

- A**  
Adcock, Ian M. 824  
Albá, M. Mar 778  
Alexander, Jim 697  
Allan, Gordon J. 882  
Amijee, Hozefa 692  
Anderson, Martin 814  
Andrews, Allison-Lynn 873  
Asosingh, Kewal 805
- B**  
Baines, Anthony J. 796  
Bannon, John H. 910  
Bateman, Alex 751  
Beattie, James 882  
Bellora, Nicolás 778  
Berndt, Alex 615  
Bhattacharya, Soumyaroop 855  
Bickerton, G. Richard J. 727  
Blackledge, Neil P. 843  
Blundell, Tom L. 727  
Boer, Rainer 886  
Braun, Clemens 886  
Brindle, Nicholas P.J. 717  
Broderick, Ronan 926  
Buchanan, Paul J. 863  
Buck, Martin 762  
Buljan, Marija 751
- C**  
Castelo, Robert 778  
Catney, Martin 905  
Cavanagh, Mary M. 811  
Chou, Pai-Chien 824  
Conticello, Vincent P. 653  
Cookson, William 838  
Cuff, Alison 745  
Curnow, Paul 643
- D**  
Dahlbäck, Magnus 814  
Dalton, Colette 697  
Davies, Donna E. 873  
Davies, R. Jeremy H. 893  
Dean, Charlotte 838  
Deschaume, Olivier 687  
Dessailly, Benoît H. 745  
Djukanović, Ratko 868  
Doig, Andrew J. 692  
Domike, Kristin R. 682  
Donald, Athene M. 682  
Donoghue, Mark T.A. 918  
Dublin, Steven 653  
Durham, Andrew 824
- E**  
Edula, Goutham 814  
Elborn, J. Stuart 863  
Engl, Christoph 762
- Engström, Gunnar 814  
Ernst, Robert K. 863  
Erzurum, Serpil C. 805  
Evans, David J. 665
- F**  
Fasshauer, Dirk 787  
Faulds, Karen 697  
Fehniger, Thomas E. 814  
Ferruti, Paolo 713  
FitzGerald, Jennifer E. 897  
Flint, David J. 882  
Ford, Paul 824  
Forsman-Semb, Kristina 814  
Furtmüller, Paul G. 772
- G**  
Garnett, Martin C. 713  
Garside, Paul 697  
Gerhardsson de Verdier, Maria 814  
Gong, Sungsam 727  
Goodstadt, Leo 734  
Goodwin, Amanda 849  
Graham, Duncan 697  
Greenfield, Andy 838  
Grenon, Muriel 897
- H**  
Hallberg, Jenny 814  
Hardy, John G. 677  
Harris, Ann 843  
Hesslinger, Christian 886  
Heyde, Mieke 713  
Holgate, Stephen T. 873  
Holloway, John W. 873  
Hon, Wai-Ching 615  
Howard, C. Vyvyan 914  
Hunniford, C. Adam 893, 905  
Hurst, Laurence D. 756  
Hussell, Tracy 811  
Huvet, Maxime 762
- J**  
Jenkins, Gisli 849  
Jeuken, Lars J.C. 707  
Johnson, Louise N. 627  
Jones, Carol E. 877  
Jovanovic, Goran 762
- K**  
Kienle, Nickias 787  
Kirby, Isabelle 873  
Klopper, Tobias H. 787  
Krebs, Mark R.H. 682  
Kurtovic, Sanela 740
- L**  
Laskowski, Roman A. 723  
Lee, Semin 727
