

Index

a

abatacept 116
abbreviated new drug application 746
abiraterone 56
abrogated apoptosis 299
abscopal effect 475
absolute lymphocyte count 217
absorption 728
absorption enhancers 705, 763
absorption rate constant 703
absorption, distribution, metabolism, excretion, and toxicity 463
absorptive efficiency 954
A β burden 389
acceptance criteria 521
accuracy 603
accurate mass tag 612
acetoside 661
acetylation 540, 627
acytlylators 920
acetylcholine 245
acetylcholinesterase 387
AChE inhibitors 387
 α -acid glycoprotein 12
acid dissociation constant 735
acidic lipids 81
acne 45
acquired immunodeficiency syndrome (AIDS) treating drugs 666–667
activating agonists 881
activation loop 879
active pharmaceutical ingredient 497, 758
active site pocket 885
active site-targeted inhibition 883
active transport 709, 743
active-only formulations 765
actoxumab/bezlotoxumab 460
acute immune responses 315
acute lymphoblastic leukemia 423, 427

AD model mice 388
adalimumab 102
ADAM 783
adamantane 985
adaptive immune resistance 211
adaptive immunity 243
adaptive rejuvenation 277
adeno-associated virus 311
adenocarcinomas 45
adenovirus 311
adiabatic calorimeter 510
adiabatic environment 510
adiabatic temperature rise 509
ADME 588, 717
adoptive immunotherapy 413
adoptive transfer 413, 425
adrenal atrophy 42
adrenocorticotropic hormone 19
adsorption isotherm 558
advanced melanoma 212
adverse events 914
affinity ceiling 113
affinity maturation 90
affinity-purification 610
age-related macular degeneration 329
aggregation 78
aggregators 580
agnathans 195
AGO proteins 351, 354
albumin 12, 32
algorithms 614
alitritol nucleic acid 836
allele 385
allele-specific gene silencing 307
allergic asthma 258
allergic diseases 663
allergic reactions 111
allergic response 427
AllergoOncology 118

- allergy 705
 allgrove syndrome 634
 allogeneic transplantation 139
 allometric exponent 716
 allometric scaling 716
 allosteric compounds 881
 allosteric core 180
 allosteric inhibitor 887
 allosteric phenomenon 177
 allosteric sites 888
 allosteric states 178
 Alnylam/Tekmira 332
 aloin 653
 alteplase 703
 alternative splicing 626
 alveolar macrophages 908
 alzheimer's disease 385, 658, 685, 785, 888
 amaryllidaceae alkaloids 657
 amine-reactive crosslinker 638
 6-aminohexanoic acid 833
 amino acid sequences 167
 amino-terminal laminin G-like domain 13
 aminoglutethimide 53
 aminoglycosides 840, 903
 amphibians 781
 amphiphilic blocks 947
 amphotericin B 747
 ampicillin 756
 amplification 455, 473
 amplification loop 355
 amplification status 455, 458
 amprenavir 756
 amyloid β 385, 685
 amyloid cascade hypothesis 387
 amyloid plaques 385, 776
 amyloid precursor protein 385, 688, 786
 amyloidogenic pathway 688
 amyotrophic lateral sclerosis 805
 anabolic effects 23
 anabolic stacking 45
 anabolic steroids 33
 anabolic-to-androgenic ratio 29
 anabolic-androgenic ratios 33
 anabolics 6
 anakinra 260, 718
 analgesics 497
 analyte retention 556
 analytical biochemistry 534
 analytical chemistry 497
 analytical method 554
 anaplastic large cell lymphoma 466
 anaplastic lymphoma kinase 211
 anastrozole 58
 ancestral gene 194
 androgen antagonist 6, 46
 androgen binding protein 13
 androgen insensitivity syndrome 22
 androgen receptor 21, 246
 androgen-dependent prostate
 carcinoma 51
 androgen-induced growth factor 23
 androstenedione 8
 androsterone 6
 anemia 34, 191, 922, 984
 anesthesia 688
 aneuploidies 451
 aneuploidy 473
 angiocrine support 149
 angiogenesis 118, 245, 784
 animal formulation 763, 765
 animal sources 651, 654, 655, 662, 664
 anion-exchange column 552
 anionic horseradish peroxidase 712
 anisodamine 659, 662
 ankylosing spondylitis 102
 anlage 271
 annexin 78
 annexin–annexin self-association 83
 anorexia 216
 anorexia nervosa 33
 antagonists 314
 anterior pituitary 251
 anthrax toxin 460
 anti-drug antibody 707
 anti-inflammatory compounds 390
 anti-phosphotyrosine antibodies 628
 anti-phosphotyrosine immunoblots 628
 anti-abeta vaccination 658
 anti-apoptotic gene 370
 anti-apoptotic proteins 328
 anti-chaotropic (or kosmotropic) salts 550
 anti-doping detection 45
 anti-inflammatory drugs
 – conjunctivitis 660
 – hepatitis 660–661
 – nephritis 661–662
 anti-obesity drugs 669, 671
 anti-retroviral therapy 908
 antibacterial agents 833, 910
 antibiotic resistance 1002
 antibiotics 805
 antibodies 88, 256, 307, 499, 687, 805
 antibody-based drug-delivery
 systems 466
 antibody-based therapeutics 465
 antibody-dependent cell-mediated cytotoxicity
 90, 213, 467

- antibody-dependent cell-mediated
phagocytosis 90
- antibody-fusion proteins 121
- antibody–cytokine fusion proteins 126
- anticancer drugs 656–657
- anticancer immunity 471
- anticoagulants 83
- antidepressant drugs 659–660
- antidiabetic drugs 657–658
- antigen specific T cells 413, 425
- antigen-presenting cell 243, 415
- antigen-specific effector cells 419
- antigen-binding receptors 113
- antigen-binding site 88, 119
- antigen-presenting cell 114, 201
- antigenic 193
- antigenicity 543
- antigens 88
- antimalarial drugs 667, 669
- antimicrobial resistance 840
- antimycobacterial activity 913
- antipyretics 497
- antisense antibacterials 841
- antisense oligonucleotide 302, 347, 372, 469, 830
- antisense RNA transcript 347
- antisense therapeutics 461
- antisense-mediated silencing 295
- antitumor antibodies 201
- antitumor cell therapy 426
- antitumor cytotoxicity 415
- antitumor effects 245, 257, 463
- antitumor immunity 120
- antitumor lymphocytes 420
- antitumor synergy 219
- antiviral silencing 355
- apheresis 413
- apo protein 882
- apolipoprotein B 317, 980
- apoptosis 23, 83, 240, 299, 351, 362, 466, 785, 878
- 3M-approach 914
- APP proteolysis 389
- aptamers 469
- aqueous normal-phase chromatography 539
- arabinogalactan 905
- arabinotransferase 905
- arachidonic acid 83
- arginin 665
- argonaute 296
- argonaute proteins 361
- aromatase 17
- aromatase inhibitors 57
- aromatic rings 500
- aromatization 17
- artemisinin 667
- artificial antigen-presenting cell 425
- artificial molecules 998
- ascorbic acid 653
- asiaticoside 672
- assay interferers 579
- association equilibrium constant 174
- asthenia 216
- asthma treating drugs 663–665
- astrocytes 784, 954
- asymmetric field flow fractionation 786
- ataxin-3 851
- atherosclerosis 460, 944, 952, 954
- atomic force microscopy 950
- atomic resolution 877
- atopy 258
- ATP-binding pocket 453
- ATP-binding site 879
- atrial natriuretic peptide 709
- attrition analysis 525
- atypical scrapie 801
- auger electron spectroscopy 950
- autoimmune destruction 153
- autoimmune disease 96, 257, 426, 467
- autoimmunity 202
- autologous cells 413
- autologous fibroblasts 398
- autologous transplantation 122
- autoxidation 172
- avidin 121
- avidin-affinity purification 618
- axon 793
- axonal injury 690
- azacitidine 459
- azafluorenone alkaloids 667
- azathioprine 661
- AZD5847 923
- b**
- B cells 90, 210, 323, 417
- B lymphocytes 92
- B-cell-activating factor 233
- B-cell leukemia 423
- B-cell proliferation 243
- B-cell integration cluster 302
- B-cell lymphoma 211, 302
- BACE1 inhibitors 389
- backbone modification 844
- bacteria 194
- bacterial cell membrane 841
- bacterial cell wall 459
- bacterial death 918
- bacterial infections 459
- bacteriophages 101, 460
- baculovirus 105

- baldness 47
 "Bangladeshi" regimen 924
 barbiturates 498
 basal ganglia 274
 base stacking 835
 base-catalyzed epimerization 519
 base-pair alterations 449
 base-paired duplexes 829
 base-pairing 315, 347
 BCS classification 751
 BCS criteria 759
 bedaquiline 902
 Behçet disease 260
 benign prostatic hypertrophy 14
 benzimidazole 854
 benzothiazinones 917
 2'-benzoyloxy cinnamaldehyde 657
 berberine 661, 667
 BET proteins 459
 beta-elimination 629
 bevacizumab 329
 BHUx 671
 bi-functional short hairpin RNA 309
 bicalutamide 49
 bicyclic hydantoins 31
 bidirectional permeability 749
 bilateral primordia 271
 biliary excretion 710
 binding affinity 113
 binding ligands 876
 bioactivation 580
 bioassay systems 26
 bioavailability 324, 703, 729, 910
 biocatalysts 505
 biocatalytic resolution 519
 biochemical assays 590
 biodistribution 115, 708, 848, 989
 bioequivalence 746
 biogenesis 295
 bioinformatics 315, 535
 bioinformatics resources 443
 biologic agents 499
 biological barriers 314
 biological matrices 534
 biological networks 307
 biological profile 578, 581
 bioluminescence imaging 1003
 biomarker 218, 685
 biomass waste 518
 biomimetic 946
 biomolecular drugs 464
 biomolecules 499
 biopharmaceuticals 540
 biopharmaceutics 729
 Biopharmaceutics Classification System 737
 Biopharmaceutics Drug Disposition Classification System 751
 biophysical screening 590
 biospecific/biomimetic affinity chromatography 543
 "biotech" units 526
 biotin affinity tag 618
 biotinylated therapeutics 122
 bis-histidine complex 172
 bispecific antibody 120, 324
 bispecific monoclonal antibodies 466
 bivalent inhibitors 891
 bladder cancer 214
 BLAST-type methods 614
 block polymers 947
 blocking groups 589
 blood 784
 blood circulation 704
 blood coagulation 78
 blood flow 952
 blood glucose 884
 blood platelets 687
 blood pressure 45, 193
 blood substitute 191, 957
 blood vessel networks 151
 blood vessels 149, 954
 blood-brain barrier 368, 389, 465, 691, 743, 805, 954, 975
 blood-tumor barrier 983
 blood-cholesterol levels 460
 bloodstream 12, 729, 974
 Bohr effect 175
 bona fide formulations 765
 bond-forming chemistry 504
 bonding energies 733
 bone formation 78
 bone marrow 241, 251, 316, 710, 784
 bone marrow biopsy 413
 bone marrow suppression 923
 bone marrow transplant 413, 420
 bone resorption 260
 bosutinib 457
 bottom-up 508
 "bottom-up" experiment 606
 bovine spongiform encephalopathy 778
 bovinization 113
 bradykinesia 689
 BRAF mutations 451
 brain 18, 368, 685, 743, 776, 792
 brain damage 268
 brain proteome 624
 brain-derived neurotrophic factor 394
 brainstem 274, 802

Brambell receptor 93, 117
breast cancer 26, 101, 299, 475, 785, 888, 983
breast milk 323
breast tumor 984
brentuximab vedotin 466
broad-spectrum antimicrobials 920
bronchitis treating drugs 662–663
Brownian affinity gating model 634
Buddleja thyrsoides leaves 663
bubble liposomes 327
bulge 829
bulk synthesis 947
Burkitt's lymphoma 453

c

c-myc 23
C-reactive protein 217
Caco-2 permeability 751
Caenorhabditis elegans 294, 349, 957
Cajal–Retzius cell zones 143
calbindin 281
calcimedins 78
calcitonin 705
calcium 79
calcium excretion 33
calcium homeostasis 399
calcium ion 81
calcium-binding proteins 79
calcium-release channels 79
calmodulin 79
calmodulin-binding domain 635
calorimeters 511
calpactins 78
calphobindins 78
cancer 152, 293, 446, 785, 883, 849, 944, 971
cancer antigens 467
cancer cell lines 833
cancer cells 363, 455
cancer gene amplification 455
cancer genome sequencing 472
cancer genomics 449
cancer immunity cycle 201
cancer immunotherapy 201
cancer metastasis 119, 457
cancer phenotype 293
cancer photodynamic therapy 1005
cancer progression 890
cancer therapy 294
cancer treatment 93
cancer vaccine 421
candidate 577
candidiasis treating drugs 667, 669
cannibalism 799
capacitance 1001

capillary electrophoresis 608
capillary isoelectric focusing 608
capillary tubing 535
capillary walls 709
capillary zone electrophoresis 608
capon comb growth 26
capture stage 561
carbapenem 741
carbohydrate metabolism 8
carbonic anhydrase IX 471
carboxylated myoglobin 177
carboplatin 324
carcinogenesis 145
carcinogenic risk 513
carcinogens 505
carcinoma 213
CARD domains 361
cardiac differentiation 148
cardiac disease modeling 148
cardiac hypertrophy 890
cardiac ion channel inhibition 589
cardiac ischemia 193
cardiac muscle 427
cardiac output 711
cardiotrophin-1 238
cardiovascular disease 329, 460
cargo 466
carrier-mediated transport 317
cartilage tissue 151
caspase-8 245
catabolic pathways 710
catabolin 233
catalytic activity 351
catalytic aminations 507
catalytic cycle 507
catalytic domain 879
catalytic hydrogenation 504
catalytic mechanism 879
catalytic reactions 516
catalytic site 885
(+)-catechin 666
cation exchangers 551
cationic liposomes 325
cationic micelles 328
catumaxomab 120
caveolae 783
caveolin 317
cDNA array analysis 618
CDR shuffling 114
CDR-grafting 101
Cecropia glazioui Sneth 663
cell cancer proliferation 305
cell culture 951
cell cycle 273, 351

