


EmBiology Insights guide: NEW search filters

(Refer to pages 9-11 for new filter workflow)

June 2024




Select EmBio Insights to upload and find information about multiple genes/proteins*



EmBiology

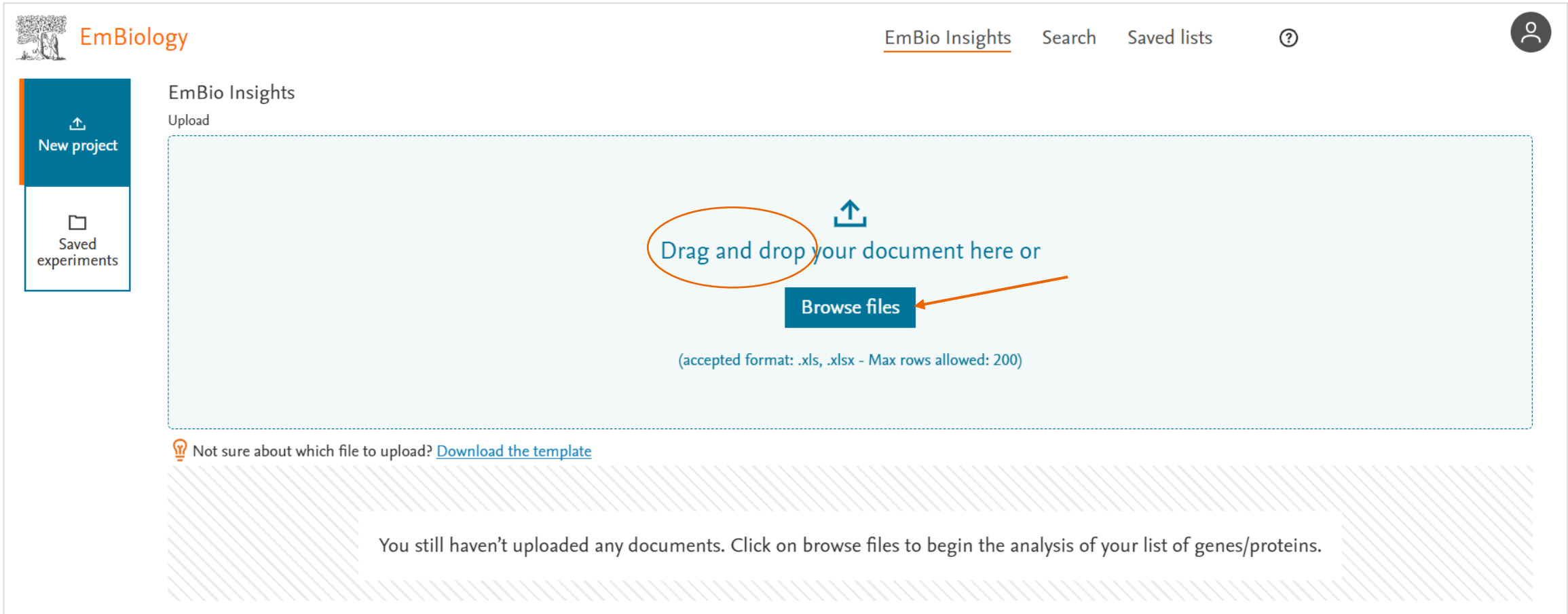
EmBio Insights Search Saved lists ?

Find biology related articles and networks

Type in a single search term e.g. disease, protein, drug, cell process, etc. 

* Genes and proteins fall into the same concept type in EmBiology – for the remainder of this guide, they will be referred to as Proteins

Uploading list of proteins



EmBiology

EmBio Insights Search Saved lists ?

