

Tutorial:

MINERVA platform for map reviewers

WP1



Funded by the Horizon 2020
Framework Programme of the
European Union



March 2022 v1



Tutorial:

MINERVA platform for map reviewers

University of Liège Team



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Here you will find the links to the maps and the credentials to access them and review.

The ONTOX MINERVA session is maintained by Hogeschool Utrecht (HU) WP5 team (led by Marc Teunis).

General link for ONTOX's MINERVA session: <http://145.38.204.52:8080/minerva/admin.xhtml>

Physiological maps direct links:

- Lipid Metabolism: http://145.38.204.52:8080/minerva/index.xhtml?id=Lipid_Metabolism_PM_v2_0_0
- Bile Secretion: http://145.38.204.52:8080/minerva/index.xhtml?id=Liver_Bile_Secretion_Physiological_Map_v2_0_0
- Vitamin D Metabolism: <http://145.38.204.52:8080/minerva/index.xhtml?id=vitD>
- Urine Production: http://145.38.204.52:8080/minerva/index.xhtml?id=Kidney_PM
- Neural Tube Closure: http://145.38.204.52:8080/minerva/admin.xhtml?id=Neural_Tube_Closure_PM_March_2022
- Brain Development: http://145.38.204.52:8080/minerva/index.xhtml?id=Brain_Development_PM_v2_0_0

If a direct link does not work, please try the general link or message us.

If you arrive on this page, please use the credentials that have been sent to you. If you did not receive these credentials, please contact us.

After entering your login and password, you will be redirected to the next page.

If you use direct links to the maps, you can jump to slide 6.

AUTHORIZATION FORM

LOGIN:

PASSWORD:

LOGIN

RESET PASSWORD

[> BACK TO MAP](#)

[+ ADD PROJECT](#) [REFRESH](#)

Show entries

ProjectId	Created	Created by	Name	Status	Edit	Remove
empty	2014-03-27	admin		Ok		
Lipid_Metabolism_PM_20220310	2022-03-10	admin	Lipid_Metabolism_PM	Ok		
Liver_Bile_Production_and_Secretion_20220203	2022-02-21	admin	Liver_Bile_Secretion_PM	Ok		
physmap_108	2022-03-02	admin	Physmap	Ok		
physmap_92	2022-02-23	admin	Physmap	Ok		
physmap_97	2022-02-25	admin	Physmap	Ok		
physmap_99	2022-02-25	admin	Physmap	Ok		
vitD	2022-03-01	admin	VitaminD_PM	Ok		

Showing 1 to 8 of 8 entries

Previous Next

[+ ADD PROJECT](#) [REFRESH](#)

After logging in, this is the page you will see. Here you will be able to choose between the available maps to open.