- cell cycle regulation 462
 cell differentiation 139, 234
 cell division 293
 cell envelope-bound proteins 624
 cell expansion 424
 cell expansion systems 425
 cell fermentation 518
 cell internalization 752
 cell lineage relationships 448
 cell lysis 918
 cell membrane 78, 316, 418
 cell monolayer cultures 749
 cell penetration 316
 cell permeability 886
 cell polarity 142
 cell proliferation 234, 299, 305, 399, 883, 888
 cell rejection 280
 cell scaffolds 425
 cell signaling 783
 cell surface 783
 cell survival 244
 cell therapy 269
 cell tissue homogenates 547
 cell transplantation 281
 cell transplantation therapy 393
 cell turnover 269
 cell wall superpolymer 903
 cell-surface proteins 423
 cell-to-cell signaling 238
 cell–cell communication 629
 cell–particle interactions 952
 cell-cycle progression 300
 cell-free DNA 473
 cell-membrane-penetrating peptides 841
 cell-penetrating magnetic nanoparticle 327
 cell-penetrating peptide 317, 832
 cell-surface proteins 115
 cell-surface receptors 93
 cell-to-cell transmission 142
 cell-wall mycolic acid 921
 cell-wall peptidoglycan layer 923
 cell–cell adhesion 306
 cellular bioavailability 886
 cellular globin 195
 cellular heterogeneity 625
 cellular immunity 243
 cellular immunotherapy 413
 cellular microenvironment 234
 cellular protein 777
 cellular response 959
 cellular toxicity 582
 cellular uptake 365, 832, 848
 cellular-based vaccination 415
 CeNA–RNA duplex 836
 central memory T cells 428
 central nervous system 245, 268, 327, 385, 688,
 705, 781, 840, 909, 944
 centromeres 296
 cephalosporin 741
 cerebellar architecture 270
 cerebellar disorders 270
 cerebellar inhibitory interneurons 273
 cerebellar network 269
 cerebellar neurons 270
 cerebellar phenotypes 280
 cerebellar plate 271
 cerebellar primordium 273
 cerebellum 269
 cerebral β-amyloidosis 687
 cerebral organoid 144
 cerebrospinal fluid 685
 ceritinib 453
 cervical cancer 328
 cetuximab 465
 channel resonators 951
 charge quantization 1001
 charge storage devices 999
 charge-transfer chromatography 543
 checkpoint blockade drugs 429
 chelating ligands 553
 chemical crosslinking 623
 chemical cues 959
 chemical engineering 497
 chemical reactivity 579
 chemical shift perturbation 877
 chemical structure 580
 chemistry, manufacturing, and controls 497
 chemokine 93, 233
 chemotherapeutic agents 208
 chemotherapeutics 323
 chemotherapy 201, 328, 466
 chevron diagram 577
 chimeric antibodies 96
 chimeric antigen receptor 419
 chimeric aptamer–siRNA molecules 367
 chimeric peptides 369
 Chinese hamster ovary 96
 chips 952
 chiral drugs 500
 chiral stationary phase 512
 chitinase inhibitors 665
 chitosan 367
 chitosan–siRNA nanoparticles 368
 chlorocruorin 162
 chloroplast 625
 chloroplast stromal proteins 625
 chlorotestosterone 27
 cholera 448

- cholera toxin 448
 cholestasis 45
 cholesterol conjugation 848
 cholesterol esters 9
 cholesterol levels 317
 choline acetyltransferase 393
 choroidal neovascularization 370
 chromaffin granules 82
 chromatin 631
 chromatin affinity purification mass spectrometry 631
 chromatin modification 356
 chromatin-associated proteins 629
 chromatograms 535
 chromatographic bed 538
 chromatographic profile 622
 chromatographic purifications 501
 chromatographic separations 512
 chromatographic support 549
 chromobindins 78
 chromophores 513
 chromosomal aberrations 449
 chromosomal alterations 449
 chromosomal gene 776
 chromosomal instability 451
 chromosomal replication 323
 chromosomal translocation 451, 879
 chromosome 20, 169, 237, 776, 1002
 chromothripsis 451
 chronic constipation 707
 chronic infection 210
 chronic lymphocytic leukemia 299, 420
 chronic myelogenous leukemia 259, 879
 chronic myeloid leukemia 307, 425
 chronic traumatic encephalopathy 690
 chronic wasting disease 800
 chymotrypsin 741
 ciliary neurotrophic factor 238, 395
 cimetidine 747
 ciprofloxacin 737
 circadian rhythms 252
 circular dichroism-optical rotatory dispersion (CD-ORD) spectroscopy 541
 circulating nucleic acid 473
 circulating tumor cell 473
 cisplatin 305, 324, 955
cis-unsaturated fatty acids 78
 clathrin 317, 783
 cleavable isotope coded affinity tag 618
 climbing fibers 270
 clinical assessment phase 519
 clinical efficacy 216
 clinical evaluation 580
 clinical symptoms 386
 clinical trials 651, 658, 663, 664
 clinical trials 469, 685, 884
 clofazimine 924
 clones 18
 cluster region protein 879
 CMC dossier 522
 CNS degeneration 805
 co-suppression 295
 coactivators 22
 coagulation 242
 coating 729
 codeine 653
 codon adaptation index 598
 codon bias 598
 cognitive decline 387
 coiled-coil protein 356
 coinhibitory signals 202
 collision-induced dissociation 601
 colloidal QDs 998
 colloidal semiconductor QD 997
 colon 741
 colon adenocarcinoma 749
 colony-forming unit 913
 colostrum 251
 column configuration 555
 column length 537
 column overloading 558
 column packing characteristics 555
 column void time 536
 combination therapy 328, 329
 combinatorial approaches 885
 combinatorial screening 853
 common ion effect 736
 complement 254
 complement cascade 111, 793
 complement proteins 332
 complement system 315
 complement-dependent cytotoxicity 90, 213
 complement-mediated lysis 121
 complementarity-determining region 90
 complementary binding site 877
 complementary chromatographic modes 560
 complementary DNA 12
 complimentary duplexes 359
 compound library 885
 computed tomography 691
 computer-aided design 581
 concentration gradient 739
 concentration overloading 558
 concentration–effect relationship 699
 concentration–time profile 703, 709
 concussion 690
 conduction band 997
 conformational mobility 887

- conjugate delivery system 980
 conjugates 989
 conjunctivitis treating drugs 660
 connective tissue growth factor 302
 continuous gradient elution 546
 controlled-release dosage 734
 cooper pair 1001
 cooperative binding 176
 cooperativity 173
 copper 784
 copper binding 785
 copper homeostasis 785
 coptisine 661
 cordyceps sinensis 662
 corepressors 22
 corneal transplant 799
 cortical folia 273
 corticobasal degeneration 689
 corticonuclear networks 269
 corticotropin-releasing factor 245
 cortisone 499
 cost of goods 503
 costimulatory domain 423
 costimulatory signals 202
 cotrimoxazole 924
 Coulomb blockade 1001
 coupled nuclei 873
 covalent bond 163
 CpG islands 300, 306
 crash cooling 512
 creams 729
 Creutzfeldt–Jakob disease 687, 777
 cricket paralysis virus 359
 critical process parameter 508
 “critical” peak pair 554
 Crohn’s disease 102, 258
 cross- β spine 804
 cross-correlation score 614
 cross-species transmission 802
 “cross-paired” dimers 119
 crosscoupling 517
 crosslinked peptide 638
 crosslinkers 634
 crosslinking analysis 638
 Crosslinking reactions 638
 cryoelectron microscopy 633
 cryogenics 504
 cryptolepine 657
 crystalline bonds 733
 crystallography 183
 cucumber mosaic virus 356
 curing 729
 cutaneous tumors 983
 cyclic AMP 9
 cyclic guanosine-monophosphate 188
 cyclic peptides 541
 cyclic tetrapyrroles 805
 cyclodepsipeptides 669
 cyclodextrin 985
 cyclodextrin polymer 985
 cyclodextrin-based nanoparticles 849
 cyclodextrin-containing polymer 329
 cyclohexenyl nucleic acid 836
 cyclophosphamide 427
 cynomolgus macaques 802
 Cyp inhibition 589
 Cyp isoforms 589
 cyproterone acetate 13
 cysteine-specific tags 637
 cystic fibrosis 451, 705, 710
 cystic fibrosis transmembrane conductance regulator 451
 cytoarchitecture 278
 cytochrome *c* oxidase 186
 cytochrome P450 9, 717, 745, 908
 cytochrome P450 enzymes 463
 cytochrome P450 inhibition 582
 cyoglobin 162
 cytokine 233
 cytokine cascades 253
 cytokine release syndrome 427
 cytokine storm 258, 468
 cytokine-mediated signals 235
 cytokine-associated damage 314
 cytokines 93, 122, 232, 427, 464, 710
 cytolysis 459
 cytomegalovirus 413
 cytoplasm 235, 316, 351, 986
 cytoplasmic polyadenylation element binding 804
 cytoskeleton 78
 cytosol receptor protein 28
 cytotoxic activity 122
 cytotoxic cargo 466
 cytotoxic effects 1003
 cytotoxic T cells 420, 467
 cytotoxic T-lymphocyte antigen 4, 117, 201
 cytotoxicity 117, 314, 912
- d**
- damage-associated molecular pattern 252
 danazol 41
 darbepoetin- α 709
 dasatinib 882
 deacetylbaicatin 517
 deadenylases 354
 deamidation 540, 630
 deazaflavin-dependent nitroreductase 921
 decidualization 246

- decision tree 763, 759
 decoy 311
 deep cerebellar nuclei 270
 deep sequencing 299
 deep tissue imaging 1003
 degradomics 534
 degranulation 258
 dehydroepiandrosterone 8
 delamanid 902, 921
 delayed-release formulation 743
 delta32 423
 dementia 386, 685, 798
 dementia treating drugs 658–659
de-novo sequencing 614
 denaturation 172
 dendrites 270
 dendritic cell platforms 421
 dendritic cells 93, 202, 323, 415, 424, 467
 dendritic leukocytes 233
 dengue hemorrhagic fever 369
 dengue shock syndrome 369
 Dengue virus 362
 denosumab 260
 dental mesenchymal cells 785
 dentate gyrus 394
 deoxy Hb 172
 deoxygenation 172
 depot effect 27
 depot injection 31
 design of experiments 508
 “designer” anabolic steroids 45
 desorption electrospray ionization 601
 desoxymethyltestosterone 40, 45
 detector time constant 555
 detergent-resistant domains 783
 development process 497
 dextran 192, 805
 DGCR8 351
 Di George Syndrome 296
 diabetes 884, 908, 944
 diabetic macular edema 329
 diarrhea 51, 216
 dicer 296, 301, 353, 842, 971
 dicer-related helicase 360
 diclofenac 747
 dielectric spectroscopy 949
 Diels–Alder reaction 515
 differential scanning calorimetry 509, 758
 differentiated cells 354
 differentiation 21, 281, 299, 351
 diffuse axonal injury 690
 diffusion coefficient 739
 diffusivity 537
 digestive system 741
 digoxin 745
 5α -dihydrotestosterone 6
 DIMP 49
 $\alpha\beta$ dimers 181
 $7\alpha,17\alpha$ -dimethyltestosterone 37
 diode array detection 541
 dipolar aprotic solvents 517
 direct conjugation 848
 direct tumorcidal effect 122
 directly observed treatment short-course
 905
 discovery phase 912
 discovery–development interface 762
 disease association 580
 disease heterogeneity 472
 disease modeling 139
 disease progression 301, 473
 disease-associated process 441
 dissolution 728, 732
 distribution 728
 distribution coefficient 738
 disulfide bonds 88
 DNA base substitutions 370
 DNA codon alterations 457
 DNA damage 475
 DNA fragment library 448
 DNA hypomethylation 300
 DNA methylation 300, 356, 457
 DNA methyltransferase 459
 DNA sequences 1002
 DNA shuffling 114
 DNA target sequences 983
 DNA transposon system 418
 DNA/histone modifications 459
 DNA–RNA duplex 835
 DNAzymes 470
 DNMT1 300
 DNMT3 β 300
 docetaxel 328
 documentation 521
 domain orientations 878
 domain structure 118
 donor fluid 750
 donor lymphocyte infusion 413
 donor-derived T-reg 426
 doppel 780
 dormant bacilli 916
 dornase- α 705
 dorsal spinal cord 274
 dosage form 729
 dose solubility ratio 748
 dose-ranging studies 716
 dosing frequency 910
 double-strand RNA 252, 351, 847, 850