- Lees, Jonathan G. 745  
Lehner, Martin D. 886  
Leir, Shih-Hsing 843  
Lindberg, Claes M. 814  
Lovell, Simon C. 768  
Lowndes, Noel F. 897
- M**  
MacNee, William 819  
Madine, Jill 692  
Mannervik, Bengt 740  
Mariani, Thomas J. 855  
Marshall, Karen E. 671  
Martin, Jane S. 830  
McArt, Darragh G. 914  
McConkey, Glenn A. 792  
McCullough, Robert W. 893, 905  
McFarlane, Emma 697  
Mc Gee, Margaret M. 910  
McKenzie, Fiona 697  
McKerr, George 914  
McMurray, Fiona 838  
Merrigan, Tony L. 905  
Merry, Catherine L.R. 660  
Middleton, David A. 692  
Miller, Simon 615  
Moffatt, Miriam 838  
Moss, Andrew J. 717
- N**  
Nasheuer, Heinz-Peter 926  
Nicholas, Ben 868  
Nihlén, Ulf 814  
Nordgren, Ida Karin 873
- O**  
Obinger, Christian 772  
Okajima, Hiroshi 882  
Orengo, Christine A. 745  
Ott, Christopher J. 843
- P**  
Patwardhan, Siddharth V. 687  
Perry, Carole C. 687  
Ponting, Chris P. 734
- R**  
Rae, Colin 882  
Ranucci, Elisabetta 713  
Reid, Adam J. 745  
Renshaw, Stephen A. 830  
Robertson, David L. 768  
Robinson-Rechavi, Marc 783  
Runarsdottir, Arna 740
- S**  
Saetzler, Kurt 914  
Scheibel, Thomas R. 677  
Schock, Bettina 863
- Selcuklu, S. Duygu 918  
Serpell, Louise C. 671  
Shand, John H. 882  
Sharma, Shikha 717  
Shastri, Surya 882  
Sleat, Rob 713  
Smith, Andrew M. 660  
Spillane, Charles 918  
Sternberg, Michael J.E. 723  
Stevenson, Ross 697  
Stokes, Robert 697  
Strub, Andreas 886  
Studer, Romain A. 783  
Stumpf, Michael P.H. 762  
Suardi, Marco A. 713  
Sureshbabu, Angara 882  
Svartengren, Magnus 814  
Szymanowska, Malgorzata 882
- T**  
Takahashi, Shin-Ichiro 882  
Tan, Hui 762  
Tanramluk, Duangrudee 727  
Tavassoli, Ali 873  
Thompson, David 697  
Thornton, Janet M. 723  
Thornton, Kate 660  
Timson, David J. 893, 905  
Toll-Riera, Macarena 778  
Toni, Tina 762  
Tonner, Elizabeth 882  
Turner, Jonathan 877
- U**  
Ulijn, Rein V. 660  
Ulrich, Wolf-Rüdiger 886
- W**  
Warnecke, Tobias 756  
Wasson, Gillian R. 914  
Weber, Claudia C. 756  
Weiss, Sophie A. 707  
Westhead, David R. 792  
Whitaker, John W. 792  
Williams, Roger 615  
Worth, Catherine L. 727
- Y**  
Yamanaka, Daisuke 882  
Yates, Laura 838  
Yeats, Corin 745  
Ying, Liming 702
- Z**  
Zámocký, Marcel 772  
Zhang, Xuxiao 615  
Zhang, Youming 838  
Zimenkov, Yuri 653

