

Acronyms & Abbreviations

Common non-scientific acronyms and abbreviations, names of elements, ions, amino acids and nucleosides, and SI-units are not included. Please see Appendix H for a list of gene and protein symbols. Gene and protein families, and names of domains are listed here.

'	Minute	BSDB	British Society for Developmental Biology
"	Second	Bt	<i>B. taurus</i>
∅	Diameter	CA	<i>Cornu Ammonis</i>
Ⓟ	Phosphate group	cAMP	Cyclic AMP
1 st AbD	Primary AbD	CAS	Chemical Abstract Service
2 nd AbD	Secondary AbD	CBB	Coomassie Brilliant Blue
A ₂₆₀	Absorption at 260 nm	CDKI	Cyclin-dependent kinase inhibitor
AA	Amino acid	cDNA	Complementary DNA
AbD	Antibody diluent	CDS	Coding sequence
AD	Alzheimer's disease	Cf	<i>C. familiaris</i>
	Activation domain	CH	Cullin homology
ADOA	Autosomal dominant optic atrophy	Chr	Chromosome
ADP	Adenine diphosphate	CLS	Coffin-Lowry syndrome
AHC	Adrenal hypoplasia congenita	cM	CentiMorgan
ALF	Ala-rich – conserved Phe	CMT1A	Charcot-Marie-Tooth syndrome type 1A
AMP	Adenine monophosphate	CMV	Cytomegalovirus
AP	Adaptor primer	CNS	Central nervous system
	Associated protein	Contr	Control
	Action potential	COS	CV-1 cells with a defective origin of SV40 replication
APC	Anaphase-promoting complex	cpm	Counts per minute
APS	Ammonium persulfate	cR	CentiRay
ARID	AT-rich interactive domain	CRC	Colorectal carcinoma
AR-JP	Autosomal recessive juvenile parkinsonism	CREB	cAMP response element-binding
ASD	APX Shroom domain		
ATP	Adenine triphosphate	CRR	Cys-rich region
ATR-X	α-thalassaemia and MR on X	CTP	Cytosine triphosphate
AZ	Active zone	CV-1	Cell line derived from the kidney of a male adult African green monkey ¹
BAC	Bacterial artificial chromosome	Cy3	Indocarbocyanin
BD	Binding domain	DAPI	4'6-diamidino-2-phenylindole-2-HCl
BLAST	Basic local alignment search tool	DAS	Dense alignment surface
BLOSUM	Blocks substitution matrix	dATP	Deoxyadenine triphosphate
BMP	Bone morphogenetic protein	DBD	DNA BD
BP	Breakpoint	ddH ₂ O	Double distilled water
bp	Base pair		
BPS	BP-spanning		
BS	Binding site		
BSCB	British Society for Cell Biology		

DEPC	Diethyl pyrocarbonate	EVH1	Ena/VASP homology domain 1
der	Derivative	ex	Exon
dGTP	Deoxyguanine triphosphate	Ext	Extension
DHHC	Asp-His-His-Cys	F	Forward
DHPLC	Denaturing HPLC	FBP	F-box protein
DIG	Digoxigenin	FBS	Foetal bovine serum
DMD	Duchenne muscular dystrophy	FBXL	F-box and Leu-rich repeats
DMEM	Dulbecco's MEM	FBXO	F-box only
DMSO	Dimethyl sulfoxide	FBXW	F-box and WD-40 repeats
DNA	Deoxyribonucleic acid	Fex	Find exons
DPBS	Dulbecco's PBS	FG	Find gene
Dr	<i>D. rerio</i>	FGene	Find gene
DSC	Discrimination of protein secondary structure class	FGenes	Find genes
DSMZ	Deutsche Sammlung von Mikroorganismen und Zellkulturen GmbH (German Collection of Microorganisms and Cell Cultures)	FGs	Find genes
DSS	Dosage sensitive sex reversal	FGS1	FG syndrome, named using the initials of the first patients' surnames (FG) ²
DTT	1,4-dithiothreitol	FISH	Fluorescent ISH
dTTP	Deoxythymine triphosphate	FITC	Fluorescein isothiocyanate
DUB	Deubiquitinating enzyme	Fr	<i>F. rubripes</i>
dUTP	Deoxyuracil triphosphate	FRAXA	Fragile site A on the X chromosome
E	Embryonic day	FRAXE	Fragile site E on the X chromosome
EA2	Episodic ataxia type 2	FTDP-17	Frontotemporal dementia with parkinsonism, chromosome 17 type
EBV	Epstein-Barr virus	G	Gauge
EC	Enzyme Commission	GA	Glutaraldehyde
ECL	Enhanced chemoluminescence	GABA	γ -aminobutyric acid
ECACC	European Collection of Animal Cell Cultures	GAD	Galactosidase AD
EDTA	Ethylenediaminetetraacetic acid	GAP	GTPase activating protein
EGTA	Ethylene glycol-bis(2-aminoethylether)-N,N,N',N'-tetraacetic acid	GBA	Genome Assembly Program
ELISA	Enzyme-linked immunosorbent assay	GCG	Glucosidase, beta, acid
EM	Electron microscope, electron microscopy	GDI	Genetics Computer Group
EMBL	European Molecular Biology Laboratory	GDP	GDP dissociation inhibitor
EMBOSS	European Molecular Biology Open Software Suite	GEF	Guanine diphosphate
EMEM	Eagle's minimum essential medium	GEFS+	Guanine nucleotide exchange factor
ENU	N-ethyl-N-nitrosourea	GF	Generalized epilepsy with febrile seizures plus
ES	Embryonic stem	Gg	GeneFinder
ESE	Exonic splicing enhancer	GM	<i>G. gallus</i>
EST	Expressed sequence tag	G-protein	GeneMark
EtBr	Ethidium bromide	Grail	GTP-binding protein
			Gene recognition and analysis internet link
		GS	GeneScan
		GSP	Gene-specific primer
		GTP	Guanine triphosphate