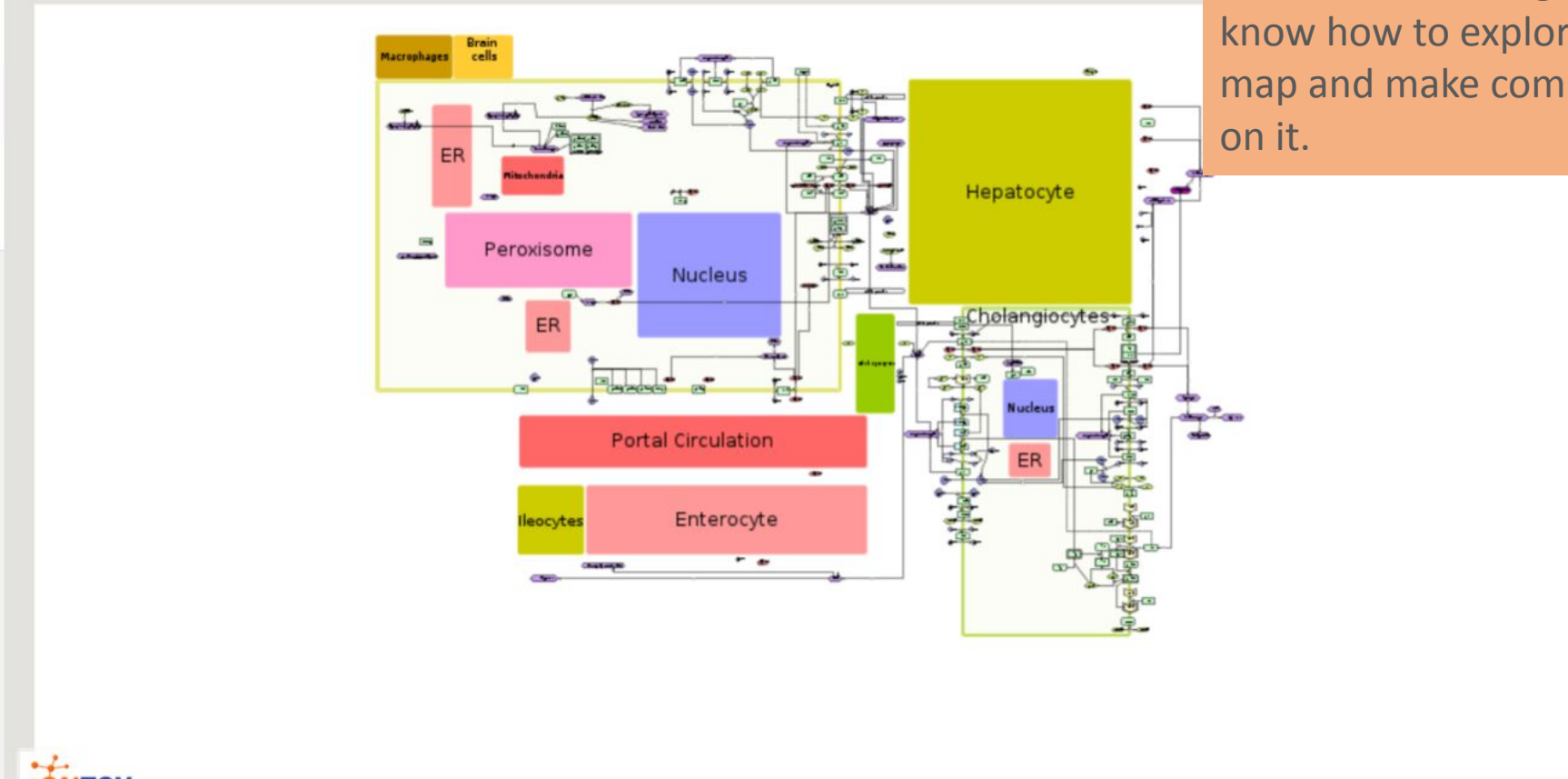
Don't worry! Only the last working versions of the maps will be available in this list.



SEARCH IN CONTENT:

keyword

☐ PERFECT MATCH



And here we are, with the map to be reviewed.

Let's take a look at the MINERVA platform environment and get to know how to explore the map and make comments on it.



