

The OBO Annotator User's Manual

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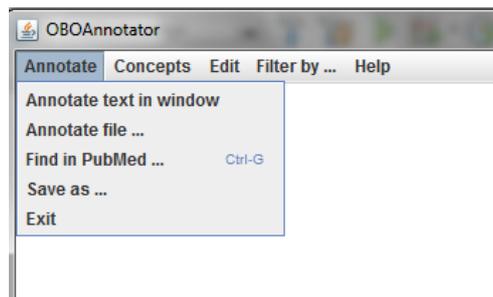
Introduction

An **annotation** is some kind of metadata attached to text. The **OBOAnnotator** registers the set of keywords (from a OBO ontology) that a text or document contains.

Program Description

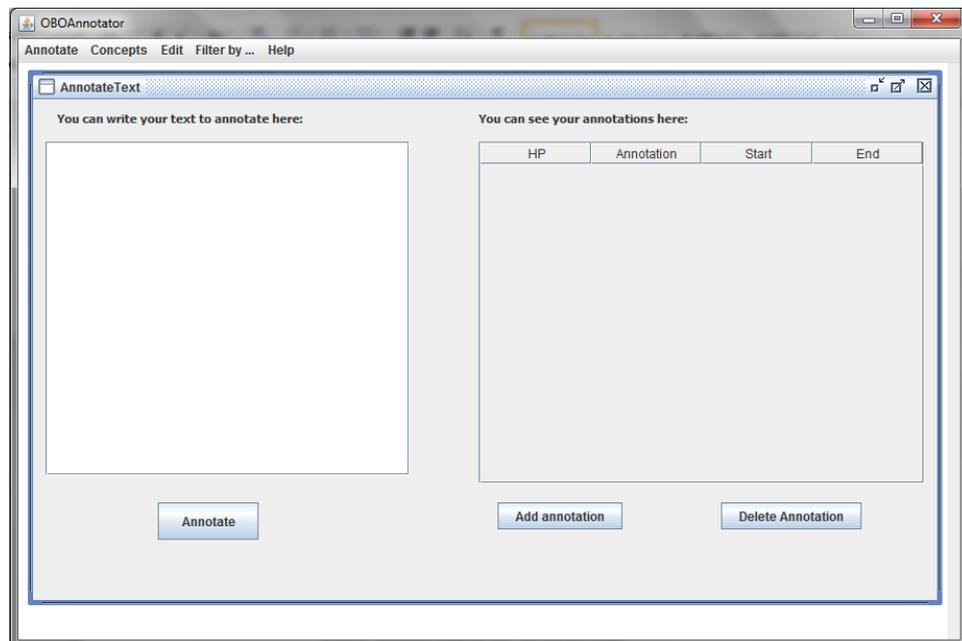
Annotate Menu

This is the first option in the menu bar.



To annotate a text, you can choose between three options:

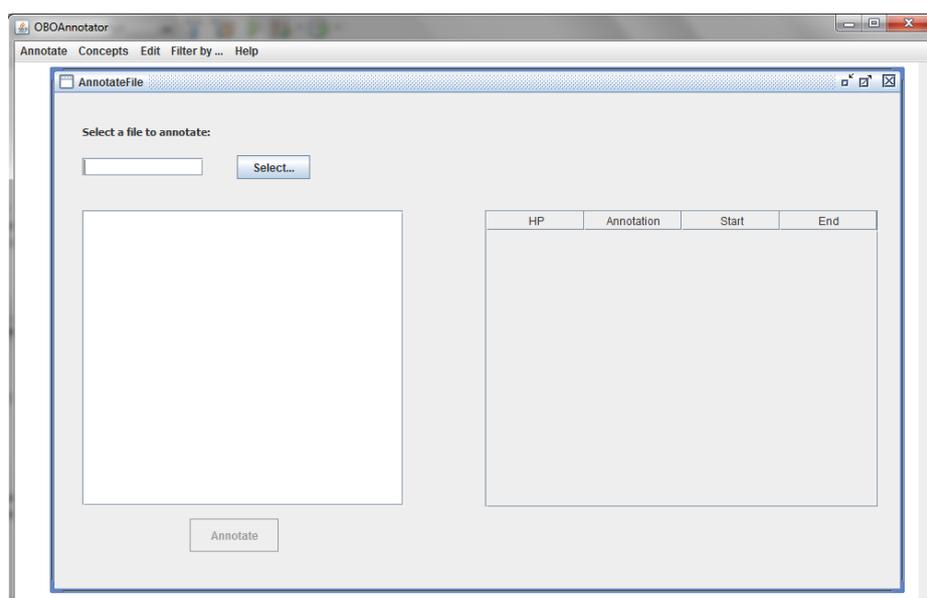
- **Annotating the text in the window.** You can write a text and automatically annotate it. On the right side, you can see the annotations in a table. You can make changes on the table (add, edit or delete entries) before saving.



