Gnomics

A Fully-Integrated Biological Interface for Python

# Introduction

## Biomedical Informatics

AMIA, the American Medical Informatics Association, defines biomedical informatics (BMI) as the “interdisciplinary field that studies and pursues the effective uses of biomedical data, information, and knowledge for scientific inquiry, problem solving and decision making, motivated by efforts to improve human health.”

One of the most important pieces of this definition is *effective use*. [Michael Gurstein](https://en.wikipedia.org/wiki/Michael_Gurstein) characterized effective use as the “capacity and opportunity to successfully integrate [Information and Communications Technology] into the accomplishment of self or collaboratively identified goals.” One of the deepest divides in BMI is between clinical applications and strictly biological research. Even informatics is divided on the subject, considering clinical informatics and bioinformatics as separate disciplines.

A primary issue in this regard is the existence of different standards. Consider, for example, the FDA’s Adverse Event Reporting System (FAERS). FAERS records component drugs using RxCUIs and adverse events (AEs) as MedDRA terms. A bioinformaticist might more commonly utilize compound identifiers such as PubChem CIDs or ChEBI IDs instead of RxCUIs, or use Human Phenotype Ontology (HPO) IDs instead of MedDRA terms. Of course, translating from one ontology to another is somewhat laborious.

## UID Problem

The unique identifier (UID) problem is one rooted in the usage of primary keys for in database tables. Three basic keys of UIDs exist: serial numbers, random numbers, and choice codes. At times, just like there are many languages, there are many types of UIDs representing the same objects. Water has an RxCUI, a ChemSpider ID, a PubChem ID, etc., but they all *mean* the same thing. In many cases, “overarching” or meta- databases are constructed to link all of these sources together. A popular example of this would be the [UMLS Metathesaurus](https://www.nlm.nih.gov/research/umls/knowledge_sources/metathesaurus/). However, this introduces a problem, namely, that a new UID for this meta-database must be designed, adding a whole new identifier to worry about. This problem was represented well in the comic [XKCD #927](https://www.explainxkcd.com/wiki/index.php/927:_Standards):



The reason for the creation of competing identifiers and standards is multifaceted, ranging from “Not Invented Here” (NIH) ideologies[[1]](#footnote-1), economic or political motivations, or lack of reliable identifier mapping for usage in updates.

## APIs

An API is an *Application Programming Interface*. Essentially, it is code that allows two software programs to talk to one another—in the instance of *GNOMICS*, our Python code asks website code for specific information which is then returned to the Python code for further processing.

### REST and SOAP Services

Two main types of API web services are generally available, REST services and SOAP services. Although REST is becoming more popular, SOAP services still have a significant grasp on the web services market.

However, even though these services are often treated as a dichotomy, SOAP (Simple Object Access Protocol) and REST (REpresentational State Transfer) are two very different entities. *SOAP* is a protocol for exchanging information between networks—specifically it utilizes XML for its messages, layered with application layer protocols (most commonly HTTP or SMTP) for message transmission. REST or RESTful services are protocol independent and are therefore not linked to HTTP or SMTP. Likewise, REST can return JSON, JSONP, XML, or anything else.

### Return Types: JSON, JSONP, and XML

Three main return types are typically available through various services, usually JSON (JavaScript Object Notation), JSONP (JSON with Padding), or XML (eXtensible Markup Language).

### API Security

Sometimes, massive usage of an API or unlicensed usage of an API can cause issues. Thus, many such services have some form of access control in order to keep these problems to a minimum. Some webservices utilize API security keys generated by a user or a combination of unique user identifiers (user names, passwords, emails, etc.). Many API services have a *request limit*, a number of requests allowed in a given unit of time.

#### ChemSpider

The [ChemSpider Webservices](http://www.chemspider.com/AboutServices.aspx) (SOAP and REST) are available through APIs. The wrapper ChemSpiPy is used within *GNOMICS* to provide access to the ChemSpider services. However, to use ChemSpider’s services, an API security token must be acquired.

To get such a token, one must complete ChemSpider’s [registration](http://www.chemspider.com/Register.aspx) process. Once registered, the security token is listed on the [Profile](http://www.chemspider.com/UserProfile.aspx) page. It should be noted that some of ChemSpider’s services require a “Service Subscriber” role; to achieve this, one must email ChemSpider to discuss an account upgrade.

#### DPLA

[How to get DPLA API key]

#### Elsevier

[How to get Elsevier API key]

#### EOL

The [EOL Application Programming Interface](http://eol.org/info/api_overview) only suggests usage of an API key given heavy API usage. An API key can be generated once one creates an EOL account.

#### FDA

[How to get FDA API key]

#### ISBNdb

[How to get ISBNdb API key]

#### NCBO

[How to get NCBO API key]

#### OMIM

[How to get OMIM API key]

#### OpenPHACTS

[How to get OpenPHACTS API key]

#### Springer

[How to get Springer API key]

#### UMLS

[How to get UMLS API key]

# Installation

## Windows

### Installing Electron on Windows

Getting Electron up and running on Windows platforms can sometimes be relatively difficult. The personal solution used in this case can be found [here](https://stackoverflow.com/questions/35293117/npm-install-that-requires-node-gyp-fails-on-windows) and is repeated below for clarity’s sake:

1. Download and install a version of Python 2.7.
2. Add the full path of the Python 2.7 install to the PATH variable.
3. Change directory in a Windows PowerShell (run as administrator) to wherever gnomics\_app is located.
4. Run the following command in a Windows PowerShell (run as administrator): npm config -g set msvs\_version 2015.
5. Run npm i to check for any possible errors.
6. Run npm install --runtime=electron --target=1.4.15 to install Electron.

## Linux

## Mac OS

# Usage

## Command-Line Interface (CLI)

## Graphic User Interface (Electron)

### Windows

First make sure no processes are current running on port 4242. To check this, open a command prompt and run the command netstat -a -o -n. This will list all protocols being run on various ports. If TCP 127.0.0.1:4242 does not appear in the list, we can continue the Electron launch procedure. However, if it does appear in the list, check the PID (last column of the netstat output) and run taskkill /F /PID $PID, where $PID is the aforementioned PID. For example, if the PID is 20284, run taskkill /F /PID 20284.

Once the port is cleared, open two command prompts or bash shells and change directories in both to gnomics\_app. Once there, run python ./gnomics/api.py in one prompt and ../gnomics\_app/node\_modules/electron/dist/electron.exe ../gnomics\_app in the other prompt.

## Graphic User Interface (Executable)

# Outline

*Gnomics* is meant to be setup in a (relatively) intuitive manner, with objects named after what they represent in real-life. Not only this, but with a Swiss army knife approach, it is hoped that if a component fails, another component will take its place dynamically.

Unfortunately, some data we try to find isn’t exactly easily accessible. In addition, certain databases or APIs being accessed might require particular security parameters or the entire API might be dropped suddenly. In these events, it is hoped that a dynamic user base will help keep the software up-to-date. If you encounter a bug or a database issue, at the very least, please please *please* note it on the GitHub.

The basic outline of the project currently includes the following folders/file hierarchy:

* data
* docs
* objects
  + assay\_files
  + clinical\_trial\_files
  + compound\_files
  + disease\_files
  + drug\_files
  + gene\_files
  + interaction\_objects
    - compound\_disease.py
    - compound\_gene.py
    - compound\_reference.py
    - disease\_gene.py
    - disease\_reference.py
    - gene\_reference.py
  + mutation\_files
  + pathway\_files
  + procedure\_files
  + protein\_files
  + reference\_files
  + taxon\_files
  + compound.py
  + disease.py
  + enzyme.py
  + gene.py
  + identifier.py
  + mutation.py
  + pathway.py
  + procedure.py
  + protein.py
  + reference.py
  + report.py
  + taxon.py
  + user.py

# Coverage

*Gnomics* covers a variety of databases and identifiers, of which are listed here, along with various APIs, source code, and other materials. For ease of reference, sources are listed alphabetically, with subsources and identifiers listed with them.

## AEO

Files: /objects/anatomical\_structure\_files/aeo.py [Main]

Homepage:

Identifiers: AEO ID

Mappings: N/A

Packages: N/A

Requirements: N/A

## ATC/DDD Index

Files: /objects/drug\_files/atc.py [Main]

Homepage: <https://www.whocc.no/atc_ddd_index/>

Identifiers: ATC Code

Mappings: N/A

Packages: N/A

Requirements: N/A

## Beilstein Database

Files: /objects/compound\_files/beilstein.py [Main]

Homepage:

Identifiers: Beilstein Registry Number

Mappings: N/A

Packages: N/A

Requirements: N/A

## BioCyc Database Collection

Files:

Homepage:

Identifiers:

Mappings: N/A

Packages: N/A

Requirements: N/A

## CARO

Files: /objects/anatomical\_structure\_files/caro.py [Main]

Homepage:

Identifiers: CARO ID

Mappings: N/A

Packages: N/A

Requirements: N/A

## CAS

Files: /objects/compound\_files/cas.py [Main]

Homepage: <https://www.cas.org/>

Identifiers: CAS Registry Number

Mappings: CAS Registry Number 🡪 MeSH Term

CAS Registry Number 🡪 MeSH UID

Packages: N/A

Requirements: N/A

## Catalogue of Life

Files: /objects/taxon\_files/col.py [Main]

Homepage: <http://www.catalogueoflife.org/>

Identifiers: COL ID

Mappings:

Packages: N/A

Requirements:

## ChEBI

Files: /objects/compound\_files/chebi.py [Main]

Homepage: <https://www.ebi.ac.uk/chebi/>

Identifiers: ChEBI ID

Mappings: ChEBI ID 🡪 Beilstein Registry Number

ChEBI ID 🡪 CAS Registry Number

ChEBI ID 🡪 DrugBank ID

ChEBI ID 🡪 DrugCentral ID

ChEBI ID 🡪 InChI

ChEBI ID 🡪 INN

ChEBI ID 🡪 KEGG COMPOUND ID

ChEBI ID 🡪 KEGG DRUG ID

ChEBI ID 🡪 Patent Number

ChEBI ID 🡪 PDBeChem Code

ChEBI ID 🡪 SM LINCS ID

ChEBI ID 🡪 SMILES

Packages: N/A

Requirements: N/A

## ChEMBL

Files: /objects/compound\_files/chembl.py [Main]

Homepage: <https://www.ebi.ac.uk/chembl/>

Identifiers: ChEMBL ID

Mappings: ChEMBL ID 🡪 ATC Code

ChEMBL ID 🡪 BAN

ChEMBL ID 🡪 Canonical SMILES

ChEMBL ID 🡪 FDA Approved Drug Name

ChEMBL ID 🡪 INN

ChEMBL ID 🡪 JAN

ChEMBL ID 🡪 USAN

ChEMBL ID 🡪 USP

ChEMBL ID 🡪 Wikipedia Accession

Packages: N/A

Requirements: N/A

## ChemSpider

Files: /objects/compound\_files/cs.py [Main]

Homepage: <http://www.chemspider.com/>

Identifiers: ChemSpider ID

Mappings: ChemSpider ID 🡪 InChI

ChemSpider ID 🡪 Molecular Formula

ChemSpider ID 🡪 PubChem CID

ChemSpider ID 🡪 PubChem CID 🡪 CAS Registry Number

ChemSpider ID 🡪 SMILES

InChI 🡪 ChemSpider ID

Packages: ChemSpiPy (<http://chemspipy.readthedocs.io>)

Requirements: API security token

## DGIdb

Files:

Homepage: <http://dgidb.genome.wustl.edu/>

Identifiers: DGIdb Gene Interaction ID

Mappings:

Packages: N/A

Requirements:

## Disease Ontology

Files: /objects/disease\_files/do.py [Main]

Homepage: <http://disease-ontology.org/>

Identifiers: DO Term

DOID

Mappings: DOID 🡪 DO Term

DOID 🡪 HGNC Approved Symbol

DOID 🡪 MIM Number

DOID 🡪 NCBI Gene ID

DOID 🡪 ORDO ID

DOID 🡪 SNOMED-CT ID

DOID 🡪 UMLS ID

Packages: N/A

Requirements:

## DrugBank

Files: /objects/drug\_files/drugbank.py [Main]

Homepage: <https://www.drugbank.ca/>

Identifiers: DrugBank ID

Mappings:

Packages: N/A

Requirements: API security token

## DrugCentral

Files: /objects/drug\_files/drugcentral.py [Main]

Homepage: <http://drugcentral.org/>

Identifiers: DrugCentral ID

Mappings:

Packages: N/A

Requirements:

## Drugs@FDA

Files: /objects/drug\_files/fda.py [Main]

Homepage: <https://www.fda.gov/drugs/informationondrugs/ucm135821.htm>

Identifiers: FDA Approved Drug Name

NDA

Mappings:

Packages: N/A

Requirements:

## EOL

Files: /objects/taxon\_files/eol.py [Main]

Homepage: <http://eol.org/>

Identifiers: EOL ID

Mappings: EOL ID 🡪 COL ID

Index Fungorum ID 🡪 EOL ID

ITIS TSN 🡪 EOL ID

NCBI Taxonomy ID 🡪 EOL ID

Paleobiology Database ID 🡪 EOL ID

Packages: N/A

Requirements:

## FMA

Files: /objects/anatomical\_structure\_files/fma.py [Main]

Homepage:

Identifiers: FMA ID

Mappings: N/A

Packages: N/A

Requirements: N/A

## Gene Ontology

Files: /objects/auxiliary\_files/go.py [Main]

Homepage: <http://www.geneontology.org/>

Identifiers: GO Accession

GO Term

Mappings:

Packages: N/A

Requirements:

## ICD

Files: /objects/disease\_files/icd.py [Main]

Homepage:

Identifiers: ICD-10-CM Code

ICD-9-CM Code

Mappings:

Packages: N/A

Requirements:

## KEGG

Files: /objects/auxiliary\_files/kegg.py [Main]

/objects/compound\_files/kegg.py [Main]

/objects/disease\_files/kegg.py [Main]