SEARCH



OVERLAYS



INFO



CONTENT

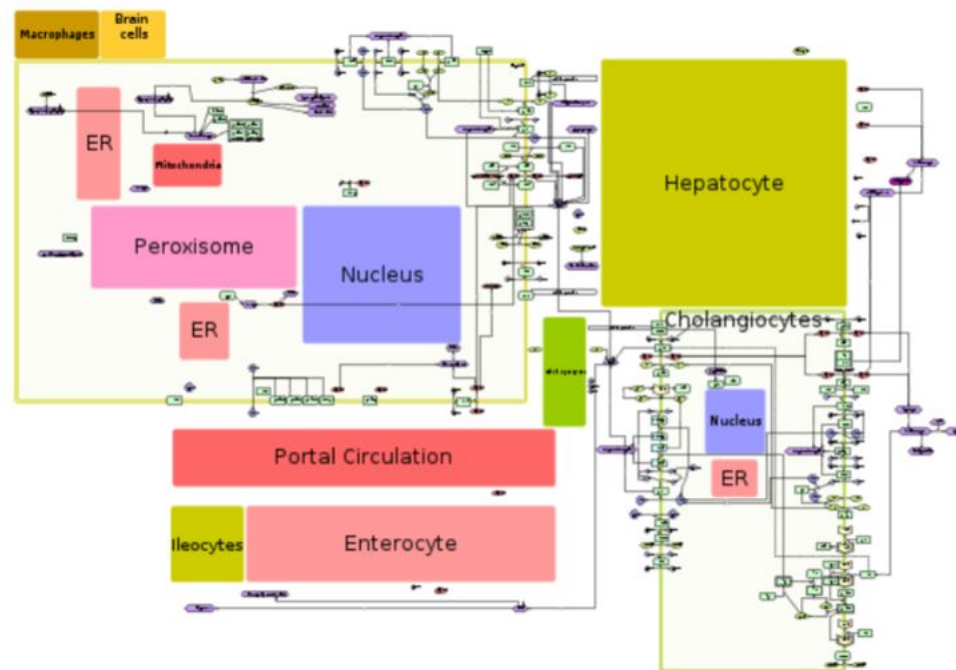
DRUG

CHEMICAL

MiRNA

First, let's make it easier to look at the map.

For that, click on "Overlays".



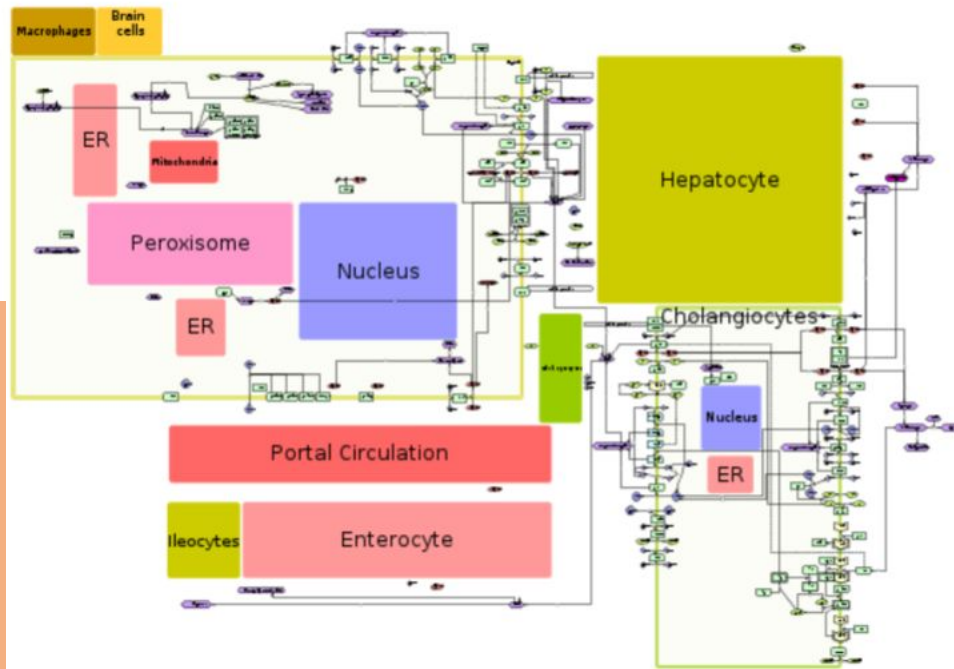
BACKGROUNDS:

Name	View
Pathways and compartments	🔍
Network	🔍
Empty	🔍



Now, to visualize the whole map without having the compartment masks, you can choose the “Network” mode of visualization by clicking on the magnifier icon.

It is not mandatory to use this resource, but it will make the viewing cleaner.



