

**ODIN:**

# **OntoGene Document Inspector**

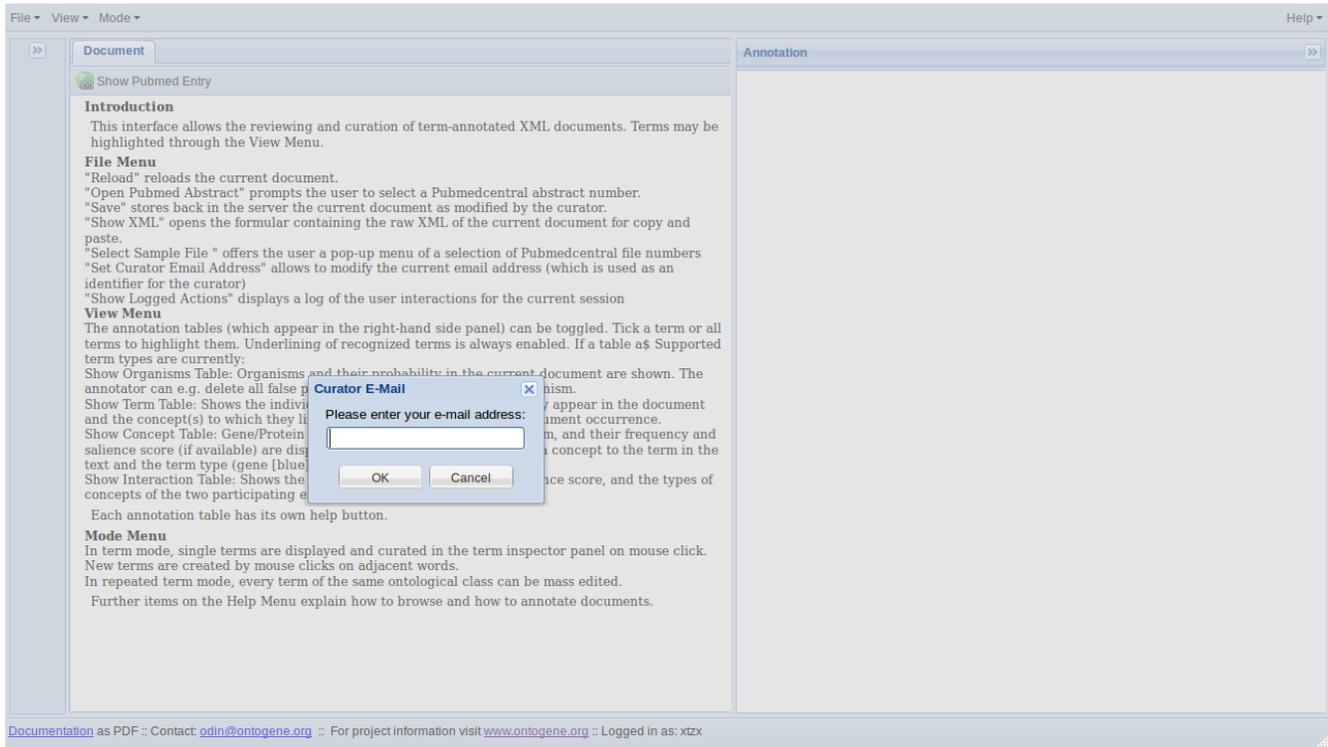
User Manual, v 0.4

Fabio Rinaldi, Simon Clematide, Gerold Schneider

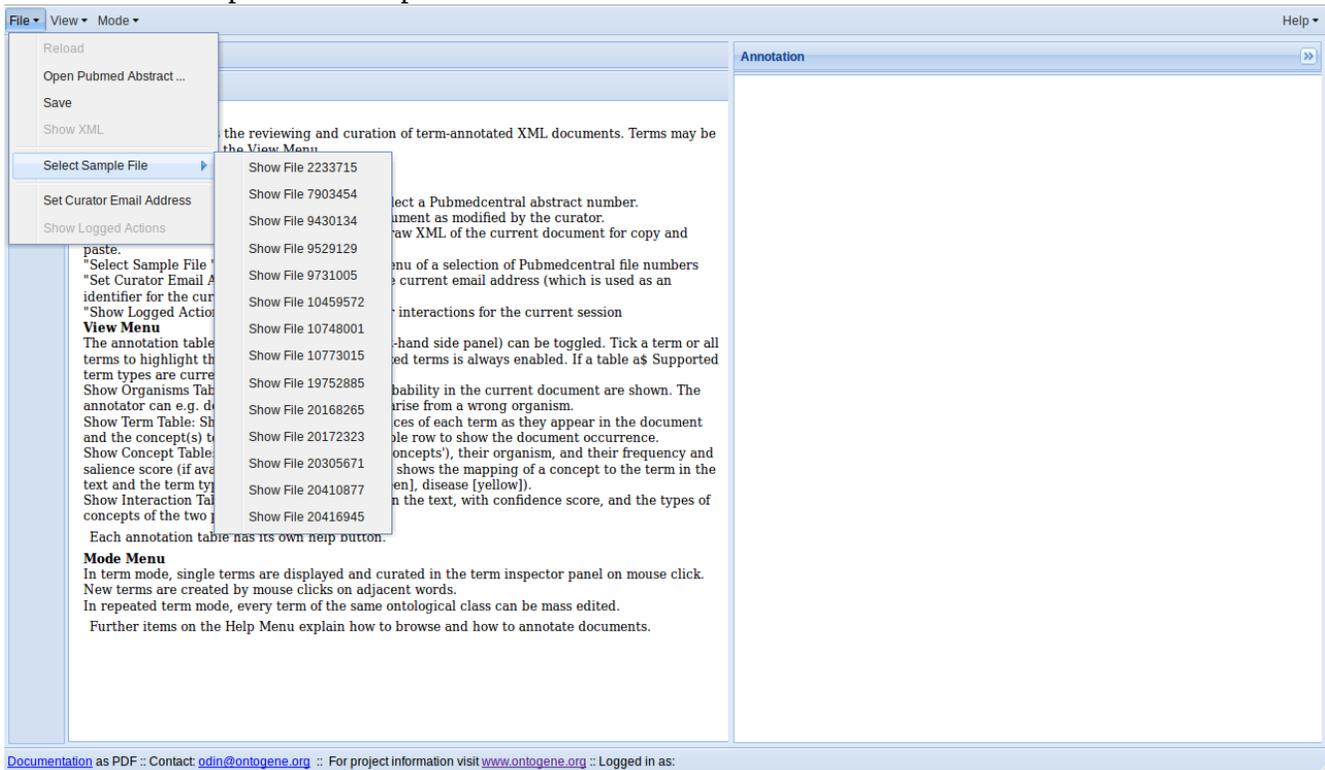
<http://www.ontogene.org/>

# 1. Getting Started

Enter your curator identifier (it does not have to be an e-mail address, just make sure it is unique and use it consistently).



Select a file to inspect. You can either use 'open Pubmed abstract' or, if you want to test, you can also select one of the provided sample files.



## 2. The ODIN panels

Below you can see an example of annotated document: the PubMed abstract is in the “Document” panel (left in the picture), the interactions appear in the “Annotation” panel (right side of the picture). If the annotation panel is empty, you can select an annotation type in the 'View'-menu. The available annotations depend on the version of ODIN and the customized application. Typically, they are terms, genes, proteins, organisms, and interaction. In the example we see interaction annotation. The concepts annotation has also been selected in the view menu, and can be brought to the foreground by clicking on the 'concept' tab in the Annotation panel.

A brief online introduction to ODIN is also available, in the 'Help' menu (top right corner).

The screenshot displays the ODIN software interface. The left panel, titled "Document PMID 2233715", shows a PubMed abstract. The right panel, titled "Annotation", shows a table of interactions. The interface includes a menu bar at the top with "File", "View", "Mode", and "Help". The "Annotation" panel has tabs for "Concepts" and "Interactions". The "Interactions" tab is active, showing a table with columns for "Conf", "Type", "Concept 1", "Name 1", "Type", "Concept 2", and "Name 2". The table contains two rows of interaction data.

**Document PMID 2233715**

Show PubMed Entry

**On the mechanism for efficient repression of the interleukin-6 promoter by glucocorticoids : enhancer , TATA box , and RNA start site ( Inr motif ) occlusion .