

Annotate the text using unified names

“Span” indicates the span (i.e. the set of characters to select) of an entity. It refers to a selection of consecutive characters of the entity. Annotations in **Blue** denote disease and in **Green** denote organism.

1. Annotation is correct for both the span and type

Finally, the researchers report that injection of PKHB1 reduced the **tumor** burden in a mouse model of CLL. [PMC4348493]

“tumor” is annotated as Disease, which is correct both for span and type.

2. Annotation type is correct but the span is wrong

Finally, the researchers report that injection of PKHB1 reduced the **tumor burden** in a mouse model of CLL. [PMC4348493]

“tumor burden” is annotated as Disease. The correct annotation should be “tumor” and the type should be Disease. The annotation is longer than the expected entity “tumor”. Therefore, it has wrong span but correct type.

Finally, the researchers report that injection of PKHB1 reduced the **tumor** burden in a mouse model of CLL. [PMC4348493]

“tum” is annotated as Disease. The correct annotation should be “tumor” and the type should be Disease. The annotation is shorter than the expected entity “tumor”. Therefore, the annotation has wrong span but correct type.

3. The span is correct but the type is wrong

Finally, the researchers report that injection of PKHB1 reduced the **tumor** burden in a mouse model of CLL. [PMC4348493]

“Tumor” is annotated as Organism. The correct annotation should be “tumor” and the type should be Disease. Therefore, the annotation has wrong type but correct span.

4. Both the span and type are wrong

Finally, the researchers report that injection of PKHB1 reduced the **tumor burden** in a mouse model of CLL. [PMC4348493]

“tumor burden” is annotated as Organism. The correct annotation should be “tumor” and the type should be Disease. Therefore, the annotation has wrong type and wrong span.

5. Missing entity (false negative)

Finally, the researchers report that injection of PKHB1 reduced the tumor burden in a mouse model of CLL. [PMC4348493]

“tumor” is missing from the annotation. Therefore, it’s a missing annotation.

Gene-Disease Relationship annotation:

1. The relationship is correct
 - a. Both of the gene and disease entities are correct
 - b. The relationship exists between the entities.
2. The relationship is wrong
 - a. One or both of the entities in the pre-annotated relationship have wrong type
 - i. Refer to the entity annotation to check whether the type is correct
 - b. Entities are correct but relationship doesn’t exist
3. The relationship is ambiguous:
 - a. Both entities have correct type, but the relationship is ambiguous
4. In the current phase, it is not necessary to annotate missing relationship

Tag scheme for annotations

1. Tags for indicating wrong/correct annotations:

Category	Tag
Wrong type	WT
Wrong span	WS
Missing	MIS
Correct	CRT

Table 1

2. Tags for entity:

Name	Tag
Gene/Protein	GP
Organism	OG
Disease	DS

Table 2

3. Tags for gene-disease relationship:

Category	Tag
Correct relationship	YGD
Wrong relationship	NGD
Ambiguous	AMB

Table 3

4. Special tag:

Special Tag	Tag
All	ALL

Table 4

Usage of annotation tags

In order to indicate both the wrong correct tags. We suggest to use following scheme to report wrong/correct/missing annotations.

A. Annotation is correct for both the span and type

Type	Tag
Gene/Protein	CRT_GP
Organism	CRT_OG
Disease	CRT_DS

Table 5

B. Annotation type is correct but the span is wrong

Type	Tag
Gene/Protein	WS_GP
Organism	WS_OG
Disease	WS_DS

Table 6

C. The span is correct but the type is wrong

In order to record the wrong annotation type, we need to use underscore to indicate the wrong type. For example, [WT_GP] means the wrong annotation type is Gene/Protein. The correct type can be indicated using an additional tag as shown below. If the annotation is a false positive, then we don't need to provide the correct type.

Wrong Type	Correct Type	Tag
Gene/Protein	Organism	[WT_GP][OG]
Gene/Protein	Disease	[WT_GP][DS]
Gene/Protein	None	[WT_GP]
Organism	Gene/Protein	[WT_OG][GP]
Organism	Disease	[WT_OG][DS]
Organism	None	[WT_OG]
Disease	Gene/Protein	[WT_DS][GP]
Disease	Organism	[WT_DS][OG]
Disease	None	[WT_DS]

Table 7

D. Both the span and type are wrong

Refer to Table 7. If the type is wrong, the span is not important. Therefore, we don't need to record whether the span is right or not. Use the scheme in Table 7.