The table displays information about the annotated keywords (Annotation column), the corresponding identifier in the ontology used by the annotator (HP column) and the starting (Start column) and ending position (End column).

This version of the annotator is based on the *Human Phenotype Ontology* (for more information: <http://www.human-phenotype-ontology.org/>).

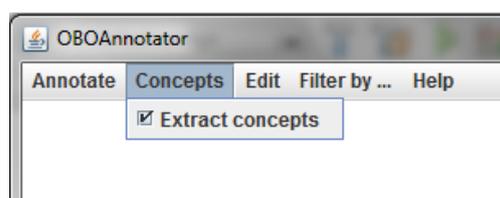
- **Annotating a file.** You can choose a plain text file.



- **Searching abstracts in Pubmed and annotate them. Annotating a term founded in PubMed.** For using this option, you must install Perl in your computer (follow the directions at the end of this manual to install it).

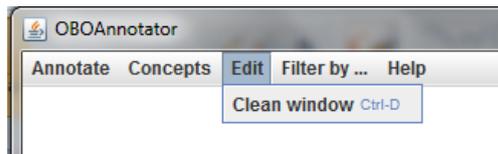
When you annotate a text, you can save the results on an Excel file or text file using the option *Save as....*

Concepts Menu



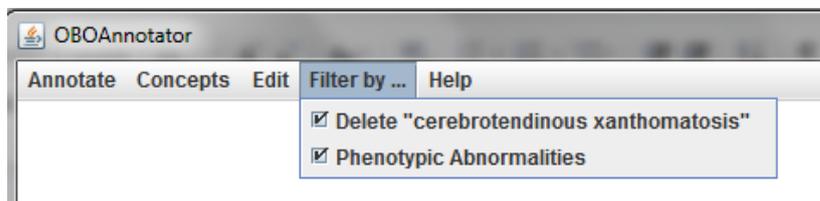
You can save all the annotations found in the text with the positions where the keywords were identified. Additionally, you can also save the minimum set of keywords, after removing duplicated annotations and preserving only the most specific ones. By default, this second option is set in the tool call 'Extract concepts', which generate two files, one with all annotations and positions, and another with minimal annotations.

Edit Menu



In this menu a unique option will be offered to clear the annotating a text window.

Filter by... Menu



In the menu bar, there are more options to be applied to the selected type of annotation; they will be marked by default. If you want to apply, you must uncheck them in the corresponding menu.

- Filter by ... Option: You can filter the entries by two filters:
 - o Remove "xanthomatosis" of "cerebrotendinous xanthomatosis."
 - o Show only entries that are phenotypic abnormalities.
- File Option. You can get the file with the concepts in the format chosen by the annotations.