Homepage: <http://www.genome.jp/kegg/>

Identifiers: KEGG COMPOUND ID

KEGG DISEASE ID

KEGG DRUG ID

KEGG GENE ID

KEGG ORGANISM ID

KEGG ORTHOLOGY ID

KEGG PATHWAY ID (EC)

KEGG PATHWAY ID (KO)

KEGG PATHWAY ID (MAP)

KEGG PATHWAY ID (Reaction)

Mappings: KEGG COMPOUND ID 🡪 ChEBI ID

KEGG COMPOUND ID 🡪 ChEBI ID 🡪 Beilstein Registry Number

KEGG COMPOUND ID 🡪 ChEBI ID 🡪 CAS Registry Number

KEGG COMPOUND ID 🡪 ChEBI ID 🡪 DrugBank ID

KEGG COMPOUND ID 🡪 ChEBI ID 🡪 DrugCentral ID

KEGG COMPOUND ID 🡪 ChEBI ID 🡪 InChI

KEGG COMPOUND ID 🡪 ChEBI ID 🡪 KEGG DRUG ID

KEGG COMPOUND ID 🡪 ChEBI ID 🡪 SM LINCS ID

KEGG COMPOUND ID 🡪 ChEBI ID 🡪 SMILES

KEGG COMPOUND ID 🡪 ChEMBL ID

KEGG COMPOUND ID 🡪 PubChem SID

KEGG COMPOUND ID 🡪 PubChem SID 🡪 PubChem CID

KEGG DISEASE ID 🡪 ICD-10-CM

KEGG DISEASE ID 🡪 MeSH UID

KEGG DISEASE ID 🡪 MIM Number

KEGG GENE ID 🡪

KEGG ORTHOLOGY ID 🡪 GO Accession

KEGG ORTHOLOGY ID 🡪 KEGG COMPOUND ID

KEGG ORTHOLOGY ID 🡪 KEGG DRUG ID

KEGG ORTHOLOGY ID 🡪 KEGG GENE ID

KEGG ORTHOLOGY ID 🡪 KEGG PATHWAY ID (KO)

KEGG PATHWAY ID (KO) 🡪 BSID

KEGG PATHWAY ID (KO) 🡪 GO Accession

KEGG PATHWAY ID (KO) 🡪 KEGG COMPOUND ID

KEGG PATHWAY ID (KO) 🡪 KEGG DISEASE ID

KEGG PATHWAY ID (KO) 🡪 KEGG ORTHOLOGY ID

KEGG PATHWAY ID (MAP) 🡪 GO Accession

KEGG PATHWAY ID (MAP) 🡪 KEGG DISEASE ID

KEGG PATHWAY ID (MAP) 🡪 KEGG PATHWAY ID (KO)

Packages:

Requirements: N/A

## LINCS Data Portal

Files: /objects/compound\_files/lincs.py [Main]

Homepage: <http://lincsportal.ccs.miami.edu/dcic-portal/>

Identifiers: SM LINCS ID

Mappings:

Packages: N/A

Requirements:

## MeSH

Files: /objects/compound\_files/mesh.py [Main]

Homepage: <https://meshb.nlm.nih.gov/>

Identifiers: MeSH Term

MeSH UID

Mappings: MeSH UID 🡪 MeSH Term

Packages: N/A

Requirements:

## MMDB

Files: /objects/compound\_files/mmdb.py [Main]

Homepage: <https://www.ncbi.nlm.nih.gov/structure>

Identifiers: MMDB ID

Mappings:

Packages: N/A

Requirements:

## NCBI BioSystems Database

Files: /objects/auxiliary\_files/biosystems.py [Main]

Homepage: <https://www.ncbi.nlm.nih.gov/biosystems/>

Identifiers: BSID

Mappings:

Packages: N/A

Requirements:

## Noble

Files: /objects/reference\_files/noble.py [Main]

Homepage: <http://noble-tools.dbmi.pitt.edu/>

Identifiers:

Mappings:

Packages: NOBLE Coder

Requirements:

## OMIM

Files: /objects/disease\_files/omim.py [Main]

Homepage: <https://omim.org/>

Identifiers: MIM Number

Mappings: MIM Number 🡪 DOID

MIM Number 🡪 HGNC Approved Symbol

MIM Number 🡪 ICD-10-CM

MIM Number 🡪 ICD-9-CM

MIM Number 🡪 NCBI Gene ID

MIM Number 🡪 SNOMED-CT ID

MIM Number 🡪 UMLS ID

Packages: N/A

Requirements: API security token

## PDB

Files: /objects/protein\_files/pdb.py [Main]

Homepage: <https://www.rcsb.org/pdb/home/home.do>

Identifiers: PDB ID

Mappings:

Packages: N/A

Requirements:

## PDBeChem

Files: /objects/compound\_files/pdbechem.py [Main]

Homepage: <http://www.ebi.ac.uk/pdbe-srv/pdbechem/>

Identifiers: PDBeChem Code

Mappings:

Packages: N/A

Requirements:

## PIR

Files: /objects/protein\_files/pir.py [Main]

Homepage: <http://pir.georgetown.edu/>

Identifiers: PIR ID

Mappings:

Packages: N/A

Requirements:

## PubChem

Files: /objects/assay\_files/pubchem.py [Main]

/objects/compound\_files/pubchem.py [Main]

Homepage: <https://pubchem.ncbi.nlm.nih.gov/>

Identifiers: PubChem AID

PubChem CID

PubChem SID

Mappings: PubChem CID 🡪 Canonical SMILES

PubChem CID 🡪 CAS Registry Number

PubChem CID 🡪 DGIdb Gene Interaction ID 🡪

HGNC Approved Gene Symbol

PubChem CID 🡪 InChI

PubChem CID 🡪 Isomeric SMILES

PubChem CID 🡪 IUPAC Name

PubChem CID 🡪 MIM Number

PubChem CID 🡪 MMDB ID

PubChem CID 🡪 Molecular Formula

PubChem CID 🡪 Patent Number

PubChem CID 🡪 PubChem AID

Packages: PubChemPy (<https://pubchempy.readthedocs.io>)

Requirements: N/A

## PubMed

Files: /objects/reference\_files/pubmed.py [Main]

Homepage: <https://www.ncbi.nlm.nih.gov/pubmed/>

Identifiers: PMID

Mappings:

Packages: N/A

Requirements:

## PubTator

Files: /objects/reference\_files/pubtator.py [Main]

Homepage: <https://www.ncbi.nlm.nih.gov/CBBresearch/Lu/Demo/PubTator/>

Identifiers:

Mappings: PMID 🡪 ChEBI ID[[2]](#footnote-2)

PMID 🡪 MeSH UID[[3]](#footnote-3)

PMID 🡪 NCBI Gene ID

PMID 🡪 NCBI Taxonomy ID

PMID 🡪 RS Number

Packages:

Requirements:

## RefSeq

Files: /objects/protein\_files/refseq.py [Main]

Homepage: <https://www.ncbi.nlm.nih.gov/refseq/>

Identifiers: RefSeq Nucleotide ID

RefSeq Protein Accession

Mappings:

Packages: N/A

Requirements:

## RxNorm

Files: /objects/drug\_files/rxcui.py [Main]

Homepage:

Identifiers: RxCUI

Mappings: AMPID 🡪 RxCUI

ANDA 🡪 RxCUI

ATC Code 🡪 RxCUI

CVX 🡪 RxCUI

DrugBank ID 🡪 RxCUI

GCN 🡪 RxCUI

GFC 🡪 RxCUI

GPI 🡪 RxCUI

GPPC 🡪 RxCUI

HIC Sequence Number 🡪 RxCUI

MMSL Code 🡪 RxCUI

NDA 🡪 RxCUI

NDC 🡪 RxCUI

NUI 🡪 RxCUI

SNOMED-CT ID 🡪 RxCUI

SPL Set ID 🡪 RxCUI

UMLS CUI 🡪 RxCUI

UNII 🡪 RxCUI

VUID 🡪 RxCUI

Packages: N/A

Requirements:

## SNOMED

Files: /objects/disease\_files/snomed.py [Main]

Homepage: <http://www.snomed.org/>

Identifiers: SNOMED-CT ID

Mappings:

Packages: N/A

Requirements:

## UniProt

Files: /objects/protein\_files/uniprot.py [Main]

Homepage: <http://www.uniprot.org/>

Identifiers: UniParc

UniProtKB AC/ID

UniProtKB Accession

UniProtKB ID

UniRef50

UniRef90

UniRef100

Mappings: UniProtKB Accession 🡪 DisProt ID

UniProtKB Accession 🡪 MINT ID

UniProtKB Accession 🡪 PDB ID

UniProtKB Accession 🡪 PIR ID

UniProtKB Accession 🡪 RefSeq Protein Accession

UniProtKB Accession 🡪 STRING ID

UniProtKB ID 🡪 DisProt ID

UniProtKB ID 🡪 MINT ID

UniProtKB ID 🡪 PDB ID

UniProtKB ID 🡪 PIR ID

UniProtKB ID 🡪 RefSeq Protein Accession

UniProtKB ID 🡪 STRING ID

Packages: N/A

Requirements:

## UBERON

Files: /objects/anatomical\_structure\_files/uberon.py [Main]

Homepage:

Identifiers: UBERON ID

Mappings: N/A

Packages: N/A

Requirements: N/A

## Wikidata

Files: /objects/compound\_files/wiki.py [Main]

/objects/taxon\_files/wiki.py [Main]

Homepage: <https://www.wikidata.org/>

Identifiers: Wikidata Accession

Mappings: Wikidata Accession 🡪 AAT ID

Wikidata Accession 🡪 ATC Code

Wikidata Accession 🡪 Canonical SMILES

Wikidata Accession 🡪 CAS Registry Number

Wikidata Accession 🡪 ChEBI ID

Wikidata Accession 🡪 ChEMBL ID

Wikidata Accession 🡪 ChemSpider ID

Wikidata Accession 🡪 DrugBank ID

Wikidata Accession 🡪 EOL ID

Wikidata Accession 🡪 Fossilworks ID

Wikidata Accession 🡪 Freebase ID

Wikidata Accession 🡪 InChI

Wikidata Accession 🡪 InChI Key

Wikidata Accession 🡪 INN

Wikidata Accession 🡪 Isomeric SMILES

Wikidata Accession 🡪 ITIS TSN

Wikidata Accession 🡪 KEGG COMPOUND ID

Wikidata Accession 🡪 KEGG DRUG ID

Wikidata Accession 🡪 MeSH UID

Wikidata Accession 🡪 MSW ID

Wikidata Accession 🡪 NCBI Taxonomy ID

Wikidata Accession 🡪 PDB Ligand ID

Wikidata Accession 🡪 PubChem CID

Wikidata Accession 🡪 RxCUI

Wikidata Accession 🡪 UMLS CUI

Wikidata Accession 🡪 UNII

Packages: N/A

Requirements:

## Wikipedia

Files: /objects/compound\_files/wiki.py [Main]

Homepage: <https://wikipedia.org/>

Identifiers: Albanian Wikipedia Article

Arabic Wikipedia Article

Aramaic Wikipedia Article

Azerbaijani Wikipedia Article

Bangla Wikipedia Article

Bashkir Wikipedia Article

Basque Wikipedia Article

Bosnian Wikipedia Article

Breton Wikipedia Article

Bulgarian Wikipedia Article

Catalan Wikipedia Article

Central Kurdish Wikipedia Article

Chinese Wikipedia Article

Classical Chinese Wikipedia Article

Croatian Wikipedia Article

Czech Wikipedia Article

Danish Wikipedia Article

Divehi Wikipedia Article

Dutch Wikipedia Article

English Wikipedia Article

Esperanto Wikipedia Article

Estonian Wikipedia Article

Finnish Wikipedia Article

French Wikipedia Article

Galician Wikipedia Article

Georgian Wikipedia Article

German Wikipedia Article

Greek Wikipedia Article

Hebrew Wikipedia Article

Hungarian Wikipedia Article

Ido Wikipedia Article

Indonesian Wikipedia Article

Irish Wikipedia Article

Italian Wikipedia Article

Japanese Wikipedia Article

Kazakh Wikipedia Article

Korean Wikipedia Article

Latin Wikipedia Article

Latvian Wikipedia Article

Lithuanian Wikipedia Article

Macedonian Wikipedia Article

Newari Wikipedia Article

Norwegian Wikipedia Article

Persian Wikipedia Article

Polish Wikipedia Article

Portuguese Wikipedia Article

Romanian Wikipedia Article

Russian Wikipedia Article

Scots Wikipedia Article

Serbo-Croatian Wikipedia Article

Simple English Wikipedia Article

Slovenian Wikipedia Article

Spanish Wikipedia Article

Swedish Wikipedia Article

Tamil Wikipedia Article

Telugu Wikipedia Article

Thai Wikipedia Article

Turkish Wikipedia Article

Ukrainian Wikipedia Article

Urdu Wikipedia Article

Walloon Wikipedia Article

Western Mari Wikipedia Article

Xhosa Wikipedia Article

Mappings: English Wikipedia Article 🡪 Wikidata Accession

Packages: N/A

Requirements:

# Alphabetical List of Identifiers

What follows is an alphabetical list of identifiers recognized and parsed within the *Gnomics* system (this, however, does not mean that every function will work with every identifier). Each identifier is followed with its ontology designation in various ontology-thesaurus systems (such as OLS and UMLS).