- double-stranded DNA 309, 469
 double-stranded RNA binding domain 353
 Down syndrome 387
 doxorubicin 324, 986, 1004
 Drosha 301, 842
Drosophila 353
 drug : excipient ratio 763
 drug candidates 584
 drug concentration–time profile 729
 drug delivery 703
 drug design 317
 drug discovery 875
 drug efficacy and safety 152
 drug instability 748
 drug metabolism capacity 150
 drug resistance mechanism 324
 drug screening 139
 drug toxicity testing 148
 drug-metabolizing activity 954
 drug–drug interaction 745
 drug-binding site 857
 drug-delivery vehicles 1003
 drug-resistant TB 902
 drug-susceptibility testing 902
 drug-susceptible tuberculosis 903
 drug–comorbid disease interactions 910
 drug–drug interaction 589, 908
 druggability 912
 druggable potential 878
 druggable sites 885
 dual-therapy 473
 Duchenne muscular dystrophy 839
 duocarmycins 656
 dura mater graft 799
 dynamic light scattering 949
 dynamic polyConjugates 980
 dynamic range 598
 dynamic terminus 888
 dynamic wave action bioreactors 426
 dysglycemia 907
 dyspnea 216
 dystonia 689
- e**
- E-factor 516
 E-cadherin 305
 early bactericidal activity 906, 913
 Ebola virus 371
 economic value 502
 ecotoxicity 539
 eculizumab 115
 Eddy-diffusion 538
 edema 32
 effect versus AUC 730
 effect versus concentration 730
 effect versus dose 730
 effector cell 415
 effector functions 115
 effector memory T cells 428
 effector target ratio 427
 efflux pump 744, 748
Elaeagnus pungens leave extract 662–663
 electrochemiluminescence 1003
 electron beam lithography 998
 electron microscopy 633, 787
 electron transfer dissociation 606
 electron transport 999
 electron-capture dissociation 613
 electron-dense inorganic core 1003
 electroporation 324
 electrophilic reactivity 506
 electrophoretic mobilities 608
 electroporation 82, 417
 electrospray ionization 600
 electrospray ionization mass spectrometry 535
 electrostatic contact area 552
 electrostatic interactions 551
 electrostatic repulsion 601
 elimination 728
 elimumab 257
 ellagic acid 660
 eluotropic strength 564
 elution volume 536
 embryo 169, 246
 embryogenesis 140, 249
 embryonic expression 781
 embryonic milieu 273
 embryonic neurogenesis 394
 embryonic stem 105, 279, 392
 embryonic stem cell 139, 785
 emotional behavior 270
 empirical MDR-TB treatment 907
 emulsifying 729
 enalapril 743
 enantiotropic 761
 encapsulation 706, 729
 encephalitis 687
 encephalomyelitis 214
 encephalomyocarditis virus 363
 encyclopedia of DNA elements 457
 end-stage organ failure 153
 endocrine system 234
 endocytosis 316, 359, 709, 781, 833, 850, 955, 975
 endogenous long hairpins 844
 endolysosomal compartment 792

- endometriosis 26
 endoplasmic reticulum 10, 102, 792, 883
 endoribonuclease 256, 424
 endosomal acidic insulinase 714
 endosomal escape 833
 endosomal membrane 316
 endosome internalization 314
 endosome trafficking 316
 endosomes 976
 endosomolytic compounds 832
 endothelial cells 188, 233
 endothelial networks 150
 endothelium 974
 endotoxin 249, 256
 "4-ene" pathway 10
 "5-ene" pathway 10
 energy of solvation 733
 enhanced permeability and retention 316
 enhanced permeation and retention 974
 enrichment 561
 enterotoxin 256
 entropy 731
 environment 501
 environmental health and safety 521
 environmental impact 501
 Environmental Protection Agency 514
 environmental signals 272
 enzalutamide 50
 enzymatic activity 1003
 enzymatic degradation 706
 enzymatic digestion 606
 enzymatic resolution 505
 eosinopoiesis 258
 Eph receptor 879
 ephedrine 653
 epidermal growth factor 23, 145, 305, 392, 465, 628
 epidermal growth factor receptor 105, 305, 447, 890, 983
 epidermal thymocyte-activating factor 233
 epididymis 7
 epigenetic changes 300
 epigenetic factors 804
 epigenetic modifiers 458
 epigenetics 457
 epigenome analysis 472
 episodic memory 386
 epitaxial layer 999
 epithelial cancer 216
 epithelial cell adhesion molecule 467
 epithelial cells 323, 744
 epithelial-to-mesenchymal transition 301, 457
 epitope 115
 epitope mapping 877
 epitope tag 635
 epitope tagging 607, 611
 Epothilones A and B 656
 epristeride 53
 Epstein-Barr virus 256, 362, 413
 equilibrium processes 731
 equilibrium solubility 732
 eraser 311
 error-prone PCR 113
 erythroblastic leukemia viral oncogene homolog 2 455
 erythrocytes 167
 erythromycin 737
 erythropoiesis 8
 erythropoietin 33, 237
 escape mutants 428
 estradiol 14
 estrogen receptor-negative breast cancer 304
 etanercept 718
 ethambutol 903
 etherification 42
 etiocholanolone 15
 ETS-related gene 987
 eugenol 666
 eukaryotic cells 106, 888
 eukaryotic organisms 351
 eukaryotic protein modification 464
 evolution 196
 evolutionary studies 194
 excipients 765
 exocytosis 78
 exon skipping 839
 exons 169, 449
 exonucleases 354
 exosomes 988
 exportin-5 315, 351, 371
 exposure-response characteristics 699
 expressed sequence tag 611
 expression levels 455
 extensively drug-resistant TB 902
 external granular layer 272
 extra-column effects 555
 extracellular barriers 464
 extracellular growth factors 462, 465
 extracellular matrix 142, 314, 784, 954
 extracellular matrix proteins 398
 extracellular signal-regulated kinase 2 879
 extracellular space 709
 extracellular vesicle 323
 extracted ion chromatography 621
 extrapulmonary disease 913
 extravascular injection 708

f

facial hair 32
 false positives 579, 877
 familial Alzheimer's disease 386
 Family 18 chitinases 665
 β -family genes 169
 FANA-RNA duplex 835
 faropenem 924
 "fast follower" approach 581
 fast-simulated intestinal fluid 740
 fatal insomnia 779
 fatty acid synthase 905
 Fc receptors 208
 fear memory 270
 febrifugine 667
 fed-state simulated gastric fluid 740
 feed-simulated intestinal fluid 740
 feedback control systems 946
 feedback loop 211
 Fennel 662
 fermentation 499
 fermentation broth 547
 fertility 912
 fetal kidney cells 151
 fetal kidney progenitor cells 148
 fetus 169
 FGFR1 protein 879
 fibroblast growth factor 392
 fibroblast growth factor 2 280
 fibroblasts 233
 field asymmetric waveform ion mobility spectrometry 605
 filamentous phages 101
 filgrastim 703
 fimbriae (H-2946 strain) 662
 finasteride 52
 first-in-human 763
 first-order kinetics 507
 first-pass effect 742
 first-line anti-TB agents 908
 first-line DST 906
 fish 781
 flash chromatography 547
 flexible peptide linker 422
 flinderoles 667
 floating culture system 143
 Flock house virus 358
 florid plaques 802
 flouroquinolones 903
 flow control 958
 flow cytometry 299, 424, 950
 fludarabine 427
 5-fluoracil 324
 5-fluorouracil 444, 957

fluorescence 543
 fluorescence *in-situ* hybridization 1002
 fluorescence emission 1001
 fluorescence-activated cell sorting 114
 fluorescent dye probes 471
 fluorescent labels 999
 2'-fluoroarabinonucleic acid 835
 fluorophores 997
 fluoxymesterone 27
 fluroquinolones 920
 flutamide 22
 2'-F modification 845
 focal adhesion kinase 987
 focused beam reflectance method 523
 folate receptor 327
 folate–receptor interactions 316
 follicle-associated epithelium 742
 follicle-stimulating hormone 9, 703
 follicular dendritic cell 784
 Food and Drug Administration 699, 731
 forkhead box protein 3 426
 formulation changes 746
 formulation feasibility 912
 fosamprenavir 756
 Fourier transform infrared (FTIR) spectroscopy 541
 Fourier transform ion cyclotron resonance 603
 fraction collection 559
 fractional distillation 537
 fractionation 560
 fragile X-associated tremor ataxia syndrome 852
 fragment antibodies 326
 fragment antigen binding 88
 fragment crystallizable 88
 fragment-based screening 590
 fragmentation efficiency 618
 frame-shift mutation 449
 free-radical 193, 247
 frontotemporal dementia 387
 full-length antibody 119
 full-length protein 588
 functional gene 464
 functional group interconversions 503
 functional groups 504
 fungi 295
 fungus 78
 fused silica 609
 Förster resonance energy transfer 1001

g

G protein-coupled receptor 590
 G–C nonamers 781
 GABAergic 272
 gain in peak capacity 559

- galectin-9 214
 gambogic acid 657
 gamma delta T cells 415
 gamma-emitting radionuclide 750
 gamma-retroviral vectors 418
 gamma-secretase 386
 GAP proteins 889
 gapmer strategy 833
 gapmers 837
 gas chromatography 512
 gas chromatography/mass spectrometry 45
 gastric acid 766
 gastric cancer 213, 299
 gastric carcinoma 785
 gastric emptying 766
 gastric secretion 766
 gastric tissue 146
 gastrointestinal (GI) permeability 728
 gastrointestinal disorders 922
 gastrointestinal stromal tumor 307
 gastrointestinal tract 464, 793
 gatekeeper mutation 881
 gatekeeper residue 881
 "gatekeeper" residue 451
 gel filtration 786
 gelling 729
 gemcitabine 332
 geminate rebinding 177
 gene alterations 448
 gene cluster 170
 gene control pathways 844
 gene copy number 455
 gene delivery 311, 981
 gene expression 20, 347, 631, 829, 971
 gene mutations 145
 gene regulation 347, 982
 gene regulatory mechanism 295
 gene repression 459
 gene silencing 294, 317, 830
 gene therapy 369, 468
 gene therapy trials 418
 gene toxicity 589
 gene transfer 414, 417
 gene-based therapy 468
 genetic aberrations 971
 genetic alterations 300
 genetic analysis 387
 genetic disorders 833
 genetic engineering 96
 genetic polymorphism 252
 genetics 780
 genome 232, 597, 829
 genome defense 347, 355
 genome engineering 469
 genome maintenance 347
 genome-wide RNAi screen 364
 genome/exome sequencing 472
 genomes 443
 genotoxic potential 513
 genotoxicity 419, 590
 geriatric patients 34
 germ layers 785
 germinal center 394
 germinal neuroepithelia 275
 germinal trigone 271
 germline alteration 300
 germline variable regions 114
 Gerstmann–Straussler–Scheinker disease 798
 gestation 168, 246
 GI mucosa 699
 GI tract motility 744
 Gibb's free energy 731
 glioblastoma 211, 299
 glioblastoma multiforme 421
 gliomas 983
 global proteome sampling 623
 global sales 524
 globin fold 163
 glomerular basement membrane 974
 glomerular charge-selectivity 712
 glomerular filtration 712, 955, 974
 glucagon 714
 glucocorticoids 13, 248
 glucose challenge 706
 glucose metabolism
 – phytoconstituents affecting 659
 – plants affecting 658
 β-glucuronidase 23
 glutamatergic 272
 glutamatergic neurons 272
 glutaraldehyde 192
 glutathione 466
 glutathione-S-transferase 23, 640
 glycemic response 706
 glycocalyx 742
 glycoengineering 111
 glycolaldehyde 192
 glycopeptides 548
 glycoprotein forms 629
 glycoproteins 90
 glycosilation pattern 711
 glycosylation 96, 540, 626
 glycosylation pattern 105
 glycosylphosphatidylinositol 783
 gold nanoparticles 980
 golden triangle 585
 gonadotropic hormone 9
 gonadotropic receptor 46

