# Biologically Active Compounds Library

The Life Chemicals Library of Bioactive Screening Compounds contains over **8,500** small molecules that have been tested in functional, binding and other biological assays and have confirmed bioactivity *in vitro* and/or *in vivo* against various biological targets of pharmaceutical interest. The library has been designed on the basis of the ChEMBL database which contained:

- 1,929,473 compound records
- 1,592,191 compounds
- 13,968,617 activities
- 1,212,831 assays
- 11,019 targets

The Library of Bioactive Compounds comprises compound records that meet the following criteria:

- Inhibition > 30%
- $K_i$ < 10μM
- $EC_{50}$ < 10μM
- $CC_{50}$ < 10μM
- $K_d$ < 10μM
- Potency < 10μM
- $XC_{50}$ < 10μM
- Residual Activity < 50%
- $AC_{50}$ < 10 μM
- IZ > 10mm
- MIC < 10 $\mu g.mL^{-1}$
- MIC < 10μM

Each compound is supplied with a link to its Compound Report Card and Bioactivity Summary.

Given below are examples of targets against which the Library compounds have shown activity:

- 3C-like protease
- 4'-phosphopantetheinyl transferase ffp
- Acidic alpha-glucosidase
- Activin receptor type-1
- Adenosine A3 receptor
- Aldehyde dehydrogenase 1A1
- ALK tyrosine kinase receptor
- AMP-activated protein kinase, alpha-1 subunit
- Ataxin-2
- ATPase family AAA domain-containing protein 5
- Beta Lactamase
- Bone morphogenetic protein receptor type-1B
- Bone morphogenetic protein receptor type-2

- Bromodomain adjacent to zinc finger domain protein 2B
- CaM kinase II delta
- Casein kinase I epsilon
- Casein kinase I gamma 2
- Cell division protein kinase 8
- Chaperone activity of bc1 complex-like, mitochondrial
- Citron Rho-interacting kinase
- Cyclin-dependent kinase 1
- Cyclin-dependent kinase 3
- Cyclin-dependent kinase 4
- Cyclin-dependent kinase 7
- Cyclin-dependent kinase 9
- Cyclin-dependent kinase-like 3
- Cytochrome P450 2C19
- Cytochrome P450 2D6
- Death-associated protein kinase 3
- Discoidin domain-containing receptor 2
- Dual specificity mitogen-activated protein kinase 1
- Dual specificity mitogen-activated protein kinase 2
- Dual specificity mitogen-activated protein kinase 5
- Dual specificity testis-specific protein kinase 1
- Dual specificty protein kinase CLK1
- Enoyl Reductase
- Ephrin type-A receptor 1
- Ephrin type-A receptor 2
- Ephrin type-A receptor 3
- Ephrin type-A receptor 4
- Ephrin type-A receptor 5
- Ephrin type-A receptor 6
- Ephrin type-A receptor 7
- Ephrin type-A receptor 8
- Ephrin type-B receptor 1
- Ephrin type-B receptor 2
- Ephrin type-B receptor 4
- Ephrin type-B receptor 6
- Epidermal growth factor receptor erbB1
- Epithelial discoidin domain-containing receptor 1
- Eukaryotic translation initiation factor 2-alpha kinase 4
- FAD-linked sulfhydryl oxidase ALR
- Fibroblast growth factor receptor 1

- Fibroblast growth factor receptor 2
- Fibroblast growth factor receptor 3
- Fibroblast growth factor receptor 4
- G protein-coupled receptor 44
- Geminin
- Glucagon-like peptide 1 receptor
- Glucose-6-phosphate dehydrogenase-6-phosphogluconolactonase
- Glycogen synthase kinase-3 beta
- Hepatocyte growth factor receptor
- HepG2
- Histone acetyltransferase GCN5
- Histone-lysine N-methyltransferase, H3 lysine-9 specific 3
- Hormonally up-regulated neu tumor-associated kinase
- Huntingtin
- Inhibitor of nuclear factor kappa B kinase alpha subunit
- Inhibitor of nuclear factor kappa B kinase beta subunit
- Insulin receptor
- Insulin-like growth factor I receptor
- Interleukin-1 receptor-associated kinase 1
- Interleukin-1 receptor-associated kinase 4
- Isocitrate dehydrogenase [NADP] cytoplasmic
- Leukocyte tyrosine kinase receptor
- Luciferin 4-monooxygenase
- Lysine-specific demethylase 4D-like
- Macrophage colony stimulating factor receptor
- Macrophage-stimulating protein receptor
- MAP kinase p38 gamma
- MAP kinase signal-integrating kinase 2
- MAP kinase-interacting serine/threonine-protein kinase MNK1
- Methionine aminopeptidase 2
- Methionyl-tRNA synthetase, putative
- Misshapen-like kinase 1
- Mitogen-activated protein kinase 6
- Mitogen-activated protein kinase 15
- Mitogen-activated protein kinase 4
- Mitogen-activated protein kinase 1
- Mitogen-activated protein kinase 2
- Mitogen-activated protein kinase 3
- Mitogen-activated protein kinase 4
- Mitogen-activated protein kinase 5