EmBio Insights
Upload

New project

Saved experiments

Drag and drop your document here or

Browse files

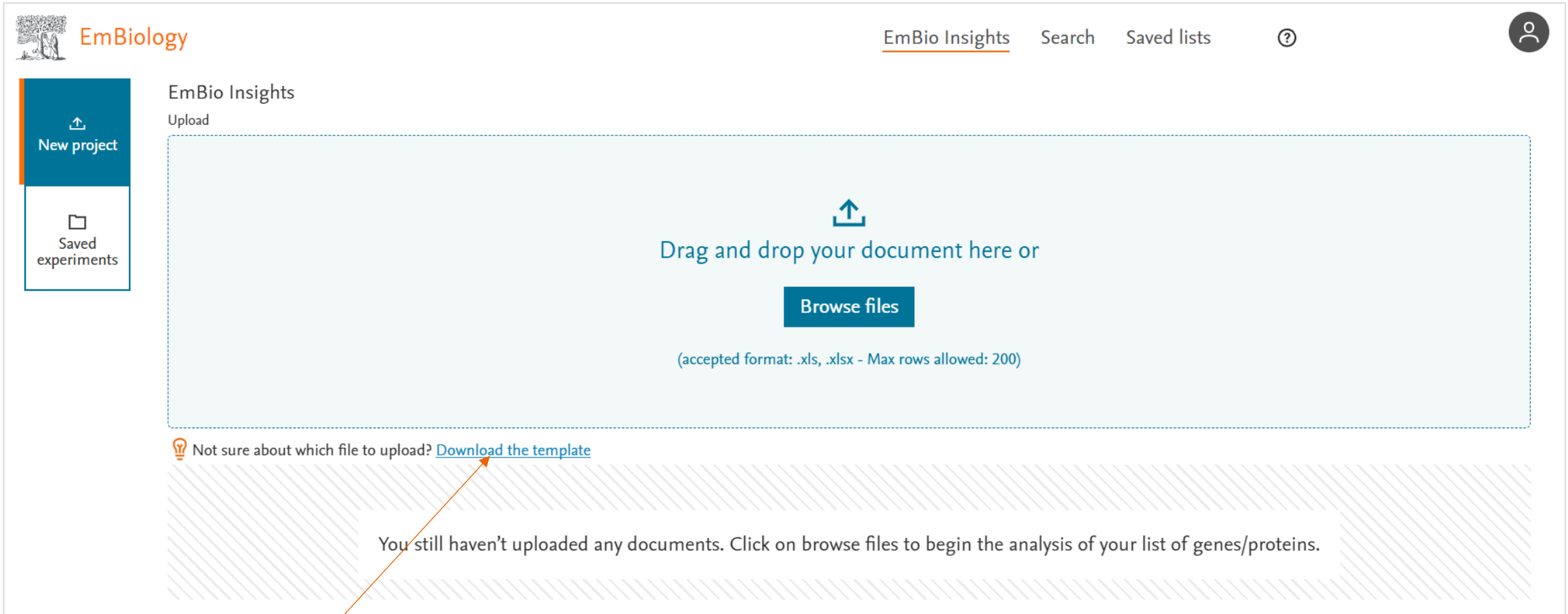
(accepted format: .xls, .xlsx - Max rows allowed: 200)

Not sure about which file to upload? [Download the template](#)

You still haven't uploaded any documents. Click on browse files to begin the analysis of your list of genes/proteins.

Drag files into the centre of the page or upload documents by clicking 'Browse files'
You can upload a list of up to 200 proteins in an xls or xlsx format

Uploading list of proteins



The screenshot shows the EmBio Insights web interface. At the top, the EmBiology logo is on the left, and navigation links for EmBio Insights, Search, Saved lists, and a help icon are on the right. A user profile icon is in the top right corner. On the left sidebar, there are two buttons: 'New project' with an upload icon and 'Saved experiments' with a folder icon. The main content area is titled 'EmBio Insights Upload'. It features a large light blue box with a dashed border containing an upload icon, the text 'Drag and drop your document here or', a 'Browse files' button, and the text '(accepted format: .xls, .xlsx - Max rows allowed: 200)'. Below this box, a lightbulb icon is next to the text 'Not sure about which file to upload? [Download the template](#)'. At the bottom, a hatched box contains the text 'You still haven't uploaded any documents. Click on browse files to begin the analysis of your list of genes/proteins.' An orange arrow points from the text 'See an example of what the file should look like by clicking 'Download the template'' at the bottom of the slide to the 'Download the template' link in the screenshot.

