

---

## LIST OF ABBREVIATIONS

ABTS	: 2,2'-Azino-bis(3-ethylbenzothiazoline-6-sulfonate)
ACh	: Acetylcholine
AChE	: Acetylcholinesterase
AChEIs	: Acetylcholinesterase inhibitors
AD	: Alzheimer's disease
ADMET	: Absorption, distribution, metabolism, excretion and toxicity
APP	: Amyloid precursor protein
ATCI	: Acetylthiocholine iodide
A $\beta$	: Beta-amyloid
A $\beta$ PP	: A $\beta$ precursor protein
BACE-1	: $\beta$ -secretase
BBB	: Blood brain barrier
BTCI	: Butyrylthiocholine iodide
BuChE	: Butyrylcholinesterase
CAS	: Catalytic active site
CAT	: catalase
ChAT	: Choline acetyltransferase
ChEs	: Cholinesterases
CNS	: Central nervous system
CPCSEA	: Committee for the purpose of control and supervision of experiments on animal
DCM	: Dichloromethane
DMF	: <i>N,N</i> -dimethylformamide
DMSO	: Dimethyl sulfoxide
DPPH	: 1,1-Diphenyl-2-picrylhydrazyl
DSC	: differential scanning calorimetry
DTNB	: 5,5'-Dithiobis (2-nitrobenzoic acid)
FBS	: Fetal bovine serum
FDA	: Food and drug administration
FRSA	: Free radical scavenging activity
GSK-3 $\beta$	: Glycogen synthase kinase-3 $\beta$
HBA	: Hydrogen bond acceptor
HBD	: Hydrogen bond donor

---

<i>h</i> BuChE	: Human butyrylcholinesterase
% HOA	: Human oral absorption percent
HFIP	: 1,1,1,3,3,3-Hexafluoro-2-propanol
HPLC	: High-performance liquid chromatography
IAEC	: Institutional animal ethics committee
IL	: Interleukin
MAO	: Monoamine oxidase
MAP	: Microtubule-associated protein
<i>m</i> CPBA	: <i>meta</i> -Chloroperbenzoic acid
MDA	: Malondialdehyde
MDCK	: Madin-Darby canine kidney
MolSA	: Molecular surface area
MTDLs	: Multitarget-directed ligands
MTs	: Microtubules
MTT	: 3-(4,5-Dimethylthiazol-2-yl)-2,5-diphenyltetrazolium bromide
MW	: Molecular weight
MWM	: Morris water maze
nAChR	: Nicotinic ACh receptor
NCE	: New chemical entity
NMDA	: <i>N</i> -Methyl-D-aspartate
NRB	: Number of rotatable bonds
OECD	: Organisation for Economic Co-operation and Development
ORAC	: Oxygen radical absorbance capacity
PAMPA	: Parallel artificial membrane permeability assay
PAS	: Peripheral anionic site
PBS	: Phosphate buffer saline
PDB	: Protein data bank
PHFs	: Paired helical filaments
PME	: Particle-mesh Ewald
PTMs	: Post-translational modifications
RCSB	: Research collaboratory for structural bioinformatics
ReFG	: Number of reactive functional groups
rGyr	: Radius of gyration
RMSD	: Root-mean-square deviation
RMSD-L	: Root-mean-square deviation of ligand

---

---

RMSF-P	: Root-mean-square fluctuation of the protein
ROS	: Reactive oxygen species
SAR	: Structure activity relationship
SASA	: Solvent accessible surface area
SEM	: Standard error of measurement
SI	: selectivity index
TBARS	: thiobarbituric acid reactive substances
TcAChE	: Torpedo Californica acetylcholinesterase
TEA	: Triethylamine
TFA	: Trifluoroacetic acid
THF	: Tetrahydrofuran
ThT	: Thioflavin T
TLC	: Thin layer chromatography
TMS	: Tetramethylsilane
TNF- $\alpha$	: Tumor necrosis factor- $\alpha$
TPSA	: Topological polar surface area
UV	: Ultraviolet
XP	: Extra precision