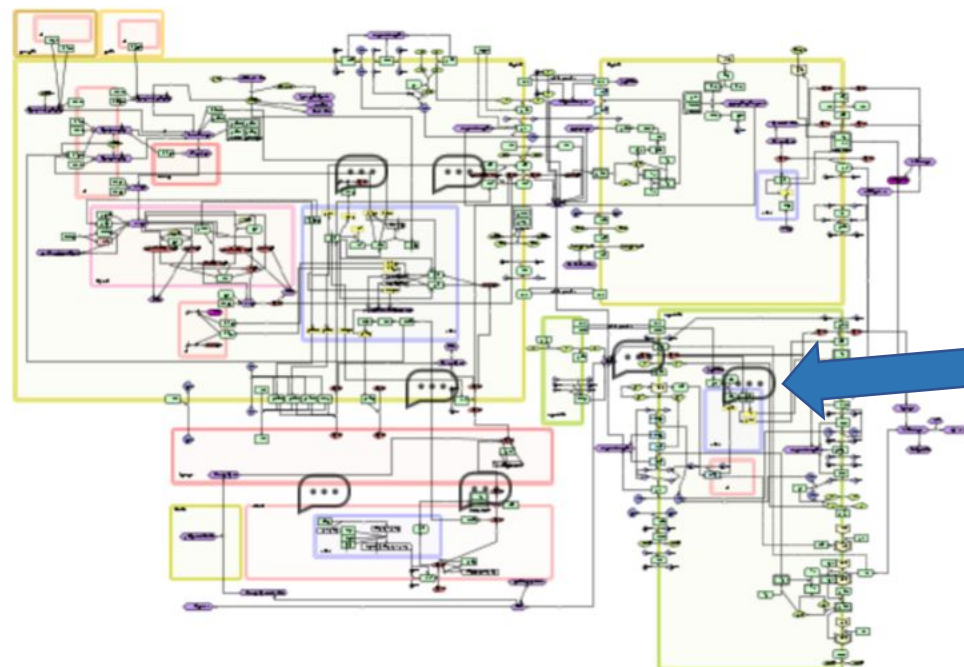
BACKGROUNDS:

Name	View
Pathways and compartments	
Network	
Empty	

USER-PROVIDED OVERLAYS:

No	Name	View	Data	Edit
No data available in table				
Add overlay		Refresh		

In the top bar, we have one box that allows the display of the comments (orange arrow) in the map (blue arrow), so you can see where other contributors made comments and also click on the comments to open and read them.



Liver_Bile_Secretion_PM Feb.03_2022

SEARCH OVERLAYS INFO

BACKGROUNDS:

Name	View
Pathways and compartments	
Network	
Empty	

USER-PROVIDED OVERLAYS:

