

USER GUIDE

Version 1.0

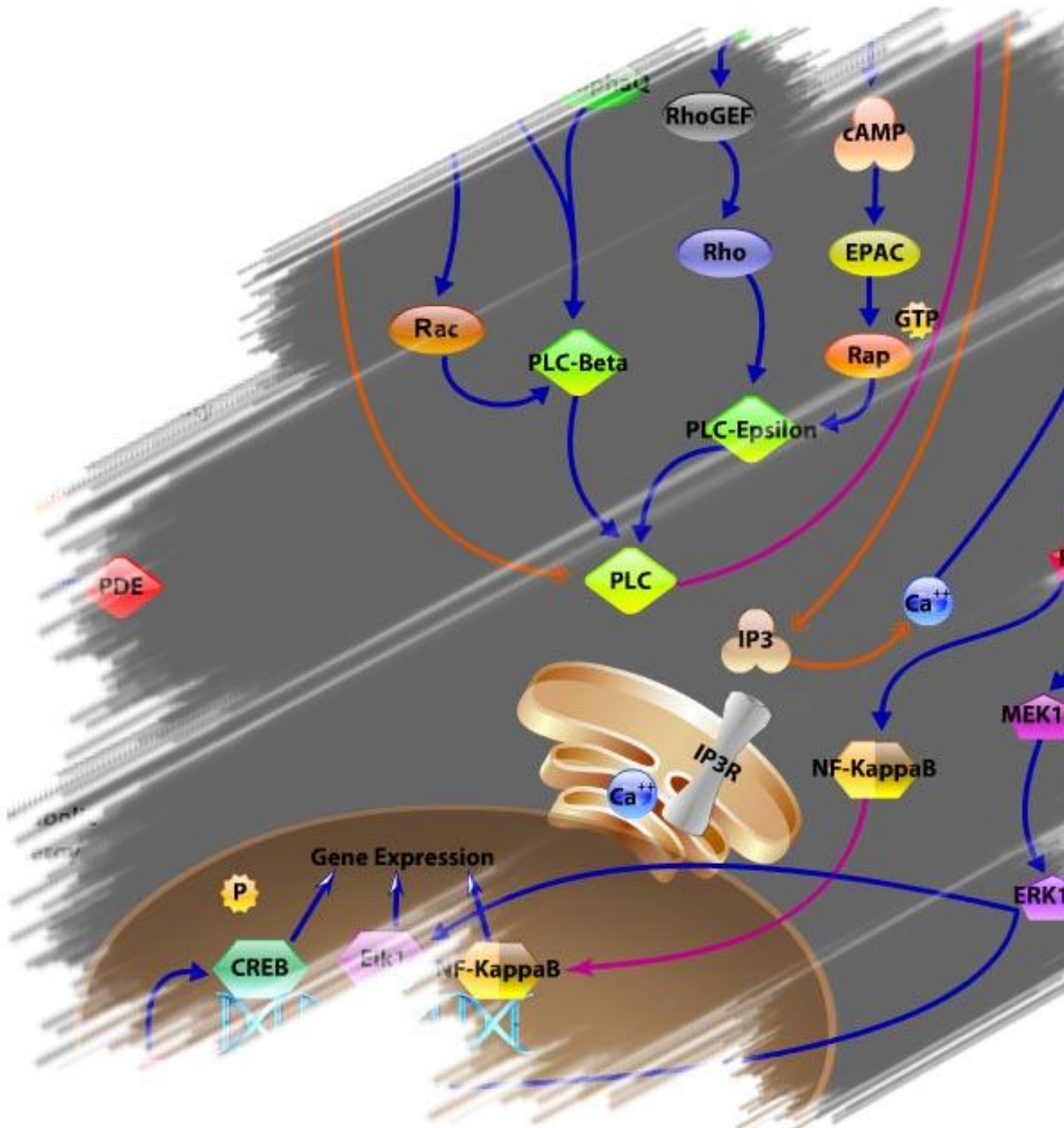


Table of Contents

1. Welcome to the EPath3D Online User Manual.....	3
1.1 Using this Manual	3
1.2 Introduction.....	3
1.3 System Requirements.....	3
2. Getting Started	4
2.1 Register to obtain ePath3D Online account.....	4
2.2 Sign-In and run ePath3D Online	5
3. Functional Components	6
4. Using Menu Bar	8
4.1 File Menu	8
4.2 Edit Menu	12
4.3 Insert Menu	12
4.4 Help Menu	12
5. Using Toolbar	13
6. Draw your first pathway	14
6.1 Adding Objects	14
6.2 Editing Objects	12
6.3 Add Connectors	18
6.4 Editing Connectors	20
6.5 Adding Membranes	22
6.6 Editing Membranes	23
6.7 Editing Project Settings	24
6.8 Preview Pathway	27
6.9 Share Pathway	28
7. Troubleshooting.....	29

1. Welcome to the EPath3D Online User Manual

In this guide, you'll find instructions on how to use the features and tools in EPath3D Online. We've included a detailed table of contents so you can quickly reference how to use a specific section or tool in EPath3D Online.

1.1 Using this Manual

As you browse these sections, you'll notice that our screenshots of the interface highlight sections of the graphic to point out tools, menus, features and other options.

Icons used in this manual:



- Keyboard shortcuts for several menu and other user driven actions.



- Handy hints to make life a little easier.

1.2 Introduction

ePath3D Online is easy-to-use web based software that enables biologists draw great looking pathways and biological graphics both for digital and print media.

Some of the key features of ePath3D Online are:

1. Access your projects anytime anywhere.
2. Categorized Protein, Receptor and Interaction elements for standardization of Pathways.
3. Vast collections of Vector Diagrams including Proteins, Receptors, Cells, Organelles, Organs and Accessory Items.
4. Option to link elements to Publication repository like Pub-Med or any other online databases.
5. Export to various formats like PDF, JPG, PNG, Transparent PNG, BMP etc.
6. Export high resolution PDF's for printing.
7. Social sharing options to share your creations with your friends and colleagues.
8. Export for offline viewing or presentation.
9. No installation hassles, real time application updates.


1.3 System Requirements

OS:	Windows, Linux, and Mac OS X
Browser:	Internet Explorer/Firefox/Chrome/Safari/Opera (Adobe Flash Player 10 plug-in or above installed on browser)
CPU:	2 GHz or more
RAM:	1 GB or more

2. Getting Started

2.1 Register to obtain ePath3D Online account

Open the ePath3D Online website at: <http://www.epath3d.com> and click on REGISTER link, fill up all required fields and create your account. After successfully registering, you can use Email id and password to login to your account.

OVERVIEWPRICESVIDEO GUIDESUPPORTREGISTERSIGN IN

Register

Create an accountIf you are already a member of ePath3D Online, [click here to sign in](#)

First name:

Last name:

Email:

A valid e-mail address. A confirmation e-mail from the system will be sent to this address. The e-mail address is not made public and will only be used if you wish to receive a new password or wish to receive certain news or notifications by e-mail.

Password:

at least 6 to 15 characters long, start with a letter and contains at least one number.