## 0-9

## Aa

**AAO ID**, *Amphibian gross Anatomy Ontology IDentifier*. [AAONCBO]

**AAT ID**, *Art and Architecture Thesaurus IDentifier*.

* AAT ID
* AAT Identifier

**ADW Taxon ID**, *Animal Diversity Web Taxon IDentifier*.

* ADW ID
* ADW Identifier
* ADW Taxon ID
* ADW Taxon Identifier

**AEO ID**, *Anatomical Entity Ontology IDentifier*. [AEONCBO, AEOOLS]

* AEO
* AEO ID
* AEO Identifier
* Anatomical Entity Ontology ID
* Anatomical Entity Ontology Identifier

**AERO ID**, *Adverse Event Reporting Ontology IDentifier*. [AERONCBO, AEROOLS]

* Adverse Event Reporting Ontology ID
* Adverse Event Reporting Ontology Identifier
* AERO
* AERO ID
* AERO Identifier

**AMPID**, *Alchemy Marked Product IDentifier*.

**ANDA ID**, *FDA Abbreviated New Drug Application IDentifier*.

**AOD ID**, *Alcohol and Other Drug IDentifier*. [AODUMLS]

* Alcohol and Other Drug
* Alcohol and Other Drug ID
* Alcohol and Other Drug Identifier
* AOD
* AOD ID
* AOD Identifier

**ASIN**, *Amazon Standard Identification Number*.

* Amazon ID
* Amazon Identifier
* ASIN

**ATC Code**, *Anatomical Therapeutic Chemical Code*. [ATCNCBO, ATCUMLS]

* Anatomical Therapeutic Chemical
* Anatomical Therapeutic Chemical Classification
* Anatomical Therapeutic Chemical Code
* ATC
* ATC Classification
* ATC Code

## Bb

**BAN**, *British Accepted Name*.

* BAN
* British Accepted Name

**BAO ID**, *BioAssay Ontology IDentifier*. [BAONCBO, BAOOLS]

**Beilstein RN**, *Beilstein Registry Number*.

* Beilstein
* Beilstein Registry
* Beilstein Registry Number
* Beilstein RN

**BNCF Thesaurus ID**, *Biblioteca Nazionale Centrale di Firenze (National Central Library of Florence) Thesaurus IDentifier*.

* BNCF
* BNCF Thesaurus
* BNCF Thesaurus ID
* BNCF Thesaurus Identifier

**BnF ID**, *Bibliothèque nationale de France (National Library of France) IDentifier*.

**BTO ID**, *BRENDA Tissue Ontology IDentifier*. [BTONCBO, BTOOLS]

* BRENDA Tissue Ontology ID
* BRENDA Tissue Ontology Identifier
* BTO
* BTO ID
* BTO Identifier

## Cc

**CALOHA ID**, *CALipho Ontology for Human Anatomy IDentifier*.

* CALOHA
* CALOHA ID
* CALOHA Identifier

**CARO ID**, *Common Anatomy Reference Ontology IDentifier*. [CARONCBO, CAROOLS]

* CARO
* CARO ID
* CARO Identifier

**CAS RN**, *Chemical Abstracts Service Registry Number*.

* CAS
* CAS Registry
* CAS Registry Number
* CAS RN

**CCPSS ID**, *Canonical Clinical Problem Statement System IDentifier*. [CCPSSUMLS]

* CCPSS
* CCPSS ID
* CCPSS Identifier

**Cellosaurus ID**, *Cellosaurus IDentifier*.

* Cellosaurus
* Cellosaurus Cell Line ID
* Cellosaurus Cell Line Identifier
* Cellosaurus ID
* Cellosaurus Identifier

**CEPH ID**, *CEPHalopod ontology IDentifier*. [CEPHNCBO]

* CEPH
* CEPH ID
* CEPH Identifier

**CHEBI ID**, *CHemical Entities of Biological Interest IDentifier*. [CHEBIOLS]

* CHEBI
* ChEBI
* CHEBI ID
* ChEBI ID
* CHEBI Identifier
* ChEBI Identifier

**ChEMBL ID**, *Chemical European Molecular Laboratory IDentifier*.

* ChEMBL
* ChEMBL Assay
* ChEMBL Assay ID
* ChEMBL Assay Identifier
* ChEMBL Compound
* ChEMBL Compound ID
* ChEMBL Compound Identifier
* ChEMBL Document
* ChEMBL Document ID
* ChEMBL Document Identifier
* ChEMBL ID
* ChEMBL Identifier

**CLO ID**, *Cell Line Ontology IDentifier*. [CLONCBO]

**CMPO ID**, *Cellular Microscopy Phenotype Ontology IDentifier*.

**COL ID**, *Catalogue Of Life IDentifier*.

* Catalogue of Life
* Catalogue of Life ID
* Catalogue of Life Identifier
* COL
* COL ID
* COL Identifier

**ConceptWiki ID**, *ConceptWiki IDentifier*.

* Concept Wiki
* Concept Wiki ID
* Concept Wiki Identifier
* ConceptWiki
* ConceptWiki ID
* ConceptWiki Identifier

**CPM Code**, *Columbia Presbyterian Medical center medical entities dictionary Code*. [CPMUMLS]

* CPM
* CPM Code
* CPM ID
* CPM Identifier
* MED
* MED Code
* MED ID
* MED Identifier

**CPT Code**, *Current Procedural Terminology Code*. [CPTNCBO, CPTUMLS]

* CPT Code
* CPT ID
* CPT Identifier

**CPT Term, English**, *English Current Procedural Terminology Term*. [CPTNCBO, CPTUMLS]

**CPT Term, Spanish**, *Spanish Current Procedural Terminology Term*. [CPTSPUMLS]

**CRC64 Checksum Value**, *Cyclic Redundancy Check Checksum Value*.

* CRC64
* CRC64 Checksum
* CRC64 Checksum Value

**CSID**, *ChemSpider IDentifier*.

* ChemSpider
* ChemSpider ID
* ChemSpider Identifier
* CS ID
* CSID

**CSSO ID**, *Clinical Signs and Symptoms Ontology IDentifier*. [CSSONCBO]

**CVX**, *Vaccine administered Code*.

## Dd

**DERMO ID**, *human DERMatological disease Ontology IDentifier*. [DERMONCBO]

**DIP ID**, *Database of Interacting Proteins IDentifier*.

* DIP
* DIP ID
* DIP Identifier

**DiseasesDB ID**, *Diseases DataBase IDentifier*. [DDBUMLS]

* DDB ID
* DDB Identifier
* DiseasesDB
* DiseasesDB ID
* DiseasesDB Identifier

**DisProt ID**, *database of Protein Disorder IDentifier*.

* DisProt
* DisProt ID
* DisProt Identifier

**DO Term**, *Disease Ontology Term*. [DOIDNCBO, DOIDOLS]

* DO Label
* DO Name
* DO Term

**DOI**, *Digital Object Identifier*.

* Digital Object ID
* Digital Object Identifier
* DOI

**DOID**, *Disease Ontology IDentifier*. [DOIDNCBO, DOIDOLS]

* Disease Ontology
* Disease Ontology ID
* Disease Ontology Identifier
* DO ID
* DO Identifier
* DOID

**DRON ID**, *DRug Ontology IDentifier*. [DRONNCBO]

**DrugBank ID**, *DrugBank IDentifier*. [DRUGBANKUMLS]

* DrugBank
* DrugBank Accession
* DrugBank ID
* DrugBank Identifier

**DrugCentral ID**, *DrugCentral IDentifier*.

* Drug Central
* Drug Central Accession
* Drug Central ID
* Drug Central Identifier
* DrugCentral
* DrugCentral Accession
* DrugCentral ID
* DrugCentral Identifier

**DSSTox ID**, *Distributed Structure-Searchable Toxicity IDentifier*.

## Ee

**ECHA InfoCard ID**, *European CHemicals Agency InfoCard IDentifier*.

**EHDAA ID**, *Human Developmental Anatomy Abstract IDentifier, verion 1.* [EHDAANCBO]

* EHDAA
* EHDAA ID
* EHDAA Identifier
* EHDAA1
* EHDAA1 ID
* EHDAA1 Identifier

**EHDAA2 ID**, *Human Developmental Anatomy Abstract IDentifier, verion 2*. [EHDAA2NCBO, EHDAA2OLS]

* EHDAA2
* EHDAA2 ID
* EHDAA2 Identifier

**EID**, *Elsevier IDentifier*.

* EID
* Elsevier ID
* Elsevier Identifier

**EMA Product Number**, *European Medicines Agency Product Number*.

**EMAP ID**, *Edinburgh Mouse Atlas Project IDentifier*. [EMAPNCBO, EMAPOLS]

* EMAP
* EMAP ID
* EMAP Identifier

**EMAPA ID**, *Edinburgh Mouse Atlas Project Abstract IDentifier*. [EMAPANCBO, EMAPAOLS]

* EMAPA
* EMAPA ID
* EMAPA Identifier

**eMedicine ID**, *eMedicine IDentifier*.

* eMedicine
* eMedicine ID
* eMedicine Identifier

**Encyclopædia Britannica Online ID**, *Encyclopædia Britannica Online IDentifier*.

* Britannica Online
* Britannica Online ID
* Britannica Online Identifier
* Encyclopedia Britannica
* Encyclopedia Britannica Online
* Encyclopedia Britannica Online ID
* Encyclopedia Britannica Online Identifier
* Encyclopædia Britannica
* Encyclopædia Britannica Online
* Encyclopædia Britannica Online ID
* Encyclopædia Britannica Online Identifier

**Ensembl Exon ID**, *Ensembl Exon IDentifier*.

**Ensembl Gene ID**, *Ensembl Gene IDentifier*.

* Ensembl
* Ensembl Gene
* Ensembl Gene ID
* Ensembl Gene Identifier

**Ensembl Protein ID**, *Ensembl Protein IDentifier*.

**Ensembl Transcript ID**, *Ensembl Transcript IDentifier*.

* Ensembl
* Ensembl ID
* Ensembl Identifier
* Ensembl Transcript
* Ensembl Transcript ID
* Ensembl Transcript Identifier

**EOL ID**, *Encyclopedia of Life IDentifier*.

* EOL
* EOL ID
* EOL Identifier

**EPPO ID**, *European and mediterranean Plant Protection Organization IDentifier*.

## Ff

**FAO ID***, Fungal Anatomy Ontology IDentifier*. [FAONCBO]

**FBbt ID**, *FlyBase anatomy ontology (drosophila gross anatomy ontology) IDentifier*. [FB-BTNCBO, FBbtOLS]

* Drosophila Gross Anatomy Ontology
* Drosophila Gross Anatomy Ontology ID
* Drosophila Gross Anatomy Ontology Identifier
* FB-BT
* FB-BT ID
* FB-BT Identifier
* FBbt
* FBbt ID
* FBbt Identifier

**FBcv ID**, *FlyBase Controlled Vocabulary (drosophila phenotype ontology) IDentifier*. [FB-CVNCBO, FBcvOLS]

**FDA Approved Name**, *Food and Drug Administration Approved Name*.

* FDA
* FDA Approved Name
* FDA ID
* FDA Identifier
* FDA Name

**FLOPO ID**, *FLOra Phenotype Ontology IDentifier*. [FLOPONCBO, FLOPOOLS]

**FlyMine Primary Gene ID**, *FlyMine Primary Gene IDentifier*.

**FlyMine Secondary Gene ID**, *FlyMine Secondary Gene IDentifier*.

**FMA ID**, *Foundational Model of Anatomy IDentifier*. [FMANCBO, FMAOLS, FMAUMLS]

* FMA
* FMA ID
* FMA Identifier
* FMAID
* Foundational Model of Anatomy
* Foundational Model of Anatomy ID
* Foundational Model of Anatomy Identifier

**Freebase ID**, *Freebase IDentifier*.

* Freebase
* Freebase ID
* Freebase Identifier

**FYPO ID**, *Fission Yeast Phenotype Ontology IDentifier*. [FYPONCBO, FYPOOLS]

## Gg

**GCN**, *Generic Code Number*.

**GCN\_SEQNO**, *Generic Code SEQuence Number*.

**GeneCards ID**, *GeneCards IDentifier*.

* GeneCards
* GeneCards ID
* GeneCards Identifier

**GeneReviews ID**, *GeneReviews IDentifier*.

**GENO ID**, *GENotype Ontology IDentifier*. [GENONCBO, GENOOLS]

**GFC**, *Generic Formula Code*.

**GI Number**, *GenInfo Number*.

**GND ID**, *Gemeinsame NormDatei (Integrated Authority File) IDentifier*.

* GND
* GND ID
* GND Identifier

**GO Accession**, *Gene Ontology Accession*. [GONCBO, GOOLS, GOUMLS]

**GO Term**, *Gene Ontology Term*. [GONCBO, GOOLS, GOUMLS]

**Goodreads Book ID**, *Goodreads Book IDentifier*.

* Goodreads Book ID
* Goodreads Book Identifier
* Goodreads ID
* Goodreads Identifier

**Google Books Volume ID**, *Google Books Volume IDentifier*.

* Google Books ID
* Google Books Identifier
* Google Books Volume ID
* Google Books Volume Identifier

**GPPC**, *Generic Product Packing Code*.

## Hh

**HAO ID**, *Hymenoptera Anatomy Ontology IDentifier*. [HAONCBO, HAOOLS]

* HAO
* HAO ID
* HAO Identifier

**HCPCS Code**, *Healthcare Common Procedure Coding System Code*. [HCPCSNCBO, HCPCSUMLS]

**HCPT Code**, *Current Procedural Terminology in HCPCS Code*. [HCPTUMLS]

**HGNC Gene ID**, *HUGO Gene Nomenclature Committee Gene IDentifier*.

* HGNC ID
* HGNC Identifier
* HGNC Gene ID
* HGNC Gene Identifier

**HGNC Gene Symbol**, *HUGO Gene Nomenclature Committee Gene Symbol*. [HUGONCBO, HGNCUMLS]

* HGNC Approved Symbol
* HGNC Gene Symbol
* HGNC Symbol

**HGVS ID**, *Human Genome Variation Society IDentifier*.

* Coding HGVS
* Coding HGVS ID
* Coding HGVS Identifier
* Genomic HGVS
* Genomic HGVS ID
* Genomic HGVS Identifier
* HGVS
* HGVS ID
* HGVS Identifier