**

**Abstract** The feedback inhibition of interleukin-6 ( IL-6 ) gene expression by glucocorticoids represents a regulatory link between the endocrine and immune systems . The mechanism of the efficient repression of the IL-6 promoter by dexamethasone ( Dex ) was investigated in HeLa cells transiently transfected with plasmid constructs containing different IL-6 promoter elements linked to the herpesvirus thymidine kinase gene ( tk ) promoter and the bacterial chloramphenicol acetyltransferase gene ( cat ) and cotransfected with cDNA vectors constitutively expressing either the active wild-type or inactive mutant human glucocorticoid receptor ( GR ) . The induction by interleukin-1 , tumor necrosis factor , phorbol ester, or forskolin of IL-6 - tk - cat chimeric constructs containing a single copy of the IL-6 DNA segment from - 173 to - 151 ( MRE I ) or from - 158 to - 145 ( MRE II ) , which derive from within the multiple cytokine - and second-messenger-responsive enhancer ( MRE ) region , was strongly repressed by Dex in a wild-type GR - dependent fashion irrespective of the inducer used . The induction by pseudorabies virus of an IL-6 construct containing the IL-6 TATA box and the RNA start site ( " initiator " or Inr element ) but not the MRE region was also repressed by Dex in the presence of wild-type GR . DNase I footprinting showed that the purified DNA-binding fragment of GR bound across the MRE , the TATA box , and the Inr site in the IL-6 promoter ; this footprint overlapped that produced by proteins present in nuclear extracts from uninduced or induced HeLa cells . Imperfect palindromic nucleotide sequence motifs moderately related to the consensus GR - responsive element ( GRE ) motif were present at the Inr , the TATA box , and the MRE II site in the IL-6 promoter ; although MRE I and a GR - binding site between - 201 and - 210 in IL-6 both lacked a discernible inverted repeat motif , their sequences showed considerable similarity with negative GRE sequences in other Dex - repressed genes . Surprisingly , chimeric genes containing MRE II , which lacks a recognizable GACGTC cyclic AMP - and phorbol ester-responsive motif , were strongly induced by both phorbol ester and forskolin , suggesting that MRE II ( ACATTGCACAATCT ) may be the prototype of a novel cyclic AMP - and phorbol ester-responsive element . Taken together , these observations suggest that ligand-activated GR represses the IL-6 gene by occlusion not only of the inducible IL-6 MRE enhancer region but also of the basal IL-6 promoter elements .