- A**  
aggregation, 682  
aging, 819  
Alzheimer's disease, 692  
 $\beta$ -amyloid, 692  
amyloid, 671  
anaemia, 796  
aneuploidy, 910  
angioplasticity, 805  
ankyrin, 796  
ascomycete, 772  
assembly, 671  
asthma, 805, 824, 873, 886  
*ASZ1*, 843
- B**  
bacterium, 762  
bacteroidete, 772  
bioanalysis, 697  
biomarker, 855, 868  
biomaterial, 687  
biomimetic material, 677  
biomineral, 687  
biomolecule, 687  
bionanotechnology, 665  
Bragg peak, 893  
buried residue, 727
- C**  
cancer, 615, 918  
catalase/peroxidase (KatG), 772  
CD200 receptor, 811  
Cdc45, 926  
cell culture, 660  
cell cycle, 926  
centrosome, 910  
checkpoint, 926  
chromatin immunoprecipitation (ChIP), 843  
chromosome conformation capture (3C), 843  
chronic lung disease, 868  
chronic obstructive pulmonary disease (COPD), 814, 819, 824, 855, 886  
co-evolution, 768  
coding potential, 778  
codon model, 783  
coenzyme Q, 707  
coiled-coil structural motif, 653  
comet assay, 914  
comparative genomics, 734  
computer simulation, 914  
controlled delivery, 702  
copy number variant, 734  
cortactin-binding protein 2 (CTNBP2), 843  
corticosteroid, 824  
cowpea mosaic virus (CPMV), 665  
cross- $\beta$  diffraction, 671  
cross-linking, 713  
cyclin-dependent kinase 9-cyclin T (CDK9-cyclin T), 627  
cystic fibrosis transmembrane conductance regulator (CFTR), 843  
cystic fibrosis, 863  
cytokine receptor, 873
- D**  
database analysis, 745  
*de novo* gene formation, 778
- desorption/ionization on silicon (DIOS), 905  
directed evolution, 740  
disease mechanism, 855  
DNA damage, 926  
DNA delivery, 713  
DNA replication, 926  
DNA supercoiling, 893  
DNase I-hypersensitive site (DHS), 843  
domain shuffling, 751  
domain superfamily, 745  
Dot1, 897  
dual-coding sequence, 756  
duplication, 768
- E**  
emphysema, 819  
endosymbiosis, 792  
endothelial progenitor cell (EPC), 805  
enzyme activity space, 740  
enzyme kinetics, 707  
enzyme promiscuity, 740  
epidermal growth factor (EGF), 877  
epithelial-mesenchymal transition, 882  
epithelium, 849  
evolution, 787, 792, 796  
evolutionary analysis, 762  
evolutionary rate, 778  
exonic splicing enhancer (ESE), 756  
expression profiling, 855
- F**  
fibre, 671  
fibrosis, 882  
flavopiridol, 627  
forkhead box A2 (FOXA2), 877  
functional divergence, 783  
functional innovation, 734  
functional orthogonality, 740  
functionalized nanoparticle, 697  
fungal soluble SNARE, 787  
fungus, 772
- G**  
gene duplication, 723, 734, 778  
gene regulation, 918  
gene sharing, 762  
genetic disease, 796  
genetics, 838  
genome stability, 910, 926  
glutathione transferase (GST), 740  
glycogen phosphorylase, 627  
goblet cell, 877  
growth factor, 717
- H**  
HeLa cell, 914  
heritability, 814  
histone methylation, 897  
histone 2AX (H2AX), 897  
horizontal gene transfer, 723, 792  
hydrogel, 660  
hydrogen bond, 727
- I**  
idiopathic pulmonary fibrosis, 849  
immunoassay, 697
- immunoglobulin superfamily, 751  
inducible nitric oxide synthase inhibitor (iNOS inhibitor), 886  
inflammation, 805, 830, 863  
inflammatory marker, 814  
influenza, 811  
innate immunity, 811  
inorganic material, 687  
insulin, 682  
insulin-like growth factor, 882  
integrin, 849  
interleukin, 830  
interleukin-13 (IL-13), 873, 877  
interleukin 13 receptor  $\alpha$ -chain 1 (IL-13R $\alpha$ 1), 873  
interleukin 4 (IL-4), 873  
*in vivo* imaging, 830  
ion beam, 893
- L**  
laser desorption, 905  
lateral gene transfer, 772  
lineage-specific biology, 734  
lipid A, 863  
lipopolysaccharide, 863  
local structural environment, 727  
lung development, 838  
lung disease, 838, 886  
lung inflammatory disease, 811  
lung, 805, 855
- M**  
mammalian evolution, 734  
mass spectrometry, 905  
mathematical model, 914  
matrix-assisted laser-desorption ionization (MALDI), 905  
mediator of DNA-damage checkpoint 1 (MDC1), 897  
membrane fusion, 787  
membrane protein, 643  
metabolic reconstruction, 792  
metal surface, 697  
metazoan SNARE, 787  
microarray, 855  
microRNA (miRNA), 918  
microscopy, 914  
mineral, 687  
mineralization, 665  
*miR-21*, 918  
mitogen-activated protein kinase (MAPK), 824  
mitotic checkpoint, 910  
MUC5AC, 877  
mucin, 868  
multi-slice computed tomography (MSCT), 814  
multicellularity, 787  
multidomain protein, 751  
mutagenesis, 838
- N**  
nanobiotechnology, 643  
nanomanipulation, 702  
nanoparticle, 665, 682