HD	Huntington's disease	LOH	Loss of heterozygosity
HDAC	Histone deacetylase	LR	London Resin
HECT	Homologous to E6-AP C-terminus	LTD	Long-term depression
HeLa	Henrietta Lacks	LTP	Long-term potentiation
HEPES	2-[4-(2-hydroxyethyl)-1-piperazinyl]-ethanesulfonic acid	MALDI – TOF	Matrix assisted laser desorption/ionization – Time of flight
HGMP	Human Genome Mapping Project	MAO	Monoamine oxidase
HIV	Human immunodeficiency virus	MASA	MR, aphasia, shuffling gait and adducted thumbs
HMG	High mobility group	mat	Maternal
HMM	Hidden Markov model	Mb	Megabase
HNPPC1	Colorectal cancer, hereditary non-polyposis, type 1	MBD	Methyl-CpG binding domain
hpf	Hours post-fertilisation	MCN	Mendelian Cytogenetics Network
HPLC	High-performance liquid chromatography	MCS	Multiple cloning site
Hs	<i>H. sapiens</i>	Md	<i>M. domestica</i>
HSAS	Hydrocephalus, stenosis of the aqueduct of Sylvius	MDC	Max Delbrück Center for Molecular Medicine
HTH	Helix turn helix	MDCK	Madin-Darby canine kidney
ICD	International classification of diseases	MEM	Modified Eagle's medium
ICRF	Imperial Cancer Research Fund	Mf	<i>M. fascicularis</i>
IF	Immunofluorescence	MIM	Mitochondrial inner membrane
Ig	Immunoglobulin	Mm	<i>M. mulatta</i>
IP	Immunoprecipitation	Mmu	<i>M. musculus</i>
IPTG	Isopropyl β -D-1-thiogalactopyranoside	MOM	Mitochondrial outer membrane
IQ	Intelligence quotient	MPI-EE	Max Planck Institute for Experimental Endocrinology
ISH	<i>In situ</i> hybridisation	MPI-MG	Max Planck Institute for Molecular Genetics
ISSX	X-linked infantile spasms	MR	Mental retardation
jmjC	Jumonji C	MRI	Magnetic resonance imaging
kb	Kilobase	mRNA	Messenger RNA
kDa	KiloDalton	MRX	MR on the X chromosome
KIAA	KI, Kazusa DNA Research Institute ('AA' are reference characters)	mtDNA	Mitochondrial DNA
KO	Knock-out	MTN	Multiple tissue northern
KRAB	Krüppel-associated box	MW	Molecular weight
LB	Lysogeny broth ³	MYM	Myeloproliferative and MR
LHON	Leber hereditary optic neuropathy	MZEF	Michael Zhang's exon finder
LIM	Lin-11/Isl-1/Mec-3	n	Nested
LINE	Long interspersed nuclear element	NA	Not applicable
LLnL	N-acetyl-Leu-Leu-norleucinal	NCBI	National Center for Biotechnology Information
LOD	Logarithm of odds	ND	Not determined
		NEAA	Non-essential AA
		NF1	Neurofibromatosis type 1
		Ni-NTA	Nickel-nitrilotriacetic acid
		NIX	Nucleotide identification
		NLS	Nuclear localisation signal
		NMD	Nonsense-mediated mRNA decay