- gonadotropin 799
 good clinical practice 913
 gossypol 656, 667
 gout 260
 gradient elution 555
 gradient ultracentrifugation 786
 "gradient" plate number 555
 graft-versus-host disease 413
 graft-versus-tumor activity 413
 gram-negative bacteria 105
 gram-positive bacteria 105
 granule aggregation 82
 granule cell layer 270
 granule cell progenitors 273
 granule cells 276, 280
 granulocyte–macrophage colony-stimulating factor 122, 205, 236
 granulocytes 784
 granulomas 906
 green analytical chemistry 539
 green chemistry 514
 green fluorescent protein 360
 greenness 515
 growth factors 151
 growth hormone 710
 growth hormone-releasing factor 706
 growth-promoting agent 39
 GSK guide 517
 GSTSH2 fusion protein 637
 GTP-activating protein 889
 guanine nucleotide exchange factor 889
 guanosine triphosphatase 888
 guide strand 297, 844
 gut epithelial organoids 145
 gut flora 742
 gut-associated lymphoid tissue 706, 742
 gut-on-a-chip 954
 gynecomastia 51
- h***
 H-bonding interactions 836
 HADDOCK 878
 hairpin dsRNA 295
 hairpin loop 829
 hairpin structure 351
 hairy cell leukemia 259
 half-life 118, 464
 half-life in human 582
 half-maximal inhibitory concentration 912
 halogenated testosterone 27
 haptoglobin 191
 hay fever 705
 hazard and operability study 511
 hazard evaluation 509
 Hb molecules 162
 Hb tetramer 162, 181
 headache 45, 216
 healthcare 517
 heart disease 148, 971
 heart transplant rejection 473
 heat gradients 324
 heat shock protein 20
 heat shock protein 90 453
 heat-generation 507
 heat-transfer 508
 heats of reaction 509
 heavy chain 82
 heavy chain antibodies 119
 heavy chain polypeptides 88
 Heinz bodies 189
 HeLa cells 364
 α -helical sandwich 22
 α -helical segments 163
 helicase 361
 α -helices 776
 β -helices 789
 helper T cells 114
 hemagglutinating agents 121
 hematopoietic factors 236
 hematopoietic malignancies 300
 hematopoietic stem cell 241, 301, 368, 393, 414, 428, 785
 heme 163
 heme ligand 172
 heme pocket 170
 heme-binding pocket 183
 heme-binding site 170
 hemichrome 172
 hemochromes 173
 hemodialysis 703
 hemoglobin 162, 626
 hemoglobin-based oxygen carrier 192
 hemolyzed blood 547
 hemopoietin receptor superfamily domain 237
 hemopoietin-1 233
 hemoprotein 162
 hemosiderin 688
 hepatic biliary ductal system 147
 hepatic circulation 742
 hepatic dysfunction 36
 hepatic first-pass metabolism 704
 hepatic function 32
 hepatic metabolism 714
 hepatitis B 980
 hepatitis B virus 849
 hepatitis C 259
 hepatitis C virus 327, 362, 843
 hepatitis treating drugs 660–661

- hepatobiliary system 955
 hepatocellular carcinoma 211, 299
 hepatocyte growth factor receptor 455
 hepatocyte targeting 975
 hepatocyte transplantation 140
 hepatocytes 714
 hepatogenesis 150
 hepatotoxic side effects 42
 hepatotoxicity 837, 907, 955
 HER2 receptor 884
 hereditary disorders 971
 hereditary tyrosinemia type I 469
 herpes simplex virus 367
 herpes virus 256
 herpes virus entry mediator 216
 heteroaromatic rings 500
 heterochronic transplantation 273
 heterocyclic nucleobases 837
 heterocyclic rings 43
 heteronuclear single quantum coherence 873
 heterotropic ligands 175
 hexitol nucleic acid 836
 hibernation 688
 "High Five" insect cells 111
 high throughput screening 581
 high-affinity receptors 710
 high-density lipoprotein-derived NP 949
 high-dose/low-potency compounds 765
 high-energy decomposition 509
 high-performance liquid chromatography 512, 608, 739
 high-permeability drugs 744
 high-throughput 945
 high-throughput analysis 632
 high-throughput mass spectrometric protein complex identification 636
 high-throughput microfluidic technology 949
 high-throughput screening 279, 501, 733, 952
 high-affinity ligands 877
 high-density lipoprotein 327
 high-performance affinity chromatography 545
 high-performance anion-exchange chromatography 551
 high-performance aqueous normal-phase chromatography 548
 high-performance capillary electrochromatography 540
 high-performance capillary electrophoresis 540
 high-performance cation-exchange chromatography 551
 high-performance gel-permeation chromatography 544
 high-performance hydrophilic interaction chromatography 547
 high-performance hydrophobic interaction chromatography 545
 high-performance ion-exchange chromatography 545
 high-performance liquid chromatography 533
 high-performance reversed-phase chromatography 534
 high-performance size-exclusion chromatography 543
 high-performance, normal-phase chromatography 546
 high-throughput parallel evaporation 562
 high-throughput screening 53, 475, 910
 High-throughput sequencing 359
 high-throughput technologies 475
 higher energy collisional dissociation 606
 HIGHRIIF 1 study 919
 HIGHRIIF 2 study 919
 Hill equation 174
 hindbrain 281
 hindbrain neuroepithelial stem 281
 hinge region 90
 hippocampal atrophy 687
 hippocampal dentate gyrus 279
 hippocampus 272, 274, 394, 955
 hirsutism 47
 histamine 258, 660
 histone deacetylase 459
 histone methylation 631
 histone modification 631
 histone modifiers 457
 histones 624, 631
 histoplamosis 258
 hit 577
 hit identification 591
 hit-to-lead medicinal chemistry 578
 hit-to-lead optimization 576
 HIV 257
 HIV viremia 212
 HNA-RNA duplex 836
 Hodgkin lymphoma 302, 423, 466
 Hodgkin's disease 211
 homeostasis 235, 299, 687
 homeostatic signaling 883
 homologous domain 80
 homozygous null mutant 358
 Hoogsteen P-A base pair 848
 "horizontal" targeting 473
 hormone response element 21
 hormone-binding domain 21
 hormone–receptor complex 19
 hormone–receptor interactions 28
 hormones 793
 host defense mechanisms 162

- host immune response 467
 host-encoded prion protein 775
 host-defense mechanism 349
 human acidic mammalian chitinase (hAMCase) 665
 human anti-chimeric antibody 101
 human anti-mouse antibody 94
 human anti-rat antibody 120
 human artificial chromosome 113
 human bioequivalence testing 746
 human developmental biology 153
 human embryonic retinal cell line 112
 Human formulation 765
 human framework 114
 human genome 878
 Human Genome Project 745
 human growth hormone 799
 human hyperimmune polyclonal serum 113
 human immunodeficiency virus 327, 447, 514, 901
 human immunodeficiency virus 1 413
 human immunoglobulins 93
 human kidney model 147
 human leukocyte antigen 421
 human malignancies 299
 "human-on-a-chip" 957
 human papillomavirus 324
 humanized glycosylation patterns 106
 humanized mouse models 803
 humoral response 94
 huntingtin 805, 851
 Huntington disease 691, 805, 851, 888
 hybrid hybridoma 120
 hybrid instrument 603
 hybridoma mRNA 96
 hybridoma technology 102
 hydrodynamic volume 544
 hydrogen bond 163
 hydrogen bond donors 581
 hydrophilic interaction chromatography 543
 hydrophilic interaction chromatography/cation-exchange chromatography 548
 hydrophilic polymers 325
 hydrophilic pore 82
 hydrophobic cavities 184
 hydrophobic interaction 163, 550
 hydrophobic interaction chromatography 543
 hydrophobic ligand 549
 hydrophobic pockets 891
 hydrophobic proteins 599
 hydrophobic sorbents 549
 hydrophobicity 608
 1-(4-hydroxybenzyl)-6,7-methylenedioxy-2-methylisoquinolinium trifluoroacetate 667
 11 β -hydroxytestosterone 38
 17 β -hydroxysteroid dehydrogenase 12
 4-hydroxytestosterone 38
 2'-hydroxycinnamaldehyde (HCA) 657
 2-hydroxymethylene-17 α -methyl-5 α -androstan-17 β -ol-3-one 38
 hydroxyapatite-chromatography 543
 hypercholesterolemia 849
 hyperplasia 47
 hypersensitivity 233
 hypertension 193
 hyperthermia 243
 hypogonadism 25
 hypolipidemic effect 34
 hypomethylation 458
 hypomorphic mutations 361
 hypothalamus 19, 23
 hypoxia 247
 hypoxic granulomas 920
- i*
- iatrogenic CJD 799
 ileum 742
in-silico lipophilicity 586
in-situ IR spectroscopy 523
in-situ hybridization 1001
in-vitro dissolution 747
in-vivo bioavailability 747
in-vivo distribution 949
in-vivo imaging system 984
 imatinib 879
 imatinib mesylate 307
 imatinib-resistant phenotype 880
 immediate-release formulation 744
 immobilized metal affinity chromatography 627
 immobilized metal ion-affinity chromatography 543
 immortality 94
 immune cells 234
 immune checkpoint blockade 201, 468
 immune effector cell 467
 immune effector functions 93
 immune evasion 422
 immune reconstitution inflammatory syndrome 908
 immune rejection 139
 immune response 90, 426, 742, 777
 immune stimulation 837
 immune system 88, 201, 708, 973
 immune tolerance 202
 immune-mediated cytotoxicity 415
 immune-checkpoint blockers 206

- immune-receptor tyrosine-based inhibitory motif 209
 immune-related adverse event 216
 immunecomplex 707
 immunodeficient mice 151
 immunoadhesins 126
 immunoaffinity chromatography 611
 immunoaffinity purification 607
 immunoassay 1001
 immunoblotting 633
 immunoediting 201
 immunogenic tumors 204
 immunogenicity 315, 317, 369, 707, 974, 989
 immunogens 388
 immunoglobulin 88, 209
 immunoglobulin genes 453
 immunohistochemistry 211, 1001
 immunomodulators 201
 immunomodulatory agents 708
 immunomodulatory effects 463
 immunoprecipitation 628
 Immunoscore 218
 immunostaining 608
 immunostimulation 838
 immunosuppression 204
 immunosuppressive drugs 717
 immunotherapies 388, 416
 immunotherapy 122, 388, 467
 immunotoxins 101
 impotence 51
 in-process control 512
 inclusion bodies 105
 "individualized" regimens 906
 indoleamine 2,3-dioxygenase 201
 induced pluripotent stem 279, 392
 induced pluripotent stem cell 139, 422
 inductively coupled plasma atomic emission spectroscopy 1005
 inertial forces 949
 infant 169
 infected macrophage assay 922
 infective disorders 665
 – AIDS 666–667
 – antibacterial agents 666
 – antifungal agents 668
 – candidiasis 667, 669
 – malaria 667, 669
 – tuberculosis 669
 infectivity 790
 inflammation 93, 209, 241, 689, 952
 inflammatory cytokines 247
 inflammatory response 209
 influenza A virus 312, 855
 influenza virus 364x
 information integration 472
 inhalation 729
 inhalational delivery 704
 inhaled insulin 704
 inheritance pattern 385
 inhibin 9
 inhibitory antagonists 881
 inhibitory signal 208
 injection site reactions 117
 innate immune receptors 315
 innate immune resistance 211
 innate immune response 314
 innate immune system 849
 insect cells 106
 insertional mutagenesis 369, 414, 418
 inspect 627
 insulin 699, 883
 insulin aspart 711
 insulin degrading enzyme 398
 insulin receptor 884
 insulin receptor substrate 884
 insulin secretion 147
 insulin sensitivity 884
 integrative systems bioinformatics 472
 integrin 325
 intercellular adhesion molecule 425
 intercellular communication 987
 interdomain linker peptide 119
 interference compounds 579
 interferon 23, 210, 232, 315, 704
 interferon-gamma 424, 908
 interferon- α 122
 interleukin 23, 122, 232, 315, 425, 468, 704, 954
 interleukin 2 202
 internal energy 731
 internal loop 829
 internal ribosome entry site 362, 854
 International Conference on Harmonisation 505
 interneuron development 275
 internucleoside linkage 831
 interstitial space 709
 intestinal absorption 31
 intestinal barrier 706
 intestinal paracellular absorption 706
 intestinal permeability 739
 intestinal stem cells 145
 intestinal surface area 954
 intestine brush border membrane 745
 intestine permeability 750
 intracellular metabolism 715
 intracellular signaling 238, 882
 intracellular signaling domain 422
 intracellular signaling pathways 24
 intrachain disulfide bond 90

- intranasal administration 705
 intrapatient heterogeneity 449
 intratumor heterogeneity 449
 intravitreal injection 329
 intronic splicing silencer region 840
 invertebrate 362
 investigational new drug 746
 "involved in metabolism" 625
 iodoacetamide 618
 ion fragmentation 601
 ion pair reagents 546
 ion sensing 1003
 ion signal 615
 ion-mobility spectrometry 604
 ionic equilibrium 732
 ionization 600, 735
 iontophoresis 705
 ipilimumab 205
 iron oxide nanoparticles 984
 irritable bowel syndrome 707
 ischemia 247
 isobaric tags for relative and absolute quantitation 618
 isocratic elution 555
Isodon japonicas 663
 isoelectric focusing 624
 isoelectric point 543, 607
 isoniazid 903
 isonicotinyl-NAD adduct 903
 isosmotic concentration 193
 isosteres 40
 isothermal titration calorimetry 581
 isotope-coded affinity tag 617
 isotopic shift 621
 isotopically labeled linker 618
 isotype 90
 isozymes 16
 isthmic organizer 271
- j**
 Janus kinase 239
 Japanese encephalitis virus 369
 jaundice 45
 jejunum 742
- k**
 Kaposi's sarcoma 257
 Kaposi's sarcoma-associated herpesvirus 361
 keratinocyte growth factor 23
 keratinocytes 236
 keratoconjunctivitis 660
 ketoconazole 54
 kidney development 148
 kidney epithelial cells 955
 kidney proximal tubule 955
 kidneys 147, 365
 kinase inhibitor 457, 577, 881
 kinase overexpression 879
 kinesin spindle protein 332
 kinetic parameters 506
 kinetic profiling 507
 kinetic solubility 733, 734
 kinome "reprogramming" 457
 Kirsten rat sarcoma viral oncogene homolog 306
 klinefelter's syndrome 25
 knockout mice 785
 knockout models 212
 "knobs-into-holes" approach 120
 knowledge transfer 520
 Kondo effect 998
 Koshland–Nemethy–Filmer 178
 Kuru 793
- l**
 label-free methods 621
 labile stereocenters 504
 β-lactam antibiotics 923
 β-lactamase inhibitor 923
 β-lactamase mRNA 841
 β-lactamases 459
 lactate-dehydrogenase 217
 lamina propria 146
 laminar flows 947
 language 270
 lapatinib 457
 larynx 8
 laser nephelometer 733
 laser-capture microdissection 626
 latency effect 730
 latent TB infection 909
 latent tuberculosis infection 909
 lawsone 660
 layer-by-layer assembly 981
 lead 577
 lead compounds 910
 lead development 912
 lead molecules 873
 lead optimization hypothesis 584
 lead profiles 580
 lentiviral vectors 418
 lentivirus 311
 leptin 883
 leptin hypersensitivity 884
 letrozole 58
 leukapheresis 416
 leukemia 413
 leukemia inhibitory factor 238
 leukocyte antigen-related 885