E. Missing entity (false negative)

Type	Tag
Gene/Protein	MIS_GP
Organism	MIS_OG
Disease	MIS_DS

Table 8

F. Usage of the special tag

The special tag [ALL] is used when the current annotation can be applied to the same annotations in the full text. For example, if all the pre-annotations of “tumor” are correctly tagged as Disease with the right span in one article, then we can use the combination of [CRT_DS][ALL] to indicate all the same pre-annotations of “tumor” are correct. Therefore, we can skip the same pre-annotations after it.

G. Annotation of gene-disease relationship

If the pre-annotation of the relationship is correct, use tag **YGD** from Table 3.

If the pre-annotation of the relationship is wrong, use tag **NGD** from Table 3:

- One or both the entities have wrong type
- Both entities have correct type, but no relationship

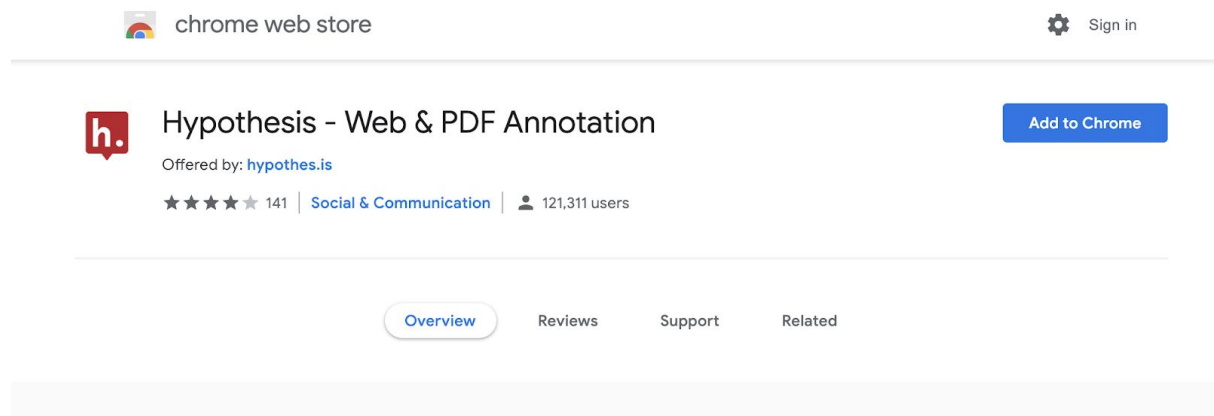
If the pre-annotation of the relationship is vague/ambiguous, use tag **AMB** from Table 3:

- Both entities have correct type, but the relationship is ambiguous


How to use the interface

The following examples illustrate how to use the Hypothes.is plug-in. Chrome must be installed as the current plug-in only support Chrome. The screenshots may differ from the aforementioned tagging scheme, therefore please refer to tagging scheme for annotation.

1. Annotators create Hypothes.is account.
2. An invitation of joining the annotation group will be sent to all annotators.
3. Install Hypothes.is plug-in in Chrome app store (Add to Chrome)



4. Open an article in EuropePMC using PMCID


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Search worldwide, life-sciences literature

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E.g. "breast cancer" HER2 Smith J

1 result found.

☐ Anti-inflammatory effects of a traditional Korean medicine: Ojayeonjonghwan.
(PMID:28614972 PMCID:PMC6130514)

Pharmaceutical Biology


Pharm Biol. 2017; 55(1): 1856–1862.
Published online 2017 Jun 14. doi: [10.1080/13880209.2017.1339282](https://doi.org/10.1080/13880209.2017.1339282)

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[Hyung-Min Kim](#),^a and [Hyun-Ja Jeong](#)^e

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Abstract

Objective: To study the anti-inflammatory properties of OJ.

Context: Ojayeonjonghwan (OJ) is a traditional Korean prescription, which has been widely used for the treatment of prostatitis. However, no scientific study has been performed of the anti-inflammatory effects of OJ.

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Formats

Show annotations in this article

☐ Chemicals
☐ Diseases
☐ Gene Ontology
☐ Gene-Disease OpenTargets
☐ Genes/Proteins
☐ Organisms

5. Select Gene/Protein, Disease, Organism and Gene-Disease OpenTargets (if available) from the right panel to show annotations

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Conclusions: OJ reduces inflammatory response, and this probably explains its positive impact on the [prostatitis-associated inflammation](#).

Go to: [▼](#)

Feedback

6. Click the Hypothes.is plug-in symbol to activate Hypothes.is

<https://europepmc.org/articles/PMC6130514?fromSearch=singleResult&fromQuery=PMC6130514>

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Formats: Abstract Full Text PDF

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- ☐ Chemicals
- ☒ Diseases (37) [▶](#)
- ☐ Gene Ontology
- ☒ Gene-Disease OpenTargets (2) [▶](#)
- ☒ Genes/Proteins (65) [▶](#)
- ☒ Organisms (47) [▶](#)

7. The pre-annotated text are highlighted in different colours. Click the highlighted text, a window will pop up to show more details e.g. the entity type and the annotated text.