[Interleukin-1](#) ; [Interleukin-6](#) ; [Oligonucleotide Probes](#) ; [RNA](#) ; [Neoplasm](#) ; [Receptors](#) ; [Glucocorticoid](#) ; [Tumor Necrosis Factor-alpha](#) ; [Tetradecanoylphorbol Acetate](#) ; [Dexamethasone](#) ; [Forskolin](#) ; [Base Sequence](#) ; [Dexamethasone](#) ; [pharmacology](#) ; [Enhancer Elements](#) ; [Genetic](#) ; [drug effects](#) ; [Feedback](#) ; [Forskolin](#) ; [pharmacology](#) ; [Gene Expression](#) ; [drug effects](#) ; [Genes](#) ; [Suppressor](#) ; [drug effects](#) ; [HeLa Cells](#) ; [drug effects](#) ; [immunology](#) ; [Humans](#) ; [Interleukin-1](#) ; [pharmacology](#) ; [Interleukin-6](#) ; [genetics](#) ; [Molecular Sequence Data](#) ; [Oligonucleotide Probes](#) ; [Promoter Regions](#) ; [Genetic](#) ; [RNA](#) ; [Neoplasm](#) ; [drug effects](#) ; [genetics](#) ; [Receptors](#) ; [Glucocorticoid](#) ; [genetics](#) ; [metabolism](#) ; [Restriction Mapping](#) ; [Second Messenger Systems](#) ; [TATA Box](#) ; [drug effects](#) ; [Tetradecanoylphorbol Acetate](#) ; [pharmacology](#) ; [Transcription](#) ; [Genetic](#) ; [Transfection](#) ; [Tumor Necrosis Factor-alpha](#) ; [pharmacology](#) ;

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Conf	Type	Concept 1	Name 1	Type	Concept 2	Name 2				N
1.00	Drug	PA452347	glucocorticoi	Gene	PA198	IL6				
0.99	Drug	PA449247	dexamethas	Gene	PA198	IL6				

ODIN has actually 3 panels (see figure below): on the left the “Inspector” panel, in the center the “Document” panel, and on the right the “Annotations” panel. The “Inspector” panel is closed in the beginning, it opens automatically if you click on a term, or if you click the double-arrow on its top (at the left of the interface). We will discuss it in section 4.

The screenshot shows the ODIN interface in Mozilla Firefox. The browser title is "OntoGene.org: pharmgkb - Mozilla Firefox". The interface is divided into three main panels:

- Inspector Panel (Left):** Contains a "Term Inspector" section with fields for "Term:" (dexamethasone), "Term Type:" (DRUG), and "Concept Values:" (PA449247). Below this is a "Search Databases" section with a "Search Term Text" input and checkboxes for "PharmGKB", "Entrez", and "UniProt".
- Document Panel (Center):** Displays a document titled "Document PMID 2233715" with a "Show PubMed Entry" link. The main content is an abstract titled "On the mechanism for efficient repression of the interleukin-6 promoter by glucocorticoids : enhancer, TATA box, and RNA start site ( Inr motif) occlusion .". The abstract text discusses the feedback inhibition of interleukin-6 (IL-6) gene expression by glucocorticoids and the mechanism of efficient repression of the IL-6 promoter by dexamethasone (Dex).
- Annotations Panel (Right):** Contains a table of interactions. The table has columns for "Conf", "Type 1", "Name 1", "Type 2", and "Name 2". There are two rows of data:
 

Conf	Type 1	Name 1	Type 2	Name 2
0.99	Drug	dexamethasone	Gene	IL6
1.00	Drug	glucocorticoids	Gene	IL6

At the bottom of the interface, there is a footer with the text: "Documentation as PDF :: Contact: [odin@ontogene.org](mailto:odin@ontogene.org) :: For project information visit [www.ontogene.org](http://www.ontogene.org) :: Logged in as:

### 3. Working with Concepts

Click on 'Concepts' in the Annotation panel. All concepts are displayed. Clicking on the right of the column title, you can sort them by the column of your choice.

If you drag the column fringe, the column gets broader or smaller.

If you double-click on a concept or name, a definition is provided in a separate window. ODIN tries to find a definition in a reference database (currently CTD).

i	Concept	Name	Score	Freq	Type
<input type="checkbox"/>	MESH_D048069	Tumor Necro...	0		
<input type="checkbox"/>	MESH_D015850	Interleukin-6	16		
<input type="checkbox"/>	MESH_D014409	Tumor Necro...	1		
<input type="checkbox"/>	MESH_D013936	Thymidine	0		
<input type="checkbox"/>	MESH_D013755	Tetradecano...	0	2	chem
<input type="checkbox"/>	MESH_D011557	Pseudorabies	0	1	disease
<input type="checkbox"/>	MESH_D009369	Neoplasms	0	2	disease
<input type="checkbox"/>	MESH_D005938	Glucocorticoids	1	2	chem
<input type="checkbox"/>	MESH_D005576	Forskolin	0	4	chem
<input type="checkbox"/>	MESH_D003907	Dexamethas...	0	3	chem
<input type="checkbox"/>	MESH_D002701	Chlorampheni...	0	1	chem
<input type="checkbox"/>	MESH_D000242	Cyclic AMP	1	2	chem
<input type="checkbox"/>	MESH_C033085	phorbol	0	4	chem
<input type="checkbox"/>	847	CAT	1	2	gene

Ticking the box on the left highlights all occurrences of this concept in the text.