Output File Format

The program will only accept files in plain text format whose internal structure is the identifier followed by text, as follows:

```
23417372
'Hot cross bun' sign in a case of cerebrotendinous
xanthomatosis: a rare neuroimaging observation.
We report a 25-year-old young man presenting with cognitive
decline, pancerebellar features, spastic quadriparesis, bilateral
cataract (operated) and tendo-Achilles swelling (xanthoma). The
CT of the head showed bilateral cerebellar hypodensities. There
were bilateral cerebellar hypointensities involving dentate
nuclei on T1-weighted images with corresponding hyperintensities
on T2-weighted MRI. Additionally, an interesting MRI finding-'hot
cross bun' appearance was seen in pons which has not been
reported in the literature so far. Biopsy from tendo-Achilles
confirmed xanthoma. He was treated with chenodeoxycholic acid
following which he showed improvement in cognition and weakness.
```

Or, in the following format (called *MEDLINE*):

```
PMID- 23659550
OWN - NLM
STAT- Publisher
DA - 20130510
IS - 1365-2990 (Electronic)
IS - 0305-1846 (Linking)
DP - 2013 May 10
TI - Cerebrotendinous xanthomatosis with the c.379C>T (p.R127W)
mutation in the
CYP27A1 gene associated with premature age-associated
limbic tauopathy.
LID - 10.1111/nan.12058 [doi]
AD - Semmelweis University, Neuropathology and Prion Disease
Reference Centre,
Budapest, Hungary; Department of Neurology, County
Hospital, Vac, Hungary.
FAU - Kapas, Istvan
AU - Kapas I
FAU - Katko, Monika
AU - Katko M
FAU - Harangi, Mariann
AU - Harangi M
FAU - Paragh, Gyorgy
AU - Paragh G
FAU - Balogh, Istvan
AU - Balogh I
FAU - Kocsi, Zoltan
AU - Kocsi Z
FAU - Regelsberger, Gunther
AU - Regelsberger G
FAU - Molnar, Maria Judit
AU - Molnar MJ
FAU - Kovacs, Gabor G
AU - Kovacs GG
LA - ENG
FT - JOURNAL ARTICLE
DEP - 20130510
TA - Neuropathol Appl Neurobiol
JT - Neuropathology and applied neurobiology
JID - 7609829
EDAT- 2013/05/11 06:00
MHDA- 2013/05/11 06:00
CRDT- 2013/05/11 06:00
PHST- 2013/05/07 [accepted]
AID - 10.1111/nan.12058 [doi]
PST - aheadofprint
SO - Neuropathol Appl Neurobiol. 2013 May 10. doi:
10.1111/nan.12058.
```

In the "examples" program folder you will find files such a way sample to test the operation of the application.

Steps to annotate a text

1. Go to Annotate menu and select the option that best suits: text scoring (Annotate text), write a text file (Annotate file) or search for a specific data repository a term (Find in PubMed...). For a set of search terms to enter as a query, also included in the "examples" folder is provided.

```
*****  
***** FILE WITH EXAMPLE WORDS TO WRITE INTO THE FOUNDER  
*****  
  
cerebrotendinous xanthomatosis  
xanthomatosis  
cerebellar  
cerebellar ataxia  
ataxia  
epilepsy  
cataracts  
xanthoma  
xanthomata  
pain back  
tumor
```

To find more terms: <http://www.ncbi.nlm.nih.gov/pubmed>

2. Select from the menu bar if you want to extract the concepts of annotations and filters you want to apply.
3. After entering the text in the window, or obtained the file selected texts in PubMed, click "Annotate" button. If there have been results found annotations appear along with a success message. Otherwise, a message that has not been able to find anything appears.
4. Finally, go to the Annotate menu and save annotations made in the format you prefer: .txt (plain text) or .csv (spreadsheet).

Installing PERL package

To install this package, follow the links below:

- Windows: <http://learn.perl.org/installing/windows.html>
- Linux: http://learn.perl.org/installing/unix_linux.html
- Mac OSx: <http://learn.perl.org/installing/osx.htm>