- leukocyte reprogramming 248
 leukocytes 242, 363
 levator ani muscle 33
 levodopa 689
 lewy bodies 685
 lewy body 689
 LexA–Protein A fusion 631
 leydig cells 8
 liarozole 54
 libido 51
 ligand binding 581
 ligand efficiency 587
 ligand-binding domain 21
 ligand-exchange chromatography 543
 ligands 237
 light chain polypeptides 88
 light chain shuffling 114
 light-to-heavy ratio 621
 light-emitting diode 1000
 lipid metabolism 8
 lipid nanoparticles 367, 849
 lipid rafts 783
 lipid solubility 12
 lipid–polymer hybrid 949
 lipidation 540
 lipo-oligosaccharides 630
 lipoarabinomannan 905
 lipocortins 78
 lipofectamine 368
 lipolase 519
 lipophilic ligand efficiency 587
 lipophilicity 585, 711, 735
 lipopolysaccharide 240
 liposome 323, 706, 849, 947, 986
 liquid chromatography 534, 599
 liquid chromatography–mass spectrometry 620
 liquid-phase separation 608
 lispro 711
 live cell imaging 792
 liver 13, 168, 316, 365, 983
 liver bud formation 149
 liver failure 147
 liver stem cells 147
 L-menthol 664
 LNA/DNA oligomers 325
 local androgenicity 28
 localized surface plasmon resonance 981
 locked nucleic acid 311, 370, 834
 loop dynamics 879
 loop-link 639
 loss-of-function gene analyses 294
 loss-of-function mutation 475, 839
 lotions 729
 lotrafiban 501
 low-copy-number protein 624
 low-density lipoprotein receptor 461
 lower-molecular-weight protecting groups 504
 LTQ-Orbitrap 606
 luciferase-targeting siRNA 984
 lucinactant 705
 lung 14, 365, 954
 lung cancer 299, 453
 luteinizing hormone 9, 703
 luteinizing hormone-releasing hormone 9, 703
 lymph 709
 lymph node metastases 306, 986
 lymph nodes 243, 249, 316, 793, 1005
 lymphadenopathy 909
 lymphatic drainage 974
 lymphatic system 704
 lymphatic transport 709
 lymphatic vessels 704
 lymphocyte activation 214
 lymphocyte activation gene 3 214
 lymphocyte anergy 214
 lymphocyte-activating factor 233
 lymphocytes 210, 232
 lymphocytic choriomeningitis virus 212
 lymphocytic infiltration 211
 lymphodepletion 420
 lymphoid tissue 784
 lymphoinvasion 793
 lymphokine 232
 lymphokine-activated killer 259
 lymphokine-activated killer cells 467
 lymphoproliferative disorders 413
 lymphoreticular tissues 799
 lymphotoxin- β 237
 lyprinol 664
 lysosome 316, 712
- m**
- Machado–Joseph disease 851
 macro-world 998
 macromolecule binding 875
 macrophage colony-stimulating factor 703
 macrophage migration inhibitory factor 233
 macrophages 93, 233, 715
 macropinocytosis 316
 macular degeneration 119, 976
 “mad cows” 799
 magic bullets 94
 magnetic bead purification 424
 magnetic field application 985
 magnetic nanoparticle 327
 magnetic resonance imaging 981, 1005
 magnetic targeting 327
 magnetization pathway 875

- major groove 848
 major histocompatibility class 114
 major histocompatibility complex 201, 415
 malaria 460
 MALDI TOF mass spectrometry 534, 604
 male castration 6
 male contraception 47
 male fertility 354
 male genitalia 6
 male pseudohermaphroditism 25
 male reprotoxins 505
 male sterility 781
 malignancy 145
 malignant cells 293, 444
 malignant epigenome 459
 malignant glioma 415
 malignant myeloma 94, 245
 malignant phenotype 449, 884
 malnutrition 33
 mammalian PrP 776
 mammary carcinoma 28
 mammary gland 249, 784
 mammary tumors 118
 MAMS-TB-01 study 919
 mannose 111
 maraviroc 423
 marine organisms 654–657, 660, 667, 669
 mascot 627
 masculinizing side effects 32
 mass modification 615
 mass spectrometer 599
 mass spectrometry 534, 599
 mass-balance 748
 mass-to-charge ratio 600
 matrix metalloproteinase 9 398
 matrix-assisted laser desorption ionization 600
 maturation 278
 MD simulations 184
 meat and bone meal 802
 mechanism-based inhibitors 57
 medial ganglionic eminence 274
 medical diagnostics 565
 melanoma 205, 301
 melting temperatures 835
 membrane organization 79
 membrane proteins 367, 618, 635
 membrane rafts 890
 membrane receptor 240
 membrane trafficking 78
 membrane-binding pockets 888
 membrane–protein interactions 890
 menopausal symptoms 26
 MeroX 640
 mesencephalon 271
 mesenchymal stem cell 139, 393
 mesenchymal-to-epithelial transition 306
 mesothelioma 419
 messenger ribonucleic acid 829
 messenger RNA 18, 295, 418
 metabolic disease 883
 metabolic labeling 615
 metabolism 728, 730
 metabolome analysis 472
 metabolomes 443
 metal–cyclen compound 892
 metal–ligand interaction 980
 metal-chelate affinity chromatography 552
 metallic nanoparticles 471
 metanephric mesenchyme 148
 metastases 208
 metastasis 888
 metastasis reduction 326
 metastatic melanoma 471
 metastatic sites 299
 metastatic spread 304
 metazoans 295
 methicillin-resistant *Staphylococcus aureus* 757
 methotrexate 708, 737
 8-methoxyquinolones 920
 methylation 627
 methylation status 458
 methylazoxo-methanol 278
 methyltestosterone 36
 methyltransferase 359
 metkephamid 710
 metribolone 22
 metronidazole 920
 MHC–antigen complex 202
 Michael acceptor 57
 micro-spotter 535
 microarray 299, 598
 microarray-based profiling 305
 microbiomes 443
 microbubbles 327
 microcircuits 270
 microengineered vascular systems 954
 microfluidic cell lysis 626
 microfluidics 945
 microglial activation 689
 micronutrient deficiency 908
 microorganisms 654–656
 microparticles 706
 microprocessor 351
 microprocessor complex 296
 micrornucleic acid 842
 microRNA 293, 351
 microsomal stability 588
 microspheres 706

- microtubule 687
 microvesicle 323
 microvilli 742
 microvortex platform 949
 microvortices 949
 mild cognitive impairment 686
 milling 729
 mineralization 8
 mini-organ technology 152
 mini-organs 139
 miniaturization 535
 minibody 120
 minicells 323
 minimum bactericidal concentration 914
 minimum inhibitory concentration 903
 miniprion 790
 minocycline 757
 minor groove 848
 miR-Mask 312, 332
 miRNA mimics 311
 miRNA genes 298
 miRNA hairpins 843
 miRNA silencing 843
 miRNA sponges 312
 miRNA/miRNA* duplex 353
 3'-mismatch-tolerant region 300
 missense mutations 449
 mitochondrial antiviral signaling 804
 mitochondrial proteins 625
 mitogen-activated protein kinase 220, 239, 450, 988
 mitogen-activated protein kinase kinase 889
 mitogenic protein 233
 mixed-mode chromatography 543
 mobile phase 535
 mobile phase temperature 562
 modifications 314
 molecular architecture 885
 molecular beacon 1002
 molecular beam epitaxy 997
 molecular biology 780
 molecular complex detection 636
 molecular dynamics 183
 molecular evolution 196
 molecular imprinted polymer 553
 molecular interactions 873
 molecular layer 270
 molecular matrix 601
 molecular modifications 755
 molecular profiling 307, 472
 molecular recognition 552, 999
 molecular targeted therapy 472
 molecular weight distribution analysis 545
 monoclonal antibody 93, 205, 258, 326, 424, 455, 460, 975
 monocytes 210, 417, 784
 Monod–Wyman–Changeux 178
 mononuclear cell 413, 417
 mononuclear phagocytic system 974
 monooxygenase 18
 monotropic 761
 morphine 653
 morpholino oligonucleotides 838
Morus alba leaves 671
 mossy fiber brainstem 270
Mosla dianthera extract 664
 motavizumab 117
 motor function 840
 motor learning 270
 mouse embryonic stem cell 362
 mouse myeloma cell line 111
 mouse peritonitis 841
 mouse xenograft models 324
 mRNA analysis 253
 mRNA expression 455, 598, 636
 mucin fibers 743
 mucin layer 742
 mucociliary clearance 705
 mucosal surface area 706
 mucus secretion 705
 multi-parameter optimization 585
 multi-substrate efflux pump 916
 multicellular organisms 957
 multicentric clinical trials 651
 multidimensional (multistage, multicolumn)
 high-performance liquid chromatography 535
 multidimensional protein identification technology 609
 multidrug resistance 328
 multidrug resistance protein 1 745
 multidrug therapy 473
 multidrug-resistant bacteria 460
 multidrug-resistant pathogens 842
 multidrug-resistant TB 902
 multiexciton states 1001
 multiorgan systems 957
 multiple conformations 878
 multiple myeloma 122, 303, 423
 multiple quantum well 997
 multiple reaction monitoring 622
 multiple sclerosis 259
 multiple system atrophy 685
 multiplex diagnosis 1001
 multipotency 139
 multipotent progenitors 276
 multiprotein complex 633, 636
 multivalent antibodies 120

- multivariate design space 522
 murine cytomegalovirus 362
 murine models 205
 muscle mass 7
 muscularis mucosa 146
 mutagenesis 881
 mutagenicity 590, 912
 mutant Hbs 189
 mutation 779, 796
 mutation profiles 472
 mutation–polymorphism combination 779
 mutational load 217
 mutational status 218
 mutations 90, 446, 1002
 Myc epitope 633
 mycobacterial catalase-peroxidase 903
 mycobacterial cell wall 905, 917
 mycobacterial membrane protein large 3 917
 mycobacterium tuberculosis 901
 myelinated axons 690
 myeloid cells 211
 myeloid-derived suppressor cell 214
 myeloma 259
 myeloma cell 94
 myoclonus 689
 myoglobin 162
 myotonic dystrophy 852
 myotrophic activity 34
 myotrophic effect 7
 myxoma virus 256
- n**
- N-acetylgalactosamine 848
 N-aminocaprylic acid 706
 N-arylpropionamides 31
 N-glycosylation 112
 N-hydroxysuccinimide 638
 N-terminal degradation sequencing 608
 N-terminal domain 82, 361
 naked siRNAs 365
 nandrolone 35
 nanocarrier functionalization 325
 nanocarrier systems 323
 nanocrystals 996
 nanomedicine 944, 946
 nanomedicine manufacture 957
 nanoparticle 323, 367, 466, 706, 849, 945, 985
 nanoparticle delivery system 988
 nanoparticle-based drug delivery 997
 nanotechnology 328
 nartograstim 710, 715
 natural killer 234
 natural killer (NK)-cell 362
 natural killer cells 413, 467
 natural ligands 577
 natural product-based drug discovery
 – animals 654, 655
 – cancer 656–657
 – chemical compound identification 651, 652
 – dementia 658–659
 – depression 659–660
 – diabetes 657–658
 – infective disorders 665–669
 – inflammation 660–662
 – marine organisms 654–656
 – microorganisms 654, 655
 – obesity 669, 671
 – plants 654
 – respiratory disorders 662–665
 – skin aging 670, 672
 – stages 651, 652, 656
 nausea 51, 216
 near-infra red (NIR) spectroscopy 513
 necrosis 473
 neoangiogenesis 299
 neocortex 274
 neoplasia 47
 neoplastic phenotype 309
Nepeta cataria 665
 nephritis treating drugs 661–662
 nephron progenitors 148
 nephrotoxicity 907
 nerve cells 1004
 nerve growth factor 394
 nerve-growth factor 23
 “net charge” concept 551
 neural cell adhesion molecule 784
 neural cytoskeleton 690
 neural stem 279
 neural transplantation 268
 neural tubes 271
 neuroblastoma 301, 419
 neurocognitive development 270
 neurodegeneration 268, 385, 798
 neurodegenerative disorders 776
 neurofibrillary tangle 385, 686
 neurofilament light 690
 neurogenesis 394, 399
 neuroglobin 162, 195
 neuroimaging 685
 neuroimmune interface 793
 neuroinvasion 793, 805
 neurologic dysfunction 778
 neurological disorders 685, 888
 neuromuscular disease 839
 neuron-specific enolase 691
 neuronal differentiation 385
 neurons 245, 269, 394, 687, 783