**HIC\_SEQN**, *Hierarchical Ingredient Code SEQuence Number*.

**HMDB ID**, *Human Metabolome DataBase IDentifier*.

**HomoloGene ID**, *HomoloGene IDentifier*.

* HomoloGene
* HomoloGene ID
* HomoloGene Identifier

**HPA Accession**, *Human Protein Atlas Accession*.

* HPA
* HPA Accession
* HPA ID
* HPA Identifier
* Human Protein Atlas
* Human Protein Atlas Accession
* Human Protein Atlas ID
* Human Protein Atlas Identifier

**HPO ID**, *Human Phenotype Ontology IDentifier*. [HPNCBO, HPOLS, HPOUMLS]

* HP
* HP Code
* HP ID
* HP Identifier
* HPO
* HPO Code
* HPO ID
* HPO Identifier
* Human Phenotype Ontology
* Human Phenotype Ontology Code
* Human Phenotype Ontology ID
* Human Phenotype Ontology Identifier

**HPO Term**, *Human Phenotype Ontology Term*. [HPNCBO, HPOLS, HPOUMLS]

* HP Label
* HP Name
* HP Term
* HPO Label
* HPO Name
* HPO Term
* Human Phenotype Ontology Label
* Human Phenotype Ontology Name
* Human Phenotype Ontology Term

**HSAPDV ID**, *human (Homo SAPiens) Developmental Stages IDentifier*. [HSAPDVNCBO, HSAPDVOLS]

## Ii

**ICD-10-CM Code**, *International Classification of Diseases, Tenth Revision, Clinical Modification Code*. [ICD10CMNCBO, ICD10CMUMLS]

* ICD 10
* ICD-10
* ICD-10-CM
* ICD-10-CM Code
* ICD-10-CM ID
* ICD-10-CM Identifier
* ICD10
* ICD10 Code
* ICD10 ID
* ICD10 Identifier
* ICD10CM

**ICD-10-PCS Code**, *International Classification of Diseases, Tenth Revision, Procedure Coding System Code*. [ICD10PCSNCBO, ICD10PCSUMLS]

**ICD-9-CM Code**, *International Classification of Diseases, Ninth Revision, Clinical Modification Code*. [ICD9CMNCBO, ICD9CMUMLS]

* ICD 9
* ICD-9
* ICD-9-CM
* ICD-9-CM Code
* ICD-9-CM ID
* ICD-9-CM Identifier
* ICD9
* ICD9 Code
* ICD9 ID
* ICD9 Identifier
* ICD9CM

**IDO ID**, *Infectious Disease Ontology IDentifier*. [IDONCBO, IDOOLS]

**IEDB Epitope ID**, *Immune Epitope DataBase Epitope IDentifier*.

**InChI**, *IUPAC International Chemical Identifier*.

**InChI, Standard**, *Standard IUPAC International Chemical Identifier*.

**InChI Key**, *IUPAC International Chemical Identifier Key*.

**InChI Key, Standard**, *Standard IUPAC International Chemical Identifier Key*.

**Index Fungorum ID**, *Index Fungorum IDentifier*.

* Index Fungorum
* Index Fungorum ID
* Index Fungorum Identifier

**INN**, *International Nonproprietary Name*.

* INN
* International Nonproprietary Name

**internetmedicin.se ID**, *internetmedicin.se IDentifier*.

* internetmedicin.se
* internetmedicin.se ID
* internetmedicin.se Identifier

**ISBN**, *International Standard Book Number*.

* ISBN

**ISBN-10**, *International Standard Book Number, 10*.

* ISBN-10
* ISBN10

**ISBN-13**, *International Standard Book Number, 13*.

* ISBN-13
* ISBN13

**ISBNdb Book ID**, *International Standard Book Number database Book IDentifier*.

* ISBNdb
* ISBNdb ID
* ISBNdb Identifier
* ISBNdb Book ID
* ISBNdb Book Identifier

**ITIS TSN**, *Integrated Taxonomic Information System Taxonomic Serial Number*.

* ITIS
* ITIS Taxonomic Serial Number
* ITIS TSN
* Taxonomic Serial Number
* TSN

**IUPAC Name**, *International Union of Pure and Applied Chemistry Name*.

* IUPAC
* IUPAC Name

## Jj

**JAN**, *Japanese Accepted Name*.

* JAN
* Japanese Accepted Name

**JSTOR Topic ID**, *Journal STORage Topic IDentifier*.

* JSTOR
* JSTOR ID
* JSTOR Identifier
* JSTOR Topic
* JSTOR Topic ID
* JSTOR Topic Identifier

## Kk

**KEGG COMPOUND ID**, *Kyoto Encyclopedia of Genes and Genomes Compound IDentifier*.

* KEGG
* KEGG COMPOUND
* KEGG COMPOUND Accession
* KEGG COMPOUND ID
* KEGG COMPOUND Identifier
* KEGG ID
* KEGG Identifier

**KEGG DRUG ID**, *Kyoto Encyclopedia of Genes and Genomes Drug IDentifier*.

* KEGG
* KEGG DRUG
* KEGG DRUG Accession
* KEGG DRUG ID
* KEGG DRUG Identifier
* KEGG ID
* KEGG Identifier

**KEGG DISEASE ID**, *Kyoto Encyclopedia of Genes and Genomes Disease IDentifier*.

* KEGG
* KEGG Accession
* KEGG DISEASE
* KEGG DISEASE Accession
* KEGG DISEASE ID
* KEGG DISEASE Identifier
* KEGG ID
* KEGG Identifier

**KEGG EC PATHWAY ID**, *Kyoto Encyclopedia of Genes and Genomes reference metabolic pathway highlighting EC numbers Pathway IDentifier*.

**KEGG GENE ID**, *Kyoto Encyclopedia of Genes and Genomes Gene IDentifier*.

* KEGG
* KEGG GENE
* KEGG GENE ID
* KEGG GENE Identifier
* KEGG ID
* KEGG Identifier

**KEGG KO PATHWAY ID**, *Kyoto Encyclopedia of Genes and Genomes reference pathway highlighting KOs Pathway IDentifier*.

* KEGG KO
* KEGG KO PATHWAY
* KEGG KO PATHWAY ID
* KEGG KO PATHWAY Identifier
* KO PATHWAY

**KEGG MAP PATHWAY ID**, *Kyoto Encyclopedia of Genes and Genomes MAnually Drawn reference Pathway Pathway IDentifier*.

* KEGG MAP
* KEGG MAP PATHWAY
* KEGG MAP PATHWAY ID
* KEGG MAP PATHWAY Identifier
* MAP PATHWAY

**KEGG RN PATHWAY ID**, *Kyoto Encyclopedia of Genes and Genomes reference metabolic pathway highlighting ReactioNs Pathway IDentifier*.

## Ll

**LCCN**, *Library of Congress Control Number*.

* LCCN
* Library of Congress Control Number

**LCSH**, *Library of Congress Subject Heading*. [LCHUMLS]

* LCH
* LCSH
* Library of Congress SH
* Library of Congress Subject Heading
* LoC SH

**LINCS ID**, *Library of Integrated Network-based Cellular Signatures IDentifier*.

* LINCS
* LINCS Accession
* LINCS ID
* LINCS Identifier

**LOINC Code**, *Logical Observation Identifier Names and Codes Code*. [LOINCNCBO]

**LOINC Term, Chinese**, *Chinese Logical Observation Identifier Names and Codes Term*. [LNC-ZH-CHUMLS]

**LOINC Term, Dutch**, *Dutch Logical Observation Identifier Names and Codes Term*. [LNC-NL-NLUMLS]

**LOINC Term, English**, *English Logical Observation Identifier Names and Codes Term* [LOINCNCBO, LNCUMLS]

**LOINC Term, Estonian**, *Estonian Logical Observation Identifier Names and Codes Term*. [LNC-ET-EEUMLS]

**LOINC Term, French**, *French Logical Observation Identifier Names and Codes Term*. [LNC-FR-FRUMLS]

**LOINC Term, French, Belgian**, *Belgian French Logical Observation Identifier Names and Codes Term*. [LNC-FR-BEUMLS]

**LOINC Term, French, Canadian**, *Canadian French Logical Observation Identifier Names and Codes Term*. [LNC-FR-CAUMLS]

**LOINC Term, French, Swiss**, *Swiss French Logical Observation Identifier Names and Codes Term*. [LNC-FR-CHUMLS]

**LOINC Term, German**, *German Logical Observation Identifier Names and Codes Term*. [LNC-DE-DEUMLS]

**LOINC Term, German, Austrian**, *Austrian German Logical Observation Identifier Names and Codes Term*. [LNC-DE-ATUMLS]

**LOINC Term, German, Swiss**, *Swiss German Logical Observation Identifier Names and Codes Term*. [LNC-DE-CHUMLS]

**LOINC Term, Greek**, *Greek Logical Observation Identifier Names and Codes Term*. [LNC-EL-GRUMLS]

**LOINC Term, Italian**, *Italian Logical Observation Identifier Names and Codes Term*. [LNC-IT-ITUMLS]

**LOINC Term, Italian, Swiss**, *Swiss Italian Logical Observation Identifier Names and Codes Term*. [LNC-IT-CHUMLS]

**LOINC Term, Korean**, *Korean Logical Observation Identifier Names and Codes Term*. [LNC-KO-KRUMLS]

**LOINC Term, Portuguese, Brazil**, *Brazilian Portuguese Logical Observation Identifier Names and Codes Term*. [LNC-PT-BRUMLS]

**LOINC Term, Russian**, *Russian Logical Observation Identifier Names and Codes Term*. [LNC-RU-RUUMLS]

**LOINC Term, Spanish**, *Spanish Logical Observation Identifier Names and Codes Term*. [LNC-ES-ESUMLS]

**LOINC Term, Spanish, Argentine**, *Argentine Spanish Logical Observation Identifier Names and Codes Term*. [LNC-ES-ARUMLS]

**LOINC Term, Spanish, Swiss**, *Swiss Spanish Logical Observation Identifier Names and Codes Term*. [LNC-ES-CHUMLS]

**LOINC Term, Turkish**, *Turkish Logical Observation Identifier Names and Codes Term*. [LNC-TR-TRUMLS]

**LT Control Number**, *LibraryThing Control Number*.

* LibraryThing Control Number
* LibraryThing Work ID
* LibraryThing Work Identifier
* LT Control Number
* LT Work ID
* LT Work Identifier

## Mm

**MA ID**, *Mouse Anatomy IDentifier*. [MANCBO, MAOLS]

* MA
* MA ID
* MA Identifier

**MedDRA ID**, *Medical Dictionary for Regulatory Activities IDentifier*. [MEDDRANCBO, MDRUMLS]

* MDR
* MDR Code
* MDR ID
* MDR Identifier
* MedDRA
* MedDRA Code
* MedDRA ID
* MedDRA Identifier

**MedDRA Term**, *Medical Dictionary for Regulatory Activities Term*. [MEDDRANCBO, MDRUMLS]

* MDR Label
* MDR Name
* MDR Term
* MedDRA Label
* MedDRA Name
* MedDRA Term

**MedDRA Term, Czech**, *Czech Medical Dictionary for Regulatory Activities Term*. [MDRCZEUMLS]

**MedDRA Term, Dutch**, *Dutch Medical Dictionary for Regulatory Activities Term*. [MDRDUTUMLS]

**MedDRA Term, French**, *French Medical Dictionary for Regulatory Activities Term*. [MDRFREUMLS]

**MedDRA Term, German**, *German Medical Dictionary for Regulatory Activities Term*. [MDRGERUMLS]

**MedDRA Term, Hungarian**, *Hungarian Medical Dictionary for Regulatory Activities Term*. [MDRHUNUMLS]

**MedDRA Term, Italian**, *Italian Medical Dictionary for Regulatory Activities Term*.

[MDRITAUMLS]

**MedDRA Term, Japanese**, *Japanese Medical Dictionary for Regulatory Activities Term*. [MDRJPNUMLS]

**MedDRA Term, Portuguese**, *Portuguese Medical Dictionary for Regulatory Activities Term*. [MDRPORUMLS]

**MedDRA Term, Spanish**, *Spanish Medical Dictionary for Regulatory Activities Term*. [MDRSPAUMLS]

**MedlinePlus ID**, *MedlinePlus IDentifier*. [MEDLINEPLUSNCBO, MEDLINEPLUSUMLS]

* MedlinePlus
* MedlinePlus ID
* MedlinePlus Identifier

**MeSH Registry Number**, *Medical Subject Headings Registry Number*.

* MeSH Number
* MeSH Registry
* MeSH Registry Number
* MeSH RN

**MeSH Term**, *Medical Subject Headings Term*. [MESHNCBO, MSHUMLS]

* Medical Subject Headings Label
* Medical Subject Headings Name
* Medical Subject Headings Term
* MeSH Label
* MeSH Name
* MeSH Term
* MSH Label
* MSH Name
* MSH Term

**MeSH Term, Croatian**, *Croatian Medical Subject Headings Term*. [MSHSCRUMLS]

**MeSH Term, Czech**, *Czech Medical Subject Headings Term*. [MSHCZEUMLS]

**MeSH Term, Dutch**, *Dutch Medical Subject Headings Term*. [MSHDUTUMLS]

**MeSH Term, English**, *English Medical Subject Headings Term*. [MESHNCBO, MSHUMLS]

**MeSH Term, Finnish**, *Finnish Medical Subject Headings Term*. [MSHFINUMLS]

**MeSH Term, French**, *French Medical Subjects Headings Term*. [MSHFREUMLS]

**MeSH Term, German**, *German Medical Subject Headings Term*. [MSHGERUMLS]

**MeSH Term, Italian**, *Italian Medical Subject Headings Term*. [MSHITAUMLS]

**MeSH Term, Japanese**, *Japanese Medical Subject Headings Term*. [MSHJPNUMLS]

**MeSH Term, Latvian**, *Latvian Medical Subject Headings Term*. [MSHLATUMLS]

**MeSH Term, Norwegian**, *Norwegian Medical Subject Headings Term*. [MSHNORUMLS]

**MeSH Term, Polish**, *Polish Medical Subject Headings Term*. [MSHPOLUMLS]

**MeSH Term, Portuguese**, *Portuguese Medical Subject Headings Term*. [MSHPORUMLS]

**MeSH Term, Russian**, *Russian Medical Subject Headings Term*. [MSHRUSUMLS]

**MeSH Term, Spanish**, *Spanish Medical Subject Headings Term*. [MSHSPAUMLS]

**MeSH Term, Swedish**, *Swedish Medical Subject Headings Term*. [MSHSWEUMLS]

**MeSH Tree Number**, *Medical Subject Headings Tree Number*.

* MeSH TN
* MeSH Tree Number
* MSH TN
* MSH Tree Number

**MeSH UID**, *Medical Subject Headings Unique IDentifier*. [MESHNCBO, MSHUMLS]

* MeSH
* MeSH UID
* MeSH Unique ID
* MeSH Unique Identifier
* MSH
* MSH UID
* MSH Unique ID
* MSH Unique Identifier

**MF ID**, *Mental Functioning ontology IDentifier*. [MFNCBO, MFOLS]

**MFMO ID**, *Mammalian Feeding Muscle Ontology IDentifier*. [MFMONCBO, MFMOOLS]

**MFOMD ID**, *Mental Functioning Ontology, Mental Disease IDentifier*. [MFOMDNCBO, MFOMDOLS]

**MGI ID**, *Mouse Genome Informatics IDentifier*.

**MINT ID**, *Molecular INTeration database IDentifier*.

* MINT
* MINT ID
* MINT Identifier

**MIRNAO ID**, *MIcroRNA Ontology IDentifier*. [MIRNAOOLS]

**MMDB ID**, *Molecular Modeling DataBase IDentifier*.

**MMSL Code**, *Multum MediaSource Lexicon Code*.

* **BD**, *fully-specified drug BranD name that can be prescribed*.
* **BN**, *fully-specified drug Brand Name that cannot be prescribed*.
* **CD**, *Clinical Drug*.
* **GN**, *Generic drug Name*.
* **IN**, *name for an INgredient*.