Confirm Password:

Address:
(optional)

I live in:

United States

Choose your plan:

☐ \$399 US Dollar (For Six Months)

☐ \$599 US Dollar (For One Year)

☐ \$1299 US Dollar (For Three Years)

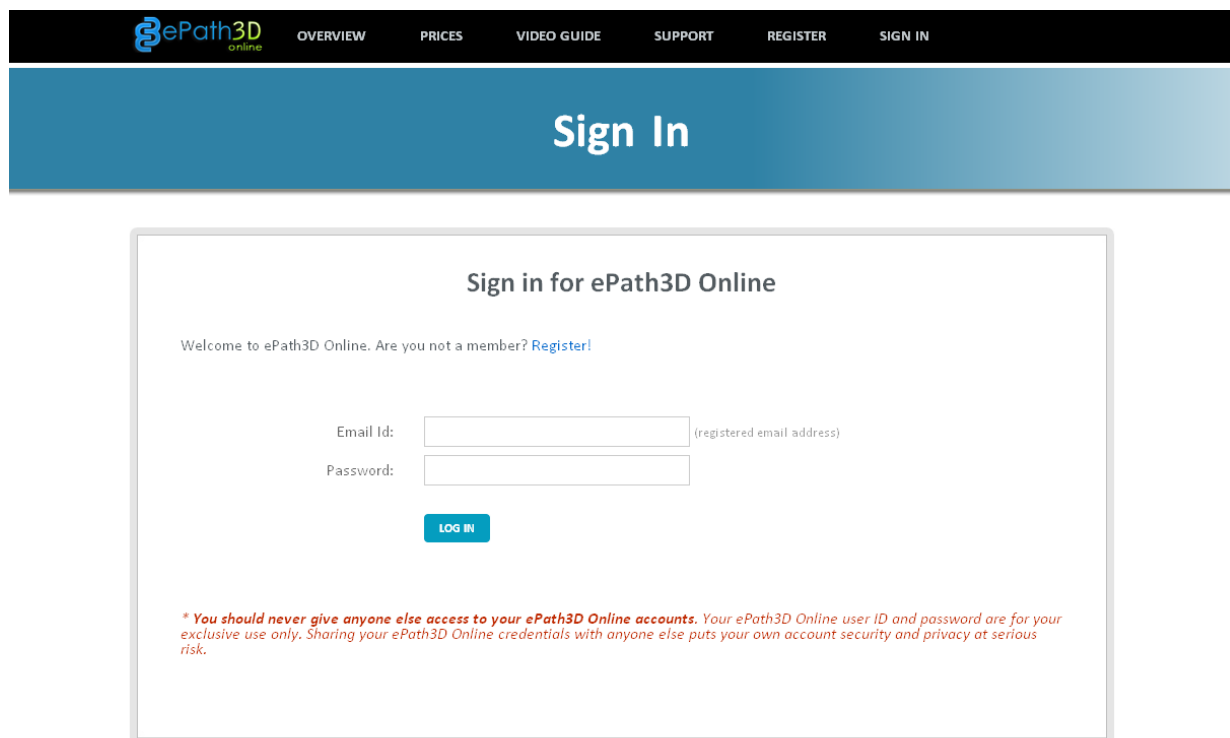
☐ Trial Plan

CONTINUE

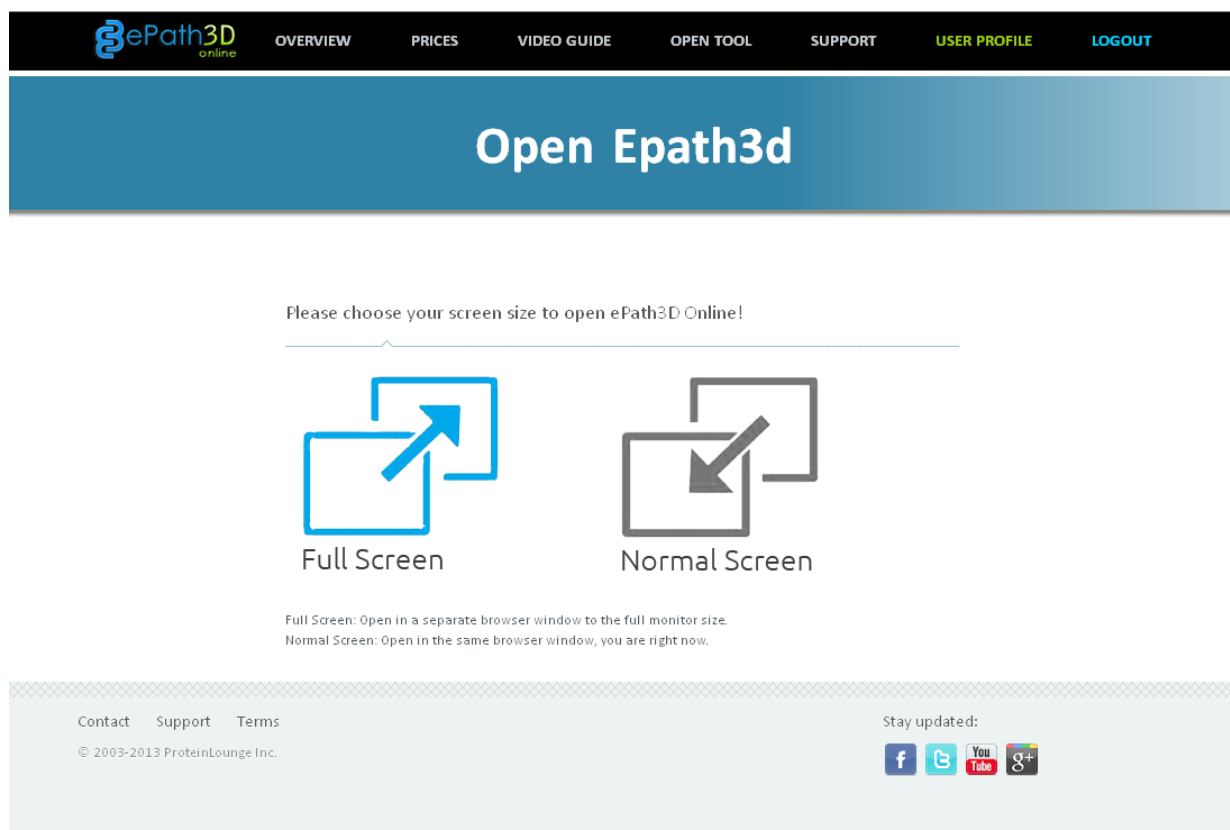
By clicking the 'Continue' button above, you confirm that you accept [Terms of Service](#)

2.2 Sign-In and run ePath3D Online

You can now Sign-in to you account using the Email id and password as shown below.