EmBiology

EmBio Insights Search Saved lists ?

EmBio Insights Upload

New project

Saved experiments

Drag and drop your document here or

Browse files

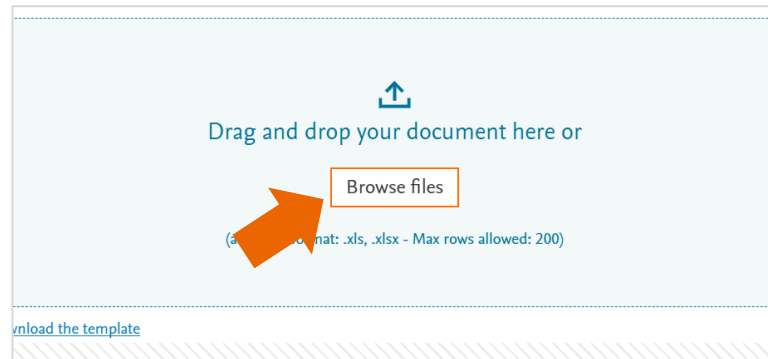
(accepted format: .xls, .xlsx - Max rows allowed: 200)











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See an example of what the file should look like by clicking 'Download the template'



E.g., browse files to upload and map to the database






Name	Status
 Alopecia short list_200	
 Gene list for experiment upload_visualisation	
 Gene list for experiment upload_visualisation	
 Chord diagram data for upload	
 List of preset relationships that correspond to fi...	



Uploads			
List name	Status	Date ↓	
1. Alopecia short list_200.xlsx 	 Analyzing...	11/09/2023	
Click edit icon to enter your experiment description.			

 Upload successful. Mapping in progress. 

Information is shown that indicates a successful upload. **'Analyzing'** status indicates the proteins in the list are being mapped to the database

Uploads			
List name	Status	Date ↓	
1. Alopecia short list_200.xlsx 	 Completed	11/09/2023	
Click edit icon to enter your experiment description.			

'Completed' status indicates mapping is done. Select **'Open analysis'** to proceed to the next step

To see relationships for all proteins on your list, click find connections – or apply additional filters

<input type="checkbox"/>	Proteins (198)	Database match (196/198)	Total references	Concept type	Description from databases
<input type="checkbox"/>	A2ML1 >	✓	43	Protein	Alpha-2-macroglobulin like 1
<input type="checkbox"/>	A4GALT >	✓	84	Protein	Alpha 1,4-galactosyltransferase (p blood group)
<input type="checkbox"/>	AAAS >	✓	107	Protein	Aladin wd repeat nucleoporin
<input type="checkbox"/>	AACS >	✓	115	Protein	Acetoacetyl-coa synthetase
<input type="checkbox"/>	AADACL3 >	✓	0	Protein	Arylacetamide deacetylase like 3
<input type="checkbox"/>	AADAT >	✓	237	Protein	Aminoadipate aminotransferase
<input type="checkbox"/>	AAED1 >	✓	4	Protein	Peroxisredoxin like 2c
<input type="checkbox"/>	AAED1 >	✓	4	Protein	Peroxisredoxin like 2c

Use the scrollbar to see all proteins in your list

Click 'Find connections' to skip filters and immediately see relationships for all proteins on your list – skip to slide 13 for this workflow

Find connections

Apply filters

Apply filters to narrow down your list of proteins before identifying connections for the proteins in your list

Applying filters to your uploaded list of proteins

Upload > Concepts mapping > Apply filters

Alopecia short list_200.xlsx

Apply filters

New project

Saved

+ Add Filter

198 results >

Number of proteins that will be analysed

Skip filters

Skip filters to directly find relationships for all proteins on your list

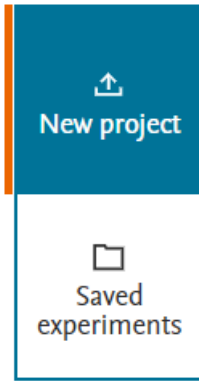
Add filter ×

- Cell where protein is expressed >
- Diseases associated with proteins >
- Organ where protein is expressed >
- Primary cell localization >
- Protein function >
- Tissue where protein is expressed >