**Molecular Formula**.

* Molecular Formula

**MonDO ID**, *Monarch Disease Ontology IDentifier*. [MONDONCBO, MONDOOLS]

* Monarch Disease Ontology ID
* Monarch Disease Ontology Identifier
* MonDO ID
* MONDO ID
* MonDO Identifier
* MONDO Identifier

**MouseMine Primary Gene ID**, *MouseMine Primary Gene IDentifier*.

**MouseMine Secondary Gene ID**, *MouseMine Secondary Gene IDentifier*.

**MP ID**, *Mammalian Phenotype ontology IDentifier*. [MPNCBO, MPOLS]

**MPATH ID**, *Mouse PATHology IDentifier*. [MPATHNCBO, MPATHOLS]

**MSW ID**, *Mammal Species of the World IDentifier*.

## Nn

**NBN System Key**, *National Biodiversity Network System Key*.

**NCBI GeneID**, *NCBI Gene IDentifier*.

* Entrez
* Entrez Gene
* Entrez GeneID
* Entrez Gene ID
* Entrez Gene Identifier
* Entrez ID
* Entrez Identifier
* NCBI
* NCBI Entrez
* NCBI Entrez Gene
* NCBI Entrez GeneID
* NCBI Entrez Gene ID
* NCBI Entrez Gene Identifier
* NCBI Gene
* NCBI GeneID
* NCBI Gene ID
* NCBI Gene Identifier
* NCBI ID
* NCBI Identifier
* NCBI-GeneID

**NCBI TaxID**, *NCBI Taxonomy IDentifier*. [NCBITAXONNCBO, NCBITaxonOLS, NCBIUMLS]

* NCBI
* NCBI TaxID
* NCBI Taxon
* NCBI Taxon ID
* NCBI Taxon Identifier
* NCBI Taxonomy
* NCBI Taxonomy ID
* NCBI Taxonomy Identifier
* NCBITaxon
* NCBITaxon ID
* NCBITaxon Identifier
* NCBITAXON
* NCBITAXON ID
* NCBITAXON Identifier

**NCI Thesaurus ID**, *National Cancer Institute Thesaurus IDentifier*. [NCITNCBO, NCITOLS, NCIUMLS]

* NCI
* NCI Code
* NCI ID
* NCI Identifier
* NCI Thesaurus Code
* NCI Thesaurus ID
* NCI Thesaurus Identifier
* NCIT
* NCIT Code
* NCIT ID
* NCIT Identifier

**NCT ID**, *National Clinical Trial IDentifier*.

**NDC**, *National Drug Code*.

**NDF-RT ID**, *National Drug File – Reference Terminology IDentifier*. [NDFRTNCBO, NDFRTUMLS]

**NDL Auth ID**, *National Diet Library of japan Authority IDentifier*.

* NDL
* NDL Auth ID
* NDL Auth Identifier

**NEU ID**, *NEUronames Brain Hierarchy IDentifier*. [NEUUMLS]

* NEU
* NEU ID
* NEU Identifier
* Neuronames Brain Hierarchy ID
* Neuronames Brain Hierarchy Identifier

**NKCR AUT ID**, *Národní Knihovna České Republiky (National Library of the Czech Republic) AUThority database IDentifier*.

## Oo

**OAE ID**, *Ontology of Adverse Events IDentifier*. [OAENCBO, OAEOLS]

* OAE ID
* OAE Identifier
* Ontology of Adverse Events ID
* Ontology of Adverse Events Identifier

**OCLC Control Number**, *Online Computer Library Center Control Number*.[[4]](#footnote-4)

* OCLC
* OCLC Control Number
* OCLC Number

**OCVDAE ID**, *Ontology of CardioVascular Drug Adverse Events IDentifier*. [OCVDAENCBO]

**OGG ID**, *Ontology of Genes and Genomes IDentifier*. [OGGNCBO, OGGOLS]

**OLID**, *Open Library IDentifier*.

* OLID
* Open Library ID
* Open Library Identifier

**OMIM Number***, Online Mendelian Inheritance in Man Number*. [OMIMNCBO, OMIMUMLS]

* MIM
* MIM Disease
* MIM Disease ID
* MIM Disease Identifier
* MIM Gene
* MIM Gene ID
* MIM Gene Identifier
* MIM ID
* MIM Identifier
* MIM Number
* OMIM
* OMIM Disease
* OMIM Disease ID
* OMIM Disease Identifier
* OMIM Gene
* OMIM Gene ID
* OMIM Gene Identifier
* OMIM ID
* OMIM Identifier
* OMIM Number

**OMP ID**, *Ontology of Microbial Phenotypes IDentifier*. [OMPNCBO, OMPOLS]

**ORDO ID**, *Orphanet Rare Disease Ontology IDentifier*. [ORDONCBO, ORDOOLS]

* ORDO
* ORDO Code
* ORDO ID
* ORDO Identifier
* Orphanet Code
* Orphanet ID
* Orphanet Identifier

**OVAE ID**, *Ontology of Vaccine Adverse Events IDentifier*. [OVAENCBO, OVAEOLS]

* Ontology of Vaccine Adverse Events ID
* Ontology of Vaccine Adverse Events Identifier
* OVAE ID
* OVAE Identifier

## Pp

**Paleobiology Database ID**, *Paleobiology Database IDentifier*.

* Paleobiology Database
* Paleobiology Database ID
* Paleobiology Database Identifier

**PatientPlus ID**, *PatientPlus IDentifier*.

* PatientPlus
* PatientPlus ID
* PatientPlus Identifier

**PATO ID**, *Phenotype And Trait Ontology IDentifier*. [PATONCBO, PATOOLS]

**PDB ID**, *Protein Data Bank IDentifier*.

* PDB
* PDB ID
* PDB Identifier
* Protein Data Bank
* Protein Data Bank ID
* Protein Data Bank Identifier
* Protein DataBank
* Protein DataBank ID
* Protein DataBank Identifier

**PDB Ligand ID**, *Protein Data Bank Ligand IDentifier*.

* PDB Ligand
* PDB Ligand ID
* PDB Ligand Identifier
* Protein Data Bank Ligand
* Protein Data Bank Ligand ID
* Protein Data Bank Ligand Identifier
* Protein DataBank Ligand
* Protein DataBank Ligand ID
* Protein DataBank Ligand Identifier

**PDBeChem ID**, *Protein Data Bank in Europe Chemical component IDentifier*.

* PDBeChem
* PDBeChem Accession
* PDBeChem ID
* PDBeChem Identifier

**Pharos Gene ID**, *Pharos Gene IDentifier*.

* Pharos
* Pharos Gene
* Pharos Gene ID
* Pharos Gene Identifier

**PII**, *Publisher Item Identifier*.

* PII
* Publisher Item
* Publisher Item ID
* Publisher Item Identifier

**PIR ID**, *Protein Information Resource IDentifier*.

* PIR ID
* PIR Identifier
* Protein Information Resource ID
* Protein Information Resource Identifier

**PLANA ID**, *PLANAria-ontology IDentifier*. [PLANAOLS]

**PMCID**, *PubMed Central reference IDentifier*.

* PMC
* PMC ID
* PMC Identifier
* PMCID

**PMID**, *PubMed IDentifier*.

* PMID
* PubMed
* PubMed ID
* PubMed Identifier

**PO ID**, *Plant Ontology IDentifier*.

**PR ID**, *PRotein ontology IDentifier*. [PRNCBO, PROLS]

**Project Gutenberg ID**, *Project Gutenberg IDentifier*.

* Project Gutenberg ID
* Project Gutenberg Identifier

**PSH**, *Polytemathematic structured Subject Heading*.

**PubChem AID**, *PubChem Assay IDentifier*.

**PubChem CID**, *PubChem Compound IDentifier*.

* CID
* PubChem CID
* PubChem Compound ID
* PubChem Compound Identifier

**PubChem SID**, *PubChem Substance IDentifier*.

**PW ID**, *PathWay ontology IDentifier*. [PWNCBO, PWOLS]

## Qq

**Quora Topic ID**, *Quora Topic IDentifier*.

* Quora
* Quora ID
* Quora Identifier
* Quora Topic
* Quora Topic ID
* Quora Topic Identifier

## Rr

**Reactome ID**, *Reactome IDentifier*.

* Reactome
* Reactome Gene
* Reactome Gene ID
* Reactome Gene Identifier
* Reactome ID
* Reactome Identifier

**Read Code, Clinical Terms Version 3**. [RCDNCBO, RCDUMLS]

* RCD
* RCD ID
* RCD Identifier
* Read Code
* Read Code Clinical Terms Version 3
* Read Code CTV3
* Read Code, Clinical Terms Version 3
* Read Code, CTV3

**RefSeq Protein Accession**.

* RefSeq
* RefSeq Accession
* RefSeq ID
* RefSeq Identifier
* RefSeq Protein
* RefSeq Protein Accession
* RefSeq Protein ID
* RefSeq Protein Identifier

**RefSeq RNA Accession**.

* RefSeq
* RefSeq Accession
* RefSeq ID
* RefSeq Identifier
* RefSeq RNA
* RefSeq RNA Accession
* RefSeq RNA ID
* RefSeq RNA Identifier

**RSID**, *Reference SNP IDentifier*.

* Reference SNP ID
* Reference SNP Identifier
* RS
* RS ID
* RS Identifier
* RS Number
* RSID

**RTECS Number**, *Registry of Toxic Effects of Chemical Substances Number*.

**RXCUI**, *RxNorm Concept Unique Identifier*. [RXNORMNCBO, RXNORMUMLS]

* RXCUI
* RXNORM
* RXNORM ID
* RXNORM Identifier
* **BN**, *Brand Name*.
* **BPCK**, *Brand name PaCK*.
* **DF**, *Dose Form*.
* **DFG**, *Dose Form Group*.
* **ET**, *dose form Entry Term*.
* **GPCK**, *Generic PaCK*.
* **IN**, *INgredient*.
* **MIN**, *Multiple INgredient*.
* **PIN**, *Precise INgredient*.
* **PSN**, *PreScribable Name*.
* **SBD**, *Semantic Branded Drug*.
* **SBDC**, *Semantic Branded Drug Component*.
* **SBDF**, *Semantic Branded Drug Form*.
* **SBDG**, *Semantic Branded Dose form Group*.
* **SCD**, *Semantic Clinical Drug*.
* **SCDC**, *Semantic Clinical Drug Component*.
* **SCDF**, *Semantic Clinical Drug Form*.
* **SCDG**, *Semantic Clinical Dose form Group*.
* **SY**, *Synonym*.
* **TMSY**, *Tall Man lettering Synonym.*

## Ss

**SCHEMBL ID**, *SureCHEMBL IDentifier*.

* SCHEMBL
* SCHEMBL ID
* SCHEMBL Identifier

**Scientific Name**.

* Binomen
* Binomial Name
* Binomial Nomenclature
* Latin Name
* Scientific Name

**SMILES**, *Simplified Molecular-Input Line-Entry System*.

* SMILES

**SMILES, Canonical**, *Canonical Simplified Molecular-Input Line-Entry System*.

* Canonical SMILES

**SMILES, Isomeric**, *Isomeric Simplified Molecular-Input Line-Entry System*.

* Isomeric SMILES

**SNOMED CT Concept ID**, *Systematized Nomenclature of Medicine – Clinical Terms Concept IDentifier*. [SNOMEDTNCBO]

* SCT ID
* SCT Identifier
* SCTID
* SNOMED CT
* SNOMED CT Concept ID
* SNOMED ID
* SNOMED Identifier
* SNOMED-CT
* SNOMED-CT Concept ID
* SNOMED-CT ID
* SNOMED-CT Identifier

**SNOMED-CT US ID**, *Systematized Nomenclature of MEDicine Clinical Terms, United States Edition, IDentifier*. [SNOMEDCT\_USUMLS]

**SNOMED International Version 3.5**, *Systematized Nomenclature Of MEDicine International Version 3.5 (1998)*. [SNMINCBO, SNMIUMLS]