**Document PMID 2233715**  
 Show Pubmed Entry

**On the mechanism for efficient repression of the interleukin-6 promoter by glucocorticoids : enhancer , TATA box , and RNA start site ( Inr motif ) occlusion .**

**Abstract** The feedback inhibition of interleukin-6 ( IL-6 ) gene expression by glucocorticoids represents a regulatory link between the endocrine and immune systems . The mechanism of the efficient repression of the IL-6 promoter by dexamethasone ( Dex ) was investigated in HeLa cells transiently transfected with plasmid constructs containing different IL-6 promoter elements linked to the herpesvirus thymidine kinase gene ( tk ) promoter and the

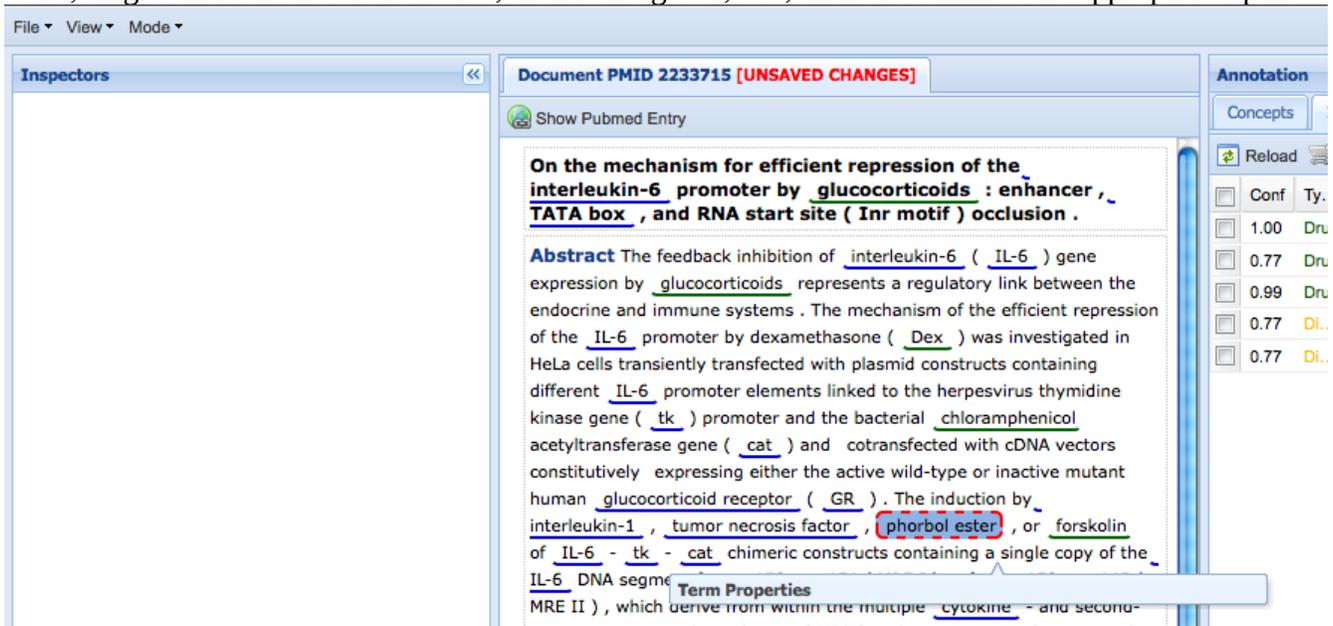
**Term Properties**  
 Type: chem  
 Value: MESH\_D015850

i	Concept	Name	Score
<input checked="" type="checkbox"/>	MESH_D015850	Interleukin-6	16
<input checked="" type="checkbox"/>	6908	TBP	11
<input checked="" type="checkbox"/>	42549	INR	11
<input type="checkbox"/>	399465	TBP-A	11
<input type="checkbox"/>	411297	IR-B	11
<input type="checkbox"/>	2908	NR3C1	3
<input type="checkbox"/>	2642	GCGR	2
<input type="checkbox"/>	2936	GSR	2
<input type="checkbox"/>	14781	GR	2

