EBCL-0036

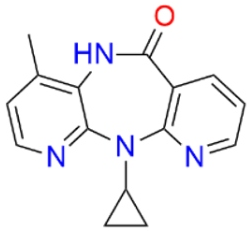
Natural Products

Natural products are biologically active compounds produced by living organisms such as plants, fungi, or animals. They play a crucial role in biological processes and serve as body fluids, metabolites, or even venoms to protect their carrier. Investigation of natural compounds strongly contributes to the understanding of organism biology. These chemicals are often diverse and complex, allowing researchers to discover up-and-coming screening candidates. Paclitaxel, extracted from the pacific vew tree to cure breast cancer, or Penicillin, derived from fungus to treat various bacterial infections, are famous examples of natural compounds that became FDA approved drugs.

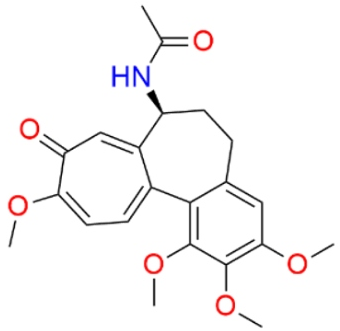
Our **Library of Natural Products** contains 1394 compounds, extracted from nature or nature-like, with information about their activity against biological targets.

Related terms: *nature medications, herbal pharmacology, venom pharmaceuticals.*

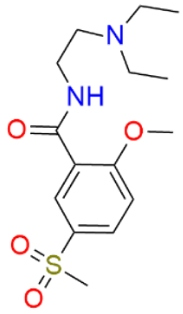
Highlights



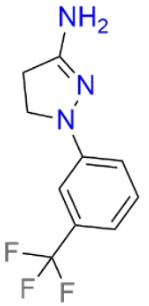
EBC-11254
CAS: 129618-40-2
Nevirapine is a non-nucleoside reverse transcriptase inhibitor used in the management of HIV-1 virus infection



EBC-15033
CAS: 54192-66-4
Colchicine is used in the treatment of gout and Familial Mediterranean Fever



EBC-07458
CAS: 51012-32-9
Tiapride is a selective D2 and D3 dopamine receptor blocker in the brain.



EBC-06498
CAS: 66000-40-6
BW 755C is a dual inhibitor of 5-lipoxygenase and cyclooxygenase pathways, inhibiting 5-LO, COX-1, and COX-2

Library Composition

Name	Occurrence in the library, times
G protein-coupled receptors	166
Carbonic anhydrases	99
Oxidoreductases	75
Cytochrome P450	70
Wnt signaling pathway	70
Ligand-gated ion channels	69
Steroid hormone receptors	39
Voltage-gated ion channels	37
Nuclear hormone receptors	35
Receptor tyrosine kinases (RTKs)	34

Potassium channels	32
Eicosanoid turnover	32
Acetylcholine turnover	29
Catecholamine turnover	28
Chromatin modifying enzymes	23
MA: Metallo (M) Peptidases	20
Hydrolases	19
Non-receptor tyrosine kinases (nRTKs)	18
SLC superfamily of solute carriers	17
Tubulins	16
CA: Cysteine (C) Peptidases	15
Orphan and other 7TM receptors	14
ATP-binding cassette transporter family	14

DNA topoisomerases	13
Unrecognized proteins	12
PA: Serine (S) Peptidases	11
Aryl hydrocarbon receptor complex	11
UDP glucuronosyltransferases (UGT)	10
Poly ADP-ribose polymerases	10
SLC22 family of organic cation and anion transporters	10
SLC6 neurotransmitter transporter family	9
Endocannabinoid turnover	9
Aldose reductase	9
Cyclic nucleotide turnover/signalling	9
L-Arginine turnover	8
Beta-lactamase	8