Click + Add Filter to add a filter that will narrow down the number of proteins that will be analysed, based on filter selections

- **Cell where protein is expressed:** Shows cells that have a cell expression relationship with proteins from your uploaded list. Selecting items from this filter will reduce the proteins to be analysed by ones known to be expressed in the selected cell types.
- **Diseases associated with proteins:** Shows diseases with a regulation relationship with proteins from your uploaded list. Selecting items from this filter will reduce the proteins to be analysed by ones known to be associated with these diseases.
- **Organ where protein is expressed:** Shows organs that have a cell expression relationship with proteins from your uploaded list. Selecting items from this filter will reduce the proteins to be analysed by ones known to be expressed in the selected organs.
- **Primary cell location:** Shows the primary cell location for proteins from your uploaded list. Selecting items from this filter reduces the proteins to be analysed by ones expressed in the selected locations.
- **Protein function:** Shows cell processes that have a regulation relationships with proteins from your uploaded list. Selecting items from this filter will reduce the proteins to be analysed by ones known to be involved in the selected cell processes.
- **Tissue where protein is expressed:** Shows tissues that have a cell expression relationship with proteins from your uploaded list. Selecting items from this filter will reduce the proteins to be analysed by ones known to be expressed in the selected tissue types

Select the question to investigate, which will define the relationships searched



Upload > Concepts mapping > Apply filters > Find connections

Alopecia short list_200.xlsx

Select a question

I'm looking for...

- Diseases associated with proteins in my list ⓘ
- Diseases that are **positively regulated** by proteins on my list ⓘ
- Diseases that have **known biomarkers** in my list ⓘ
- Diseases that have (potential) **novel biomarkers** in my list ⓘ
- Cell processes **regulated by** proteins in my list ⓘ
- Expression targets (proteins) **regulated by** proteins in my list ⓘ
- Common **regulators** (proteins) of proteins in my list ⓘ
- Drugs that **directly interact with** proteins in my list ⓘ
- Drugs that **regulate** proteins in my list ⓘ

