

LIST OF SYMBOLS AND ABBREVIATIONS

C=C	-	Acetylenic vibrational stretch
O-H	-	Alcohol vibrational stretch
(- C \equiv C-)	-	Alkyne vibrational stretch
NH ₄ HPO ₄	-	Ammonium phosphate
ANOVA	-	Analysis of Variance
C=C-C	-	Aromatic ring stretch
<i>A. flavus</i>	-	<i>Aspergillus flavus</i>
<i>A. fumigatus</i>	-	<i>Aspergillus fumigatus</i>
<i>A. niger</i>	-	<i>Aspergillus niger</i>
<i>B. subtilis</i>	-	<i>Bacillus subtilis</i>
BLAST	-	Basic Local Alignment Searching Tool
BHA	-	Butylated hydroxyanisole
CaCO ₃	-	Calcium carbonate
CaCl	-	Calcium chloride
<i>C. albicans</i>	-	<i>Candida albicans</i>
<i>C. tropicalis</i>	-	<i>Candida tropicalis</i>
cm	-	Centimeter
CCD	-	Central Composite Design
CCRD	-	Central Composite Rotatable Design
CHCl ₃	-	Chloroform
R ²	-	Coefficient of determination
CV	-	Coefficient of variance
EC ₅₀	-	Concentration at half-maximal effect
CuSO ₄ .5H ₂ O	-	Copper(II) Sulfate Pentahydrate
°C	-	Degree Celsius

Df	- Degree of freedom
DNA	- Deoxyribonucleic acid
DMSO	- Dimethyl sulfoxide
K ₂ HPO ₄	- Dipotassium phosphate
EIDs	- Emerging Infectious Diseases
<i>E.coli</i>	- <i>Escherichia coli</i>
EDTA	- Ethylenediaminetetraacetic acid
EPS	- Exopolysaccharide
FRAP	- Ferric reducing antioxidant power
Fe ₂ SO ₄ .7H ₂ O	- Ferrous Sulphate Heptahydrate
FTIR	- Fourier Transform Infrared spectrophotometry
ν	- frequency
GCMS	- Gas chromatography–mass spectrometry
HMO2	- Gastric adenocarcinoma cells
GPS	- Global Position System
G	- Gram
VERO	- Green monkey kidney cells
Hrs	- Hours
MCF-7	- Human Breast adenocarcinoma cancer cells
HeLa	- Human cervical cancer cells
HCT-116	- Human colon carcinoma cells
HT-29	- Human colorectal adenocarcinoma <i>cell line</i>
HepG2	- Human hepatic carcinoma cells
COC1	- Human ovarian cancer cells
HL-60	- Human promyelocytic leukemia cells
H ₂ S	- Hydrogen sulphide
HIF-1 α	- Hypoxia-inducible factor 1-alpha
IU	- International Unit
Fe(III)	- Iron (III) oxide

FeCl ₂	-	Iron(II) chloride
Fe(II)	-	Iron(II) oxide
FeSO ₄ .7H ₂ O	-	Iron(II) Sulfate Heptahydrate
km	-	Kilometer
LDH	-	Lactate dehydrogenase
HEp2	-	Laryngeal carcinoma cells
L	-	Litre
LCF	-	Lyophilized culture filtrate
MgSO ₄	-	Magnesium sulfate
MgSO ₄ .7H ₂ O	-	Magnesium sulfate heptahydrate
MYEB	-	Malt yeast extract broth
MYEA	-	Maltose yeast extract agar
MnCl ₂	-	Manganese(II) chloride
m/z	-	Mass to Charge ratio
MR-VP	-	Methyl Red and Voges-Proskauer
C-H-	-	Methyl vibrational stretch
µg	-	Microgram
µl	-	Microliter
µm	-	Micrometer
mg	-	Milligram
mg	-	Milligram
ml	-	Millilitre
mm	-	Millimeter
mM	-	millimolar
MIC	-	Minimum Inhibitory Concentration
min	-	Minutes
M	-	Molarity
MEGA	-	Molecular Evolutionary Genetics Analysis
<i>M. smegmatis</i>	-	<i>Mycobacterium smegmatis</i>

Nm	-	Nanometer
nM	-	Nanomolar
NCBI	-	National Center for Biotechnology Information
NADH	-	Nicotinamide adenine dinucleotide dehydrogenase
NO scavenging	-	Nitric acid scavenging activity
NBT	-	Nitroblue tetrazolium
NA	-	Nutrient agar medium
NB	-	Nutrient broth
OVAT	-	One Variable At a Time
O.D	-	Optical density
pNA	-	para nitroaniline
%	-	Percentage
PBS	-	Phosphate buffered saline
H ₃ PO ₄	-	Phosphoric acid
PCR	-	Polymerase chain reaction
KOH	-	Potassium hydroxide
KNO ₃	-	Potassium nitrate
PDA	-	Potato dextrose agar
<i>P.aeruginosa</i>	-	<i>Pseudomonas aeruginosa</i>
RF	-	Rectiflexibles
RSM	-	Response Surface Methodology
R _f	-	Retention factor
RA	-	Retinaculiaperti
Rpm	-	Rotation per minute
SEM	-	Scanning electron microscopy
Sec	-	Seconds
SARS	-	Severe Acute Respiratory Syndrome
NaCl	-	Sodium chloride
S	-	Spirales

<i>S.aureus</i>	-	<i>Staphylococcus aureus</i>
<i>S.epidermidis</i>	-	<i>Staphylococcus epidermidis</i>
SCA	-	Starch casein agar medium
SCB	-	Starch casein broth
<i>S. cirratus</i> SRP11	-	<i>Streptomyces cirratus</i> SRP11
NIH 3T3	-	Swiss Mouse embryonic fibroblast cells
TLC	-	Thin layer chromatography
3D	-	Three dimensional
tRNA	-	transfer Ribonucleic acid
TSI	-	Triple sugar iron test
TPTZ	-	Tripyridyl triazine
Tris- HCl	-	Tris Hydrochloric acid
TAE	-	Tris-acetate-EDTA
TE	-	Tris-EDTA buffer
UV	-	Ultraviolet-visible spectrophotometry
<i>V.cholerae</i>	-	<i>Vibrio cholerae</i>
v	-	Volume
H ₂ O	-	Water
cm ⁻¹	-	Wavelength
ZnSO ₄ .7H ₂ O	-	Zinc sulphate Heptahydrate
DMBPO-5	-	(2,4-dimethylbenzyl)pyrrolidin-2-one
MTT	-	(3-(4,5- bromide) dimethylthiazol-2-yl)-2,5-diphenyltetrazolium
ABTS	-	2, 2'-azino-bis(3-ethylbenzothiazoline-6-sulphonic acid
DPPH	-	2,2 Diphenyl-1-picrylhydrazyl
IC ₅₀	-	50% of inhibitory concentration