MG: Metallo (M) Peptidases	7
Unclassified proteins	7
Alpha-glucosidase	6
AA: Aspartic (A) Peptidases	6
Adenosine turnover	6
Lanosterol biosynthesis pathway	6
Chloride channels	6
Casein kinase 2 (CK2) family	6
E3 ubiquitin ligase components	5
Fatty acid-binding proteins	5
Transcription factors	5
Catalytic receptors	5
Carrier proteins	5

Pattern recognition receptors	•	5
IRE family	•	4
Transcription factor regulators	•	4
Viral protein targets	•	4
Sigma receptors	•	4
Cyclin-dependent kinase (CDK) family	•	4
Enoyl-[acyl-carrier-protein] reductase	•	4
Dioxygenases	•	4
Glycerophospholipid turnover	•	4
"AGC: Containing PKA, PKG, PKC families"	•	4
Bromodomain-containing proteins	•	3
Glycogen synthase kinase (GSK) family	•	3
CAMK: Calcium/calmodulin-dependent protein kinases	•	3

Integrase	•	3
Receptor serine/threonine kinase (RSTK) family	•	3
Nucleotide turnover	•	3
RAF family	•	3
CD: Cysteine (C) Peptidases	•	3
Heat shock proteins	•	2
SLC3 and SLC7 families of heteromeric amino acid transporters (HATs)	•	2
Kelch-like proteins	•	2
SLC28 and SLC29 families of nucleoside transporters	•	2
Bromodomain kinase (BRDK) family	•	2
Other (fungal)	•	2
CAMK-like (CAMKL) family	•	2
Protein kinase C (PKC) family	•	2

α-amylase	•	2
Thyroid hormone turnover	•	2
MC: Metallo (M) Peptidases	•	2
Miscellaneous protein kinases	•	2
MH: Metallo (M) Peptidases	•	2
Alcohol dehydrogenase	•	2
P-type ATPases	•	2
GABA turnover	•	2
Other antimicrobial targets	•	2
B-cell lymphoma 2 (Bcl-2) protein family	•	2
Aurora kinase (Aur) family	•	2
Acid-ammonia ligases (amide synthases)	•	2
F-type and V-type ATPases	•	2

CE: Cysteine (C) Peptidases	2
Spermidine synthase	1
Amino acid hydroxylases	1
Small monomeric GTPases	1
Immunoglobulin like domain containing proteins	1
Glutaminases	1
Polo-like kinase (PLK) family	1
Inositol phosphate turnover	1
Transcription regulation (bacteria)	1
SLC5 family of sodium-dependent glucose transporters	1
Plant targets	1
CK1: Casein kinase 1	1
CD molecules	1

NADPH oxidases	•	1
Ceramide turnover	•	1
1.1.1.27 L-lactate dehydrogenase	•	1
"STE: Homologs of yeast Sterile 7, Sterile 11, Sterile 20 kinases"	•	1
G protein-coupled receptor kinases (GRKs)	•	1
Cytochrome P450 (bacteria)	•	1
NAK family	•	1
Phosphatidyl inositol 3' kinase-related kinases (PIKK) family	•	1
Methyltransferases	•	1
Lysyl oxidases	•	1
Anti-infective targets	•	1
Synuclein family	•	1
RSK family	•	1

Isocitrate dehydrogenases	•	1
Aldehyde oxidase	•	1
Lipid modifying kinases	•	1
Cytokine receptor family	•	1
Lymphocyte antigens	•	1
Glutathione transferases	•	1
NIMA (never in mitosis gene a)- related kinase (NEK) family	•	1
IKK family	•	1
Mitogen-activated protein kinases (MAP kinases)	•	1
Adenylate kinase	•	1
Glycogen phosphorylase	•	1
Human endogenous retrovirus (HERV) proteins	•	1
Glycosidases	•	1

Carboxylases and decarboxylases	•	1
SLC17 phosphate and organic anion transporter family	•	1
SLC1 family of amino acid transporters	•	1
Beta-glucosidase	•	1
SLC25 family of mitochondrial transporters	•	1
Purine-nucleoside phosphorylase	•	1
Nucleotide salvage	•	1