**SNOMED-II, 1982 Update**, *Systematized Nomenclature Of MEDicine II, 1982 Update*. [SNMUMLS]

**SPL Set ID**, *Standard Product Label Set IDentifier*.

**SPTO ID**, *Solanaceae Phenotype and Trait Ontology IDentifier*. [SPTONCBO]

**STRING ID**, *Search Tool for the Retrieval of Interaction Genes/proteins IDentifier*.

* STRING
* STRING ID
* STRING Identifier

**SYMP ID**, *SYMPtom ontology IDentifer*. [SYMPNCBO, SYMPOLS]

* SYMP ID
* SYMP Identifier
* Symptom Ontology ID
* Symptom Ontology Identifier

## Tt

**TA98 ID**, *Terminologia Anatomica 1998 IDentifier*.

**TA98 Latin Term**, *Terminologia Anatomica 1998 IDentifier*.

**TADS ID**, *Tick gross Anatomy IDentifier*. [TADSNCBO, TADSOLS]

**TAO ID**, *Teleost Anatomy Ontology IDentifier*. [TAONCBO]

**TGMA ID**, *The Gross Mosquito Anatomy IDentifier*. [TGMANCBO]

**Thesaurus of Psychological Index Terms ID**, *Thesaurus of Psychological Index Terms IDentifier*.

## Uu

**UBERON ID**, *UBER anatomy ONtology IDentifier*. [UBERONNCBO, UBERONOLS]

* UBERON
* UBERON ID
* UBERON Identifier

**UBERON Term**, *UBER anatomy Ontology Term*. [UBERONNCBO, UBERONOLS]

* UBERON Label
* UBERON Term

**UMLS CUI**, *Unified Medical Language System Concept Unique Identifier*.

* UMLS
* UMLS Concept UID
* UMLS Concept Unique ID
* UMLS Concept Unique Identifier
* UMLS CUI
* UMLS ID
* UMLS Identifier

**UMLS Term**, *Unified Medical Language System Term*.

* UMLS Label
* UMLS Name
* UMLS Term

**UNII**, *UNique Ingredient Identifier*.

**UniProt Gene ID**, *UniProt Gene IDentifier*.

* UniProt Gene
* UniProt Gene Accession

**UniProtKB AC**, *UniProt KnowledgeBase ACcession*.

* ACC
* UniProt AC
* UniProt ACC
* UniProt Accession
* UniProtKB AC
* UniProtKB ACC
* UniProtKB Accession

**UniProtKB AC/ID**

* UniProtKB AC+ID
* UniProtKB AC+Identifier
* UniProtKB AC/ID
* UniProtKB AC/Identifier
* UniProtKB ACC+ID
* UniProtKB ACC+Identifier
* UniProtKB ACC/ID
* UniProtKB ACC/Identifier
* UniProtKB Accession+ID
* UniProtKB Accession+Identifier
* UniProtKB Accession/ID
* UniProtKB Accession/Identifier

**UniProtKB ID**, *UniProt KnowledgeBase IDentifier*.

* UniProt ID
* UniProt Identifier
* UniProtKB ID
* UniProtKB Identifier

**UniRef100 ID**, *UniRef100 IDentifier*.

* NF100
* NF100 ID
* NF100 Identifier
* UniRef100
* UniRef100 ID
* UniRef100 Identifier

**UniRef50 ID**, *UniRef50 IDentifier*.

* NF50
* NF50 ID
* NF50 Identifier
* UniRef50
* UniRef50 ID
* UniRef50 Identifier

**UniRef90 ID**, *UniRef90 IDentifier*.

* NF90
* NF90 ID
* NF90 Identifier
* UniRef90
* UniRef90 ID
* UniRef90 Identifier

**UO ID**, *Units of measurement Ontology IDentifier*. [UONCBO, UOOLS]

**UPI**, *UniParc Identifier*.

* UniParc
* UniParc ID
* UniParc Identifier
* UParc
* UParc ID
* UParc Identifier
* UPI

**USAN**, *United States Adopted Name*.

* U.S. Adopted Name
* United States Adopted Name
* US Adopted Name
* USAN

**USP**, *United States Pharmacopeia*.

* U.S. Pharmacopeia
* United States Pharmacopeia
* US Pharmacopeia
* USP

**UWDA ID**, *University of Washington Digital Anatomist IDentifier*. [UWDAUMLS]

* UWDA
* UWDA ID
* UWDA Identifier

## Vv

**Vega Gene ID**, *Vega Gene IDentifier*.

* Vega
* Vega Gene
* Vega Gene ID
* Vega Gene Identifier
* Vega ID
* Vega Identifier

**Vernacular Name**.

* Common Name
* Vernacular Name

**VOID**, *Vaccine Ontology IDentifier*. [VONCBO]

**VSAO ID**, *Vertebrate Skeletal Anatomy Ontology IDentifier*. [VSAONCBO]

**VUID**, *VHA Unique IDentifier*.

**VT ID**, *Vertebrate Trait IDentifier*. [VTNCBO, VTOLS]

**VTO ID**, *Vertebrate Taxonomy Ontology IDentifier*. [VTONCBO, VTOOLS]

## Ww

**WBbt ID**, *WormBase anatomy ontology (c. elegans gross anatomy) IDentifier*. [WB-BTNCBO, WBBTOLS]

* WB-BT
* WB-BT ID
* WB-BT Identifier
* WBBT
* WBBT ID
* WBBT Identifier
* WBbt
* WBbt ID
* WBbt Identifier

**Wikidata Accession**.

* Wikidata
* Wikidata Accession
* Wikidata ID
* Wikidata Identifier

**WikiGene ID**, *WikiGene IDentifier*.

* WikiGene
* WikiGene ID
* WikiGene Identifier

**WikiPathways ID**, *WikiPathways IDentifier*. [WIKIPATHWAYSNCBO]

**Wikipedia Accession**.

* Wikipedia
* Wikipedia Accession
* Wikipedia Article

**Wikipedia Accession, Arabic**.

**Wikipedia Accession, Azerbaijani**.

**Wikipedia Accession, Basque**.

**Wikipedia Accession, Breton**.

**Wikipedia Accession, Bosnian**.

**Wikipedia Accession, Catalan**.

**Wikipedia Accession, Chinese**.

**Wikipedia Accession, Chinese (Min Nan)**.

**Wikipedia Accession, Croatian**.

**Wikipedia Accession, Czech**.

**Wikipedia Accession, Danish**.

**Wikipedia Accession, Divehi**.

**Wikipedia Accession, Dutch**.

**Wikipedia Accession, English**.

**Wikipedia Accession, English (Simple)**.

**Wikipedia Accession, Esperanto**.

**Wikipedia Accession, Finnish**.

**Wikipedia Accession, French**.

**Wikipedia Accession, Galician**.

**Wikipedia Accession, German**.

**Wikipedia Accession, Greek**.

**Wikipedia Accession, Hebrew**.

**Wikipedia Accession, Hungarian**.

**Wikipedia Accession, Indonesian**.

**Wikipedia Accession, Italian**.

**Wikipedia Accession, Japanese**.

**Wikipedia Accession, Korean**.

**Wikipedia Accession, Latin**.

**Wikipedia Accession, Latvian**.

**Wikipedia Accession, Lithuanian**.

**Wikipedia Accession, Macedonian**.

**Wikipedia Accession, Newari**.

**Wikipedia Accession, Norwegian**.

**Wikipedia Accession, Persian**.

**Wikipedia Accession, Polish**.

**Wikipedia Accession, Portuguese**.

**Wikipedia Accession, Romanian**.

**Wikipedia Accession, Russian**.

**Wikipedia Accession, Scots**.

**Wikipedia Accession, Serbo-Croatian**.

**Wikipedia Accession, Spanish**.

**Wikipedia Accession, Slovak**.

**Wikipedia Accession, Slovenian**.

**Wikipedia Accession, Swedish**.

**Wikipedia Accession, Telugu**.

**Wikipedia Accession, Thai**.

**Wikipedia Accession, Turkish**.

**Wikipedia Accession, Ukrainian**.

**Wikipedia Accession, Vietnamese**.

**WikiSkripta ID**, *WikiSkripta IDentifier*.

* WikiSkripta
* WikiSkripta ID
* WikiSkripta Identifier

## Xx

**XAO ID**, *Xenopus Anatomy Ontology IDentifier*. [XAONCBO, XAOOLS]

* XAO
* XAO ID
* XAO Identifier

## Yy

## Zz

**ZFA ID**, *ZebraFish Anatomy ontology IDentifier*. [ZFANCBO, ZFAOLS]

* ZFA
* ZFA ID
* ZFA Identifier

**ZVG ID**.

# List of Identifiers by Object

## Adverse Event Identifiers

**AERO ID**, *Adverse Event Reporting Ontology IDentifier*.

**MedDRA ID**, *Medical Dictionary for Regulatory Activities IDentifier*.

**MedDRA Term**, *Medical Dictionary for Regulatory Activities Term*.

**MeSH UID**, *Medical Subject Headings Unique IDentifier*.

**OAE ID**, *Ontology of Adverse Events IDentifier*.

**OVAE ID**, *Ontology of Vaccine Adverse Events IDentifier*.

## Anatomical Structure Identifiers

**AEO ID**, *Anatomical Entity Ontology IDentifier*.

**AOD ID**, *Alcohol and Other Drug thesaurus IDentifier*.

**BNCF Thesaurus ID**, *Biblioteca Nazionale Centrale di Firenze (National Central Library of Florence) Thesaurus IDentifier*.