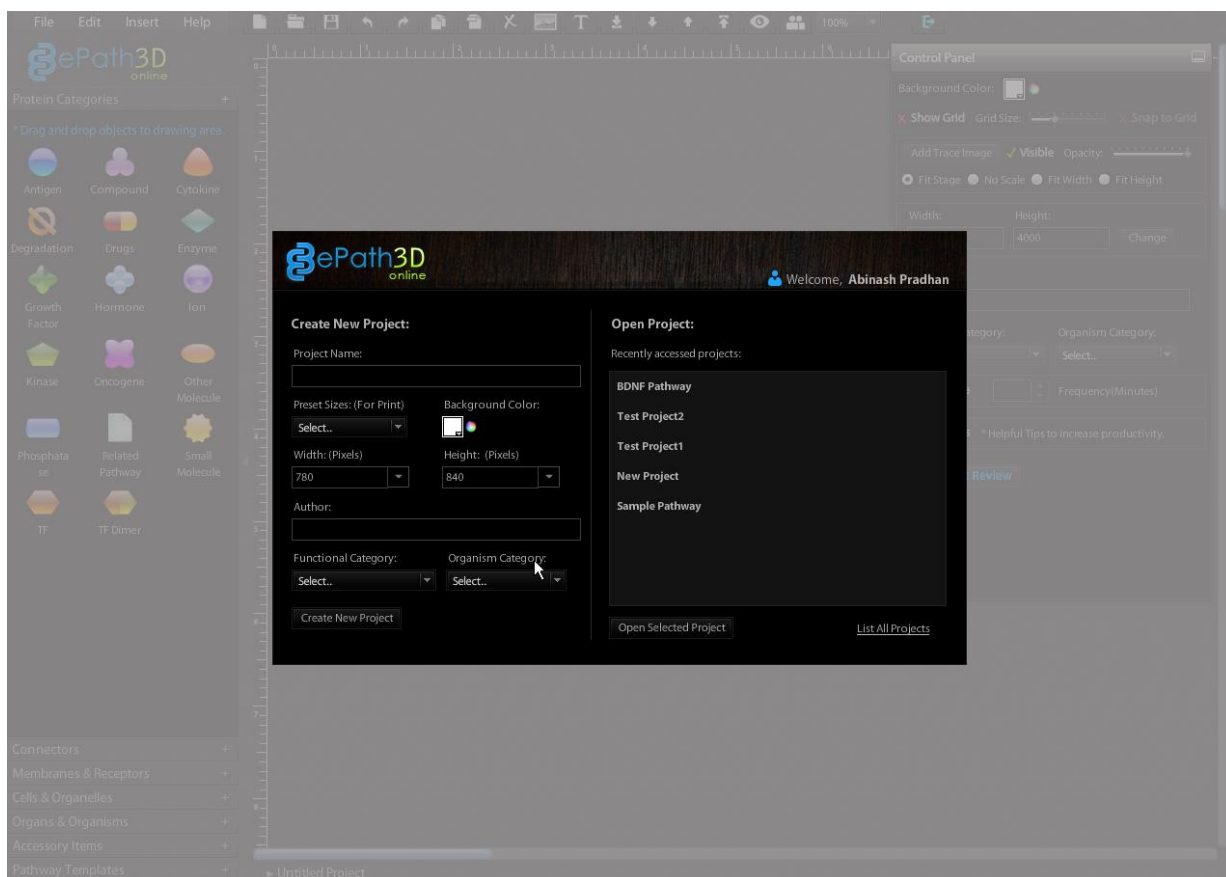
You have options to open the application in Full Screen browser window (more drawing space) or Normal Screen browser window. Click on any one of the option.



In order to run ePath3D Online correctly, Flash Player 10 or higher needs to be installed on your browser. Browser will automatically check and download the required version of flash player for you.

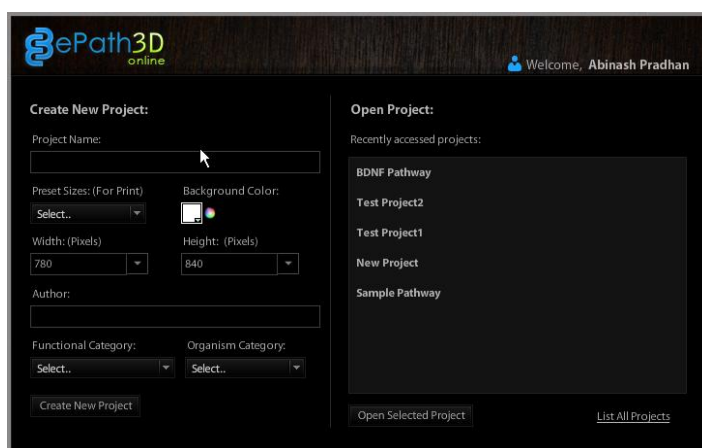
If you have issues in running the application, please download latest Flash Player Plug-in manually from: <http://www.adobe.com/support/flashplayer/downloads.html>

You will get to see ePath3D Online up and running.

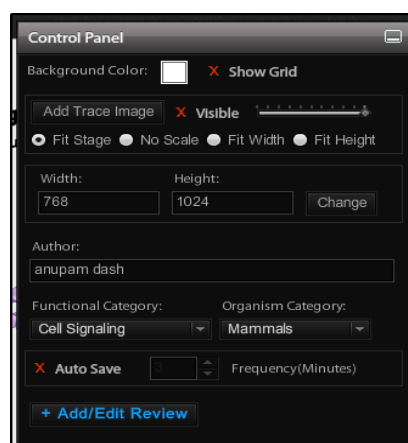


3. Functional Components

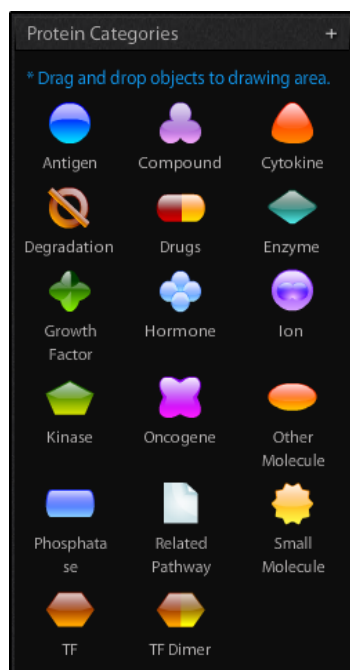
Below are snapshots of main functional components of the tool you will use while creating your diagrams.



