

CDE Tools v 0.1 Manual

Features

CDE Tools is an Ontology term query and annotation Excel Add-in, user can search terms information from BioPortal^[1], MedPortal^[2] and OLS^[3] easy and quickly by CDE Tools, and direct inset in sheet, it base on ExcelDNA^[4], user also can annotate term by this Tools.

Usage

Double click

Excel 2010 and above

.NET 4.0 and above

Window 7 and above

Main Functions

CDE Tools hat 2 Function

Terms search and annotation

Figure 1 is main interface

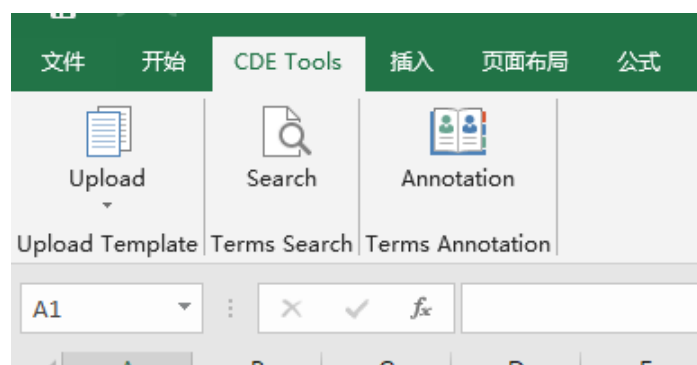


Figure 1: CDE Tools main interface

After clicking the "Search" option, a window for term search will pop up, as shown in Figure 2.

The image shows a 'Search Term' dialog box. It has a title bar with a close button. Inside, there is a 'Search Term' text input field. Below it is a 'Data Sources' section with radio buttons for 'BioPortal', 'OLS', 'MedPortal', and 'All', with 'BioPortal' selected. There is another 'Search Term' text input field below the radio buttons. At the bottom, there is a button labeled 'Insert to Excel'. Below the button is a table with columns 'ID', 'Ontology', 'Term', and 'IRI'. The table has one row with a '*' in the first column. The rest of the table area is greyed out.

Figure 2: The term search interface

user can input the term such as "Melanoma" in the search box of search-interface, there are four options below the input box, user can click on any source, and click the search button to search, the default is "Bioportal", When the user selects All, a global search is performed, and the search results are as follows:

Search Term

Search Term

Data Sources

☒ BioPortal ☐ OLS ☐ MedPortal ☐ All

Search Term

Insert to Excel

	ID	Ontology	Term	IRI
▶	1	MEDDRA	Melanoma	http://purl.bioontology.org/...
	2	LOINC	Melanoma	http://purl.bioontology.org/...
	3	NCIT	Melanoma	http://ncicb.nci.nih.gov/xml...
	4	MESH	Melanoma	http://purl.bioontology.org/...
	5	OMIM	Melanoma	http://purl.bioontology.org/...
	6	MEDLIN...	Melanoma	http://purl.bioontology.org/...
	7	CRISP	melanoma	http://purl.bioontology.org/...
	8	ICPC2P	melanoma	http://purl.bioontology.org/...
	9	PDQ	melanoma	http://purl.bioontology.org/...
	10	RADLEX	melanoma	http://radlex.org/RID/RID34617
	11	DOID	melanoma	http://purl.obolibrary.org/o...
	12	HP	Melanoma	http://purl.obolibrary.org/o...
	13	BAO	melanoma	http://purl.obolibrary.org/o...
	14	EFO	melanoma	http://www.ebi.ac.uk/efo/EFO

Figure 3: Search in BioPortal

Search Term

Search Term

Data Sources

☐ BioPortal ☒ OLS ☐ MedPortal ☐ All

Search Term

Insert to Excel

	ID	Ontology	Term	IRI
▶	1	ncit	Melanoma	http://purl.obolibrary.org/ob...
	2	efo	melanoma	http://www.ebi.ac.uk/efo/EFO_...
	3	omit	Melanoma	http://purl.obolibrary.org/ob...
	4	hp	Melanoma	http://purl.obolibrary.org/ob...
	5	doid	melanoma	http://purl.obolibrary.org/ob...
	6	mpath	melanoma	http://purl.obolibrary.org/ob...
	7	clo	melanoma	http://purl.obolibrary.org/ob...
	8	zp	melanoma	http://purl.obolibrary.org/ob...
	9	bao	melanoma	http://purl.obolibrary.org/ob...
	10	mp	melanoma	http://purl.obolibrary.org/ob...