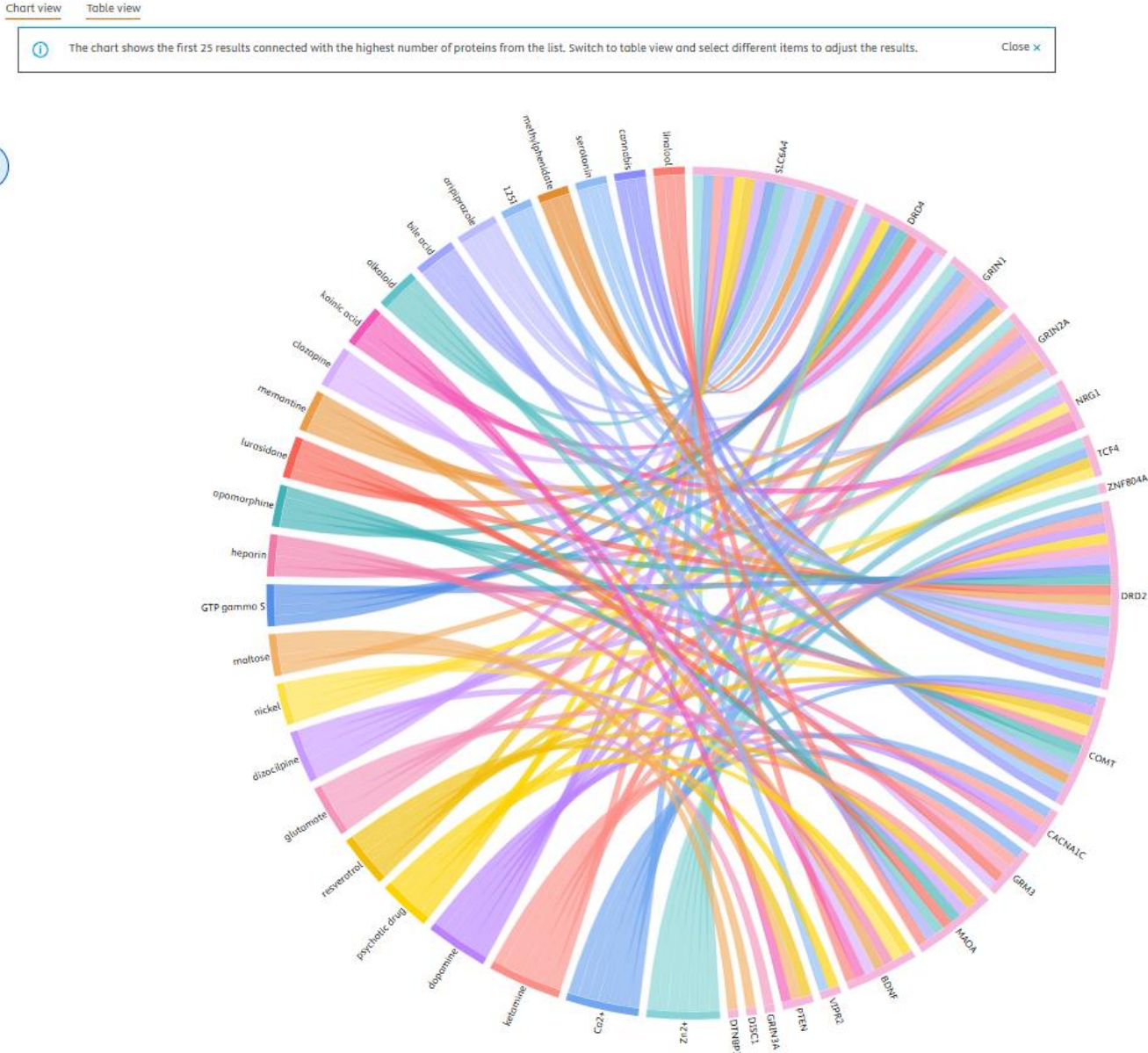
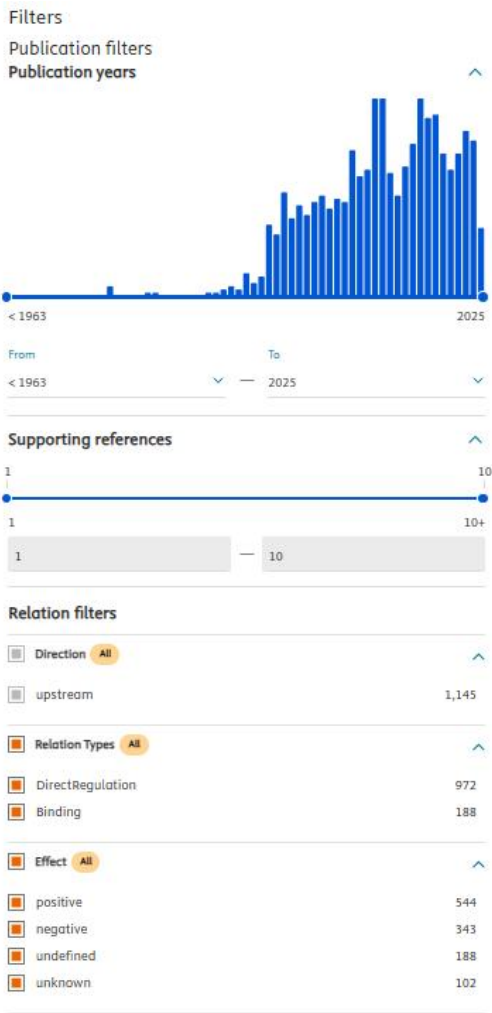
Find 🔍

Filters applied: downstream direction, positive effect, Regulation relationship

Click 'i' to see the relationships that are applied to address each question



Use the NEW filters to narrow down your search



Take advantage of the NEW filters to refine your results by Publications or by Relations.

Publication Filters

Publication years: Allows filtering by specific years. For example, setting the lower limit to 1992 and upper limit to 2021 means results will include all articles published between the years 1992 and 2021.