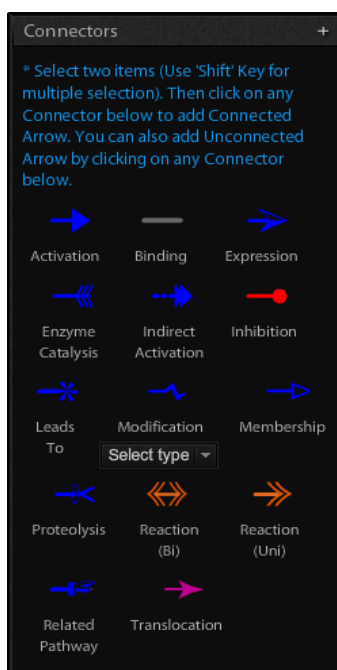
Start-up Screen



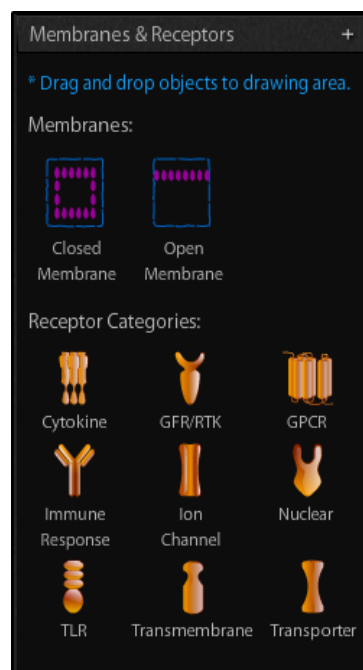
Control Panel



Protein Panel



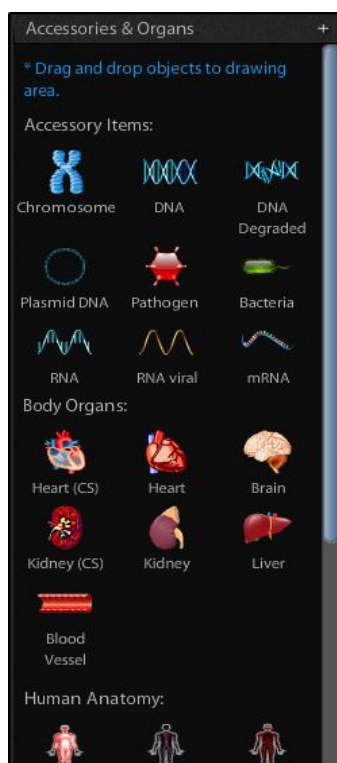
Connectors Panel



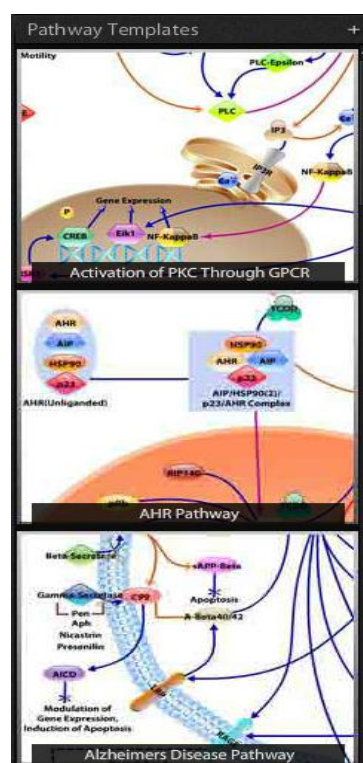
Membranes & Receptors Panel



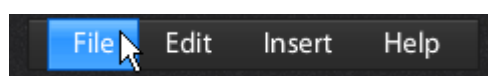
Cells & Organelles Panel



Accessories & Organs Panel



Pathway Templates Panel



Menu bar



Tool bar

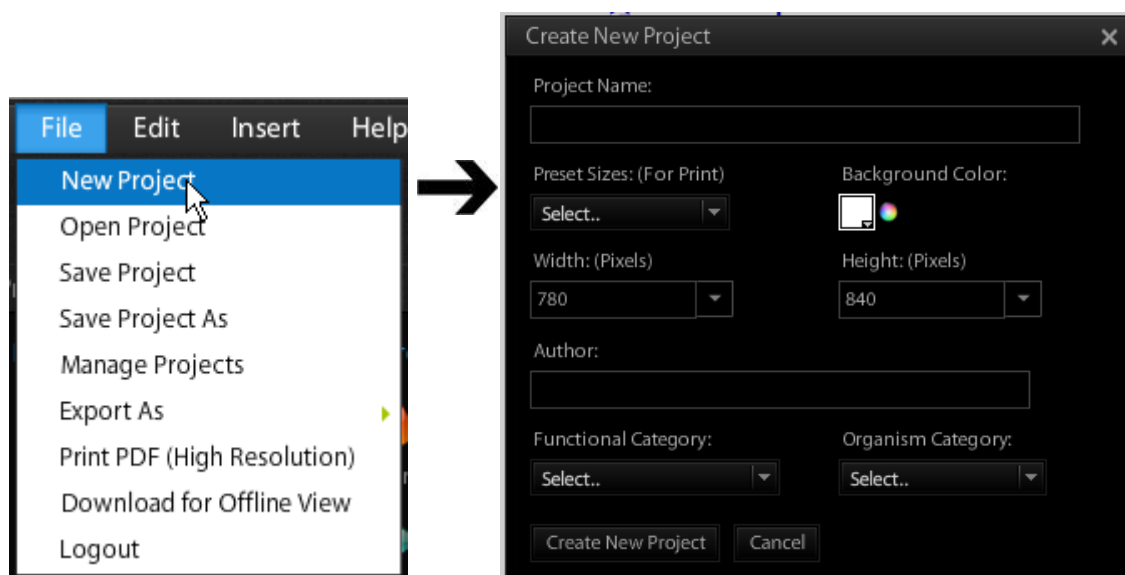
4. Using Menu bar



Menu bar consists of four options like File, Edit, Insert and Help.

4.1 File Menu

4.1.1 New Project



You can select a new workspace to start a new project at any time. To start a new document you may either use the 'New' option from the File menu, or select the 'New' icon on the toolbar.

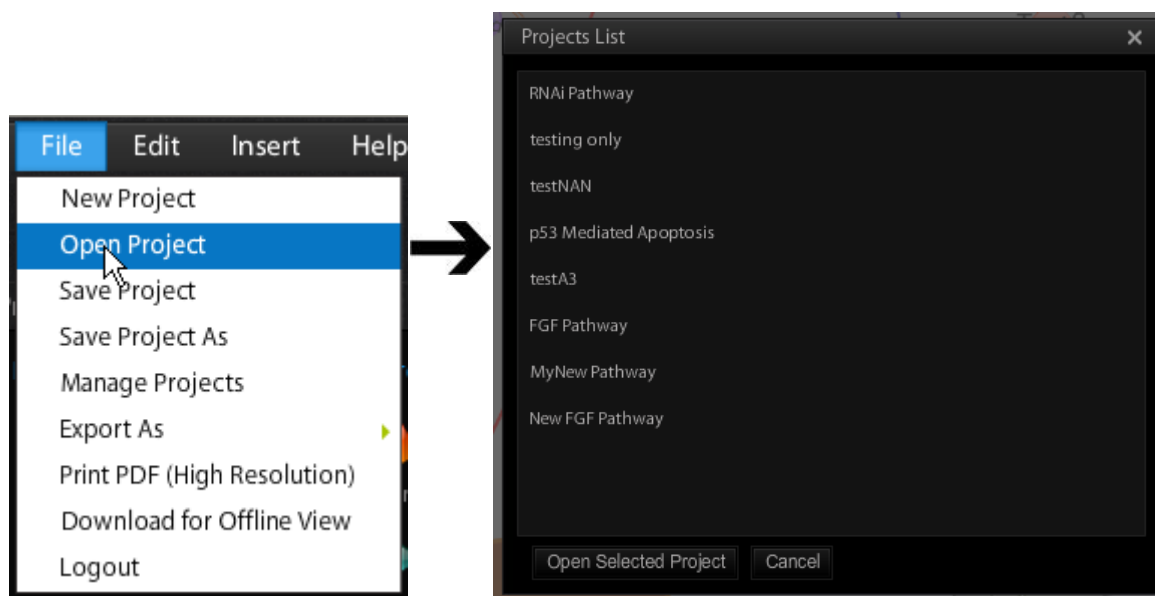
'Create New Project' dialogue box has input elements like:

1. **Project Name:** Enter 'Project Name' of your choice.
2. **Preset Sizes:** Select any size from the dropdown list (A4/A3). If you intend to create high resolution PDF for print, and then select either A3 or A4 option. You can save these sizes for web publishing too.
3. **Background Color:** Select default background color of Project Canvas using color picker. You can change the color of Canvas later using the 'Control Panel' color picker.
4. **Width/Height: (Pixels):** If you need your project to have specific 'Width' and 'Height', you can type in your required size in the respective input fields.
5. **Author:** Type in Project's Author/s name. (Optional)
6. **Functional Category:** Select functional category of your project from dropdown list. (Optional)
7. **Organism Category:** Select organism category of your project from dropdown list. (Optional)
8. **Create New Project:** Click on 'Create New Project' button to create new workspace with specified settings.
9. **Cancel:** Click on 'Cancel' button to create close the dialog box and go back to previous state.