**CARO ID**, *Common Anatomy Reference Ontology IDentifier*.

**CCPSS ID**, *Canonical Clinical Problem Statement System IDentifier*.

**CEPH ID**, *CEPHalopod ontology IDentifier*.

**EHDAA2 ID**, *Human Developmental Anatomy Abstract IDentifier*.

**EMAP ID**, *Edinburgh Mouse Atlas Project IDentifier*.

**EMAPA ID**, *Edinburgh Mouse Atlas Project Abstract IDentifier*.

**Encyclopædia Britannica Online ID**.

**FBbt ID**, *FlyBase anatomy ontology (drosophila gross anatomy ontology) IDentifier*.

**FMA ID**, *Foundational Model of Anatomy IDentifier*.

**Freebase ID**, *Freebase IDentifier*.

**HAO ID**, *Hymenoptera Anatomy Ontology IDentifier*.

**JSTOR Topic ID**, *Journal STORage Topic IDentifier*.

**LCSH**, *Library of Congress Subject Heading*.

**MA ID**, *Mouse Adult gross anatomy IDentifier*.

**MeSH Term, Croatian**, *Croatian Medical Subject Headings Term*.

**MeSH Term, Czech**, *Czech Medical Subject Headings Term*.

**MeSH Term, Dutch**, *Dutch Medical Subject Headings Term*.

**MeSH Term, English**, *English Medical Subject Headings Term*.

**MeSH Term, Finnish**, *Finnish Medical Subject Headings Term*.

**MeSH Term, French**, *French Medical Subjects Headings Term*.

**MeSH Term, German**, *German Medical Subject Headings Term*.

**MeSH Term, Italian**, *Italian Medical Subject Headings Term*.

**MeSH Term, Japanese**, *Japanese Medical Subject Headings Term*.

**MeSH Term, Latvian**, *Latvian Medical Subject Headings Term*.

**MeSH Term, Norwegian**, *Norwegian Medical Subject Headings Term*.

**MeSH Term, Polish**, *Polish Medical Subject Headings Term*.

**MeSH Term, Portuguese**, *Portuguese Medical Subject Headings Term*.

**MeSH Term, Russian**, *Russian Medical Subject Headings Term*.

**MeSH Term, Spanish**, *Spanish Medical Subject Headings Term*.

**MeSH Term, Swedish**, *Swedish Medical Subject Headings Term*.

**MeSH Tree Number**, *Medical Subject Headings Tree Number*.

**MeSH UID**, *Medical Subject Headings Unique IDentifier*.

**MFMO ID**, *Mammalian Feeding Muscle Ontology IDentifier*.

**NCI Thesaurus ID**, *National Cancer Institute Thesaurus IDentifier*.

**NEU ID**, *NEUronames Brain Hierarchy IDentifier*.

**PLANA ID**, *PLANAria ontology IDentifier*.

**Read Code, Clinical Terms Version 3**.

**SNOMED International Version 3.5**, *Systematized Nomenclature Of MEDicine International Version 3.5 (1998) (SNMI)*.

**SNOMED-II, 1982 Update**, *Systematized Nomenclature Of MEDicine II, 1982 Update (SNM)*.

**TA98 ID**, *Terminologia Anatomica 1998 IDentifier*.

**TA98 Latin Term**, *Terminologia Anatomica 1998 IDentifier*.

**TADS ID**, *Tick gross Anatomy IDentifier*.

**TGMA ID**, *The Gross Mosquito Anatomy IDentifier*.

**Thesaurus of Psychological Index Terms ID**, *Thesaurus of Psychological Index Terms IDentifier*.

**UBERON ID**, *UBER anatomy ONtology IDentifier*.

**UMLS CUI**, *Unified Medical Language System Concept Unique Identifier*.

**UWDA ID**, *University of Washington Digital Anatomist IDentifier*.

**WBbt ID**, *WormBase anatomy ontology (c. elegans gross anatomy) IDentifier*.

**Wikidata Accession**.

* Wikidata
* Wikidata Accession
* Wikidata ID
* Wikidata Identifier

**Wikipedia Accession, Arabic**.

**Wikipedia Accession, Azerbaijani**.

**Wikipedia Accession, Basque**.

**Wikipedia Accession, Breton**.

**Wikipedia Accession, Bosnian**.

**Wikipedia Accession, Catalan**.

**Wikipedia Accession, Chinese**.

**Wikipedia Accession, Chinese (Min Nan)**.

**Wikipedia Accession, Croatian**.

**Wikipedia Accession, Czech**.

**Wikipedia Accession, Danish**.

**Wikipedia Accession, Divehi**.

**Wikipedia Accession, Dutch**.

**Wikipedia Accession, English**.

**Wikipedia Accession, English (Simple)**.

**Wikipedia Accession, Esperanto**.

**Wikipedia Accession, Finnish**.

**Wikipedia Accession, French**.

**Wikipedia Accession, Galician**.

**Wikipedia Accession, German**.

**Wikipedia Accession, Greek**.

**Wikipedia Accession, Hebrew**.

**Wikipedia Accession, Hungarian**.

**Wikipedia Accession, Indonesian**.

**Wikipedia Accession, Italian**.

**Wikipedia Accession, Japanese**.

**Wikipedia Accession, Korean**.

**Wikipedia Accession, Latin**.

**Wikipedia Accession, Latvian**.

**Wikipedia Accession, Lithuanian**.

**Wikipedia Accession, Macedonian**.

**Wikipedia Accession, Newari**.

**Wikipedia Accession, Norwegian**.

**Wikipedia Accession, Persian**.

**Wikipedia Accession, Polish**.

**Wikipedia Accession, Portuguese**.

**Wikipedia Accession, Romanian**.

**Wikipedia Accession, Russian**.

**Wikipedia Accession, Scots**.

**Wikipedia Accession, Serbo-Croatian**.

**Wikipedia Accession, Spanish**.

**Wikipedia Accession, Slovak**.

**Wikipedia Accession, Slovenian**.

**Wikipedia Accession, Swedish**.

**Wikipedia Accession, Telugu**.

**Wikipedia Accession, Thai**.

**Wikipedia Accession, Turkish**.

**Wikipedia Accession, Ukrainian**.

**Wikipedia Accession, Vietnamese**.

**WikiSkripta ID**, *WikiSkripta IDentifier*.

**XAO ID**, *Xenopus Anatomy Ontology IDentifier*.

**ZFA ID**, *ZebraFish Anatomy IDentifier*.

## Assay Identifiers

**BAO ID**, *BioAssay Ontology IDentifier*.

**ChEMBL ID**, *Chemical European Molecular Laboratory IDentifier*.

**PubChem AID**, *PubChem Assay IDentifier*.

## Clinical Trial Identifiers

**NCT ID**, *National Clinical Trial IDentifier*.

## Compound Identifiers

**Beilstein Registry Number**.

**CAS RN**, *Chemical Abstracts Service Registry Number*.

**ChEBI ID**, *Chemical Entities of Biological Interest IDentifier*.

**ChEMBL ID**, *Chemical European Molecular Laboratory IDentifier*.

**CSID**, *ChemSpider IDentifier*.

**InChI**, *IUPAC International Chemical Identifier*.

* InChI
* IUPAC International Chemical
* IUPAC International Chemical ID
* IUPAC International Chemical Identifier

**InChI, Standard**, *Standard IUPAC International Chemical Identifier*.

* Standard InChI
* Standard IUPAC International Chemical
* Standard IUPAC International Chemical ID
* Standard IUPAC International Chemical Identifier

**InChI Key**, *IUPAC International Chemical Identifier Key*.

* InChI Key
* InChIKey
* IUPAC International Chemical ID Key
* IUPAC International Chemical Identifier Key

**InChI Key, Standard**, *Standard IUPAC International Chemical Identifier Key*.

**IUPAC Name**, *International Union of Pure and Applied Chemistry Name*.

**KEGG COMPOUND ID**, *Kyoto Encyclopedia of Genes and Genomes Compound IDentifier*.

**LINCS ID**, *Library of Integrated Network-based Cellular Signatures IDentifier*.

**MeSH Term, English**, *English Medical Subject Headings Term*.

**MeSH UID**, *Medical Subject Headings Unique IDentifier*.

**MMDB ID**, *Molecular Modeling DataBase IDentifier*.

**Molecular Formula**.

**PDB Ligand ID**, *Protein Data Bank Ligand IDentifier*.

**PDBeChem ID**, *Protein Data Bank in Europe Chemical component IDentifier*.

**PubChem CID**, *PubChem Compound IDentifier*.

**PubChem SID**, *PubChem Substance IDentifier*.

**SMILES**, *Simplified Molecular-Input Line-Entry System*.

**SMILES, Canonical**, *Canonical Simplified Molecular-Input Line-Entry System*.

**SMILES, Isomeric**, *Isomeric Simplified Molecular-Input Line-Entry System*.

**UNII**, *UNique Ingredient Identifier*.

**Wikidata Accession**.

**Wikipedia Accession, English**, *English Wikipedia Accession*.

## Disease Identifiers

**DiseasesDB ID**, *Diseases DataBase IDentifier*.

**DO Term**, *Disease Ontology Term*.

**DOID**, *Disease Ontology IDentifier*.

**eMedicine ID**, *eMedicine IDentifier*.

**Freebase ID**, *Freebase IDentifier*.

**GND ID**, *Gemeinsame NormDatei (Integrated Authority File) IDentifier*.

**ICD-9-CM Code**, *International Classification of Diseases, Ninth Revision, Clinical Modification Code*.

**ICD-10-CM Code**, *International Classification of Diseases, Tenth Revision, Clinical Modification Code*.

**IDO ID**, *Infectious Disease Ontology IDentifier*.

**internetmedicin.se ID**, *internetmedicin.se IDentifier*.

**JSTOR Topic ID**, *Journal STORage Topic IDentifier*.

**KEGG DISEASE ID**, *Kyoto Encyclopedia of Genes and Genomes Disease IDentifier*.

**MedlinePlus ID**, *MedlinePlus IDentifier*.

**MeSH UID**, *Medical Subject Headings Unique IDentifier*.

**MFOMD ID**, *Mental Functioning Ontology, Mental Disease IDentifier*.

**MonDO ID**, *Monarch Disease Ontology IDentifier*.

**NCI Thesaurus ID**, *National Cancer Institute Thesaurus IDentifier*.

**NDL Auth ID**, *National Diet Library of japan Authority IDentifier*.

**OMIM Number**, *Online Mendelian Inheritance in Man Number*.

**ORDO ID**, *Orphanet Rare Disease Ontology IDentifier*.

**PatientPlus ID**, *PatientPlus IDentifier*.

**Quora Topic ID**, *Quora Topic IDentifier*.

**SNOMED CT ID**, *Systematized Nomenclature of MEDicine Clinical Terms IDentifier*.

**UMLS CUI**, *Unified Medical Language System Concept Unique Identifier*.

## Drug Identifiers

**AMPID**, *Alchemy Marked Product IDentifier*.

**ANDA ID**, *FDA Abbreviated New Drug Application IDentifier*.

**ATC Code**, *Anatomical Therapeutic Chemical Code*.

**BAN**, *British Accepted Name*.

**CVX**, *Vaccine administered Code*.

**DrugBank ID**, *DrugBank IDentifier*.

**DrugCentral ID**, *DrugCentral IDentifier*.

**EMA Product Number**, *European Medicines Agency Product Number*.

**FDA Approved Name**.

**GCN**, *Generic Code Number*.

**GCN\_SEQNO**, *Generic Code SEQuence Number*.

**GFC**, *Generic Formula Code*.

**GPPC**, *Generic Product Packing Code*.

**HIC\_SEQN**, *Hierarchical Ingredient Code SEQuence Number*.

**INN**, *International Nonproprietary Name*.

**JAN**, *Japanese Accepted Name*.

**KEGG DRUG ID**, *Kyoto Encyclopedia of Genes and Genomes Drug IDentifier*.

**MeSH Term, English**, *English Medical Subject Headings Term*.

**MeSH UID**, *Medical Subject Headings Unique IDentifier*.

**MMSL Code**, *Multum MediaSource Lexicon Code*.

* **BD**, *fully-specified drug BranD name that can be prescribed*.
* **BN**, *fully-specified drug Brand Name that cannot be prescribed*.
* **CD**, *Clinical Drug*.
* **GN**, *Generic drug Name*.
* **IN**, *name for an INgredient*.

**NDC**, *National Drug Code*.

**NUI**, *National Drug File Reference Terminology Unique Identifier[[5]](#footnote-5)*.

**RXCUI**, *RxNorm Concept Unique Identifier*.

* **BN**, *Brand Name*.
* **BPCK**, *Brand name PaCK*.
* **DF**, *Dose Form*.
* **DFG**, *Dose Form Group*.
* **ET**, *dose form Entry Term*.
* **GPCK**, *Generic PaCK*.
* **IN**, *INgredient*.
* **MIN**, *Multiple INgredient*.
* **PIN**, *Precise INgredient*.
* **PSN**, *PreScribable Name*.
* **SBD**, *Semantic Branded Drug*.
* **SBDC**, *Semantic Branded Drug Component*.
* **SBDF**, *Semantic Branded Drug Form*.
* **SBDG**, *Semantic Branded Dose form Group*.
* **SCD**, *Semantic Clinical Drug*.
* **SCDC**, *Semantic Clinical Drug Component*.
* **SCDF**, *Semantic Clinical Drug Form*.
* **SCDG**, *Semantic Clinical Dose form Group*.
* **SY**, *Synonym*.
* **TMSY**, *Tall Man lettering SYnonym*

**SNOMED CT ID**, *Systematized Nomenclature of MEDicine Clinical Terms IDentifier*.

**SPL Set ID**, *Standard Product Label Set IDentifier*.

**UMLS CUI**, *Unified Medical Language System Concept Unique Identifier*.

**USAN**, *United States Accepted Name*.

**USP**, *United States Pharmacopoeia*.

**VUID**, *VHA Unique IDentifier*.

**Wikidata Accession**.

## Gene Identifiers

**Ensembl Gene ID**, *Ensembl Gene IDentifier*.

**FlyMine Primary Gene ID**, *FlyMine Primary Gene IDentifier*.

**FlyMine Secondary Gene ID**, *FlyMine Secondary Gene IDentifier*.

**HGNC Gene ID**, *HUGO Gene Nomenclature Committee Gene IDentifier*.

**HGNC Gene Symbol**, *HUGO Gene Nomenclature Committee Gene Symbol*.

**KEGG GENE ID**, *Kyoto Encyclopedia of Genes and Genomes Gene IDentifier*.

**MouseMine Primary Gene ID**, *MouseMine Primary Gene IDentifier*.

**MouseMine Secondary Gene ID**, *MouseMine Secondary Gene IDentifier*.

**NCBI GeneID**, *NCBI Gene IDentifier*.

**OMIM Number***, Online Mendelian Inheritance in Man Number*.

**Pharos Gene ID**, *Pharos Gene IDentifier*.

**Vega Gene ID**, *Vega Gene IDentifier*.

**Wikidata Accession**.

**WikiGene ID**, *WikiGene IDentifier*.

## Genotype Identifiers

## Mutation Identifiers

## Patent Identifiers

## Pathway Identifiers

**KEGG EC PATHWAY ID**, *Kyoto Encyclopedia of Genes and Genomes reference metabolic pathway highlighting EC numbers Pathway IDentifier*.

**KEGG KO PATHWAY ID**, *Kyoto Encyclopedia of Genes and Genomes reference pathway highlighting KOs Pathway IDentifier*.

**KEGG MAP PATHWAY ID**, *Kyoto Encyclopedia of Genes and Genomes MAnually Drawn reference Pathway Pathway IDentifier*.

**KEGG RN PATHWAY ID**, *Kyoto Encyclopedia of Genes and Genomes reference metabolic pathway highlighting ReactioNs Pathway IDentifier*.

**WikiPathways ID**, *WikiPathways IDentifier*.

## Phenotype Identifiers

**HPO ID**, *Human Phenotype Ontology IDentifier*.

**MedDRA ID**, *Medical Dictionary for Regulatory Activities IDentifier*.

**MedDRA Term**, *Medical Dictionary for Regulatory Activities Term*.

**MeSH UID**, *Medical Subject Headings Unique IDentifier*.

**SNOMED CT US ID**, *Systematized Nomenclature of MEDicine Clinical Terms, United States Edition, IDentifier*.

## Procedure Identifiers

**CPT Code**, *Current Procedural Terminology Code*.

## Protein Identifiers

**DIP ID**, *Database of Interacting Proteins IDentifier*.

**DisProt ID**, *database of Protein Disorder IDentifier*.

**MINT ID**, *Molecular INTeration database IDentifier*.

**PDB ID**, *Protein Data Bank IDentifier*.

**PIR ID**, *Protein Information Resource IDentifier*.

**RefSeq Protein Accession**.

**STRING ID**, *Search Tool for the Retrieval of Interaction Genes/proteins IDentifier*.

**UniProtKB AC**, *UniProt KnowledgeBase ACcession*.

**UniProtKB ID**, *UniProt KnowledgeBase IDentifier*.

## Reference Identifiers

**DOI**, *Digital Object Identifier*.

**PII**, *Publisher Item Identifier*.

**PMCID**, *PubMed Central reference IDentifier*.

**PMID**, *PubMed IDentifier*.

**Wikidata Accession**.

## Symptom Identifiers

**SYMP ID**, *SYMPtom ontology IDentifier*.

**Wikidata Accession**.

## Taxon Identifiers

**COL ID**, *Catalogue Of Life IDentifier*.

**EOL ID**, *Encyclopedia Of Life IDentifier*.

**Index Fungorum ID**, *Index Fungorum IDentifier*.

**ITIS TSN**, *Integrated Taxonomic Information System Taxonomic Serial Number*.

**NCBI TaxID**, *NCBI Taxonomy IDentifier*.

**Paleobiology Database ID**, *Paleobiology Database IDentifier*.

**Scientific Name**.

**Vernacular Name**.

**Wikidata Accession**.

# Functions

In addition to mapping of various identifiers, *Gnomics* also employs a series of attributes and properties in relation to the data the identifiers represent.

## Adverse Event Functions

## Anatomical Structure Functions

This is a list of functions, attributes, and properties associated with the anatomical structure object.

### Anatomical Connections

### Anatomical Location

### Arterial Supply

### Classes

### Hypernym

### Venous Drainage

## Assay Functions

This is a list of functions, attributes, and properties associated with the assay object.

### Assay Type Description

### Comment

### Confidence Description

### Confidence Score

### Description

### Protocol

### Result

## Clinical Trial Functions

This is a list of functions, attributes, and properties associated with the clinical trial object.