nanopipette, 702  
nanosensor, 702  
nanostructure assembly, 653  
nanostructure, 660  
nanotechnology, 643  
negative regulator, 811  
*N*-ethyl-*N*-nitrosourea (ENU), 838  
neutrophilic respiratory disease, 830  
nitrate stress, 886  
nitric oxide, 886  
nucleosome, 756

## O

oncomir, 918  
optical device, 643  
orphan gene, 778  
oxidative phosphorylation, 707  
oxidative stress, 819

## P

p53-binding protein 1 (53BP1), 897  
p85, 615  
p110, 615  
parasite, 792  
Parkinson's disease, 692  
pathogenesis, 819  
peptide-based nanostructure, 653  
phage-shock stress response, 762  
phosphatase, 660  
phosphoinositide 3,4,5-trisphosphate, 615  
phosphoinositide 3-kinase (PI3K), 615  
phosphorylation, 627, 723  
phylogenetic analysis, 772  
phylogenetics, 792  
plasmid DNA, 893  
polyplex, 713  
positive selection, 783  
protein 4.1, 796  
protein domain, 751  
protein engineering, 717  
protein evolution, 723, 727, 751, 756, 783

protein folding, 671, 682  
protein function, 745, 756  
protein interaction network, 768  
protein kinase inhibitor, 627  
protein kinase, 627  
protein network, 723, 745  
protein structure, 723, 727  
protein-protein interaction, 768  
protein-film voltammetry, 707  
proteomics, 868  
*Pseudomonas aeruginosa*, 863

## Q

quasi-species, 740

## R

Rad9, 897  
radiation damage, 893  
receptor tyrosine kinase (RTK), 717  
rewiring, 768

## S

scanning-ion conductance microscopy (SICM), 702  
secondary bacterial pneumonia, 811  
self assembly, 713  
senescence, 882  
sensor, 643  
sequence conservation, 762  
 $\beta$ -sheet, 671, 682  
signal transducer and activator of transcription 6 (STAT6), 877  
signal transduction, 873  
silk-inspired polymer, 677  
silkworm silk, 677  
single molecule, 702  
smoking, 814  
solid-supported bilayer lipid membrane, 707  
spectrin, 796  
spherulite, 682

spider silk, 677  
splicing, 756  
sputum, 868  
steric stabilization, 713  
steroid, 824  
stiffness, 660  
structure-function relationship, 745  
*Sulfolobus islandicus* rod-shaped virus 2 (SIRV2), 665  
surface-assisted laser-desorption ionization (SALDI), 905  
surface-enhanced resonance Raman scattering (SERRS), 697  
surface plasmon resonance (SPR), 697  
switch, 643  
 $\alpha$ -synuclein, 692  
systematic random sampling, 914

## T

theophylline, 824  
tissue injury, 882  
Toll-like receptor (TLR), 863  
transforming growth factor- $\beta$  (TGF $\beta$ ), 849, 882  
transposable element, 778  
twin, 814

## U

ubiquinone, 707

## V

vascular endothelial growth factor (VEGF), 805  
vesicle trafficking, 787  
virus, 665

## W

water tracing, 713

## Z

zebrafish, 830