Figure 4: Search in OLS

Search Term

Search Term

Data Sources ☐ BioPortal ☐ OLS ☒ MedPortal ☐ All

Search Term Insert to Excel

ID	Ontology	Term	IRI
1	DOID	melanoma	http://purl.obolibrary.org/o...
2	HP	Melanoma	http://purl.obolibrary.org/o...
3	OMIM	Melanoma	http://purl.bioontology.org/...
4	MEDLIN...	Melanoma	http://purl.bioontology.org/...
5	LOINC	Melanoma	http://purl.bioontology.org/...
6	NCIT	Melanoma	http://ncicb.nci.nih.gov/xml...
7	MESH	Melanoma	http://purl.bioontology.org/...
8	HPCH	Melanoma	http://purl.obolibrary.org/o...
9	HPCH	melanoma	http://purl.obolibrary.org/o...
10	CLO-NICR	melanoma	http://purl.obolibrary.org/o...
11	HP	Nodula...	http://purl.obolibrary.org/o...
12	HP	Choroi...	http://purl.obolibrary.org/o...
13	MEDLIN...	Intrao...	http://purl.bioontology.org/...
14	PW	melano	http://purl.obolibrary.org/o...

Figure 5: Search in MedPortal

Search Term

Search Term

Data Sources ☐ BioPortal ☐ OLS ☐ MedPortal ☒ All

Search Term Insert to Excel

ID	Ontology	Term	IRI
48	MESH	Uveal ...	http://purl.bioontology.org/...
49	MESH	Melano...	http://purl.bioontology.org/...
50	MESH	Melano...	http://purl.bioontology.org/...
0	OLS		
1	ncit	Melanoma	http://purl.obolibrary.org/o...
2	efo	melanoma	http://www.ebi.ac.uk/efo/EF0...
3	omit	Melanoma	http://purl.obolibrary.org/o...
4	hp	Melanoma	http://purl.obolibrary.org/o...
5	doid	melanoma	http://purl.obolibrary.org/o...
6	mpath	melanoma	http://purl.obolibrary.org/o...
7	clo	melanoma	http://purl.obolibrary.org/o...
8	zp	melanoma	http://purl.obolibrary.org/o...
9	bao	melanoma	http://purl.obolibrary.org/o...
10	mn	melanoma	http://purl.obolibrary.org/o...

Figure 6: Global search

The user can select the data after the query, click the insert button, and insert it directly into the table, as shown in Figure 7.

Open template | Terms search | Terms administration

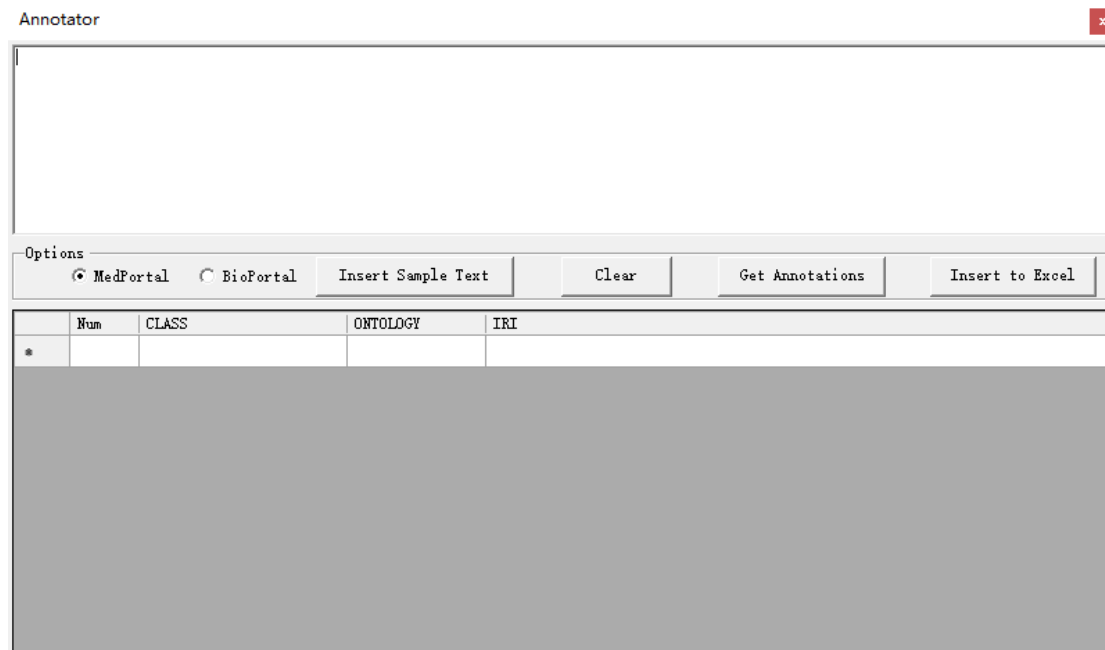
A1 : X ✓ f "http://purl.bioontology.org/ontology/CSP/2020-2434"|"melanoma"

	A	B	C	D	E	F	G	H	I	J
1	"http://purl.bioontology.org/ontology/CSP/2020-2434" "melanoma"									
2										

