

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

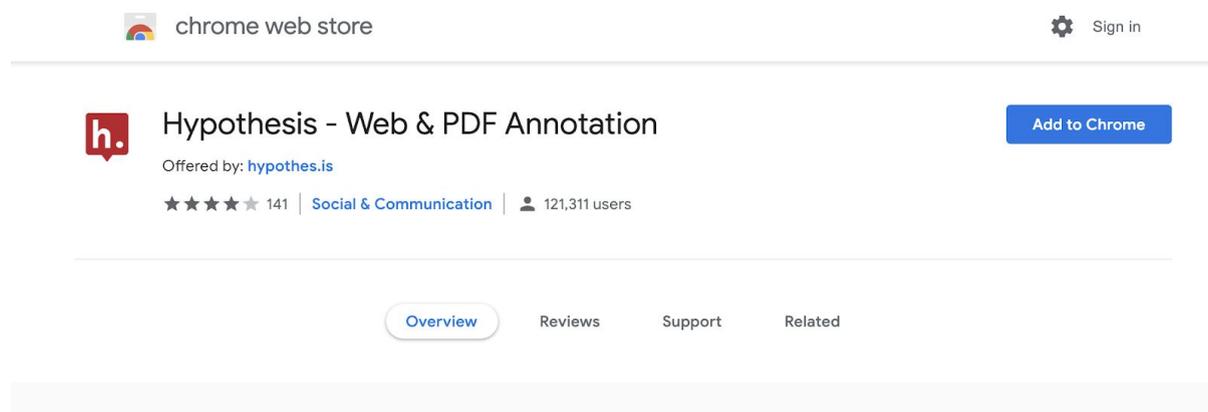
If the pre-annotation of the relationship is vague/ambiguous, use tag **AMB** from Table 3:

- 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)



The screenshot shows the Chrome Web Store interface for the 'Hypothesis - Web & PDF Annotation' extension. At the top left, there is a 'chrome web store' logo. At the top right, there is a 'Sign in' button with a gear icon. The main content area features the extension's icon (a red square with a white 'h.'), the title 'Hypothesis - Web & PDF Annotation', and a blue 'Add to Chrome' button. Below the title, it says 'Offered by: hypothes.is'. Further down, there are five stars, the number '141', the category 'Social & Communication', and a user icon with '121,311 users'. At the bottom of the extension card, there are four tabs: 'Overview' (which is selected and highlighted in blue), 'Reviews', 'Support', and 'Related'. Below the extension card, there is a light gray horizontal bar.

4. Open an article in EuropePMC using PMCID

Search worldwide, life-sciences literature

PMC6130514

[Advanced Search](#)

E.g. "breast cancer" HER2 Smith J

1 result found.

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

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Pharmaceutical Biology



Pharm Biol. 2017; 55(1): 1856-1862.

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Anti-inflammatory effects of a traditional Korean medicine: Ojayeonjonghwan

[Sun-Young Nam](#),^a [Kyu-Yeob Kim](#),^a [Mi Hye Kim](#),^b [Jae-Bum Jang](#),^c [So-Young Rah](#),^d [Jin-Man Lee](#),^e
[Hyung-Min Kim](#),^a and [Hyun-Ja Jeong](#)^e

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Abstract

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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.

Materials and methods: Peritoneal macrophages were isolated 3-4 days after injecting a C57BL/6J mouse with thioglycollate. They were then treated with OJ water extract (0.01, 0.1, and 1 mg/mL) for 1 h

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Show annotations in this article

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

[Feedback](#)

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

Pharm Biol. 2017; 55(1): 1856-1862. PMID: PMC6130514
 Published online 2017 Jun 14. doi: [10.1080/13880209.2017.1339282](https://doi.org/10.1080/13880209.2017.1339282) PMID: [28614972](https://pubmed.ncbi.nlm.nih.gov/28614972/)

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Results: NO generation and [iNOS](#) induction were increased in the LPS-activated [mouse](#) peritoneal macrophages. However, NO generation and [iNOS](#) induction by LPS were suppressed by treatment with OJ for the first time. The IC₅₀ value of OJ with respect to NO production was 0.09 mg/mL. OJ did not influence LPS-stimulated [COX-2 induction, but did significantly decrease LPS-stimulated secretions and mRNA expressions of tumour necrosis factor \(TNF\)-α, interleukin \(IL\)-6, and IL-1β](#). Inhibition rates of TNF-α, [IL-6](#), and IL-1β at an OJ concentration of 1 mg/mL were 77%, 88%, and 50%, respectively. OJ also suppressed the LPS-induced nuclear translocation of NF-κB. High-performance liquid chromatography showed schizandrin and gomisin A are major components of OJ.

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

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

is://europepmc.org/articles/PMC6130514?fromSearch=singleResult&fromQuery=PMC6130514

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Abstract



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

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Background

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

Object

Diseases

Diabetic foot ulcers Linked Life Data 👍 ▼

Annotation source: Europe PMC

To identify

Diabetic foot ulcers in the presence of **peripheral neuropathy** in a study.

Method

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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 Annotate  Highlight

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Show annotations in this article

- Chemicals
- Diseases (37) >
- Gene Ontology
- Gene-Disease OpenTargets (2) >
- Genes/Proteins (65) >
- Organisms (47) >

9. 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

The screenshot shows the annotation interface. On the left, there is a 'Format' sidebar with options for 'Abstr', 'Show ann', 'Chemic', 'Disease', 'Gene C', 'Gene D', 'Genes', and 'Organit'. The main area displays a 'How to get started' guide with six steps. Below the guide, the 'Annotations' panel shows a list of annotations. The selected annotation is 'yxxx_test' with a '1 min' duration. It shows a text editor with the word 'prostatitis' and a 'Preview' button. Below the text editor is a tag box with 'DS x' and 'CT x' and a label 'add tags here'. At the bottom, there is a 'Post to yang-test' button and a 'Cancel' button.

10. 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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The screenshot shows the annotation interface. The 'Annotations' panel shows a list of annotations. The selected annotation is 'yxxx_test' with a 'Just now' timestamp. It shows a text editor with the word 'prostatitis' and a 'Preview' button. Below the text editor is a tag box with 'DS x' and 'CT x' and a label 'Add tags...'. At the bottom, there is a 'Post to yang-test' button and a 'Cancel' button. A red arrow points to the 'Post to yang-test' button.

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

The screenshot shows a page from 'THE BRITISH JOURNAL OF DERMATOLOGY'. The article title is 'A genome-wide association study suggests that MAPK14 is associated with diabetic foot ulcers'. A pop-up window is open over the text 'MAPK14 is associated with diabetic foot ulcers', displaying a table of relationships:

Gene-Disease OpenTargets	Relationship	Count
MAPK14	diabetic foot ulcers	1
OpenTargets	OpenTargets	1

Below the pop-up, a 'Show annotations in this article' panel is visible, listing various categories with checkboxes and counts:

- Accession Numbers
- Chemicals
- Diseases (93) >
- Gene Ontology
- Gene-Disease OpenTargets (1) >
- Genes/Proteins (22) >
- Organisms (3) >

- 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 interface. On the left, there is a navigation menu with sections: About, Tools, Developers, and Help. The main area displays a text snippet from the article: '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'. A text box contains the annotation 'yxxx_test' and a 'Post to yang-test' button is visible at the bottom right.