

# ABBREVIATIONS

## MEASUREMENTS

µg	Microgram
µm	Micrometer
µM	Micromolar
Å	Angstrom
A <sub>600</sub>	Absorbance at 600 nm
h	hour
K	Kelvin
kDa	kilo Dalton
mA	milli Amperes
ng	Nanogram
nm	Nanometer
nM	Nanomolar
O.D.	Optical Density
°C	Degree centigrade
v/v	volume-by-volume
w/v	weight-by-volume

## CHEMICALS AND BUFFERS

AMP	Adenosine-monophosphate
DNA	Deoxyribonucleic acid
dNTP	Deoxynucleotide triphosphate
DSBs	Double strand breaks
DTT	Dithiothreitol
EDTA	Ethylene diamine tetra acetic acid
HEPES	(N-[2-Hydroxyethyl] piperazine-N'-[2-ethanesulphonic acid])
IPTG	Isopropyl-β-D-Thiogalactopyranoside
Me <sub>2</sub> SO	Dimethylsulphoxide
MES	(2-[N-Morpholino]-ethanesulphonic acid)
NAD	Nicotinamide adeninedinucleotide
NADP	Nicotinamide adeninedinucleotide phosphate
NTP	Nucleotide triphosphate
OG	Oregon maleimide 460
PEG	Polyethylene glycol
PMSF	Phenyl-methylsulphonyl fluoride
RNA	Ribonucleic acid
SDS	Sodium dodecyl sulphate
TCA	Trichlorof acetic acid
Tris	Tris (hydroxymethyl) aminomethane

## PROTEINS

MtuLigA	<i>M. tuberculosis</i> DNA ligase A
MtuLigA1	<i>M.</i> DNA ligase A mutant ( $\Delta$ BRCT domain)
MtuLigA2	<i>M. tuberculosis</i> DNA ligase A mutant (Adenylation+OB)
MtuLigA3	<i>M. tuberculosis</i> DNA ligase A mutant (Adenylation domain)
MtuLigA4	<i>M. tuberculosis</i> DNA ligase A mutant (Ia subdomain deleted)
MtuLigA5	<i>M. tuberculosis</i> DNA ligase A mutant (OB+Zn+HhH+BRCT)
MtuLigA6	<i>M. tuberculosis</i> DNA ligase A mutant (Zn+HhH+BRCT)
MtuLigA7	<i>M. tuberculosis</i> DNA ligase A mutant (BRCT)
OB	Oligomer binding fold
HhH	Helix–hairpin–Helix motif
Zn figure	Zinc figure domain
Mtu $\beta$ -Clamp	Beta clamp of <i>M. tuberculosis</i> labeled with Oregon Maleimide 460(Molecular probe)
dnaZ	Rv3721c (Gamma subunit of DNA Clamp loader complex)
TfiLigA	DNA ligaseA of <i>T. filiformis</i>
EcoLigA	DNA ligaseA of <i>E. coli</i>
T4Lig	DNA ligase of T4 bacteriophage
Lig	DNA ligase

## AMINO ACID AND NUCLEOTIDE

Standard three letter and single letter codes (Amino acids); Standard single letter codes (Nucleotides)

## OTHERS

AMoRe	Automated molecular replacement package
BLAST	Basic local alignment and search tool
CCP4	Collaborative computational project No. 4
C-terminal	Carboxy-terminal
MAD	Multiwavelength anomalous dispersion
MIC	Minimum inhibitory concentration
MIR	Multiple isomorphous replacement
MR	Molecular replacement;
<i>Mt</i>	<i>Mycobacterium tuberculosis</i>
N-terminal	Amino-terminal
ORF	Open reading frame
Phenix	Python based Hierarchical ENvironmentfor Integrated Xtallography
PISA	Protein Interfaces, Surfaces and Assemblies
SDS-PAGE	Sodium dodecyl sulphate polyacrylamide gel electrophoresis
TB	Tuberculosis