Figure 7: Insert information directly into Excel

The term annotation

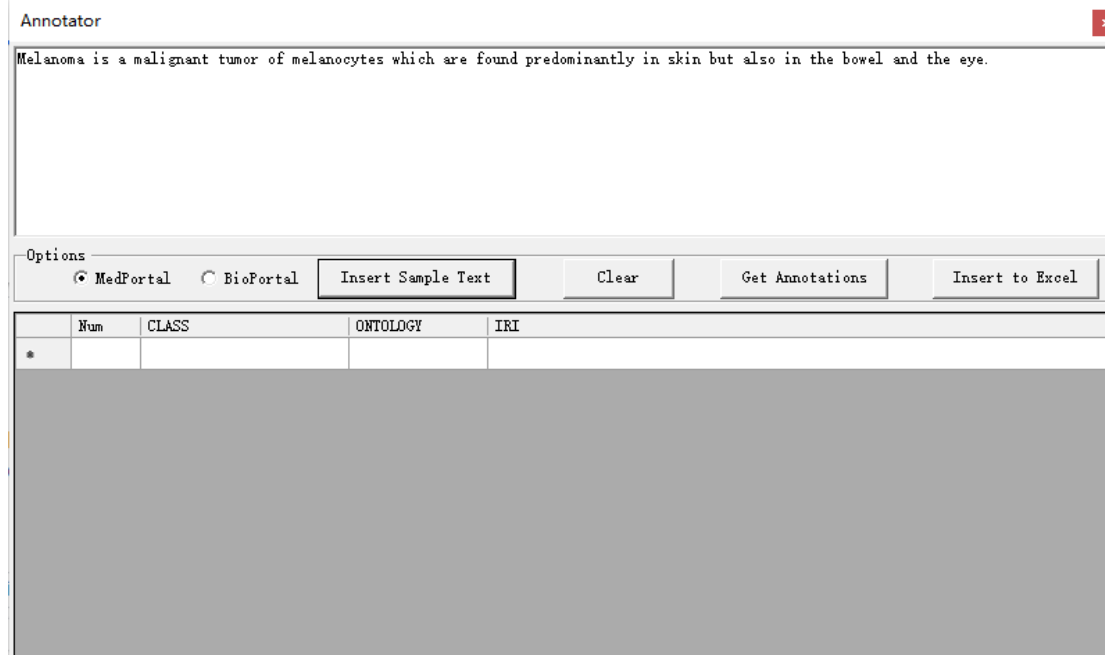
After clicking the "Annotation" option, a window pops up, as shown in Figure 8:



The screenshot shows a window titled "Annotator" with a red close button in the top right corner. Inside the window is a large, empty text area. Below the text area is a control bar with the label "Options" on the left. To the right of "Options" are two radio buttons: "MedPortal" (which is selected) and "BioPortal". Further right are four buttons: "Insert Sample Text", "Clear", "Get Annotations", and "Insert to Excel". Below the control bar is a table with four columns: "Num", "CLASS", "ONTOLOGY", and "IRI". The first row of the table has a "*" in the "Num" column and is followed by a large grey rectangular area, likely representing a list of annotations.

Figure 8: Annotation interface

The user can choose between MedPortal or BioPortal, and click "Insert Sample Text" to get the reference text, as shown in Figure 9:



This screenshot shows the same "Annotator" window as Figure 8, but now the text area contains the sentence: "Melanoma is a malignant tumor of melanocytes which are found predominantly in skin but also in the bowel and the eye." The control bar and table below remain the same as in Figure 8.

Figure 9: insert annotated text

Click "Clear" to clear all the text in the text box, as shown in Figure 10:

Annotator

☒ MedPortal
 ☐ BioPortal

Num	CLASS	ONTOLOGY	IRI
*			

Figure 10: Cleanup text

After input text, the user can click the "Get Annotations" button to get the annotation of the text, as shown in Figure 11:

Annotator

Melanoma is a malignant tumor of melanocytes which are found predominantly in skin but also in the bowel and the eye.

☒ MedPortal
 ☐ BioPortal

Num	CLASS	ONTOLOGY	IRI
1	MELANOMA	HPCH	http://purl.obolibrary.org/obo/NCIT_C3224
2	MELANOMA	NCIT	http://ncicb.nci.nih.gov/xml/owl/EVS/Thesaurus.owl#C3224
3	MELANOMA	MEDLINEPLUS	http://purl.bioontology.org/ontology/MEDLINEPLUS/C0025202
4	MELANOMA	MESH	http://purl.bioontology.org/ontology/MESH/D008545
5	MELANOMA	OMIM	http://purl.bioontology.org/ontology/OMIM/MT0000127
6	MELANOMA	HPCH	http://purl.obolibrary.org/obo/MPATH_359
7	MELANOMA	LOINC	http://purl.bioontology.org/ontology/LNC/LA14279-6
8	MELANOMA	HP	http://purl.obolibrary.org/obo/HP_0002861
9	MELANOMA	DOID	http://purl.obolibrary.org/obo/DOID_1909

Figure 11: Annotated result

[1] Bioportal: <https://bioportal.bioontology.org/>

[2] Medportal: <http://medportal.bmicc.cn/>

[3] OLS (Ontology Lookup Service): <https://www.ebi.ac.uk/ols/index>

[4] ExcelDNA WebLink: <https://excel-dna.net/>