

## Scientific names of Indian medicinal plants

Manual curation of the list  
identify synonyms for removal  
of redundant information



Indexing a unique scientific name  
to each curated Indian medicinal plant  
and its synonyms



### Curated list of Indian medicinal plants

Literature



Databases



Natural Language  
Processing (NLP)

PubMed.gov

### List of plant-phytochemical associations

Manual search for  
phytochemical ontologies  
(Phytochemical name, synonyms and  
Standard chemical identifiers)



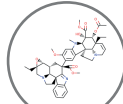
Indexing a unique standard chemical identifier to  
each phytochemical in a chosen ontological order

Pubchem  
ChEBI  
CAS  
CHEMSPIDER

Indian Medicinal Plant



Phytochemical



### Unique list of Plant-Phytochemical associations

Phytochemical  
classification

ClassyFire

Kingdom  
Superclass  
Class  
Subclass



Plant  
classification

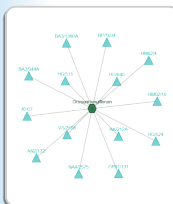
Tropicos  
PlantList

Kingdom  
Family

Traditional Indian  
medicine Formulations  
TKDL

Plant-Formulation  
associations

| INDIAN MEDICINAL PLANT | FORMULATION IDENTIFIER |
|------------------------|------------------------|
| Ocimum tenuiflorum     | AQ1212A                |
| Ocimum tenuiflorum     | AT67                   |
| Ocimum tenuiflorum     | BP1634                 |
| Ocimum tenuiflorum     | HD1615                 |
| Ocimum tenuiflorum     | HD1624                 |
| Ocimum tenuiflorum     | HD1649                 |
| Ocimum tenuiflorum     | VS2558                 |



Literature



List of Plant-Therapeutic  
use associations

Manual search for  
therapeutic  
ontologies  
(Therapeutics name,  
synonyms and  
standard identifiers)

Indexing a  
unique  
therapeutic  
use and its  
synonyms

Unique list of  
Plant-Therapeutic use  
associations

Cheminformatics

STITCH

Human target  
proteins

| Predicted human target proteins |              |                                       |
|---------------------------------|--------------|---------------------------------------|
| Protein identifier              | ATCIC symbol | Confidence score from STITCH analysis |
| CANP/PPP2R1B/PPP2R1A            | PPP2R1       | 775                                   |
| CANP/PPP2R1B/PPP2R1A            | ATCIC1       | 800                                   |
| CANP/PPP2R1B/PPP2R1A            | ATCIC2       | 800                                   |
| CANP/PPP2R1B/PPP2R1A            | ATCIC3       | 800                                   |
| CANP/PPP2R1B/PPP2R1A            | ATCIC4       | 800                                   |
| CANP/PPP2R1B/PPP2R1A            | ATCIC5       | 700                                   |
| CANP/PPP2R1B/PPP2R1A            | ATCIC6       | 800                                   |
| CANP/PPP2R1B/PPP2R1A            | ATCIC7       | 775                                   |
| CANP/PPP2R1B/PPP2R1A            | ATCIC8       | 700                                   |



Copyright network of predicted human targets of CANP/PPP2R1B/PPP2R1A

admetSAR

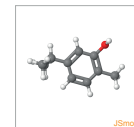
ADMET properties

| ADMET Properties            |               |             |
|-----------------------------|---------------|-------------|
| Property                    | Value         | Probability |
| Human Intestinal Absorption | +             | 0.985       |
| Blood Brain Barrier         | +             | 0.938       |
| Caco-2 permeability         | +             | 0.915       |
| P-glycoprotein substrate    | Non-substrate | 0.722       |
| P-glycoprotein inhibitor 1  | Non-inhibitor | 0.924       |
| P-glycoprotein inhibitor 2  | Non-inhibitor | 0.955       |

FAF-Drugs4  
RDKit  
Open Babel

Physicochemical and  
drug-likeness properties

| Physicochemical Properties     |              |
|--------------------------------|--------------|
| Property                       | Value        |
| Molecular weight               | 180.22 g/mol |
| LogP                           | 2.62         |
| LogD                           | 3.43         |
| LogRw                          | -3.58        |
| Number of stereocenters        | 0            |
| Stereochemical complexity      | 0.000        |
| Frag3                          | 0.400        |
| Topological polar surface area | 20.23 Å²     |



JSmol

| Drug-likeness Properties             |       |
|--------------------------------------|-------|
| Property                             | Value |
| Lipinski's rule of 5 violations      | 0     |
| Veber rule                           | Good  |
| Egan rule                            | Good  |
| Oral PhysChem score (Traffic Lights) | 1     |
| SSR's 4/400 score                    | Good  |