- CTRL/Command + N

4.1.2 Open Project



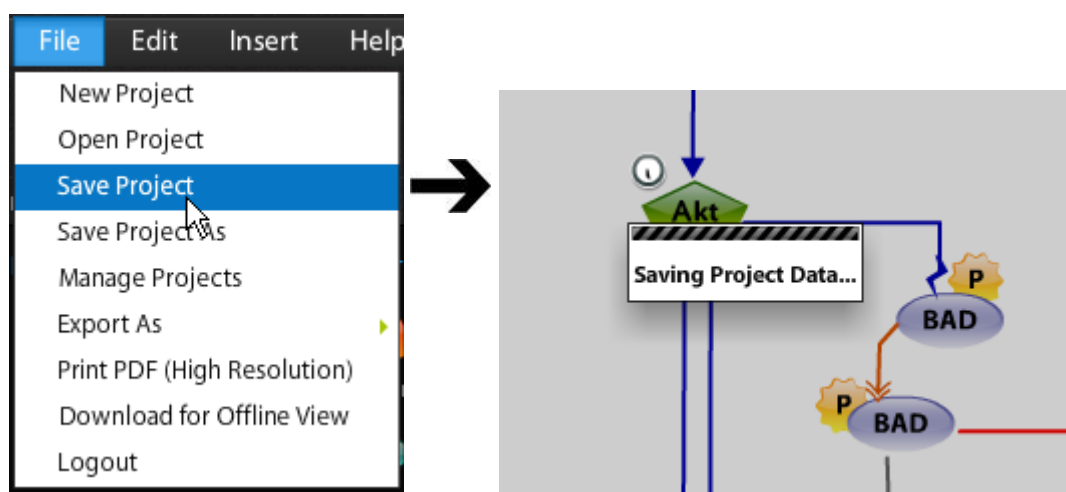
To open existing project you may either use the Open option from the File menu, or select the Open icon on the toolbar. This will show 'Project List' dialogue box.

'Project List' dialogue box has a list of already created projects. Select project from the list and click on 'Open Selected Project' button to open it. Click on 'Cancel' button to close the dialogue box.



- CTRL/Command + O

4.1.3 Save Project

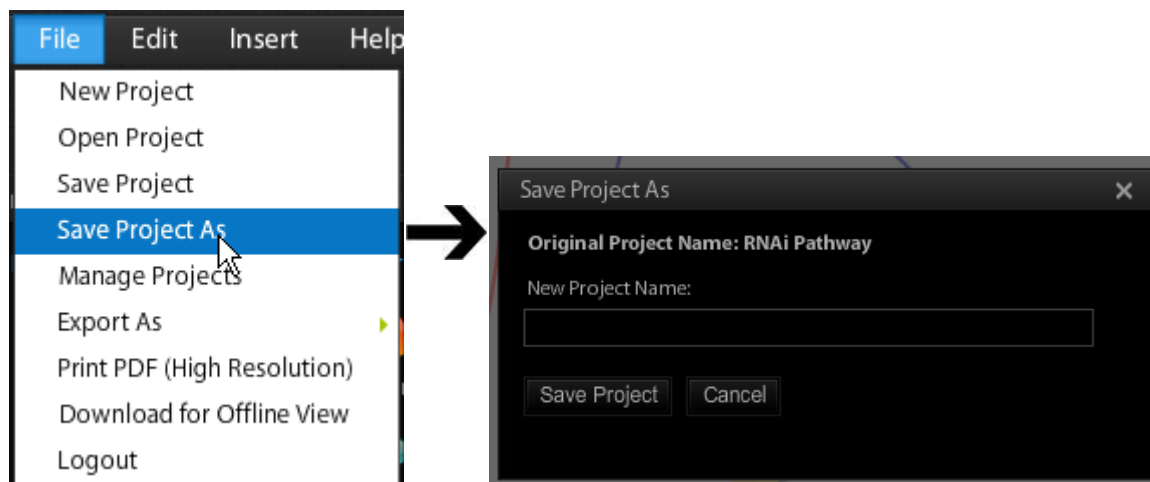


To save currently open project you may either use the Save Project option from the File menu, or click on the 'Save' icon on the toolbar. This will show 'Saving Project' progress dialogue box while project is being save on the server.




- CTRL/Command + S

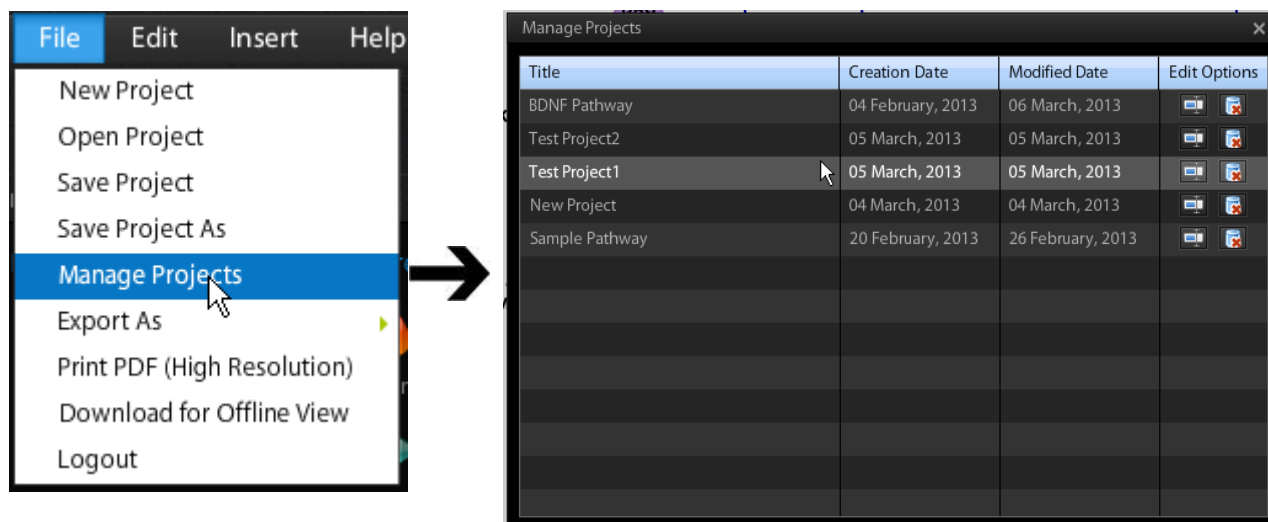
4.1.4 Save Project As




To save currently open project in a new name, you may either use the 'Save Project As' option from the File menu, or click on the 'Save As' icon on the toolbar. This will show 'Save Project As' dialogue box to enter new Project name. Click on 'Save Project' button to save the project in new name. Clicking on 'Cancel' button closes the dialogue box.

 - Use 'Save Project As' option if you need to create similar project with minimal changes.

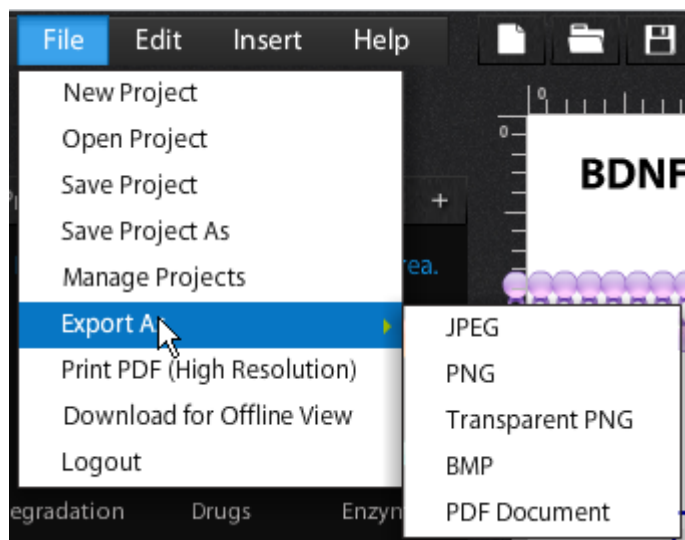
4.1.5 Manage Projects



Click on Manage Projects menu to open the 'Manage Projects' popup window. This window shows the list of projects you have created. The 'Edit Options' column contains 'Rename Project' and 'Delete Project' icon buttons which can be used to rename a project and delete a project respectively.