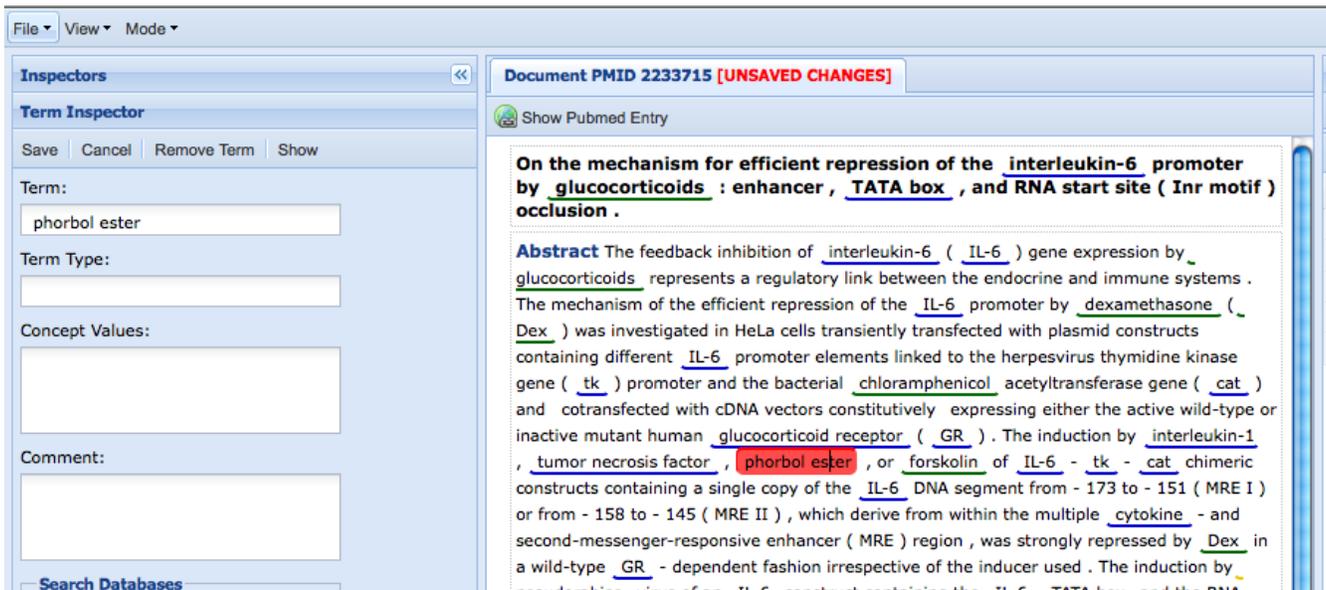
You can delete all selected or unselected concept occurrences in the document using the red buttons on top of the Annotation panel.

## 4. The Term Inspector

You can manually add missed terms to the database as follows. Double-click on a word to be able to annotate it in the inspector. The first click selects the word (a red dotted frame appears), the second click opens the term inspector (the word gets a red background). If you want to create a multi-term word, single-click on one of the words, then its neighbour, etc., until the term has the appropriate span.



Then click again, the term inspector opens.



If you have made an erroneous selection, click on 'Remove Term'. You can also remove terms by clicking them in the document panel while pressing the SHIFT key.

In the Term Inspector, you can manually edit the concept and the type of a term, leave a comment or browse term databases. Currently CTD, Entrez, UniProt and PharmGKB are linked (additional DBs can be added upon request). The following screenshots give a browsing example. First, an example from CTD. Click on a term in the document panel ('pseudorabies', in red in the example below). Tick 'CTD' in the inspector panel (left), then click 'Search Terms'. As this term is ambiguous, we are given a selection. We choose 'Diseases'.

The left screenshot shows the 'Term Inspector' for 'pseudorabies'. The 'Term' is 'pseudorabies', 'Term Type' is 'disease', and 'Concept Values' include 'MESH\_D011557'. The 'Search Databases' section has 'CTD' checked. The right screenshot shows the 'Keyword Query Results' for 'pseudorabies'. It displays 5 items matched: Chemicals (1), Diseases (1), Genes (2), GO Terms (0), and Organisms (0). Below this, a snippet of text from a document is visible, mentioning 'pseudorabies virus' and 'IL-6'.

Second, an example from 'PharmGKB' on 'dexamethasone'.

The screenshot shows the PharmGKB website search results for 'dexamethasone'. The search bar contains 'dexamethasone'. The results are sorted by relevance and show 1-20 of 401 results. The first result is 'Drug: dexamethasone [pgx research]', followed by 'Gene: RASD1', 'Drug: thiabendazole', and 'Drug: ciprofloxacin'.

Within the PharmGKB database, with two additional clicks you might get to the screen shown below, depending on what you are looking for.

The screenshot shows a web browser window with the PharmGKB website. The browser's address bar shows the URL `pharmgkb.org/drug/PA449247?previousQuery=dexamethasone#1`. The website header includes the PharmGKB logo and navigation links: HOME | PUBLICATIONS | FEEDBACK | SIGN IN | Search PharmGKB. Below the header is a navigation bar with links: Home, Search, Download, Help, Consortia. The main content area is titled "DRUG/SMALL MOLECULE: dexamethasone" and includes a search filter "from search: dexamethasone, dexamethasor". A tabbed interface shows "Overview" selected, with other tabs for Clinical PGx, PGx Research, Properties, Pathways, Is Related To, Publications, and Downloads/Link Outs. The Overview section contains three columns of lists: Generic Names, Trade Names, and Brand Mixture Names. To the right of these lists is a chemical structure diagram of dexamethasone. At the bottom left, the PharmGKB Accession Id: PA449247 is displayed.

Generic Names	Trade Names	Brand Mixture Names
DEX	Adexone	Ak Trol Suspension
DXM	Aeroseb-D	(Dexamethasone + Neomycin Sulfate + Polymyxin B Sulfate)
Desametasone	Aeroseb-Dex	Ciprodex (Ciprofloxacin
Desametasone [Dcit]	Anaflogistico	(Ciprofloxacin Hydrochloride) +
Desamethasone	Aphtasolon	Dexamethasone)
Dexametasona [INN-Spanish]	Aphthasolone	Cresonhene L.iq. (Camphor +
Dexamethasone Acetate	Auxiron	

While the core of ODIN is similar in all versions, it is a flexible tool and the version that is adapted to your task may look different. We will look at two typical tasks in the following chapters: working with interactions in section 5, and with organisms in section 6.