No	Name	View	Data	Edit
No data available in table				

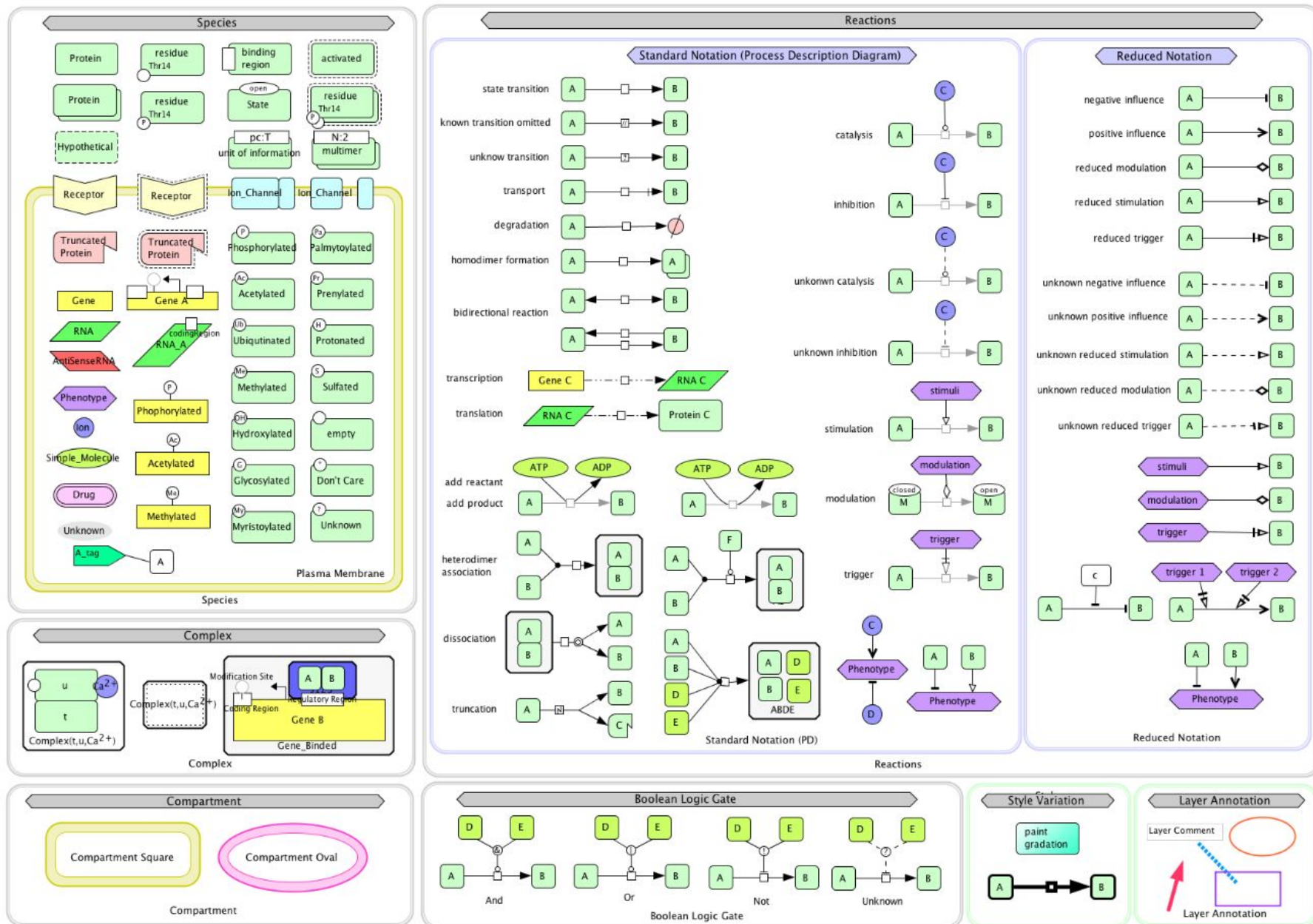
Add overlay Refresh

Powered by MINERVA Platform (v16.0.7)

There is also a box opening a legend panel with the current version of the CellDesigner graphical notation (the notation used in the map construction).

For your reference, there is an image with the full panel in the next slide.

☒ LEGEND ☐ COMMENTS



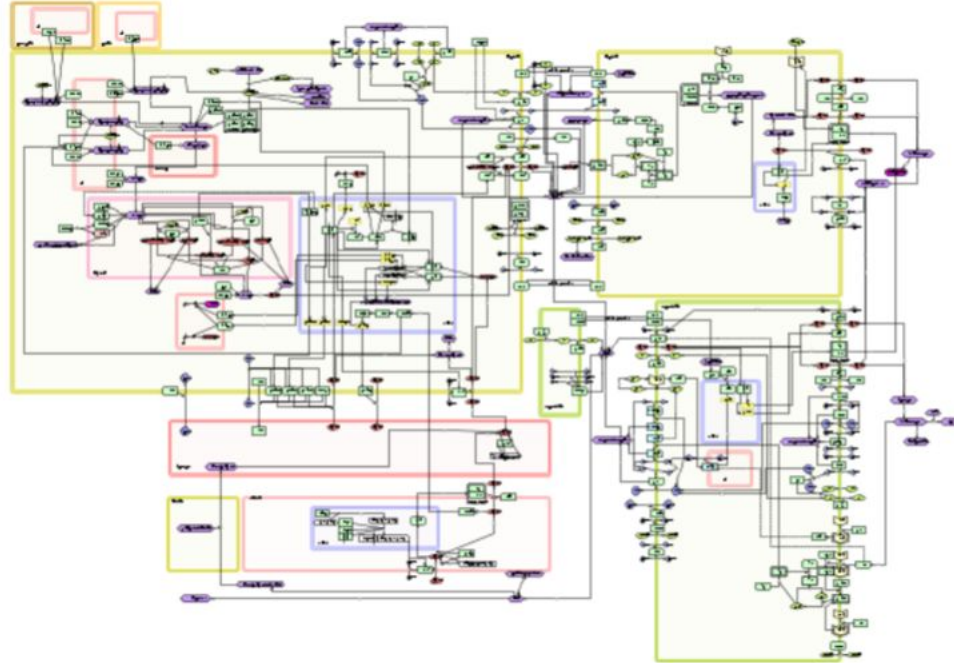
BACKGROUNDS

Name
Pathways and co
Network
Empty

To navigate through the map, you can use the zoom buttons or your mouse scroll. You can also use your mouse to click and drag to change locations. It is the same mechanism for using Google Maps, for example.