 - Project once deleted can not be retrieved back. So be sure before deleting any project.

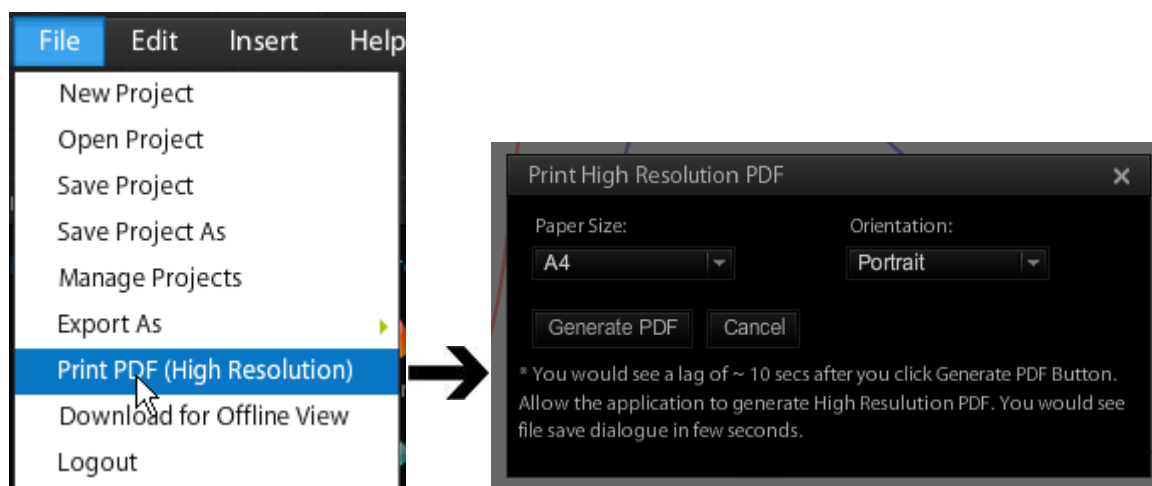
4.1.6 Export As



Export project to various image formats like: JPEG, PNG, Transparent PNG, BMP and PDF document using respective sub-menus. This will prompt for local drive location to save the file.

💡 - Transparent PNG image is exported without any background color (transparent). Useful for composing PNG file over other existing graphics.

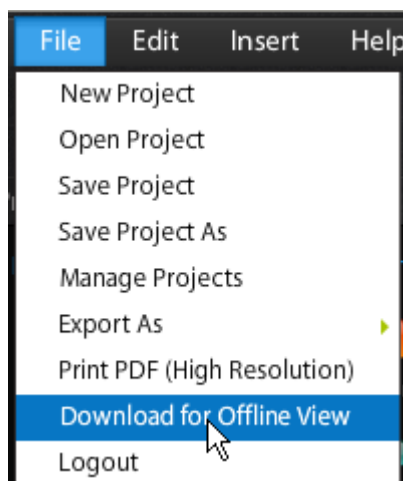
4.1.7 Print PDF (High Resolution)



Use this option to create High Resolution PDF for printing purpose. Clicking on the menu will show 'Print High Resolution PDF' dialogue box.

In this dialogue box, select Paper Size (A4/A3) and Orientation (Portrait/Landscape) as per your requirement. Clicking on 'Generate PDF' button will generate PDF file and will prompt for local drive location to save the file. (Application may freeze for 10-20 seconds during PDF generation, please wait till PDF generation is completed)

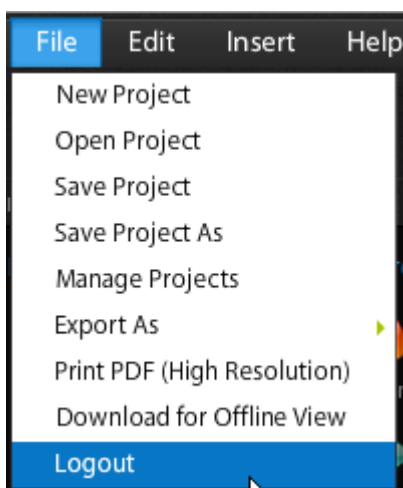
4.1.8 Download for Offline View



Use this option to generate offline viewer files for currently open project.

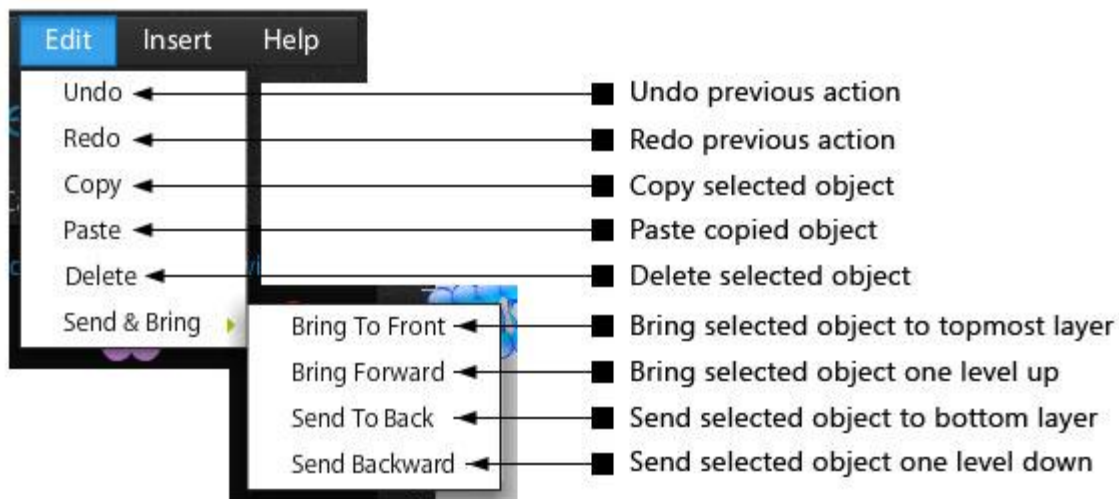
This will compile offline viewer Zip Package and will prompt for local drive location to save the file.

4.1.9 Logout & Close



Use this option to Logout from your account and close ePath3D Online.