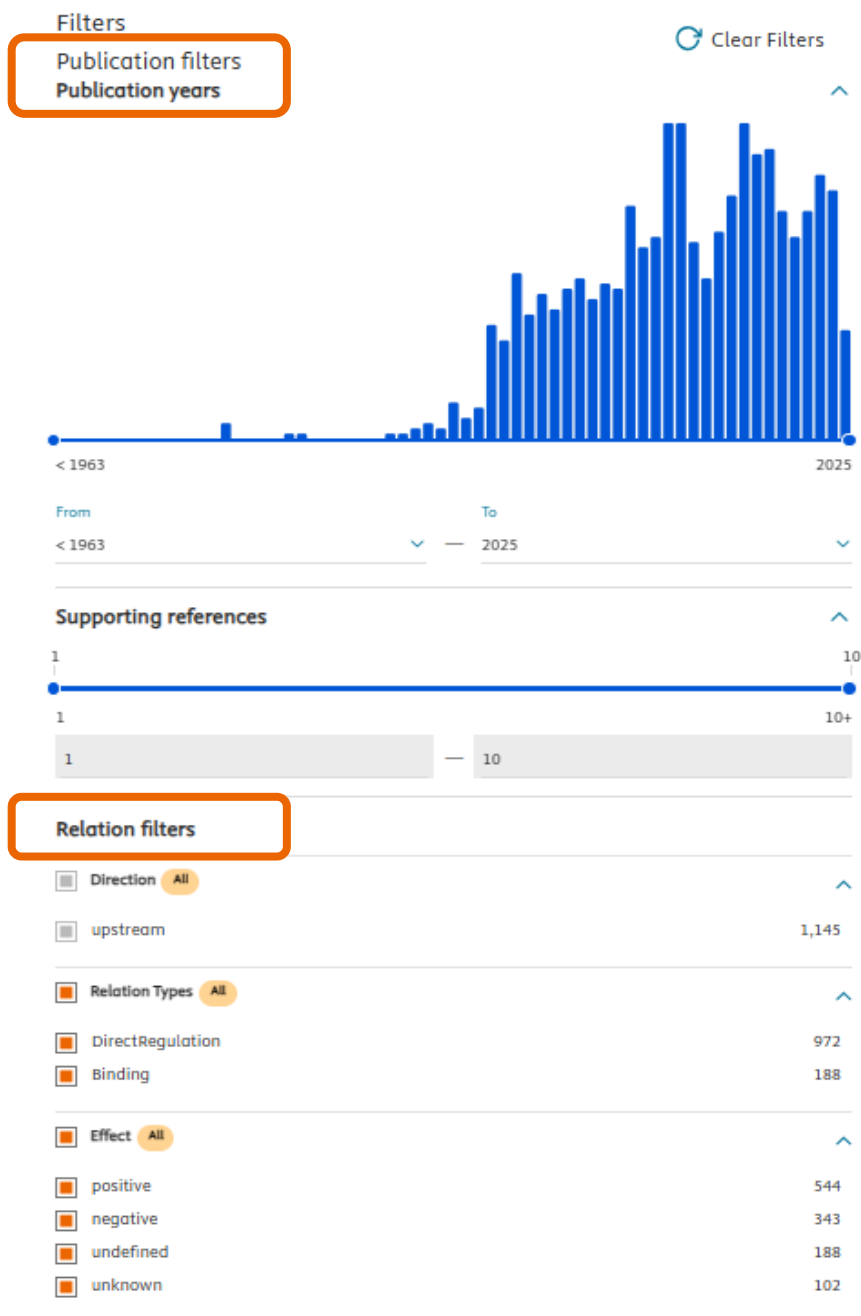
References: Allows filtering by a specific number of references per relation. For example, if the No. references per relation = 5, results will include articles where all primary relationships are supported by 5 or more references.

