL, 1925, 6565
trans-Parinaric acid, 2471
trans-Splicing ribozyme, 5033
 Transamidase, 603
 Transbilayer movement, 1171
 Transbilayer phospholipid distribution, 5500
 Transcript, 1702, 6721
 Transcript-stability, 4934
 Transcription, 93, 1479, 1635, 1716, 1827, 1911, 2335, 2531, 2843, 3099, 3217, 4934, 5880, 6217, 6807
 Transcription factor, 415, 1131, 1865, 2109, 2285, 3753, 3769, 5251
 Transcription mediator, 4784
 Transcriptional control, 1215
 Transcriptional repressor, 669
 Transcriptional targeting, 5739
 Transcriptome, 4154, 4417
 Transcriptome analysis, 2015
 Transduction, 2853
 Transfection, 6665
 Transformation, 5023
 Transgenesis, 393, 3715, 5621
 Transgenic, 1479
 Transgenic *Arabidopsis*, 3136
 Transgenic lettuce, 620
 Transgenic mouse, 4485
 Transgenic rice, 3315
 Transgenic tobacco, 206
 Transgenics, 3980
 Transglutaminase, 2351
 Transhydrogenase, 2347
 Transient complexes, 6187
 Transient dissociation, 1222
 Transient interactions, 3023
 Transit peptide, 6509
 Transition state analog, 517
 Transition state stabilization, 2170
 Transitional ER, 5215
 Translation, 107, 1983
 Translation factors, 4576
 Translation strategies, 2591
 Translational regulation, 1766, 5858
 Translationally controlled tumor protein, 3558
 Translocase, 3353
 Translocation pore, 4091
 Transmembrane domain, 3329
 Transmembrane helix, 3353, 4777
 Transmembrane proteins, 1017, 6435
 Transmissible spongiform encephalopathies, 4231
 Transport, 998, 1064, 1112, 2160, 5894
 Transport kinetics, 1085
 Transporter associated with antigen processing, 1156
 Transporter evolution, 1010
 Transportin, 1365
 Transthyretin, 491, 3451
 Triacylglycerol, 5484
Trichoderma harzianum, 3780
 Trichome, 1411
 Trigger factor, 72
 Triglyceride synthesis, 5117
 Triglycerides, 4282
 2',4',7-Trihydroxyisoflavone, 769
 TRIM/RBCC, 4784
 Trinuclear Cu center, 4069
 Trinucleotide repeat, 5208, 5399
 Trioxsalen, 1631
 Tripeptide, 2071
 Triple-helix, 3545
 Triterpenoid compounds, 6302
 Tritium labeling, 6797
 Triton X-100, 6749
 Trk, 4991
 tRNA, 5198, 6695
 tRNA modification, 5198
 TRNOESY, 5411
 Trophoblast, 5653
 TRPV1, 5728
 Truncated tau, 3582
 TRUSS, 4591
Trypanosoma brucei, 2306
Trypanosoma cruzi, 2365, 2686
 Trypanosomes, 5552
 Trypsin, 545
 Tryptophane intrinsic fluorescence, 4325
 TSE, 2033
 TSRC1 protein, 245
 Tuberos sclerosis 1, 5621
 Tubulin, 4941
 Tumor cell proliferation, 3308
 Tumor endothelial marker 7, 2253
 Tumor growth, 3185
 Tumor invasion, 6789
 Tumor marker, 3395
 Tumor necrosis factor, 245, 4533, 4625
 Tumor necrosis factor α , 3257, 6224
 Tumor necrosis factor receptor-associated factor 6, 3145
 Tumor necrosis factor- α , 1391, 3706, 5117
 Tumor necrosis factor-related apoptosis-inducing ligand, 885
 Tumor progression, 1156
 Tumor suppressor, 2811, 2860
 Tumour suppressor, 6903
 Tunicamycin, 3721
 Tuoba Xianbei, 6242
 Two-color ratiometric dyes, 2951
 Two-component signal transduction, 3206
 Two-dimensional difference gel electrophoresis, 3229
 Two-electrode voltage clamp, 5059
 Two/three state transition, 6846
 Type 1 diabetes, 553
 Type 2 diabetes, 6561
 Type 2 diabetes mellitus, 6837
 Type-III export, 3916
 Tyrosine, 1350
 Tyrosine kinase, 15, 2603
 Tyrosine phosphatase, 3853
 Tyrosine phosphatases, 1859
 Tyrosine phosphorylation, 2603, 4051, 4991
 Tyrosine phosphorylation of β -catenin, 3042
 Tyrosine radical, 1345
- ## U
- UBA, 3401
 Ubiquinone, 2534
 Ubiquitin, 2285, 3401, 4521, 6155, 6233, 6813, 6981
 Ubiquitin-proteasome, 1753
 Ubiquitin-conjugating enzyme 9, 1635
 Ubiquitin-proteasome system, 4784
 Ubiquitination, 431, 3145, 3921, 4697
 UbL, 3401
 UCP, 4815
 UCP1, 4661
 UCP3, 1371, 5172
 UDP-galactose, 4246
 UDP-glucuronosyltransferase, 1953
 UGT1A6, 1953
 UIP28, 2609
 Ultraviolet radiation, 769
 Ultraviolet-C, 3229
 Ultraviolet-damage, 6755
 UNC-84, 1263
 Unfolded protein response, 184, 5510
 Unfolding, 697
 Unilamellar vesicles, 3201