## 5. Working with Interactions

We are now going to look at the **interactions** that were suggested by the system. Select one of the interactions: the terms in the document which participate in this interaction will be highlighted (and all other highlightings will disappear).

In the following screenshot, the relation between interleukin-6 and glucocorticoids has been selected.

The screenshot shows the OntoGene.org web application in a Firefox browser. The main content area displays a document titled "On the mechanism for efficient repression of the interleukin-6 promoter by glucocorticoids: enhancer, TATA box, and RNA start site (Inr motif) occlusion". The abstract text is visible, with several terms highlighted in purple, including "interleukin-6", "glucocorticoids", "IL-6", "TATA box", and "RNA start site".

On the right side, the "Annotation" panel is open, showing the "Interactions" tab. A table lists the interactions:

Conf	Type	Concept1	Name 1	Type	Concept 2	Name 2	Buttons
1.00	Drug	PA452347	glucocorticoid	Gene	PA198	IL6	[Green checkmark] [Red X] [N]
0.99	Drug	PA449247	dexamethas	Gene	PA198	IL6	[Green checkmark] [Red X] [N]

Confirm the interaction if you believe that it is correct.

This screenshot shows the same OntoGene.org interface as the previous one, but with the interaction between "glucocorticoid" and "IL6" confirmed. The "Interactions" table now shows a green checkmark in the "Buttons" column for the first row (1.00 Drug PA452347 glucocorticoid Gene PA198 IL6). The document text and abstract remain the same.

If it does appear to be incorrect, proceed as in the picture below.

The screenshot shows the OntoGene web interface in a Mozilla Firefox browser. The main content area displays a document titled "On the mechanism for efficient repression of the interleukin-6 promoter by glucocorticoids : enhancer , TATA box , and RNA start site ( Inr motif ) occlusion .". The abstract text is visible, and a table in the right-hand "Interactions" panel highlights a specific interaction. The table has columns for Conf, Type, Concept 1, Name 1, Type, Concept 2, Name 2, and a set of control icons. The highlighted row shows a confidence of 1.00, a Drug type, Concept 1 PA452347 (glucocorticoi), Name 1 Gene PA198, Type IL6, Concept 2 PA198, and Name 2 IL6. A mouse cursor is pointing at the 'v' icon in the control column of this row.

If you cannot decide, because the abstract does not provide sufficient information, and you would need to consult the full text of the paper. In this case, proceed as below.

This screenshot is identical to the one above, showing the same document and interaction table. However, in this instance, the mouse cursor is pointing at the 'u' icon in the control column of the highlighted row, indicating a different action being performed on the interaction.

If the document actually expresses that there is NO interaction between the two entities, select the 'N' tick-box (the OK tick-box is selected automatically).

**Document PMID 2233715 [UNSAVED CHANGES]**

Show Pubmed Entry

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Interleukin-1 ; Interleukin-6 ; Oligonucleotide Probes ; RNA , Neoplasm ; Receptors , Glucocorticoid ; Tumor Necrosis Factor-alpha ; Tetradecanoylphorbol Acetate ; Dexamethasone ; Forskolin ; Base Sequence ; Dexamethasone ; pharmacology ; Enhancer Elements , Genetic ; drug effects ; Feedback ; Forskolin ; pharmacology ; Gene Expression ; drug effects ; Genes , Suppressor ; drug effects ; HeLa Cells ; drug effects ; immunology ; Humans ; Interleukin-1 ; pharmacology ; Interleukin-6 ; genetics ; Molecular Sequence Data ; Oligonucleotide Probes ; Promoter Regions , Genetic ; RNA , Neoplasm ; drug effects ; genetics ; Receptors , Glucocorticoid ; genetics ; metabolism ; Restriction Mapping ; Second Messenger Systems ; TATA Box ; drug effects ; Tetradecanoylphorbol Acetate ; pharmacology ; Transcription , Genetic ; Transfection ; Tumor Necrosis Factor-alpha ; pharmacology ;

Conf	Type	Concept1	Name 1	Type 2	Name 2	N
<input checked="" type="checkbox"/>	Drug	PA452347	glucocortico	Gene	PA198 IL6	<input checked="" type="checkbox"/>
<input type="checkbox"/>	Drug	PA449247	dexamethas	Gene	PA198 IL6	<input type="checkbox"/>

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You can optionally resize the columns of the interaction table, and remove some of them. If you hover over the column titles, a down-arrow between the columns will appear: use it in order to open a menu. For example, the columns “Concept1” and “Concept2” can be removed. The same information can be obtained by moving the mouse over the column “Name”.