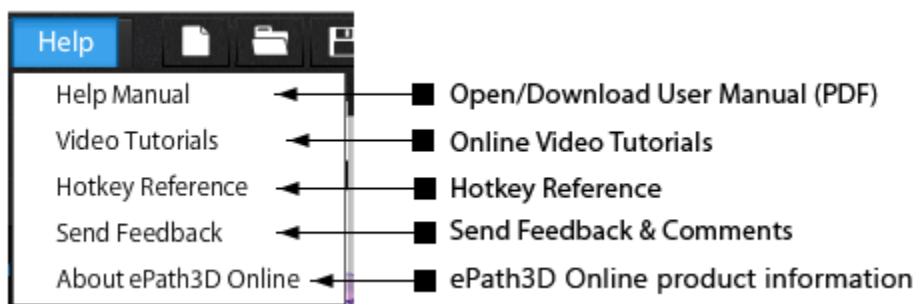
4.2 Edit Menu



4.3 Insert Menu

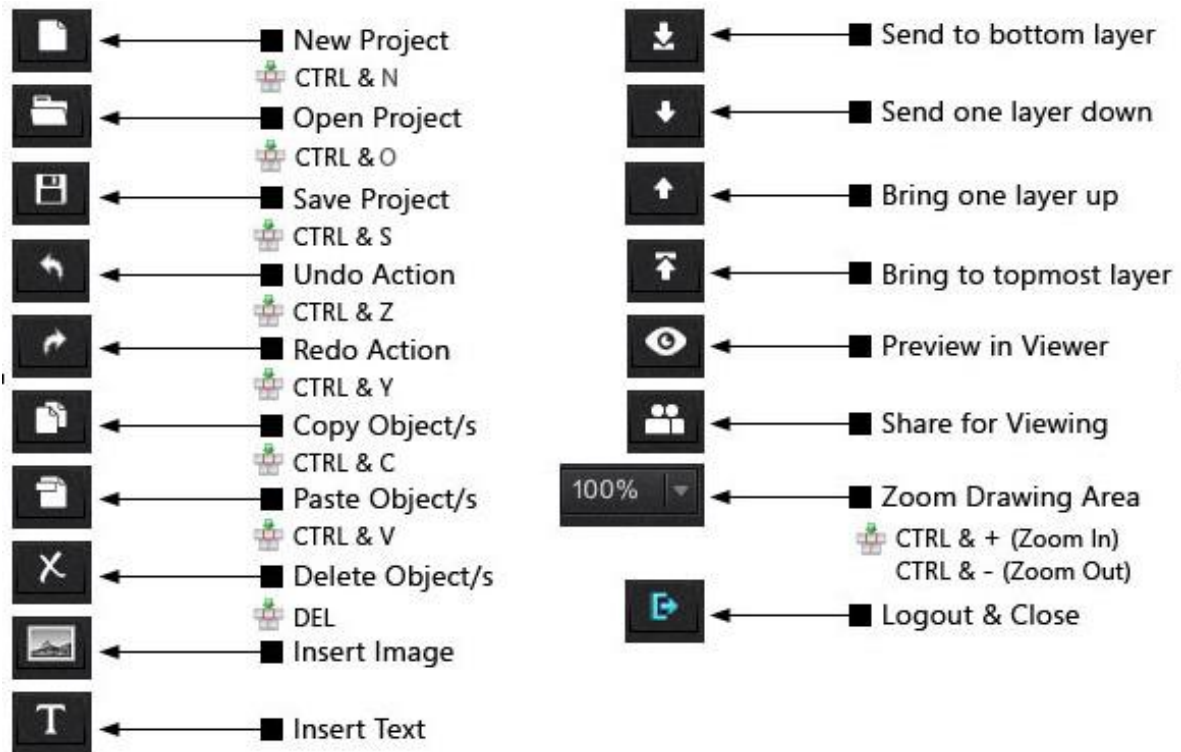


4.4 Help Menu



5. Using Toolbar

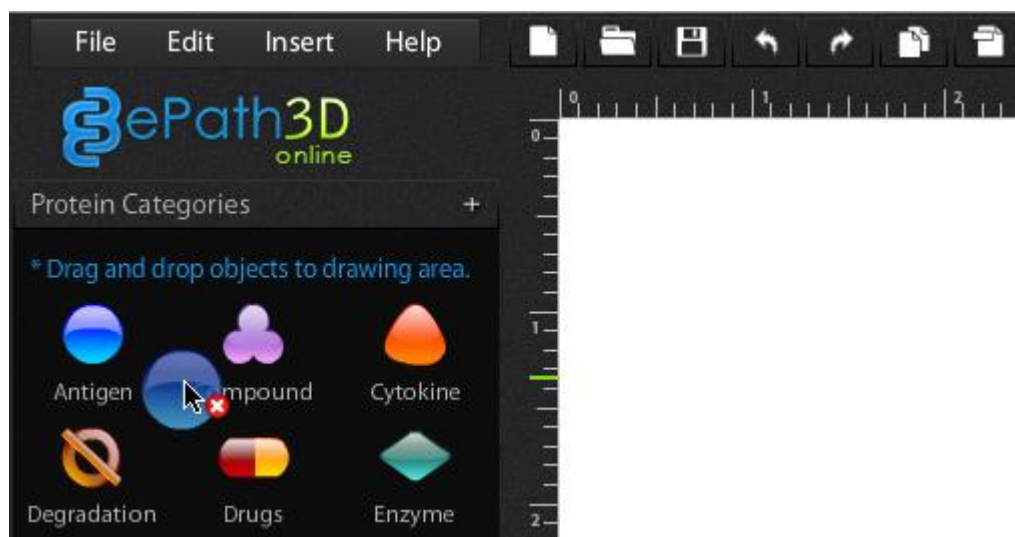
Toolbar consists of tools like New Project, Open Project, Save Project, Undo, Redo, Copy, Paste, Delete, Insert Image, Insert Text, Send To Back, Send Backwards, Bring Forward, Bring To Front, Preview, Share, Zoom and Logout & Close.



6. Draw your first Pathway

In addition to modifying existing pathway templates, you can draw a pathway from scratch by selecting from the Protein Categories, biological membranes, Signaling Connector Categories and other accessory items from the folders on the left column.

6.1 Adding Objects



Drag an Object from left panel to the stage. It will add an instance of the dragged object to the stage as shown below.



Once object is added to the stage, it can be moved, resized and its properties can be changed using the Control Panel.

6.2 Editing Objects

Click on the Object to select it. Once an object is selected it will have a visible boundary box with tools to move, resize and rotate as shown below.



Moving mouse to the corners will show resize/rotate cursor. Click and drag to either resize or rotate selected object. Moving mouse inside the selected object will show move cursor. Click and drag to move selected object over the stage.

- 💡 - Press 'Shift' key while dragging to get constrained Move, Resize and Rotate behaviors.
- 💡 - Use keyboard Arrow Keys to move selected Objects (Press 'Shift' key to move Objects faster)
- 💡 - Use 'CTRL/Command + Z' to undo change.

6.2.1 Object Control Panel

Selected Object's properties can be modified by changing settings provided on Object's Control Panel as shown below.

Control Panel

Label Text: Symbols Alt Keys View Symbol Alt keys

Antigen Edit Label

Arial 14 Format Label

Category: Antigen Change Category

Change Category: Select Advanced Color Picker

Item Color: Standard Color Picker Item Opacity: Change Opacity

☒ Show Shadow Show/Hide Shadow Shadow Color: Change Shadow Color

Reset Size Reset Rotation Reset Color Reset Size, Rotation, Color

☒ Enable RollOver Popup Enable Rollover Pop-up

Subcellular Locations: Unknown Sub-cellular Locations

Cellular Locations: Unknown Cellular Locations

Anatomical Locations: Unknown Anatomical Locations

Links Description Add Links Add Description

URL: Add Link

Like: http://www.ncbi.nlm.nih.gov/nuccore/NM_005343

- Delete 'label text' from control panel for Object where no Label/Text is required.

6.2.2 Adding Symbols Using Alt Keys

Symbols can be added to Object Labels and Texts using the below Hotkeys. First Select Myriad Pro as Font then use any of the below key combinations to add symbols.