Unionoidea, 862
 3-untranslated region, 2591
 Unwinding, 4683
 uORF, 1309
 uPA, 5385
 Upstream activating sequence, 3099
 Urate oxidase, 2087
 Uricase, 2087
 Uterine-embryo adhesion, 5653
 Uteroglobin, 4515, 6022
 3' UTR, 3694
 5' UTR, 1309
 UV, 3624
 UV filters, 5071
 UvrABC, 6423
 $\alpha\text{v}\beta 3$, 1376

V

v-akt Murine thymoma viral oncogene homologue kinase, 300
 V_1 -complex, 932
 V201 chimera, 256
 Vac14, 6948
 Vaccines, 2985
 Vacuolar ATPase, 2006
 Vacuolar H^+ -ATPase, 932, 3161
 Vacuolar sequestration, 6384
 Vacuolar-type (H^+)-ATPase, 2723
 Vacuole, 1112
 Vaginal opening, 3485
 VAI RNA, 1553
 Valosin-containing protein, 474
 Vanilloid, 568
 Variants, 1345
 Vascular cell adhesion molecule-1, 1391
 Vascular endothelial cells, 4911
 Vascular endothelial growth factor, 669, 5869
 Vascular smooth muscle, 4114
 Vascular smooth muscle cell, 5177
 Vasodilation, 2317
 Vasopressin, 4114
 VDAC, 2153
 VEGF, 2879, 3006, 4332
 Venom, 4895
 Venom peptide, 3860
Venustaconcha ellipsiformis, 862
 Vertebrates, 4984
 Vesicle recycling, 3263
 Vesicle transport, 6477
 Viable but non-culturable, 2731
 Vibrational spectroscopy, 1350
 Vinexin, 4288
 Viral escape, 1156
 Viral fusion, 2561
 Viral kinetics, 2414
 Viral RNA silencing suppressor, 3117
 Virulence, 2615
 Virus infection, 2896
 Virus neutralization, 5612
 Virus-host interaction, 2896
 Virus-like particles, 4047
 Visceral fat, 2917
 Visfatin, 4105
 Visfatin/pre B-cell colony enhancing factor, 6635
 Visual cycle, 4200
 Vitamin A, 3065
 Vitamin B12, 2994
 Voltage-gated K^+ channels, 592, 6254
Volvox carteri, 3013
 von Hippel Lindau, 6182

von Hippel-Lindau, 5718
 Vpr, 2598

W

Waardenburg syndrome type IV, 1635
 WAT, 4126
 Water, 4613
 Water channel, 6679
 Water transport, 6679
 WAVE, 1993, 6464
 West Nile virus, 867
 Western blotting, 4047
 WF146 protease, 6007
 WFS1, 5635
WFS1, 4000
 Wheat germ agglutinin, 3051
 Wig-1, 4401
 WNK, 932
 Wnt, 3665
 Wnt signaling, 5423
 Wnt signalling pathway, 1227
 Wnt/ β -catenin pathway, 3519
 Wolfram syndrome, 4000, 5635
 Wolframin, 4000
 Woozy mouse, 5237

X

X protein of hepatitis B virus, 431
 X-ray, 5759
 X-ray absorption spectroscopy, 3023, 6187
 X-ray crystallography, 251, 341, 1042, 6898
 X-ray diffraction analysis, 6943
 X5, 3643
Xanthomonas manihotis β -galactosidase, 4377
 Xanthophylls, 4718
 Xenobiotic metabolism, 1780
 Xenobiotics, 67
Xenopus laevis, 393, 1941
Xenopus oocytes, 5059
Xenopus oogenesis, 4947
 Xyloglucan endotransglucosylase/hydrolase, 3136
 α -Xylosidase, 2707

Y

Y-box binding protein 1, 3921
Yarrowia lipolytica, 1971
 YCA1, 6880
 Yeast, 46, 717, 2830, 4683, 6813
 Yeast growth, 2265
 Yeast two-hybrid, 51
 Yeast two-hybrid analysis, 77
 Yeast two-hybrid screen, 6649
 Yeast two-hybrid system, 6477
Yersinia pathogenesis, 179
 YIL042c, 2553
 YjbN, 5198
 YOR090c, 2553

Z

Zaprinast, 5003

Zat10, 6537

Zebrafish, 4409, 4984

Zein, 5803

Zhangfei, 58

Zinc, 795, 3173

Zinc binding, 2109

Zinc finger, 4143, 4401

Zinc finger motifs, 5077

Zinc finger protein, 2285

Zinnia, 4311

Zone-interference gel electrophoresis, 4143

z-VAD-fmk, 6880

Zygote, 1747

Zygotic gene activation, 1747

Zymogen activation, 2269

Zymomonas mobilis, 5084