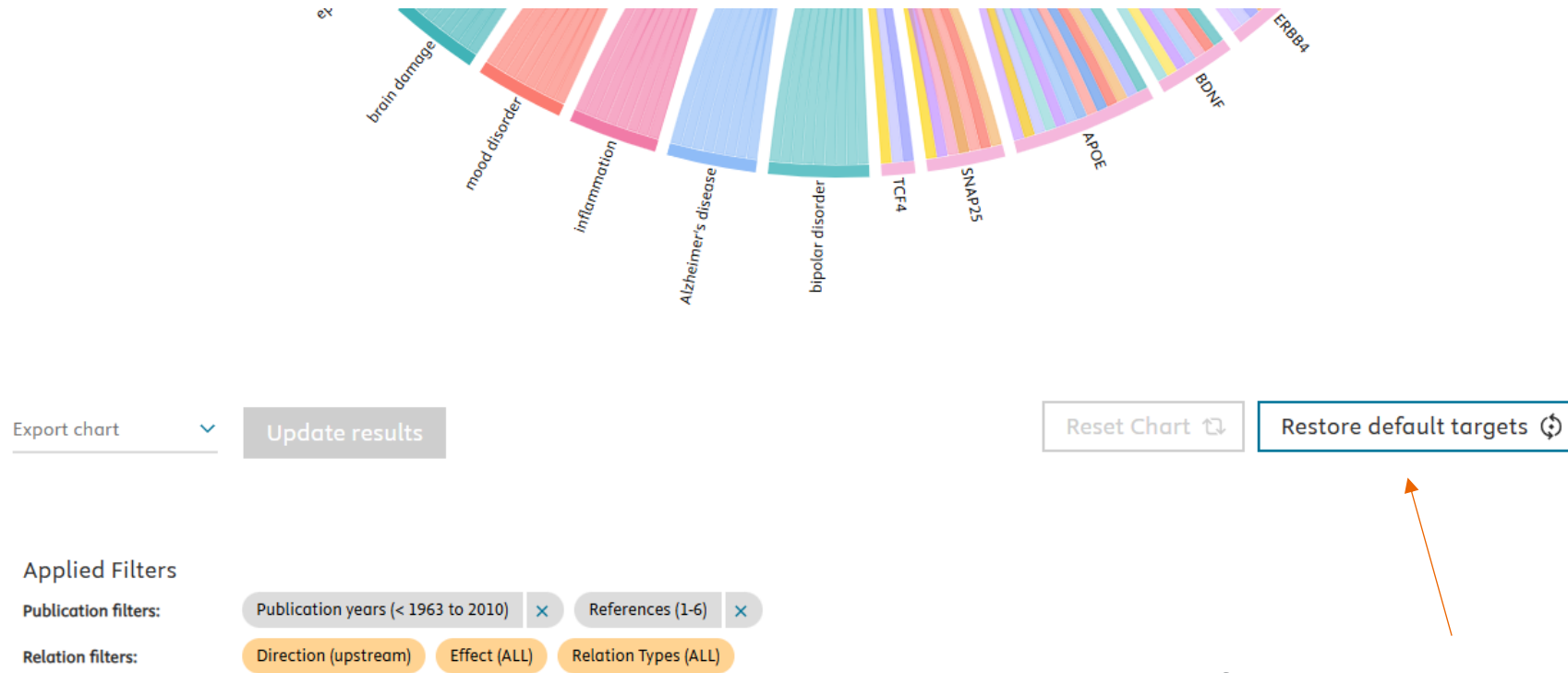
Relation Filters

Direction: results will include articles where all primary relationship are 1) upstream (meaning concepts act on the search term) or 2) downstream (concepts are acted on by the search term). The filter option is disabled (greyed out) when there is only one possible choice, based on the original question being examined.

Relation Types: results will include articles where all primary relationships are of the selected type(s).

Effect: results will include articles where all primary relationships are of the selected effect(s) – positive, negative, unknown (meaning the effect of the relationship has not been identified) and undefined (meaning the relationship type does not have a positive/negative effect).





The applied filters will appear here. You can add or remove selected filters, and the chart will update automatically.

The Restore default targets button resets the interface to its initial state by removing any interactions you've made, such as applied filters or changes to the selected items in the chart. It will return to the starting point, showing the first 25 results connected with the highest number of proteins from the uploaded list.