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Show Pubmed Entry

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Interleukin-1 ; Interleukin-6 ; Oligonucleotide Probes ; RNA , Neoplasm ; Receptors , Glucocorticoid ; Tumor Necrosis Factor-alpha ; Tetradecanoylphorbol Acetate ; Dexamethasone ; Forskolin ; Base Sequence ; Dexamethasone ; pharmacology ; Enhancer Elements , Genetic ; drug effects ; Feedback ; Forskolin ; pharmacology ; Gene Expression ; drug effects ; Genes , Suppressor ; drug effects ; HeLa Cells ; drug effects ; immunology ; Humans ; Interleukin-1 ; pharmacology ; Interleukin-6 ; genetics ; Molecular Sequence Data ; Oligonucleotide Probes ; Promoter Regions , Genetic ; RNA , Neoplasm ; drug effects ; genetics ; Receptors , Glucocorticoid ; genetics ; metabolism ; Restriction Mapping ; Second Messenger Systems ; TATA Box ; drug effects ; Tetradecanoylphorbol Acetate ; pharmacology ; Transcription , Genetic ; Transfection ; Tumor Necrosis Factor-alpha ; pharmacology ;

Conf	Type 1	Name 1	Type 2	Name 2	N
<input type="checkbox"/>	Drug	dexa	Sort Ascending	IL6	<input type="checkbox"/>
<input checked="" type="checkbox"/>	Drug	gluc	Sort Descending	IL6	<input checked="" type="checkbox"/>

Columns menu options:

- Type 1
- Concept 1
- Name 1
- Type 2
- Concept 2
- Name 2

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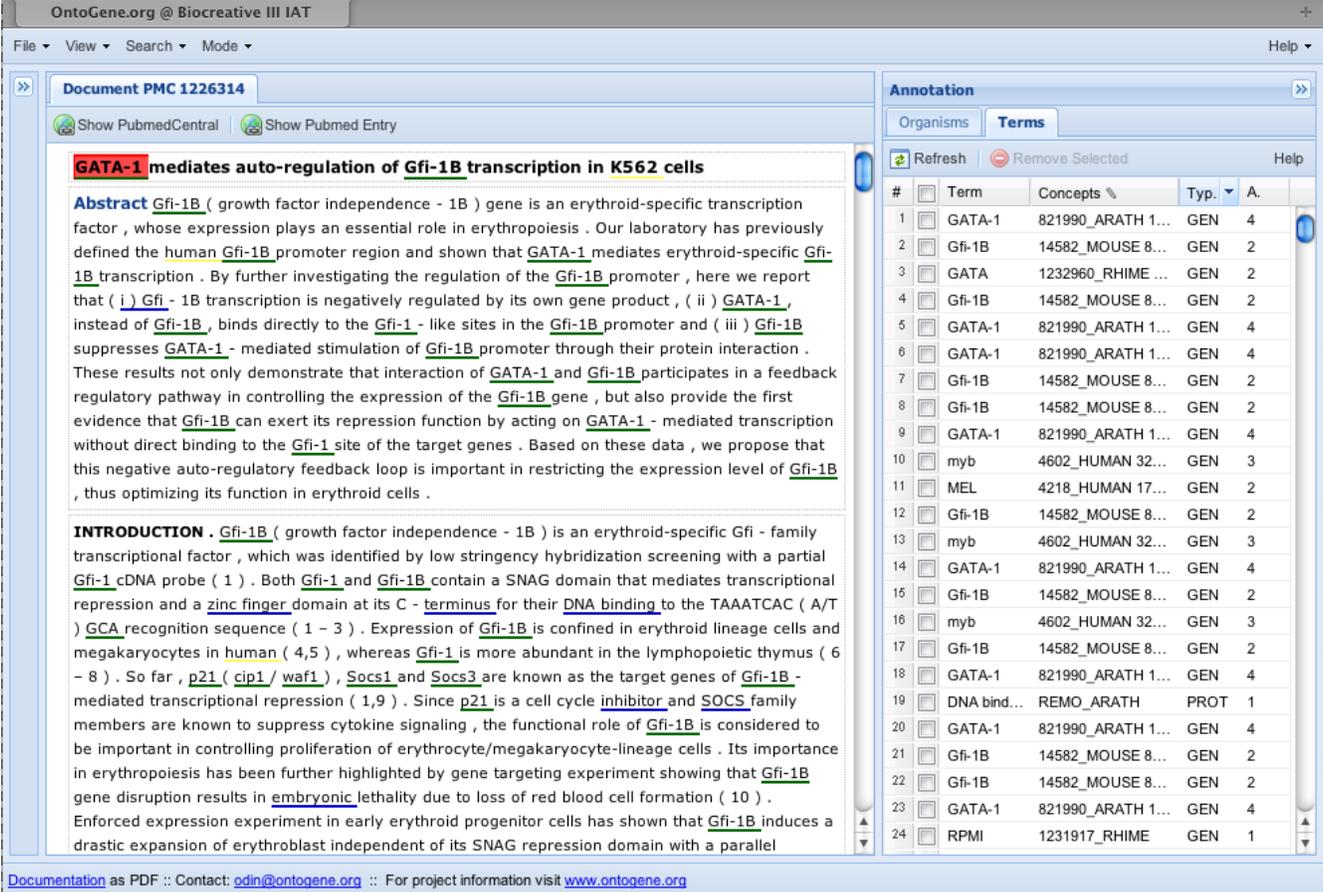




## 6. Constraining Organisms

In the following example, we show a version of ODIN that works with information on organisms. Depending on your customization and field of application, this may not be available.

We open the sample PubMed file 1226314, and select organism and term tables from the 'view' menu, if your version of ODIN offers them. Your screen may now look as follows.