A genome-wide association study suggests that **MAPK14** is associated with diabetic foot ulcers¹

W. Meng,¹ A. Veluchamy,¹ H.L. Hébert,¹ A. Campbell,¹ H.M. Colhoun,² and C.N.A. Palmer³

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Summary

Go to: ▼

Background

Diabetic foot ulcers (DFUs) are a devastating complication of **diabetes**.

Objectives

Diseases

To identify

Diabetic foot ulcers

Linked Life Data



Scottish

in the presence of **peripheral neuropathy** in a study.

Method

Annotation source: Europe PMC

Show annotations in this article

☐ Accession Numbers

☐ Chemicals

☒ Diseases (93) >

☐ Gene Ontology

☒ Gene-Disease OpenTargets (1) >

☒ Genes/Proteins (22) >

☒ Organisms (3) >

8. Use the mouse to select the entity that you would like to annotate.

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Materials

Annotate

Highlight

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- Click “Annotate” to annotate the select words in the pop-up panel. Add tags of the annotation in the tag box according to the Tag Scheme. If you have any comments, you can leave it in the text box.

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Conclusions: OJ reduces inflammatory response, and this probably explains its positive impact on the [prostatitis](#) associated inflammation.

Keywords: Mouse peritoneal macrophages, nitric oxide, inflammatory cytokine, NF-κB

yang-test

Format

Abstract

Show annotations

☐ Chemical
 ☒ Disease
 ☐ Gene
 ☒ Gene
 ☒ Genes
 ☒ Organism

How to get started

- To create an annotation, select text and click the button.
- To add a note to the page you are viewing, click the button.
- To create a highlight, select text and click the button.
- To reply to an annotation, click the button.
- To share an annotated page, click the button at the top.
- To create a private group, select **Public**, open the dropdown, click **+ New group**.

Annotations 1 Page Notes

yxzz_test

yang-test

prostatitis

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Preview

add comments here

DS X CT X Add tags...

add tags here

Post to yang-test

Cancel

- To finish the annotation, click the “Post to” button to post the annotation to the correct annotation group. Then the annotation will be added to the annotation group.

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add comments here

DS X CT X Add tags...

add tags here

Post to yang-test

Cancel

11. For Gene-Disease relationship annotation, click the highlighted text, the pre-annotated relationships will appear in a pop-up window.

The screenshot shows the Wiley article page for 'A genome-wide association study suggests that MAPK14 is associated with diabetic foot ulcers'. The article is from Br J Dermatol, 2017 Dec; 177(6): 1664-1670. A pop-up window titled 'Gene-Disease OpenTargets' is displayed over the text 'MAPK14 is associated with diabetic foot ulcers'. The pop-up shows 'MAPK14' as the gene and 'diabetic foot ulcers' as the disease, both with 'OpenTargets' as the source. The source is noted as 'OpenTargets Platform'. To the right, a 'Show annotations in this article' panel lists various categories: Accession Numbers, Chemicals, Diseases (93), Gene Ontology, Gene-Disease OpenTargets (1), Genes/Proteins (22), and Organisms (3). The article text includes a summary and background section, with 'Diabetic foot ulcers (DFUs)' defined as a complication of diabetes.

12. If a relationship between a gene and disease appears in the sentence, only select the part that contains the two entities using Hypothes.is. Then annotate the selected part by adding a gene-relationship tag to indicate whether it's a correct pre-annotation or a missing relationship annotation.

If the pre-annotation is wrong, select the pre-annotation and annotate it as a wrong relation.

CDX2, 3 (21%) showed expression of CD117, and a single case was positive for CD30 (7%). None of the cases showed any staining for OCT3/4. Primary mediastinal YST appear to have a similar immunohistochemical phenotype as their testicular counterparts. Coexpression of CAM5.2, [SALL4](#), [glypican-3](#), and [AFP](#) provides the best support for YST differentiation; however, it has to be noted that none of these markers is specific for these tumors and immunohistochemical results will always have to be interpreted in the context of morphologic, clinical, and radiologic information.

[Read Article at publisher's site](#)

The screenshot shows the Hypothes.is annotation interface. On the left, there is a sidebar with links for 'About', 'Tools', 'Developers', and 'Help'. The main area displays the text from the article snippet, with a selection box highlighting the sentence: 'glypican-3, and AFP provides the best support for YST differentiation; however, it has to be noted that none of these markers is specific for these tumors'. Below the text, there is a 'Preview' button and a 'Post to yang-test' button. A search bar at the bottom contains the text 'YGD X: Add tags...'.