- Mixed lineage kinase 7
- Monoamine oxidase A
- Monoamine oxidase B
- M-phase phosphoprotein 8
- Mycobacterium bovis BCG
- Myosin light chain kinase family member 4
- Myosin-IIIB
- Nerve growth factor receptor Trk-A
- Neuropeptide S receptor
- Niemann-Pick C1 protein
- Nonstructural protein 1
- Paired box protein Pax-8Phosphatidylinositol-4-phosphate 5-kinase type-1 alpha
- Phosphorylase kinase gamma subunit 1
- Phosphorylase kinase gamma subunit 2
- Plasmodium falciparum
- Platelet-derived growth factor receptor alpha
- Platelet-derived growth factor receptor beta
- Proto-oncogene tyrosine-protein kinase MER
- Putative uncharacterized protein
- Ras-related protein Rab-9A
- Receptor protein-tyrosine kinase erbB-2
- Receptor protein-tyrosine kinase erbB-4
- Receptor tyrosine-protein kinase erbB-3
- Receptor-interacting serine/threonine-protein kinase 4
- Rho-associated protein kinase 2
- Ribosomal protein S6 kinase 1
- Ribosomal protein S6 kinase alpha 1
- Ribosomal protein S6 kinase alpha 2
- Ribosomal protein S6 kinase alpha 6
- Sentrin-specific protease 6
- Sentrin-specific protease 7
- Sentrin-specific protease 8
- Serine/threonine-protein kinase 10
- Serine/threonine-protein kinase 11
- Serine/threonine-protein kinase 16
- Serine/threonine-protein kinase 2
- Serine/threonine-protein kinase 32A
- Serine/threonine-protein kinase 33
- Serine/threonine-protein kinase 35

- Serine/threonine-protein kinase AKT2
- Serine/threonine-protein kinase Aurora-C
- Serine/threonine-protein kinase Chk1
- Serine/threonine-protein kinase Chk2
- Serine/threonine-protein kinase DCLK2
- Serine/threonine-protein kinase GAK
- Serine/threonine-protein kinase MRCK beta
- Serine/threonine-protein kinase MRCK gamma
- Serine/threonine-protein kinase MRCK-A
- Serine/threonine-protein kinase PAK 4
- Serine/threonine-protein kinase PIM3
- Serine/threonine-protein kinase PLK4
- Serine/threonine-protein kinase receptor R3
- Serine/threonine-protein kinase RIPK2
- Serine/threonine-protein kinase SBK1
- Serine/threonine-protein kinase SIK1
- Serine/threonine-protein kinase SIK2
- Serine/threonine-protein kinase SIK3
- Serine/threonine-protein kinase SRPK2
- Serine/threonine-protein kinase TNNI3K
- Serine/threonine-protein kinase tousled-like 2
- Serine/threonine-protein kinase ULK3
- Serine/threonine-protein kinase/endoribonuclease IRE1
- Serotonin transporter
- Short transient receptor potential channel 4
- Sigma opioid receptor
- Solute carrier organic anion transporter family member 1B1
- Solute carrier organic anion transporter family member 1B3
- Sphingomyelin phosphodiesterase
- SPS1/STE20-related protein kinase YSK4
- Stem cell growth factor receptor
- Survival motor neuron protein
- Thioredoxin glutathione reductase
- Thioredoxin reductase 1, cytoplasmic
- Thymidine phosphorylase
- TRAF2- and NCK-interacting kinase
- Tubulin
- Tubulin alpha-1 chain
- Tyrosine kinase non-receptor protein 2

- Tyrosine-protein kinase ABL
- Tyrosine-protein kinase ABL2
- Tyrosine-protein kinase BLK
- Tyrosine-protein kinase BRK
- Tyrosine-protein kinase BTK
- Tyrosine-protein kinase CSK
- Tyrosine-protein kinase FGR
- Tyrosine-protein kinase FRK
- Tyrosine-protein kinase FYN
- Tyrosine-protein kinase HCK
- Tyrosine-protein kinase JAK3
- Tyrosine-protein kinase LCK
- Tyrosine-protein kinase Lyn
- Tyrosine-protein kinase receptor FLT3
- Tyrosine-protein kinase receptor RET
- Tyrosine-protein kinase receptor Tie-1
- Tyrosine-protein kinase receptor TYRO3
- Tyrosine-protein kinase receptor UFO
- Tyrosine-protein kinase SRC
- Tyrosine-protein kinase Srms
- Tyrosine-protein kinase TIE-2
- Tyrosine-protein kinase TXK
- Tyrosine-protein kinase YES
- Uncharacterized aarF domain-containing protein kinase 4
- Vascular endothelial growth factor receptor
- Vascular endothelial growth factor receptor 1
- Vascular endothelial growth factor receptor 2
- Vascular endothelial growth factor receptor 3
- Voltage-gated T-type calcium channel alpha-1H subunit