- neuropathological features 385
 neuroprotective drugs 390
 neuroprotective properties 781
 neurotransmitter 397
 neurotrophic factors 392
neurotrophin-3 394
neurotrophins 280, 397
 neutral horseradish peroxidase 712
 neutral lipid emulsion 329
 neutralist theory 196
 neutropenia 260, 718
 neutrophils 93, 242, 417
 new chemical entity 497
 next generation sequencing 598
 "next generation" of transfusion medicine 430
 "next-generation" compounds 914
 next-generation inhibitors 893
 next-generation sequencing 448
nicotiana benthamiana 349
 Niemann–Pick disease 280
 nigrostriatal pathway 269
 nilotinib 882
 nilutamide 49
 nitric oxide 186, 247
 nitrogen balance 8
 nitrogen retention 34
 nitroimidazoles 920
 nitroimidazoxazine 921
 nivolumab 212
 NMDA 388
 NMDA receptor 388
 NMR screening 877
 NMR spectroscopy 873
 NMR spectrum 875
 no-food effect 766
 NO-scavenging 193
 NO-synthase 188
 nod-like receptor 252
Nodamura virus 363
 non-antibody-based therapeutics 699
 non-Hodgkin lymphoma 423
 non-arteritic anterior ischemic optic neuropathy 329
 non-genetic biomarker 687
 non-Hodgkin lymphoma 96
 non-small-cell lung cancer 213, 300, 474
 nonbinding ligands 876
 noncodingRNA 293
 nondenaturing mobile phase 551
 nonenzymatic modification 630
 nonhelical loops 163
 nonmalignant immune cells 428
 nonsense mutation 449
 nonsteroidal anti-inflammatory drug 747
Nora virus 359
 noradrenaline 245, 246
 norbolethone 45
 normal phase silica materials 547
 normal-phase chromatography 543
 normalized spectral abundance factor 622
 NS cells 393
 nuclear envelope membrane 633
 nuclear magnetic resonance 183, 597, 788, 835, 873, 950
 nuclear magnetic resonance (NMR)-spectroscopy 534
 nuclear membrane 16
 nuclear Overhauser effect 873
 nuclear pore proteins 629
 nuclear transcriptional factors 21
 nuclear translocation 209
 nucleic degradation 314
 nucleic stability 831
 nucleation 734, 998
 nucleation–polymerization 791
 nucleic acid 776
 nucleic acid genome 776
 nucleic acid secondary structure 836
 nucleic acid sequences 294
 nucleophilic substitution 517
 nucleoporins 634
 nucleosomes 458
 nucleotide exchange 891
 nucleotide substitutions 195
 nucleus 235, 351
- O**
- 2'-*O*-alkyl modifications 834
¹⁶O-labeled water 639
¹⁸O-labeled water 639
¹⁸O-labeling 621
O-linked *N*-acetylglucosamine 629
 2'-*O*-MOE modification 834
 obesity 884
 octarepeats 782
 octreotide 709
 "off-target" effect 370
 off-line analysis 523
 off-target genes 315
 off-target silencing 846
 Office of Technology Assessment analysis 503
 oleanolic acid 657
 olfactory bulb 274
 oligoarginines 326
 oligofectamin 367
 oligonucleotide probes 1003
 oligonucleotides 314, 780, 829, 999
 oligosaccharide groups 626

- "omics" analyses 294
 2'-O-Me modification 370
 oncogene 293, 299, 302, 453, 984
 oncogenic addiction 449, 450
 oncogenic proteins 889
 oncogenic transformation 884
 oncogenicity 464
 oncology 444
 oncolytic virotherapy 471
 oncostatin-M 238
 online genome database 598
 ontogenetic mechanism 269
 ontogenetic rhythm 273
 oocytes 24
 open reading frame 18, 298, 635, 780
 open-source programs 614
 opsonization 325
 optic cup 144
 optic neuritis 922
 optic vesicle 144
 optical gain 999
 optical imaging 1001
 optics 999
 optimal gradient run time 556
 optimization 498, 503, 580
 optimization phase 583
 optimization process 582
 optimization runs 508
 optimized formulations 325
 optofluidics 959
 oral absorption 735
 oral bioavailability 500
 oral vaccine delivery 707
 orbitrap 604
 orchietomy 47
 organ bud transplantation therapy 150
 organ buds 139
 organ shortage 152
 organ targeting 848
 organic solvents 516
 organogenesis 140, 249
 organogenetic processes 143
 organoids 139
 orphan drugs 526
 orsay 360
 Orsay virus 360
 orthogonal assay 578
 orthogonal separations 563
 orthogonality of different separation modes 563
 osteoarthritis 119
 osteoclast-activating factor 233
 osteoclastogenesis 260
 osteoporosis 34
 osteosarcoma 785
 osthole 656
 otelixizumab 117
 ototoxicity 907
 ovarian cancer 112, 421, 846, 1004
 ovarian function 246
 ovarian tumors 301
 ovary 246
 overhanging nucleotides 353
 ovogenesis 246
 ovulation 246
 oxazolidinones 922
 oxidation/reduction cycles 503
 oxidative enzymes 589
 oxirene 57
 oxy Hb 186
 oxygen delivery 196
 oxymyoglobin 186
- p**
- P-glycoprotein 703, 744, 749
 P-gp efflux 747
 P-gp pump 328
 P300/CBP-associated factor 361
 p38 protein 879
 p53 306
 paclitaxel 324, 517
 palivizumab 117
 pan-assay interference compounds 579
 pancreas transcription factor 1-a 272
 pancreatic adenocarcinoma 332
 pancreatic cancer 890
 pancreatic ductal adenocarcinoma 302, 466
 pancreatic tissues 146
 pancreatic tumors 299
 pancreatic, melanoma 785
 papilloma virus 257
 paracellular permeation 743
 paracellular route 749
 paramagnetic probes 877
 parasitic infections 459
 parathyroid hormone 706
 parenteral formulations 706
 Parkinson's disease 685, 805
 paroxysmal nocturnal hemoglobinuria 116
 partial pressure 173
 particle compressibility 554
 particle diameter 537
 particle size 951
 particle size distribution 554
 particle surface area 739
 partition coefficient 738
 partition 732
 Pasha 296, 351
 passenger strand 297, 844

- passive delivery 326
 passive diffusion 13, 709, 714, 743, 748
 passive immunization 388
 passive immunotherapy 112
 passive permeability 587
 passive transcellular route 749
 pathogen-associated molecular pattern 370
 pathogenesis 775
 pathogenic mechanisms 685
 pathogenic nucleic acids 294
 pathological milieu 441
 pathophysiology 952
 patient compliance 704
 PAZ domain 351
 peak broadening 537
 peak capacity 563
 peak dispersion 538
 peak intensity ratio 637
 pediatric TB 909
 pedigree analysis 22
 PEG 986
 pegaspargase 708
 pegfilgrastim 708
 PEGylated lipids 849
 PEGylated liposomes 325
 pembrolizumab 213
 penetratin 326
 penicillin 741, 840
 PepNovo 627
 pepsin 741
 peptide bonds 606
 peptide drug delivery 707
 peptide fragmentation 629
 peptide fragments 541
 peptide mapping 608
 peptide mass fingerprinting 612
 peptide mass-matching 634
 peptide nucleic acid 832
 peptide sequence analysis 612
 peptides 538
 peptidomics 534
 per aqueous liquid chromatography 539
 perfluorocarbons 191
 perfusion fluid 750
 pericytes 954
 perinatal lethality 785
 peripheral blood lymphocytes 418
 peripheral blood mononuclear cell 101, 425
 peripheral neuropathy 922
 permeability class boundary 746
 permeability 581
 permeation enhancers 765
 persister bacilli 906
 persisters 906
 personalized medicine 307
 personalized treatment 955
 personalized therapy 152
 petunia 349
 Peyer's patches 251, 706, 793
 pH gradient strips 624
 pH-dependent binding 117
 pH-partition theory 737
 phage display 101
 phage libraries 101
 phage therapy 460
 pharmaceutical profiling program 753
 pharmaceutics 728
 pharmacodynamic profile 115
 pharmacodynamics-based drug–drug interaction 717
 pharmacodynamics 728, 729, 829, 912
 pharmacokinetic profile 588, 729, 927
 pharmacokinetics-based drug–drug interaction 717
 pharmacokinetics 106, 115, 699, 728, 829, 912
 pharmacological action 730
 pharmacological testing 59
 pharmacophoric map 577
 Phase I clinical trials 423, 497, 763
 Phase II clinical trials 497, 765, 913
 Phase III trials 497, 914
 phenotype 272, 349, 784
 phenotypic mechanism 448
 phenotypic response 577
 phenylalanine 543
 Philadelphia chromosome 453
 Philadelphia chromosome-positive CML 879
 phlebotomy 416
 phloem 358
 phosphatidylinositide 3-kinase 209
 phosphodiester backbone 972
 phosphoinositide 3-kinase (PI3K) delta and gamma 663
 phosphopeptides 548, 628
 phosphorodiamide morpholino oligomer 832
 phosphoromonothioate 314
 phosphorothioate 831
 phosphorylation 540, 627, 878
 photobleaching 1001
 photochromic switching 1003
 photodynamic medical therapy 1003
 photolysis 177
 photosensitizers 1005
 photostability 1003
 photothermal therapy 981
 phylogenetic tree 195
 physical pharmacy 728
 physico-chemical properties 500, 580, 711

- pilot plants 511
 ping-pong mechanism 355
 pituitary gland 19, 144, 233
 pituitary gonadotrophic inhibition 34
 PIWI domain 351
 Piwi-associated RNA 354
 placenta 246, 801
 placental transmission 90
 plant cell fermentation 518
 plant sources 651, 654, 656–658, 664, 666, 668, 669, 672
 plant trial 521
 plantibodies 112
 plants 112
 plasma cells 92
 plasma expanders 191
 plasma membrane 79, 364, 889, 975
 plasma protein binding 589
 plasmid DNA 327
 plasmids 311
 plasmodesmata 358
 plate height 537
 plate number 537
 platelet 241
 pluripotent stem cell 139, 146, 392
 pneumonia 258
 point mutations 117, 449, 916
 Poisson process 196
 polar surface area 581, 743
 polar-bonded phase chromatography 547
 poliovirus 362, 371
 polo-like kinase 1 326
 polyacrylamide gel-electrophoresis 599
 polyaromatic hydrocarbon 546
 polyaspartic acid 547
 polybasic region 781
 polyclonal antibodies 112
 polyclonal population 424
 polycystic kidney disease 148
 polycythemia 189
 polyethylene glycol 192, 317, 708
 polyethylenimine 317, 976
 polymerization 92
 polymers 184
 polymorph ratio 759
 polymorph screening 514, 758
 polymorph specification 759
 polymorph/salt screening 762
 polymorph 733
 polymorphic conversion 735, 758, 760
 polymorphic forms 758
 polymorphic regions 22
 polymorphism 21, 514, 624, 801
 polymorphonuclear leucocytes 232
 polypeptide chain 163
 polypharmacology 476
 polysaccharide structures 629
 pore connectivities 546
 pore diameter distribution 554
 pore diameter 554
 pore geometries 545
 pore sensors 951
 porphyrin 180
 post-transcriptional gene silencing 295, 349
 post-translational modification
 post-translational modification 106, 464, 535, 597, 786
 post-translational protein modifications 462
 postmitotic interneurons 275
 postprandial hyperglycemia 711
 postsynaptic partners 269
 potency 582
 potential genotoxic impurities 513
 powder X-ray diffraction 514
 power law global error model 622
 pre-miRNA hairpin 854
 precision medicine 472
 preclinical studies 313
 precursor RNA 355
 precursor solutions 947
 pregabalin 505, 518
 pregnancy 112, 169
 preinitiation complex 632
 preparative chromatography 557
 pressure control 958
 pressure gradients 324
 pressure-relief system 509
 presystemic metabolism 703
 pretomanid 921
 primary hypogonadism 25
 primary miRNA 351
 primate foamy virus 361
 primates 195
 prion infection 778
 prion infectivity 778
 prion replication 790, 791
 prions 775
 pro-inflammatory cytokine 119
 pro-survival genes 363
 probasin 23
 process analytical technology 523, 539
 process chemist 497
 process design 521
 process qualification 521
 process R&D 498
 process technology 497
 process validation 521

