

Abbreviations

Abbreviations are also defined where they first appear in the text. For amino acids the three letter code and/or the one letter symbols are occasionally used.

Biochemical, Chemical and Physical Terms:

DNA	Deoxyribonucleic acid
cDNA	Complementary DNA
DSB	DNA double strand break
E·S, E·I, E·P	Enzyme-substrate -inhibitor, -product
<i>E. coli</i>	<i>Escherichia coli</i>
Glc	Glucose, glucosyl residue
H-bond	Hydrogen bond
<i>H. marismortui</i>	<i>Haloarcula marismortui</i>
HIC	Hydrophobic Interaction Chromatography
HR	Homologous recombination
IEX	Ion Exchange
IR	Ionizing radiation
K_D	Dissociation constant
LBHB	Low-barrier hydrogen bond
MCS	Multiple cloning site
NHEJ	Non-homologous end joining
PAGE	Polyacrylamide Gel Electrophoresis
PCR	Polymerase Chain Reaction
pPep	Phosphorylated peptide
RFC	Replication factor C
RMSD	Root-mean-square deviation
RNA	Ribonucleic acid
mRNA, rRNA, tRNA	Messenger RNA, ribosomal RNA, transfer RNA
RNP	Ribonucleoprotein
ROS	Reactive oxygen species
SEC	Size Exclusion Chromatography
SELEX	Systematic Evolution of Ligands by Exponential Enrichment
SET	Solubility enhancement tag
SNP	Single Nucleotide Polymorphism
TS	Transition state
UV	Ultra Violet

Proteins and Protein Domains:

APP	Amyloid precursor protein
ATM	Ataxia telangiectasia-mutated
ATR	Ataxia telangiectasia- and RAD3-related
ATRIP	ATR interacting protein
BARD1	BRCA1-associated RING domain protein 1
BASC complex	BRCA1-associated genome surveillance complex
BRCA1	Breast Cancer Susceptibility Gene Product 1
BRCT domain	BRCA1 C-terminal domain
BRCT-n, BRCT-c	N- and C-terminal BRCT domain of the BRCT repeat
CBH-I	Cellobiohydrolase I
DNA-PK	DNA-dependent protein kinase
FHA domain	Forkhead-associated domain
GST	Glutathione S-transferase
GFP	Green fluorescent protein
MBP	Maltose binding protein
MDC1	Mediator of DNA damage checkpoint protein 1
MRN	Mre11-Rad50-Nbs1
Nbs1	Nijmegen breakage syndrome protein 1
PABP1	Poly(A)-binding protein 1
PARP1 (pADPRT1)	Poly(ADP-ribose) polymerase 1
PIK	Phosphoinositide kinase
PrP	Prion Protein
Trx	Thioredoxin
TTR	Transthyretin
V8 protease	Endo-proteinase Glu-C
XRCC1	X-ray cross-complementing group 1 protein

Chemicals:

ATP	Adenosine triphosphate
DTT	Dithiothreitol
dNTP	Deoxynucleotide triphosphate
IPTG	Isopropyl β -D-thiogalactopyranoside
MES	2-(N-morpholino)-ethane sulfonic acid
PEG	Polyethylene glycol
PMSF	Phenylmethyl-sulfonyl fluoride
SDS	Sodium dodecyl sulfate
Tris	2-amino-2-hydroxymethylpropane-1,3-diol, Tris[hydroxymethyl]amino-methane

Structural Biological Methods:

CSP	Chemical Shift Perturbation
DQF-COSY	Double Quantum Filtered Correlation Spectroscopy
EM	Electron Microscopy
FT	Fourier Transform
HSQC	Heteronuclear Single Quantum Correlation
HMQC	Heteronuclear Multiple Quantum Correlation
NMR	Nuclear Magnetic Resonance
NOE	Nuclear Overhauser Enhancement
NOESY	Nuclear Overhauser Enhancement Spectroscopy
SA	Simulated Annealing
SAD/MAD	Single/Multiple Anomalous Dispersion
SE	Sedimentation Equilibrium
SIR/MIR	Single/Multiple Isomorphous Replacement
SV	Sedimentation Velocity
T ₁ /T ₂	Longitudinal/Transverse Relaxation Time Constant
TOCSY	Total Correlation Spectroscopy
UCF	Ultracentrifugation

Medical Terms:

AD	Alzheimer's disease
FAC	Familial amyloid cardiomyopathy
FAP	Familial amyloid polyneuropathy

Units:

Å	Ångström (1 Å = 0.1 nm = 10 ⁻¹⁰ m)
K	Kelvin (0 K = -273.15°C)
kDa	kilo-Dalton (1 kDa = 1.6605 • 10 ⁻²¹ g)
M	Molarity (mol/Liter)
MHz	Mega-Hertz
OD	Optical density
ppm	Parts per million

Data Banks:

BMRB	Biological Magnetic Resonance Bank
PDB	Protein Data Bank