USER-PROVIDED OVERLAYS:

No	Name	View	Data	Edit
No data available in table				
Add overlay		Refresh		



?

View

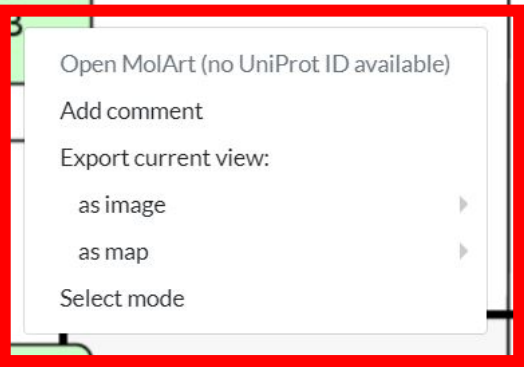
0.00

ho n

To add a comment, click the mouse's right button on top of the place where you want to tag the comment. Then, choose the "Add comment" and click on it.

Edit

Refresh



BACKGROUNDS:

Next, you can choose where to pin the comment (in the "type" menu), and there is a place to type your comment.

Please, don't forget to identify yourself with your e-mail, so that we can reach you to discuss if needed.

ADD COMMENT

Type

Protein: NHE3

Pinned



Email:

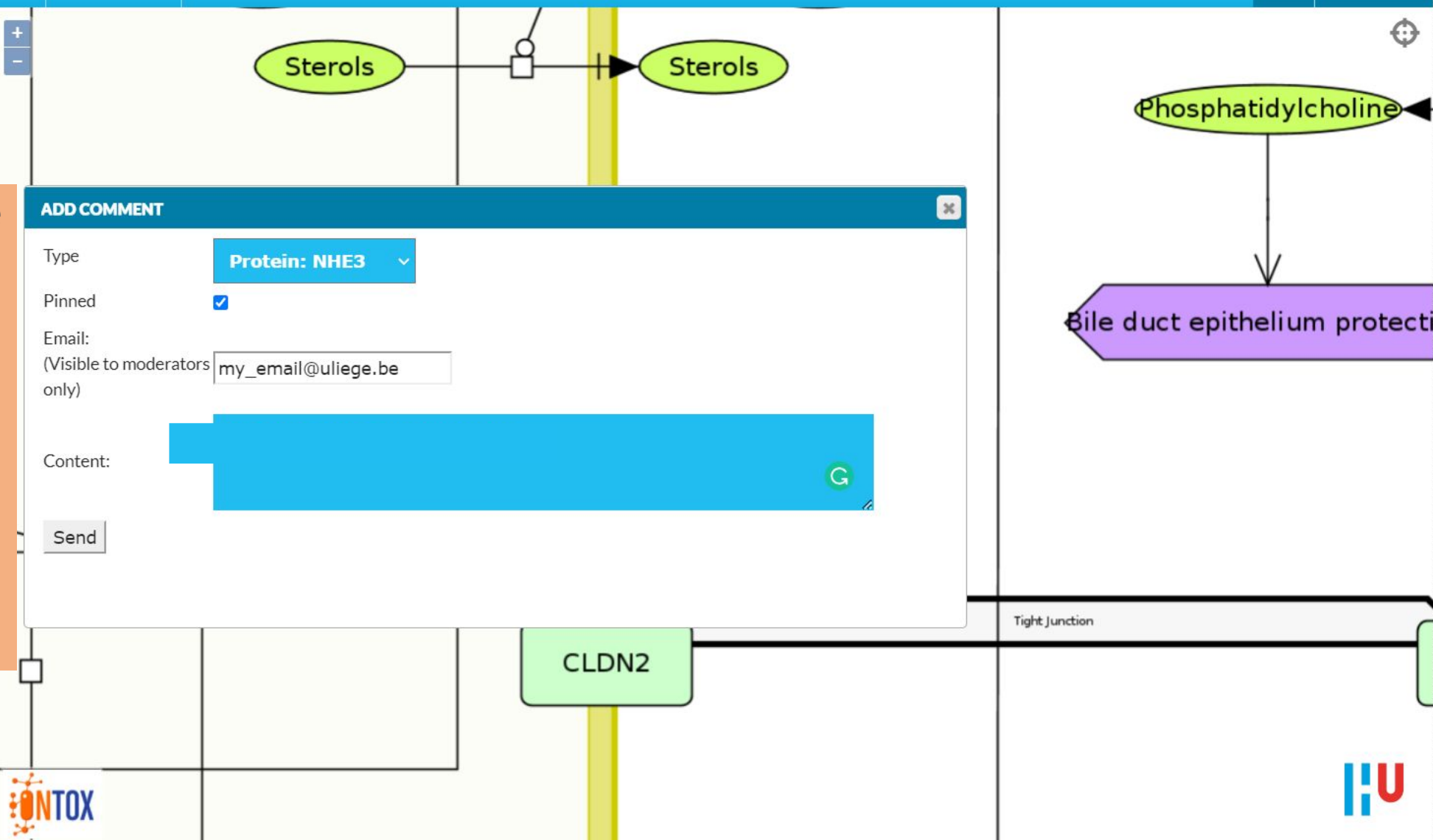
(Visible to moderators only)