### Brief Summary

### Brief Title

### Completion Date

### Country

### Date First Received

### Detailed Description

### Official Title

### Overall Status

### Phase

### Primary Completion Date

### Start Date

### Status

### Study Type

## Compound Functions

This is a list of functions, attributes, and properties associated with the compound object.

### AlogP

The calculated value for the lipophilicity of a molecule expressed as log (octanol/water partition coefficient). The method used here is that defined by Ghose and Crippen.

### Heavy atom count

### Hydrogen bond acceptor (HBA) count

### Hydrogen bond donor (HBD) count

### Isotope atom count

### Molecular weight (MW)

### Monoisotopic mass

### Nominal mass

### Rotatable bond (RTB) count

The number of rotatable bonds in the molecule. Rotatable bonds, in this sense, are single bonds between heavy atoms. Ring bonds are not counted in this scenario.

### tPSA

### XlogP

## Disease Functions

This is a list of functions, attributes, and properties associated with the disease object.

### Category

### Classes

### Description

### Medical Specialty

### Named After

## Drug Functions

This is a list of functions, attributes, and properties associated with the drug object.

### Ask Doctor

### Ask Doctor or Pharmacist

### Available Strength

### Do Not Use

### Dosage and Administration Table

### Effective Time

### Indications and Usage

### Is Original Packager?

### Keep out of Reach of Children?

### Package Label Principal Display Panel

### Prescribable

### Product Type

### Purpose

### Questions

### Stop Use

### Version

### Warnings

### When Using

## Gene Functions

This is a list of functions, attributes, and properties associated with the gene object.

### Chromosomal Position

### Definition

### Description

### Gene Type

### Map Location

## Pathway Functions

This is a list of functions, attributes, and properties associated with the pathway object.

### Description

### Pathway Class

## Phenotype Functions

This is a list of functions, attributes, and properties associated with the phenotype object.

## Protein Functions

This is a list of functions, attributes, and properties associated with the protein object.

## Reference Functions

This is a list of functions, attributes, and properties associated with the reference object.

### Abstract

### Journal

### Title

## Symptom Functions

This is a list of functions, attributes, and properties associated with the symptom object.

## Taxon Functions

This is a list of functions, attributes, and properties associated with the taxon object.

### Actual evapotranspiration rate in geographic range

### Onset of fertility

### Parental care

### Phylogenetics

### Physiology

### Population biology

### Population trend

### Potential evapotranspiration rate in geographic range

### Precipitation in geographic range

### Prenatal development duration

### Procedures

### Reproduction

### Risk statement

### Social group size

### Social system

### Systematics

### Taxon biology

### Taxonomic classification

### Taxonomy

### Teat number

### Temperature in geographic range

### Terrestriality

### Threats

### Total life span

### Trends

### Trophic level

### Trophic strategy

### Type information

### Uses

### Weaning age

### Weight

## Tissue Functions

This is a list of functions, attributes, and properties associated with the tissue object.

# Interaction Objects

## Adverse Event 🡪 Phenotype

## Phenotype 🡪 Taxon

## Protein 🡪 Compound

## Protein 🡪 Drug

## Protein 🡪 Gene

## Protein 🡪 Pathway

## Protein 🡪 Tissue

## Reference 🡪 Mutation

## Reference 🡪 Patent

## Reference 🡪 Pathway

## Taxon 🡪 Phenotype

## Taxon 🡪 Reference

## Taxon 🡪 Tissue

## Tissue 🡪 Anatomical Structure

## Tissue 🡪 Protein

## Transcript 🡪 Tissue

# Search

The centerfold of *GNOMICS* focuses on its extensive search capabilities, itself focused on each given object’s specific properties.

## Adverse Events

PARAMETERS:

* **Query**

## Anatomical Structure

PARAMETERS:

* **Query**

## Assay

PARAMETERS*:*

* **Query**
* Assay category
* Assay cell type
* Assay ChEMBL identifier
* Assay organism
* Assay strain
* Assay subcellular function
* Assay taxon identifier
* Assay test type
* Assay tissue
* Assay type
* Assay type description
* BAO format
* Cell ChEMBL identifier
* Confidence description
* Confidence score
* Description
* Document ChEMBL ID
* Target ChEMBL identifier
* Tissue ChEMBL identifier
* Relationship description
* Relationship type
* Score
* Source assay identifier
* Source identifier

## Cell Line

## Clinical Trial

PARAMETERS

* **Query**
* Accepts healthy volunteers indicator
* Acronym
* Amendment date
* Anatomic sites
* Arm description
* Arm name
* Arm type
* Brief title
* Brief summary
* CCR identifier
* CTEP identifier
* DCP identifier
* Condition
* Contact email
* Contact name
* Contract phone
* Count
* Country
* Current trial status
* Current trial status date (greater than or equal to)
* Current trial status date (less than or equal to)
* Download
* Exclude
* Full text
* From result
* Gender
* Generic contact
* Include
* Intervention
* Intervention code
* Intervention description
* Intervention synonyms
* Intervention type
* Maximum age in years (greater than or equal to)
* Maximum age in years (less than or equal to)
* Maximum age number (greater than or equal to)
* Maximum age number (less than or equal to)
* Maximum age unit
* Minimum age in years (greater than or equal to)
* Minimum age in years (less than or equal to)
* Minimum age number (greater than or equal to)
* Minimum age number (less than or equal to)
* Minimum age unit
* NCI identifier
* NCT identifier
* Official title
* Organization address line 1
* Organization address line 2
* Organization city
* Organization coordinates latitude
* Organization coordinates longitude
* Organization country
* Organization email
* Organization family
* Organization fax
* Organization name
* Organization name full text
* Organization phone
* Organization postal code
* Organization state or province
* Organization status
* Organization status date
* Organization-to-family relationship
* Organization TTY
* Output format
* Phase
* Primary purpose code
* Protocol identifier
* Record verification date (greater than or equal to)
* Record verification date (less than or equal to)
* Recruiting
* Recruitment status
* Recruitment status date
* Size
* Sponsor
* State
* Study identifier
* Study identifier type
* Study protocol type
* Trial identifier

## Compound

PARAMETERS:

* **Query**

## Disease

PARAMETERS:

* **Query**
* Filter type
* Fields type
* Sort type
* Operator type
* Start
* Limit
* Retrieve
* Format

## Drug

PARAMETERS:

* **Query**

## Enzyme

## Gene

PARAMETERS:

* **Query**

## Genotype

## Mutation

## Patent

## Pathway

PARAMETERS:

* **Query**

## Phenotype

PARAMETERS:

* **Query**

## Procedure

PARAMETERS:

* **Query**

## Protein

PARAMETERS:

* **Query**
* Accession
* Active
* Annotation
* Author
* CD antigen
* Citation
* Cluster
* Count
* Created
* Database
* EC
* Evidence
* Existence
* Family
* Fragment
* Gene
* Gene (Exact)
* GOA
* Host
* Identifier
* INN
* Interactor
* Keyword
* Length
* Lineage
* Mass
* Method
* Mnemonic
* Modified
* Name
* Organelle
* Organism
* Plasmid
* Proteome
* Proteome component
* Replaces
* Reviewed
* Scope
* Sequence
* Sequence modified
* Source
* Taxonomy
* Tissue
* Web

## Reference

PARAMETERS:

* **Query**
* Affiliation
* All fields
* Article identifier
* Author
* Author identifier
* Book
* Completion date
* Conflict of interest
* Corporate author
* Create date
* EC/RN number
* Editor
* Entrez date
* Filter
* First author name
* Full author name
* Full investigator name
* Grant number
* Investigator
* ISBN
* Issue
* Journal
* Language
* Last author
* Location identifier
* MeSH date
* MeSH major topic
* MeSH subheadings
* MeSH terms
* Modification date
* NLM unique identifier
* Other term
* Pagination
* Personal name as subject
* Pharmacological action
* Place of publication
* PMID
* Publisher
* Publication date
* Publication type
* Secondary source identifier
* Subset
* Supplementary concept
* Text words
* Title and abstract
* Transliterated title
* UID
  + Notes: This is the same as PMID.
* Volume

## Symptom

PARAMETERS:

* **Query**

## Taxon

PARAMETERS:

* **Query**
* Cache TTL
* Exact
* Filter by hierarchy entry identifier
* Filter by string
* Filter by taxon concept identifier
* Page

## Tissue

# Tutorials

The tutorials are arranged basically by question. If there is a biological question or a technical question, it will hopefully be answered here.

# List of Supported Languages

What follows is a list of support languages (available via any of the various identifier conversions), with ISO 639-2 and ISO 639-1 codes. MEDLINE/PubMed language codes are derived from the MARC Code List for Languages as prepared by the Library of Congress Network Development and MARC Standards Office (these are also the codes utilized in OLDMEDLINE). Currently, 84 language designations are available in at least one part of *GNOMICS*.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Language or Designation** | **ISO 639-2 Code** | **ISO 639-1 Code** | **Wikipedia Code** | **MEDLINE / PubMed Code** | **UMLS Code** |
| Afrikaans | afr | af | af | afr |  |
| Albanian | sqi | sq | sq | alb |  |
| Amharic | amh | am | am | amh |  |
| Arabic | ara | ar | ar | ara |  |
| Aramaic | arc | arc | arc |  |  |
| Armenian | arm | hy | hy | arm |  |
| Aymara | aym | ay | ay |  |  |
| Azerbaijani | aze | az | az | aze |  |
| Bangla / Bengali | ben | bn | bn | ben |  |
| Bashkir | bak | ba | ba |  |  |
| Basque | baq | eu | eu |  | BAQ |
| Breton | bre | br | br |  |  |
| Bosnian | bos | bs | bs | bos |  |
| Bulgarian | bul | bg | bg | bul |  |
| Cantonese |  |  | zh\_yue |  |  |
| Catalan | cat | ca | ca | cat |  |
| Central Kurdish |  |  | ckb |  |  |
| Chinese | chi | zh | zh | chi | CHI |
| Chinese, Classical |  |  | zh\_classical |  |  |
| Chinese, Min Nan |  |  | zh-min-nan |  |  |
| Croatian | hrv | hr | hr | hrv | SCR |
| Czech | cze | cs | cs | cze | CZE |
| Danish | dan | da | da | dan | DAN |
| Divehi | div | dv | dv |  |  |
| Dutch | dut | nl | nl | dut | DUT |
| English | eng | en | en | eng | ENG |
| English, Simple |  |  | simple |  |  |
| Esperanto | epo | eo | ep | epo |  |
| Estonian | est | et | et | est | EST |
| Finnish | fin | fi | fi | fin | FIN |
| French | fre | fr | fr | fre | FRE |
| Galician | glg | gl | gl |  |  |
| Georgian | geo | ka | ka | geo |  |
| German | ger | de | de | ger | GER |
| Greek, Modern | gre | el | el | gre | GRE |
| Hebrew | heb | he | he | heb | HEB |
| Hindi | hin | hi | hi | hin |  |
| Hungarian | hun | hu | hu | hun | HUN |
| Icelandic | ice | is | is | ice |  |
| Ido | ido | io | io |  |  |
| Indonesian | ind | id | id | ind |  |
| Irish | gle | ga | ga |  |  |
| Italian | ita | it | it | ita | ITA |
| Japanese | jpn | ja | ja | jpn | JPN |
| Kazakh | kaz | kk | kk |  |  |
| Kinyarwanda | kin | rw | rw | kin |  |
| Korean | kor | ko | ko | kor | KOR |
| Latin | lat | la | la | lat |  |
| Latvian | lav | lv | lv | lav | LAV |
| Lithuanian | lit | lt | lt | lit |  |
| Macedonian | mac | mk | mk | mac |  |
| Malay | may | ms | ms | may |  |
| Malayalam | mal | ml | ml | mal |  |
| Maori | mao | mi | mi | mao |  |
| Multiple Languages |  |  |  | mul |  |
| Newari | new |  | new |  |  |
| Norwegian | nor | no | no | nor | NOR |
| Persian / Iranian | per | fa | fa | per |  |
| Polish | pol | pl | pl | pol | POL |
| Portuguese | por | pt | pt | por | POR |
| Pushto / Pashto | pus | ps | ps | pus |  |
| Romanian / Rumanian / Moldovan | rum | ro | ro | rum |  |
| Russian | rus | ru | ru | rus | RUS |
| Sanskrit | san | sa | sa | san |  |
| Scots | sco |  | sco |  |  |
| Scottish Gaelic | gla | gd | gd |  |  |
| Serbian | srp | sr | sr | srp |  |
| Serbo-Croatian |  |  | sh |  |  |
| Slovak | slo | sk | sk | slo |  |
| Slovenian | slv | sl | sl | slv |  |
| Spanish | spa | es | es | spa | SPA |
| Swedish | swe | sv | sv | swe | SWE |
| Tamil | tam | ta | ta |  |  |
| Telugu | tel | te | te |  |  |
| Thai | tha | th | th | tha |  |
| Turkish | tur | tr | tr | tur | TUR |
| Ukrainian | ukr | uk | uk | ukr |  |
| Undetermined |  |  |  | und |  |
| Urdu | urd | ur | ur | urd |  |
| Vietnamese | vie | vi | vi | vie |  |
| Walloon | wln | wa | wa |  |  |
| Welsh | wel | cy | cy |  |  |
| Western Mari |  |  | mrj |  |  |
| Xhosa | xho | xh | xh |  |  |

1. NIH refers to culture in which using or buying existing information is avoided, largely due to external origins (in another country or company, for example) or royalty-type associated costs. The opposite ideology would be “proudly found elsewhere” (PFE). [↑](#footnote-ref-1)
2. Only utilized when a MeSH UID is not available (to the best of this author’s knowledge). [↑](#footnote-ref-2)
3. For chemicals and diseases. [↑](#footnote-ref-3)
4. More information about OCLC Control Numbers can be found [here](https://www.oclc.org/support/services/batchload/controlnumber.en.html). [↑](#footnote-ref-4)
5. Also referred to as NDF-RT ID. [↑](#footnote-ref-5)