The screenshot displays the OntoGene.org web application interface. The main window shows a PubMed document titled "GATA-1 mediates auto-regulation of Gfi-1B transcription in K562 cells". The abstract text is visible, discussing the role of Gfi-1B in erythropoiesis and its regulation by GATA-1. The introduction section provides further details on the Gfi-1B gene and its function.

On the right side, the "Annotation" panel is active, showing a table of terms and their associated concepts. The table has columns for "#", "Term", "Concepts %", "Typ.", and "A.". The data is as follows:

#	Term	Concepts %	Typ.	A.
1	GATA-1	821990_ARATH 1...	GEN	4
2	Gfi-1B	14582_MOUSE 8...	GEN	2
3	GATA	1232960_RHIME ...	GEN	2
4	Gfi-1B	14582_MOUSE 8...	GEN	2
5	GATA-1	821990_ARATH 1...	GEN	4
6	GATA-1	821990_ARATH 1...	GEN	4
7	Gfi-1B	14582_MOUSE 8...	GEN	2
8	Gfi-1B	14582_MOUSE 8...	GEN	2
9	GATA-1	821990_ARATH 1...	GEN	4
10	myb	4602_HUMAN 32...	GEN	3
11	MEL	4218_HUMAN 17...	GEN	2
12	Gfi-1B	14582_MOUSE 8...	GEN	2
13	myb	4602_HUMAN 32...	GEN	3
14	GATA-1	821990_ARATH 1...	GEN	4
15	Gfi-1B	14582_MOUSE 8...	GEN	2
16	myb	4602_HUMAN 32...	GEN	3
17	Gfi-1B	14582_MOUSE 8...	GEN	2
18	GATA-1	821990_ARATH 1...	GEN	4
19	DNA bind...	REMO_ARATH	PROT	1
20	GATA-1	821990_ARATH 1...	GEN	4
21	Gfi-1B	14582_MOUSE 8...	GEN	2
22	Gfi-1B	14582_MOUSE 8...	GEN	2
23	GATA-1	821990_ARATH 1...	GEN	4
24	RPMI	1231917_RHIME	GEN	1

The article deals with human genes and proteins. If we click the organism tab of the annotation panel we see that indeed the system assign the highest probability (51.3%) to human.

We can discard all non-human concepts (e.g. interpretations terms as non-human proteins) as follows: tick all organisms except human, then click on the '- selected' symbol, as shown below.

The screenshot shows the OntoGene interface. The main content area displays a document titled "GATA-1 mediates auto-regulation of Gfi-1B transcription in K562 cells". The abstract text is visible, discussing the role of Gfi-1B in erythropoiesis and its regulation by GATA-1. The introduction section is also visible, detailing the Gfi-1B protein structure and its function.

On the right side, the "Annotation" panel is active, showing a list of organisms. The "Organisms" tab is selected, and the "Selected" button is highlighted. The list of organisms includes:

Organism	Value
<input checked="" type="checkbox"/> HUMAN	0.232170530872704
<input checked="" type="checkbox"/> MOUSE	0.0578636294286605
<input checked="" type="checkbox"/> DROME	0.0336846853420541
<input checked="" type="checkbox"/> BPP4	0.026533820671173
<input checked="" type="checkbox"/> CERAE	0.026533820671173
<input checked="" type="checkbox"/> ARATH	0.0253729660168092
<input checked="" type="checkbox"/> NEUCR	0.0199003655033797
<input checked="" type="checkbox"/> PIG	0.0199003655033797
<input checked="" type="checkbox"/> RAT	0.0176648911118334
<input checked="" type="checkbox"/> BPT4	0.0132669103355865
<input checked="" type="checkbox"/> STRPU	0.0132669103355865

At the bottom of the page, there is a footer with contact information: "Documentation as PDF :: Contact: [odin@ontogene.org](mailto:odin@ontogene.org) :: For project information visit [www.ontogene.org](http://www.ontogene.org)".

All organisms except for human disappear. Also in the text, fewer terms are highlighted. If we click the terms tab no change is immediately apparent, we first need to press 'refresh' button to see only human terms. If we click on a term in the text, the term inspector only gives human concept values, which considerably reduces ambiguity.

## 7. Saving your work

In the 'file' menu, you can save your annotation. Note that the save option is not available in demo versions. If you save an article, the next time you reload it, your selections up to that point are there.

The screenshot shows the OntoGene.org web application in a Mozilla Firefox browser. The 'File' menu is open, and the 'Save' option is highlighted. The main content area displays a scientific article abstract titled "On the mechanism for efficient repression of the interleukin-6 promoter by glucocorticoids : enhancer , TATA box , and RNA start site ( Inr motif ) occlusion .". The abstract text is visible, along with a list of related terms and a table of interactions.

Conf	Type 1	Name 1	Type 2	Name 2					
0.99	Drug	dexamethasone	Gene	IL6					
1.00	Drug	glucocorticoids	Gene	IL6					

When you are done with an article, click on “Finish & Save”.

The screenshot shows the same OntoGene.org web application, but now the 'Interactions' tab is active. The 'Finish & Save' button is highlighted in the top right corner of the interaction table. The article text and the interaction table are visible.

Conf	Type 1	Name 1	Type 2	Name 2					
0.99	Drug	dexamethasone	Gene	IL6					
1.00	Drug	glucocorticoids	Gene	IL6					

For any problem, comment or suggestion please contact us at

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Best regards,  
The OntoGene Team  
<http://www.ontogene.org/>