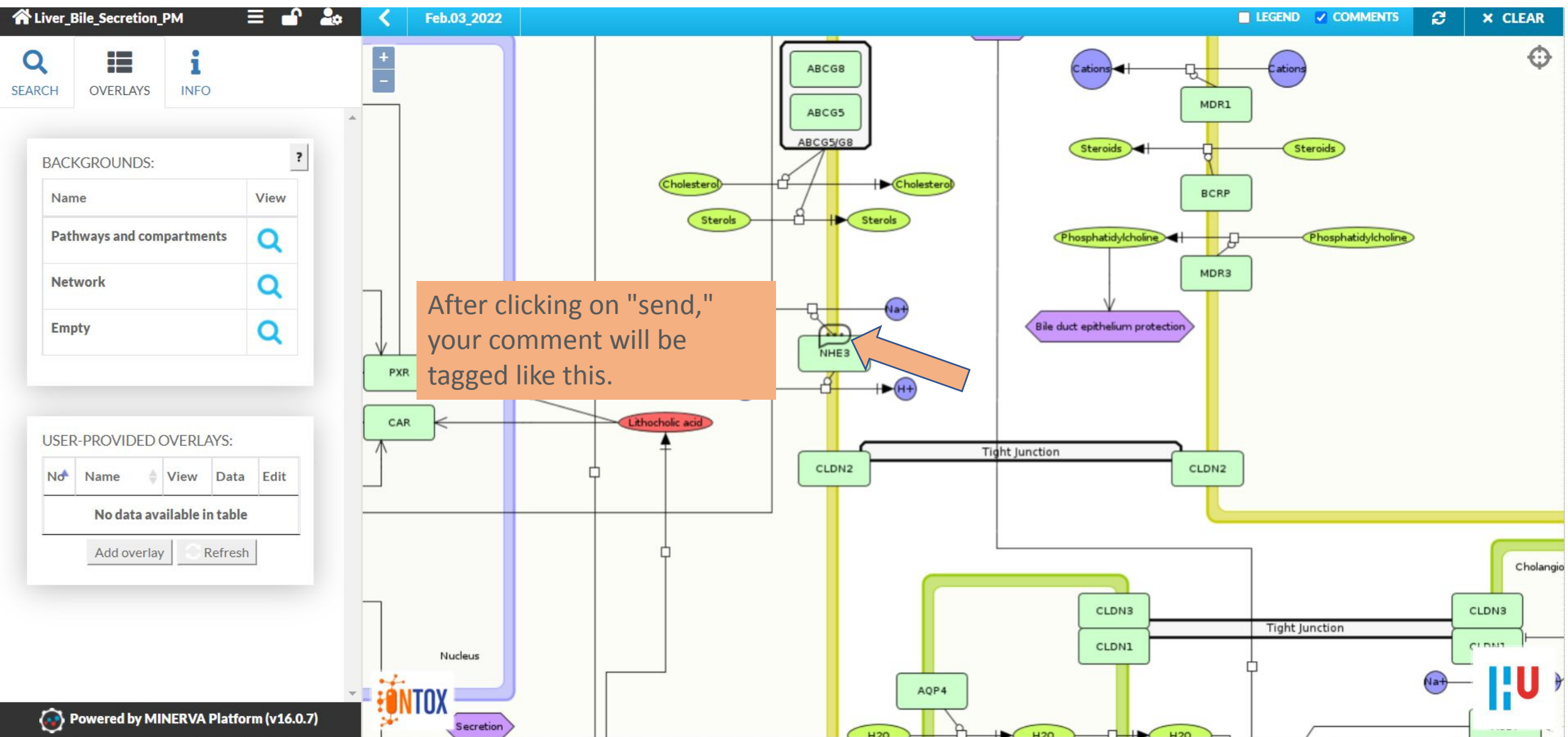
my_email@uliege.be

Content:



Send





Lipid_Metabolism_PM Mar.10_2022 LEGEND COMMENTS CLEAR

SEARCH OVERLAYS INFO

CONTENT DRUG CHEMICAL MiRNA

SEARCH IN CONTENT: keyword ☐ PERFECT MATCH

1 **Phenotype:** Triacylglyceride synthesis

Pathway: Triacylglyceride synthesis

Annotations:

Source: Annotated by curator

[1] [WikiPathways \(WP325\)](#)

Powered by MINERVA Platform (v16.0.7)

ONTTOX

GPAT

acyl dihydroxyacetone phosphate

fatty acyl CoA

DGAT

phosphatidic acid

phospholipids

diacylglycerol

MOGAT

monoacylglycerol

triacylglycerol

triacylglyceride synthesis

You might notice that when you click on some nodes, information appears in the left-hand menu.

These are the node's annotations, and they could have links to other databases, like the Wikipathways in this example. Then, you can click on the link (orange arrow) to access the complementary information.

```
graph TD
    GPAT[GPAT] --> ACP[acyl dihydroxyacetone phosphate]
    GPAT --> FACP[fatty acyl CoA]
    ACP --> DGAT1[DGAT]
    FACP --> DGAT1
    DGAT1 --> PA[phosphatidic acid]
    PA --> PL[phospholipids]
    PA --> DAG[diacylglycerol]
    DAG --> MOGAT[MOGAT]