- process verification 522
 process-driven control limits 521
 processing conditions 506
 productivity-enhancing technologies 525
 progenitor cells 272
 pregestational activity 39
 prognostic markers 217
 programmed cell death 201, 299
 progressive supranuclear palsy 687
 prokaryotes 106
 proliferation signals 425
 proliferation 299
 prolonged-release dosage 742
 promegestone 56
 promoter mutant 919
 proof of concept 501
 property profile 585
 prospective white matter 272
 prostaglandin 245
 prostate cancer 14, 22, 299, 421, 628, 983
 prostate membrane-specific antigen 326
 prostate-specific antigen 22, 118
 prostate-specific membrane antigen 975
 prostate 13
 prostatic carcinoma 47
 prostatic tissues 14
 prosthetic group 183
 protamines 368
 protease D 23
 protease inhibitors 707
 proteasome 630
 protection/deprotection cycles 503
 protein A 634
 protein abundance 598
 protein accumulation 625
 protein affinity pulldown 623
 protein aggregators 579
 protein assemblies 635
 protein binding 710
 protein catabolism 8
 protein complex composition 623
 protein crystal structure 577, 588
 protein crystallography 180, 184
 protein expression 455
 protein isoforms 598
 protein kinase R 847
 protein kinase receptor 315
 protein misfolding cyclic amplification 792
 protein phosphorylation 878
 protein purification process 561
 protein surface 577
 protein synthesis 8, 829, 922
 protein target 873
 protein truncation 626
 protein tyrosine kinase 878
 protein tyrosine phosphatase 878
 protein–ligand complex 176
 protein–protein interaction 598
 protein-based drugs 312
 protein-based therapeutics 699
 protein-binding capacities 549
 protein-coding genes 294, 295
 protein-coding regions 449
 protein–hydrophobic surface interactions 551
 protein–ligand complexes 878
 protein–protein interactions 462, 592
 proteins 999
 proteome analysis 472, 599
 proteome 443, 597
 proteomics 534
 proteotypic peptide 621
 proto-oncogenes 629
 protofibrillar aggregates 789
 proton sponge effect 976
 proton transfer chain 914
 protoporphyrin IX 163
 proven acceptable ranges 522
 pseudohermaphroditism 16
 psoriasis vulgaris 119
 psoriasis 258, 259
 psychiatric disorders 907
 psychiatric symptoms 799
 psymberin 657
 PTP1B 883
 pulmonary diseases 944
 pulmonary endothelium 427
 pulmonary microangiopathy 908
 pulmonary tuberculosis 901
 pulse-chase experiments 783
 pulsed Q collision-induced dissociation 620
 purification points 504
 purification steps 559
 Purkinje cell degeneration 276
 Purkinje cell 270, 784
 pyranose sugars 847
 pyrazinamidase 905
 pyrazinamide 903
 pyrazoles 41
 pyrithiamine 856
- q***
- QconCAT 621
 QD acceptors 1003
 QT-interval 921
 quadroma 120
 quadrupole field 604

quality assurance/quality control 554
 quality by design 522, 554
 quality by testing 522
 quantitative proteomics 636
 quantitative structure–activity relationship 920
 quantitative structure–retention relationship 564
 quantum aspects 1001
 quantum dot 471, 951, 997
 quaternary ammonium ligands 551
 quaternary structure 178, 540, 786
 quercetin 657, 667
 quinine 653, 667
 quinolinones 31

r

R&D efficiency 524
 rabies virus glycoprotein 368
 radial glia 278
 radiation therapy 201
 radioimmunoassays 39
 radiotherapy 466
 Raman microscopy 514
 random mutagenesis 113
 ranibizumab 118
 rapamycin 426
 Ras complexes 890
 Ras conformers 890
 Ras effectors 889
 Ras family proteins 889
 Ras inhibitors 891
 Ras oncogene 888
 Ras protein 888
 Ras upregulation 890
 Ras–SOS interface 891
 rash 216
 rat ventral prostate 19
 raxibacumab 460
 reaction calorimetry 507
 reaction dumping 512
 reaction end point 513
 reaction mass efficiency 516
 reaction monitoring 513
 reaction profiles 507
 reaction stoichiometry 516
 reaction times 504
 reactive oxygen species 242, 924, 986, 1005
 reactivity of solvents 505
 reagent reactivity 504
 reagent toxicity 504
 real-time monitoring 959
 rearrangements 473
 receptor binding affinity 755
 receptor binding analyses 30

receptor molecules 999
 receptor tyrosine kinase 451
 receptor-mediated elimination 715
 receptor-mediated specific uptake 710
 receptor-mediated transport 715
 receptor-mediated endocytosis 316, 368
 receptors 237, 598
 reciprocal recognition 269
 recombinant DNA 464
 recombinant human insulin 704
 recombinant IgG 93
 recombinant molecule 234
 recombinant protein 106
 recombinant viral vectors 369
 redox 579
 redox-based inhibitors 580
 5α -reductase 7
 reelin 278
 regeneration 685
 regenerative medicine 139, 390, 400
 regulatory agencies 497
 regulatory environment 524
 regulatory filings 522
 regulatory proteins 598
 regulatory RNAs 351
 regulatory T cells 244
 Reifenstein syndrome 25
 relative abundance 615
 relative resolution map 556
 relief venting 512
 renal amino acid homeostasis 713
 renal cancer 212
 renal cell cancer 704
 renal cell carcinoma 415
 renal clearance 317
 renal elimination 715
 renal failure 714
 renal filtration 1003
 renal insufficiency 714
 renal metabolism 712
 renal organoids 147
 renal toxicity 955
 renilla luciferase 1003
 replication protein A 591
 replication states 905
 replication transactivation activator 362
 replicon 360
 reproducibility 579
 reprogramming 392
 reptiles 781
 reserpine 653
 resistance, nodulation, and division 917
 resolving power 603
 resonance energy transfer 1003

- respiratory disorders
 – asthma 663–665
 – bronchitis 662–663
 respiratory distress syndrome 705
 respiratory syncytial virus 117, 257, 365
 restricted access material 547
 resuscitation-promoting factor 906
 retention behavior 556
 retention factor 536
 retention volume 536
 reticuloendothelial system 111, 314, 707
 retinitis pigmentosa 144
 retinoids 21
 retrotransposons 354
 retroviral genomes 778
 retroviral transduction 428
 retrovirus 311, 418
 reverse transcriptase inhibitors 908
 reverse-phase liquid chromatography 512
 reversed-phase chromatography 535
 reversibility 163
 Reynolds number 947
 rheumatoid arthritis 102, 126, 258, 708
 Rho-associated coiled-coil forming kinase 143
 ribavirin 259
 ribonucleic acid interference 836
 ribonucleotide reductase M2 329
 ribosomal proteins 625
 ribosomal RNA 841
 ribosomes 632
 riboswitch 857
 riboswitches 856
 ribozymes 470
 rifabutin 903
 rifampicin 902
 rifampin 745
 rifapentine 903
 RIFAQUIN trial 919
 RIFATOX trial 919
 RISC complex 309
 RISC-loading complex 296
 risk management 803
 ritonavir 745, 758
 rituximab 96
 RNA binding affinity 830
 RNA degradation 830
 RNA interference 294, 347, 469
 RNA polymerase 905
 RNA sequencing 472
 RNA silencing 349
 RNA translation 351, 830
 RNA viruses 362
 RNA-induced silencing complex 971
 RNA-binding affinity 837
 RNA-binding antibiotics 840
 RNA-binding intercalators 852
 RNA-binding ligands 852
 RNA-binding proteins 315
 RNA-dependent RNA polymerase 356
 RNA-helicase 356
 RNA-induced silencing complex 351, 470, 843
 RNAi modulators 307
 RNAi pathway 971
 RNAi pathway mutant 358
 RNAi therapeutics 316
 RNAi therapies 471
 RNAi toxicity 315
 RNAi-based therapy 987
 RNAi-targets 312
 RNase H mechanism 837
 rodent pharmacokinetic study 589
 root effect 175
 roseoflavin 856
 rostrocaudal axis 274
 Rous sarcoma virus 347
 Rule of 3 584
 Rule of Five 500
 ryo-kan-kyomi-sin-ge-nin-to (RKSG) 663
- s**
- safety data 589
 safety margins 756
 safety profile 115, 582
 safety review team 511
 SAGA-like complex 632
 salicylic acid 653
 salicylihalamide 657
 saliva 323
 salivary gland 144
 salt bridges 182
 salt formation 503, 757
 salt selection 761
 salting in 737
 salting out 737
 salting-out effect 550
 salvage receptor 93
 saponins 665
 saturation energy 875
 saturation magnetization 875
 saturation mutagenesis 113
 saturation transfer difference-NMR 875
 scaling up 558
 schizophrenia 888
 Schwann cells 793
 scrapie 778
 screening 577
 screening cascade 583, 587
 screening solution 578

- seborrhea 47
 second messenger 186
 second pocket 885
 second-generation processes 525
 second-line anti-TB agents 909
 second-line DST 906
 secondary hypogonadism 25
 secondary structure 541, 786
 secosteroid 53
 β -secretase 389, 688
 γ -secretase 389
 secretase inhibitors 388
 γ -secretase modulators 390
 secretory component 93
 secretory vesicle membrane 78
 select 503
 selected reaction monitoring 622
 selective androgen receptor modulator 22, 31
 selectivity 537, 543, 583
 self-morphogenesis 142
 self-regulating pharmacokinetics 708
 semen 8
 semiconductor heterostructures 997
 seminal vesicles 7
 seminiferous fluid 13
 semisynthetic process 518
 senile plaques 686
 sensitivity 603
 separation columns 535
 septic shock 256
 sequence homology 360
 sequence selectivity 829
 sequencing instruments 448
 sequential epitope tagging, affinity purification, and mass spectrometry 632
 sequest 627
 severe acute respiratory syndrome 365
 severe combined immunodeficiency 249, 413
 sex characteristics 7
 sex glands 6
 sex hormone binding β -globulin 12
 SH2-domain containing tyrosine phosphatase 203
 shadoo 781
 shape-selective recognition 852
 sheeting 729
 shope fibroma virus 256
 short hairpin RNA 295
 short interfering ribonucleic acid 832
 short interfering RNA 295, 309
 shRNA coding sequences 369
 sialic acid 111
 sickle-cell 191
 sickle-cell anemia 191
 side chains 183
 side effects 7, 122, 704
 side reactions 504
 side-effect burden 586
 siderosis 688
 signal amplification 356
 signaling cascades 307
 signaling enzymes 879
 signaling pathways 878, 884
 signaling proteins 455, 598
 silencing mechanism 358
 silica hydride stationary phase 548
 silica-based packing materials 545
 simulated gastric fluid 740
 simulated intestinal fluid 740
 sindbis virus 358
 single chain variable fragment 422
 single guided RNA 469
 single nucleotide polymorphism 254, 300
 single-chain peptide 640
 single-electron transistors 999
 single-enantiomer forms 500
 single-pass (open loop) perfusion 750
 single-photon sources 1000
 single-point mutations 473
 single-stranded RNA 297
 single-stranded short interfering ribonucleic acid 851
 single-subunit oxygenation 180
 sinusoidal vasculature 316
 siRNA clamp 358
 siRNA duplexes 360
 siRNA oligonucleotides 971
 siRNA silencing 314
 siRNA-ION constructs 985
 siRNA 971
 β -site APP-cleaving enzyme 1 688
 site occupancy theory 546
 site-directed mutagenesis 113, 192
 size-exclusion chromatography 543
 Sjogren's syndrome 145
 skeletal calcium 8
 skeletal growth 7
 skeletal muscle 784
 skin aging preventing drugs 670, 672
 skin discoloration 924
 skin diseases 983
 skipping 839
 slime mold 78
 slurry test 760
 small cell lung cancer 302
 small hairpin RNA 364
 small interfering RNA 353, 470, 1003
 small intestine 741
 small molecules 840

- small nucleic acid lipid particle 367
 small RNAs 351
 small, noncoding RNA 332
 small-molecular entities 499
 small-molecule antibiotics 841
 small-molecule drug conjugates 471
 small-molecule drug 462, 699
 small-molecule inhibitors 883
 small-molecule libraries 852
 small-molecule NCEs 524
 snake venom phosphodiesterase 836
 SNALPs 987
 SNARE proteins 78
 solid cancers 214
 solid particle dissolution 739
 solid tissues 1003
 solid tumor 302, 466, 850
 solid-phase extraction 547
 solid-state properties 758
 solubility 579
 soluble salt 763
 solute–solvent bonds 733
 solution calorimetry 734
 solvent cavity 733
 solvent modifier 555
 solvent selection 516
 solvent–solvent bonds 733
 solvents 505
 solvophobic effect 545
 solvophobic phenomena 546
 solvophobic theory 545
 somatic cells 392
 somatic hypermutation 90
 somatic macronucleus 295
 somatic mutations 449
 somatic stem cell 139
 Son-of-Sevenless 889
 sonoporation 705
 SOS protein 891
 species barrier 777
 spectral counting 621, 622
 spectral diffusion 997
 spectral jumps 997
 spectral overlap 1002
 α -spectrin N-terminal fragment 691
 spectroscopy 507
 spermatogenesis 23, 51, 246, 354
 spermatozoa 8
 spermine-binding protein 23
 spherical nucleic acid 981
 spinal muscular atrophy 839
 spinocerebellar ataxia type-1 280
 spiroindolones 460
 spleen 168, 251, 316, 983
 splenomegaly 191
 splice-site mutations 449
 spliceosome 839
 splicing 829
 sponge 311
 sporadic Creutzfeldt–Jakob disease 796
 SQ109 917
 stability 581
 stable isotope labeling 617
 stable isotopes 617
 stable nucleic acid particle lipid-based nanoparticle 316
 stable nucleic-acid-lipid particle 849, 986
 staff training 521
 stanalone 7
 stanozolol 43
 stat3 211
 stationary phase 545
 StavroX 640
 stellate interneurons 270
 stem cell culture 140
 stem cell replacement therapy 396
 stem cell surface markers 393
 stem cell therapy 390
 stem cell transplant 423
 stem cell 279, 469
 stem-loop structure 309, 364
 step impurities 523
 stereochemical mechanism 181
 stereoelectronic effects 833
 steric block 838
 steric hindrance 186
 steric interactions 833
 steroid hormones 19
 steroid nucleus 6
 steroid receptor proteins 20
 steroid xenobiotic receptor 745
 steroid–receptor complexes 20
 steroidol aromatase inhibitors 56
 steroidogenesis 9, 246
 stimulated emission 999
 stoichiometric chemical transformations 504
 stoichiometry 623
 Stokes shifts 1001
 stomatitis vesicular virus 249
 stopcodons 451
 β -strands 776, 790
 strand selection 846
 STREAM 907
 streptavidin-conjugated QD 1002
 streptavidin 121
 streptomycin 854
 striatal-enriched protein tyrosine phosphatase 888