NMDA	N-methyl-D-aspartate	PPM-X	Psychosis, pyramidal signs, macroorchidism on X
NMRI	Naval Medical Research Institute	pred	Prediction
NP 40	Nonidet P 40	PRED-TMR	Prediction of TM regions
NS-MR	Non-syndromic MR	PSD	Post-synaptic density
NS-XLMR	Non-syndromic XLMR	PSort	Protein sort
NT	Nick translation	Pt	<i>P. troglodytes</i>
	Neurotransmitter	put	Putative
NTP	Nucleotide triphosphate	PVDF	Poly-vinylidene difluoride
o/n	Overnight	PWS	Prader-Willi syndrome
OD	Optical density	QTL	Quantitative trait locus
OHS	Occipital horn syndrome	r	Correlation coefficient
OLB	Oligo labelling buffer	R	Reverse
OMIM	Online Mendelian inheritance in man	RA	Radioactive, radioactively
ORF	Open reading frame	Rab	Ras genes from rat brain
PAC	Phage artificial chromosome	RACE	Rapid amplification of cDNA ends
PAGE	Poly-acrylamide gel electrophoresis	Ras	Rat sarcoma
pat	Paternal	rDNA	Ribosomal DNA
PBS	Phosphate-buffered saline	REPuter	Repeat computer
PBST	PBS Tween-20	RESCUE	Relative enhancer and silencer classification by unanimous enrichment
PCR	Polymerase chain reaction		
PD	Parkinson's disease	Rho	Ras homologue
pd(N) ₆	Random hexamer primers	RING	Really interesting new gene
PDB	Protein data bank	Rn	<i>R. norvegicus</i>
PDZ	PSD-95/Dlg/ZO-1	RNA	Ribonucleic acid
PEG	Polyethylene glycol	rpm	Rotations per minute
PEM	PIPES, EGTA, MgCl ₂	RPMI	Roswell Park Memorial Institute
PFA	Paraformaldehyde		
Pfam	Protein family	rRNA	Ribosomal RNA
PHD	NA ^a	RSK	Ribosomal S6 kinase
	Plant homeodomain	RT	Room temperature
Phyre	Protein homology/analogy recognition engine		Reverse transcription
PIP	Percent identity plot	RZPD	Deutsches Ressourcenzentrum für Genomforschung GmbH (German Resource Center for Genome Research)
PIP ₂	Phosphatidylinositol 4,5-bisphosphate		
PIPES	Piperazine-1,4-bis(2-ethanesulphonic acid)	S	Svedberg
PIX	Protein identification	SBASE	'Support-vector-machines-domain-prediction-system' base
PMSF	Phenylmethanesulfonyl fluoride	SCF	Skp1 – Cullin 1 – FBP
Pp	<i>P. pygmaeus</i>	SCLH	Subcortical laminar heterotopia
pp90 ^{rsk}	Phosphorylated 90 kDa protein of the ribosomal S6 kinase family	SD	Synthetic dextrose minimal medium
			Standard deviation
		SDS	Sodium dodecyl sulfate
		SEM	Scanning EM
		Seq	Sequencing
		SET	Ser-, Gln- and Thr-rich

^a Even in the original paper⁴, this acronym was not explained.

SETI	Search for extraterrestrial intelligence	TU	Technische Universität (University of Technology)
SH3	Src homology 3	TY	Tryptone, yeast extract
SHS	Sutherland-Haas syndrome	U	Unit of enzymatic activity
SI	Système international	UCSC	University of California Santa Cruz
Sigcleave	Signal peptide cleave	UPD	Uniparental disomy
SignalP	Signal peptide	UPP	Ubiquitin – proteasome pathway
siRNA	Small interfering RNA	Ura	Uracil
S-MR	Syndromic MR	UTP	Ura triphosphate
SNF	Sucrose non-fermenting	UTR	Untranslated region
SNP	Single nucleotide polymorphism	UV	Ultraviolet
SOC	NA ^a	v/v	Volume/volume
SOCS	Suppressor of cytokine signaling	VAGE	Vertical agarose gel electrophoresis
SOX	Sry HMG box	VBC	VHL – Elongin B/C
SSC	Standard saline citrate	VHL	Von Hippel-Lindau
SSCP	Single-strand conformation polymorphism	w/v	Weight/volume
SUMO	Small Ubiquitin-like modifier	WAIS	Wechsler adult – or child – intelligence scale
SURE	Stop unwanted rearrangement events	WB	Western blotting
SV	Synaptic vesicle Simian virus	WBS	Williams-Beuren syndrome
SWI	Switching deficient	WD-40	~40 AA motif, often terminating in a Trp-Asp dipeptide
S-XLMR	Syndromic XLMR	WHO	World Health Organisation
T _a	Annealing temperature	WI	Whitehead Institute for Biomedical Research
TdT	Terminal deoxynucleotidyl transferase	WIK	WT Kalkutta
TEAA	Triethylammonium acetate	WT	Wild-type
TEMED	N,N,N',N'-Tetramethylethylenediamine	X;A	X;autosome
TES	Tris-HCl, EDTA, SDS	XCI	X chromosome inactivation
TF	Transcription factor	X-gal	5-bromo-3-indoyl-β-D-galactopyranoside
TM	Transmembrane	X _i	Inactive X chromosome
TMAP	TM mapping	XI	<i>X. laevis</i>
Tn	<i>T. nigroviridis</i>	XLAG	X-linked lissencephaly, ambiguous genitalia
Tris	Tris(hydroxymethyl) aminomethane	XLIS	Lissencephaly on X
TRITC	Tetramethylrhodamine isothiocyanate	XLMR	X-linked MR
tRNA	Transfer RNA	X-SCLH/ LIS	X-linked subcortical laminar heterotopia/lissencephaly
		Xt	<i>X. tropicalis</i>
		Y2H	Yeast two-hybrid
		YAC	Yeast artificial chromosome
		YPD	Yeast extract, peptone, dextrose
		ZFP	Zinc-finger protein

^a In the original paper by Hanahan⁵, generally accepted to be the first to refer to 'SOC', this acronym was not explained.