    DAG --> DGAT2[DGAT]
    MOGAT --> MAG[monoacylglycerol]
    DGAT2 --> TAG[triacylglycerol]
    FACP --> TAG
    TAG --> TGS{triacylglyceride synthesis}
```



Some considerations to take into account when reviewing a map:

The physiological maps are not homogeneous: this means that different mechanisms described could have very different levels of details, and this is not necessarily a problem. If you feel that a mechanism could benefit from more details, please do not hesitate to comment.

Including a reference in your comment is of great help for us doing the upgrades of the maps. The DOI or PubMed ID of a paper might be sufficient for us to find the information, but the more details you give us, the more we benefit from your comments.

And of course, you can always send your suggestions and questions also by e-mail.

Thank you!



Useful links:

MINERVA user manual:

https://minerva.pages.uni.lu/doc/user_manual/v15.0/index/

Basic exploration tools:

https://minerva.pages.uni.lu/doc/user_manual/v15.0/index/#basic-exploration-tools

Contacts:

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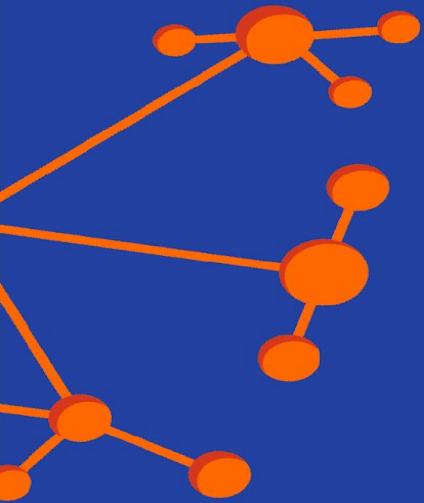
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