- stromal cell-derived factor-1 245
 stromal cells 211
 structural flexibility 311
 3D structure 163
 structure analogs 586
 structure–activity relationship 26, 579, 756, 881
 structure-aided drug design 873
 structure–function 22
 structure–property relationship 581
 subcloning 102
 subgranular zone 394
 submucosa 146
 β -subunit 163
 40S-subunit 632
 subunit–subunit interactions 178
 subventricular zone 394
 sudoterb 918
 sugar modifications 834, 845
 sugar-phosphate backbone 832
 suicide genes 428
 sulfamethoxazole 924
 sulfanilamide 730
 sulfate conjugates 44
 sulfonamide 498
 superkine 237
 superparamagnetic iron oxide nanoparticle 327
 surface analysis 615
 surface area 554
 surface epithelia 365
 surface heterogeneity 554
 surface plasmon resonance 581, 877
 surface tension 549
 surface tension modifier 546
 surface topography 552
 surface-enhanced laser desorption/ionization time-of-flight 607
 surface-to-volume ratio 608
 surfactants 998
 survival 299
 sutezolid 922
 switchable base-pairs 848
 synapsin I 629
 synaptic degeneration 689
 synergistic activity 917, 918
 synergistic effect 218, 473
 synexins 78
 synonymous mutations 449
 synthetic androgens 26
 synthetic antibiotic 852
 synthetic bivalent inhibitor 886
 synthetic chemistry 885
 synthetic copolymer materials 549
 synthetic lethality 475
 synthetic organic chemistry 497
 synthetic prions 778
 synthetic tractability 581
 α -synuclein 805
 synucleinopathies 689
 systemic bioavailability 699
 systemic circulation 704
 systemic delivery 365
 systemic exposure 703
 systemic lupus erythematosus 257
 systems biology 534
 systems cell biology 625
- t**
- T-cell immunotherapy trials 418
 T-cell receptor 243, 421
 T-cell-replacing factor III 233
 T-cell activation 203
 T-cell effector function 210
 T-cell epitopes 114
 T-cell function 465
 T-cell immunoglobulin and mucin domain 3 214
 T-cell leukemia 465
 T-cell receptor 201, 467
 T-cell therapy 201
 T cells 323, 784
 T lymphocytes 243
 T-lymphocyte attenuator 214
 T-regulatory cell 420
 tabalumab 257
 tabletting 729
 tacrolimus 745
 TAL protein 631
 tamoxifen 58
 tandem affinity purification 635
 tandem mass spectrometry 601
 tandem spectra 613
 tandem target sites 312
 TAR-peptide complex 855
 target cells 365
 target RNA 295
 target selectivity 755
 target specificity 370, 428
 target validation 580
 target-mediated drug disposition 717
 target-based approach 910
 target-to-drug strategy 912
 targeted mutagenesis 113
 targeted specificity 424
 targeted therapeutics 473
 targeted therapy 441, 444
 TATA-box binding protein 637
 tau 385
 tau proteins 685
 tauopathies 689

- taxol 517, 653
 TB prevalence 902
 TB reactivation 901
 TB treatment regimens 927
 TB/HIV coinfection 908
 technology transfer 520
 telencephalic subventricular zone 274
 telomerase 425
 telomeres 296
 template structure 789
 tenecteplase 703
 tertiary structure 795
 testicular atrophy 51
 testicular dysfunction 25
 testicular feminization 25
 testis 246
 testosterone 6
 testosterone glucuronide 15
 testosterone pool 9
 tetrahydrogestrinone 45
 tetramer–dimer dissociation constant 185
 thalamus 798
 thalassemia 172
 thalidomide 731
 theophylline 717
 theoretical plates 537
 therapeutic agents 838
 therapeutic antibodies 106, 112
 therapeutic applications 363
 therapeutic effect 441
 therapeutic intervention 882
 therapeutic margin 903
 therapeutic potential 887
 therapeutic protein–small-molecule drug interactions 717
 therapeutic protein–therapeutic protein interactions 717
 therapeutic proteins 705
 therapeutic target database 462
 therapeutic window 729
 therapy 805
 thermal analysis 761
 thermal gravimetric analysis 758
 thermal runaway 510
 thermal screening unit 509
 thermal stability 831, 845
 thermal stabilization 835
 thermally unstable materials 508
 thermochemical calculations 509
 thermodynamic equilibrium 732
 thermodynamic or kinetic effects 548
 thermodynamic stability 185
 thermodynamic studies 835
 thermodynamically stable polymorph 760
 thermodynamics 731
 thiamine pyrophosphate 857
 thienopyridine scaffold 856
 thiomesterone 38
 third-line agents 903
 three-dimensional contour plots 562
 three-dimensional structure 552
 Threshold of Toxicological Concern 513
 thrombocytopenia 922
 thrombopoietin 709
 thromboses 83
 thrombosis 952
 thyroid follicles 147
 thyroid hormones 13, 21
 thyroid papillary carcinoma 299
 tigecycline 757
 tissue distribution 365, 730
 tissue engineering strategy 153
 tissue explants 955
 tissue growth factors 464
 tissue inhibitor of metalloproteinases 3 302
 tissue plasminogen activator 703
 titanium oxide enrichment chromatography 628
 TNF-related apoptosis-inducing ligand 239
 tobacco mosaic virus 112
 tocilizumab 257
 tolerability 923
 toll-like receptor 315, 363, 847, 973
 “top-down” approach 606
 topology 163
 topotecan 745
 total body irradiation 427
 totally drug-resistant TB 902
 toxic components 1003
 toxic effects 216, 389
 toxic metabolites 708
 toxic side effects 463
 toxicity 312
 toxicity profile 473
 toxicological potential 513
 toxicology 716, 912
 toxicology studies 912
 toxin coregulated pilus 448
trans stereochemistry 26
 transactivation response 852
 transaminases 832
 transcellular migration 709
 transcellular permeation 743
 TransChromo mouse 105
 transchromosomal calves 113
 transcortin 32
 transcription factors 625, 781
 transcriptional activator 317
 transcriptomes 443

- transdermal drug delivery 705
 transdifferentiation 462
 transfection 985
 transfection efficiency 985, 1003
 transferrin 368
 transferrin receptor 327
 transferrin receptor 1 122
 transformation efficiency 114
 transforming growth factor- β 237
 transforming growth factor- α 465
 transgene 418
 transgenes 356, 418
 transgenic mice 794, 803
 transgenic mouse 105
 transgenic organisms 105
 transgenic plants 112
 transient expression 429
 transit time 188, 744
 transition temperature 761
 translational repression 295
 translational silencing 353
 transmembrane channel 82
 transmembrane domain 422
 transmembrane receptors 465
 transmembrane subunit 235
 transmissibility 778
 transmissible spongiform encephalopathy 112, 784
 transmission electron microscopy 949
 transplantation 259
 transplantation therapy 392
 transportan 326
 transporters associated with antigen processing 468
 transposase protein 418
 transposon cassettes 418
 transposon-mediated transduction 417
 transposons 349
 transvascular transportation 316
 transverse relaxation optimized spectroscopy 877
 trasponsors 296
 trastuzumab 101, 118, 307, 455
 trauma 247
 traumatic brain injury 685
 TRBP 353
 treatment duration 919
 treatment regimens 906
 trehalose monomycolate 917
 tremelimumab 205
 trenbolone 45
 triene analogs 36
 trifunctional crosslinker 638
 trimethoprim 924
 triple helix 832
 trophic factors 395
 tropomyosin 1 305
 troponin C 79
 trypsin 741
 trypsin microreactor 609
 tryptic peptides 627
 tryptophan 543
 tubercle bacilli 913
 tuberculosis 258, 901
 tuberculosis treating drugs 669
 tumor accumulation 975
 tumor antigens 367
 tumor burden 427
 tumor cells 120, 245
 tumor downregulation 423
 tumor eradication 415
 tumor formation 393
 tumor gene expression patterns 457
 tumor genomics 473
 tumor growth 888
 tumor growth retardation 326
 tumor infiltrating lymphocyte 415
 tumor initiation 312
 tumor invasion 212
 tumor lesions 208
 tumor lysis 428
 tumor microenvironment 201, 420, 466
 tumor molecular biomarkers 218
 tumor necrosis factor 235, 423
 tumor necrosis factor receptor 216
 tumor necrosis factor-alpha 315, 664, 785, 981
 tumor peptides 421
 tumor progression 467
 tumor regression 312, 363
 tumor response 208
 tumor sites 1005
 tumor suppressor gene 145
 tumor suppressors 305, 629
 tumor targeting 119, 126
 tumor tissue 413
 tumor vasculature 325
 tumor-specific lymphocytes 420
 tumor-associated antigens 466
 tumor-associated dendritic cell 215
 tumor-infiltrating lymphocyte 206
 tumor-initiated angiogenesis 466
 tumor-reactive T cells 208
 tumor-specific antigens 467
 tumor-specific T cells 468
 tumor-suppressors 299
 tumorigenesis 446, 884, 888
 tumors 883, 974
 turbidity probe 523

- two-dimensional difference gel electrophoresis 615
 two-dimensional electron system 997
 two-photon optical imaging 1005
 type 2 diabetes 260
 type II diabetes mellitus 704
 tyrosine 543
 tyrosine kinase 879
 tyrosine-kinase inhibitor 206, 453
 tyrosine-protein phosphatase non-receptor type 11 888
- u**
 ubiquitin 630
 ubiquitin C-terminal hydrolase L1 691
 ubiquitination 627
 ultra-high-performance liquid chromatography 539
 ultrafiltration 786
 ultrasound 327
 umbilical cord blood transplant 427
 unlocked nucleic acid 846
 5'-untranslated region 854
 untranslated region 298, 354
 ureteric epithelium 148
 urogenital tract 16
 uterine bleeding 26
 uterus 246
 UV detection 541
- v**
 vaccine 205, 307, 467, 499, 705, 793
 vaccinia virus 249
 valacyclovir 743
 valence band 997
 van Deemter–Knox equation 538
 Van't Hoff equations 761
 vanadate 884
 variably protease-sensitive prionopathy 798
 variant Creutzfeldt–Jakob disease 777
 vas deferens 7
 vascular endothelial cell growth inhibitor 245
 vascular endothelial growth factor 106, 220, 329
 vascular endothelial system 711
 vascular endothelium 367, 952
 vasoactive intestinal peptide 246
 velocity distribution 604
 ventral mesencephalon 274
 ventricular zone 272
 Verbascum thapsus 664, 665
 vertebrates 195
 “vertical” targeting 473
 vesicular stomatitis virus 360
 vinblastine 324, 653
 vincristine 653
 viral entry receptors 423
 viral escape 371
 viral genome 777
 viral infection 210, 315, 971
 viral replication 257, 347, 359, 424, 855
 viral RNAs 854
 viral sensors 360
 viral suppressors of RNAi 358
 viral transcription 371
 viral vector transduction 417
 virilization 8
 virilizing actions 45
 virion 423
 viroids 777
 virotherapeutic agent 471
 virulence factors 448
 virus-derived small interfering RNA 356
 viruses 776
 viscosity 193
 vitamin C 653
 vitamin D 21
 vitamin E analogs 193
 vitamins 742
 volatile organic impurities 512
 voltage-dependent ion channels 78
 voltage-gated ion channel 592
 volume of distribution 709, 716
 volume overloading 558
 vulnerability 912
- w**
 waste minimization 504
 wastewater streams 517
 water-insoluble compounds 766
 water-soluble compounds 765
 water-Ligand Observed via Gradient Spectroscopy 875
 Watson–Crick base-pairing 830
 West Nile virus 312, 362
 West Nile virus infection 423
 wheat germ cell-free protein production system 669
 whole-cell phenotypic screens 914
 whole-genome RNAi screening 312
 whole-genome sequencing 294
 wild-type antibody 115
 Wilms tumor 301
 wingless-int 143
 working memory 270
- x**
 X-linked chronic granulomatous disease 414
 X-ray crystallography 788

X-ray diffraction 183
X-ray structures 183
X-ray crystallography 590, 845, 879
X-ray structure 878
XenoMouse™ 102

y

yatakemycin 656
yeast 78, 105, 804
yeast cell display technology 114
yeast prions 804
yeast protein database 635
yeast proteome 627
yeast ribosome 632

yeast two-hybrid 632
“YTE” mutant 117

z

zanoterone 48
zebrafish 838, 957
zebrins 279
zero-dead volume tubing 555
zeta-potential 951
zinc finger nuclease 423
zone band broadening 538
zoonotic risk 796
zwitterionic compound 736