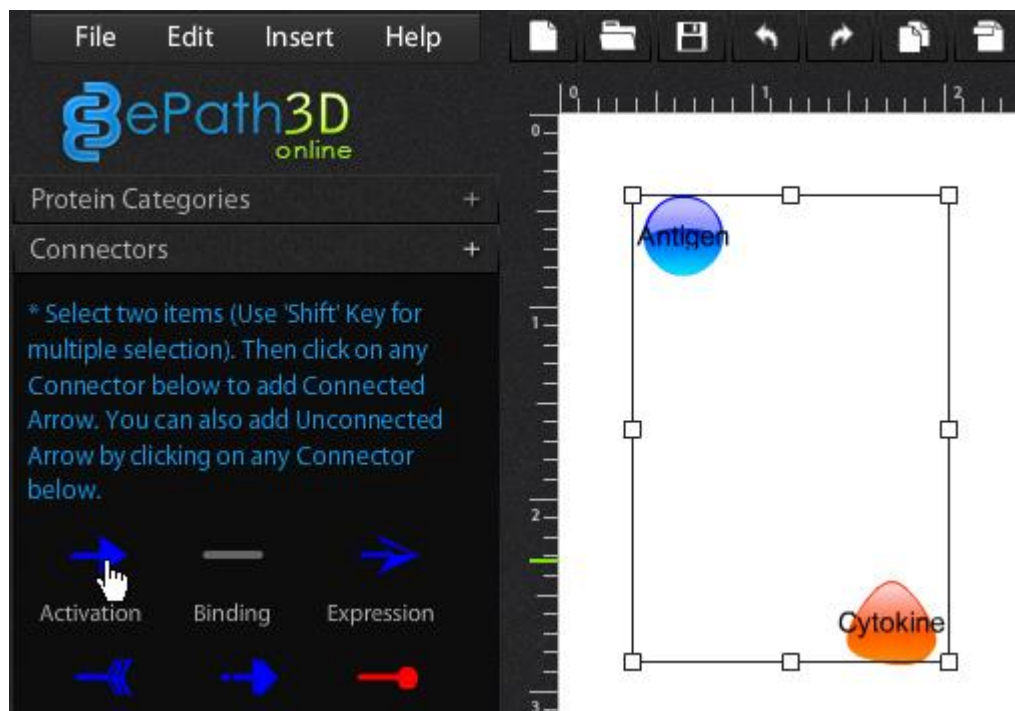
For Windows

Alt Code	Symbol	Description
Alt 224	α	Alpha
Alt 225	β	Beta
Alt 226	Γ	Gamma
Alt 235	δ	Delta
Alt 238	ε	Epsilon
Alt 233	Θ	Theta
Alt 227	π	Pi
Alt 230	μ	Mu
Alt 228	Σ	Uppercase Sigma
Alt 229	σ	Lowercase sigma
Alt 231	τ	Tau
Alt 232	Φ	Uppercase Phi
Alt 237	φ	Lowercase Phi
Alt 234	Ω	Omega
Alt 0169	©	Copyright

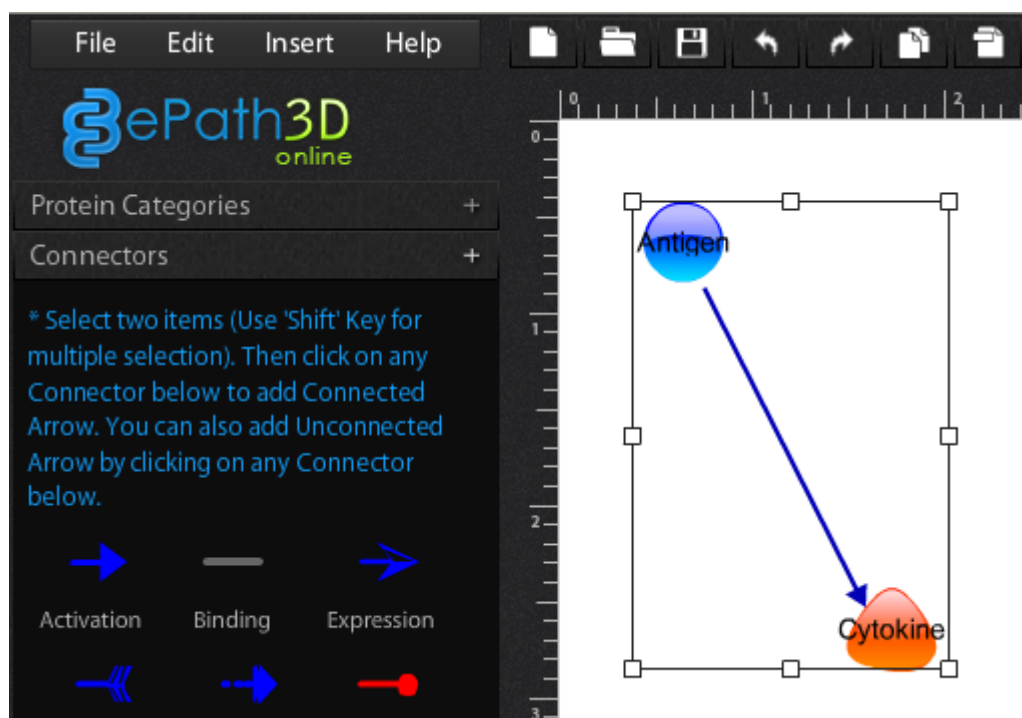
For Macintosh

Alt Code	Symbol	Description
Alt + s	β	Beta
Alt + p	π	Pi
Alt + m	μ	Mu
Alt + w	Σ	Uppercase Sigma
Alt + z	Ω	Omega
Alt + g	©	Copyright
Alt + 2	™	Trademark

6.3 Adding Connectors



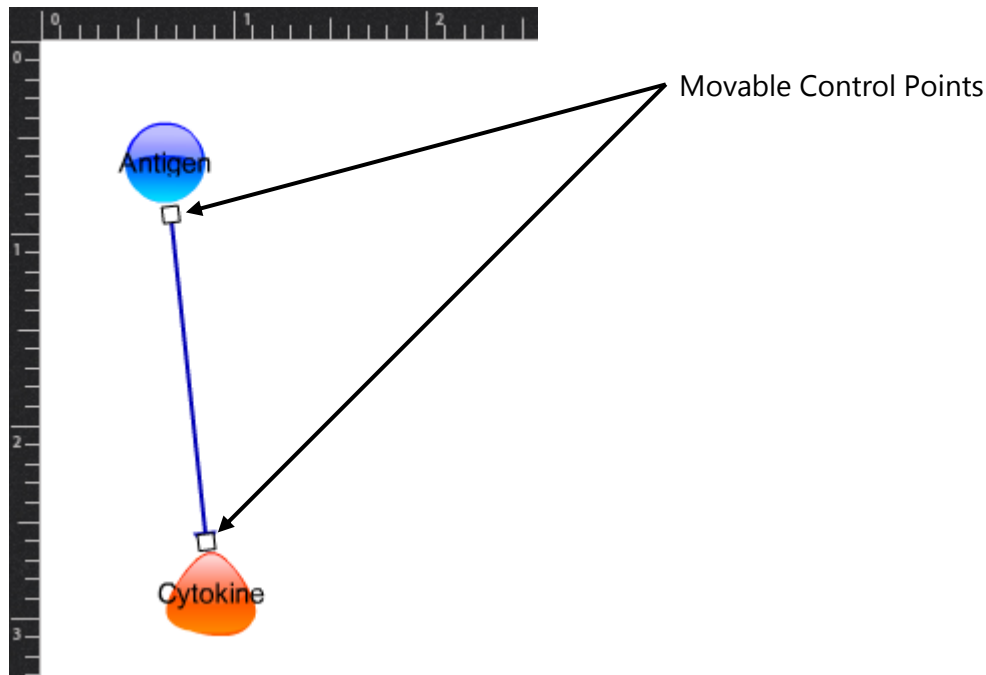
Select two Objects (Hold SHIFT key for multiple object selection) between which connector is needed. This will automatically open up the Connectors Container on the left. Click on the type of signaling connector which you would like to place. A connector gets drawn between the selected objects as shown below. When objects are moved, their connectors also get redrawn depending on position changes.



Unconnected/Freeform connectors can also be added by clicking on connector icons while not selecting any objects on the stage. Unconnected connectors can be moved around the stage freely as those are not connected to any Objects.

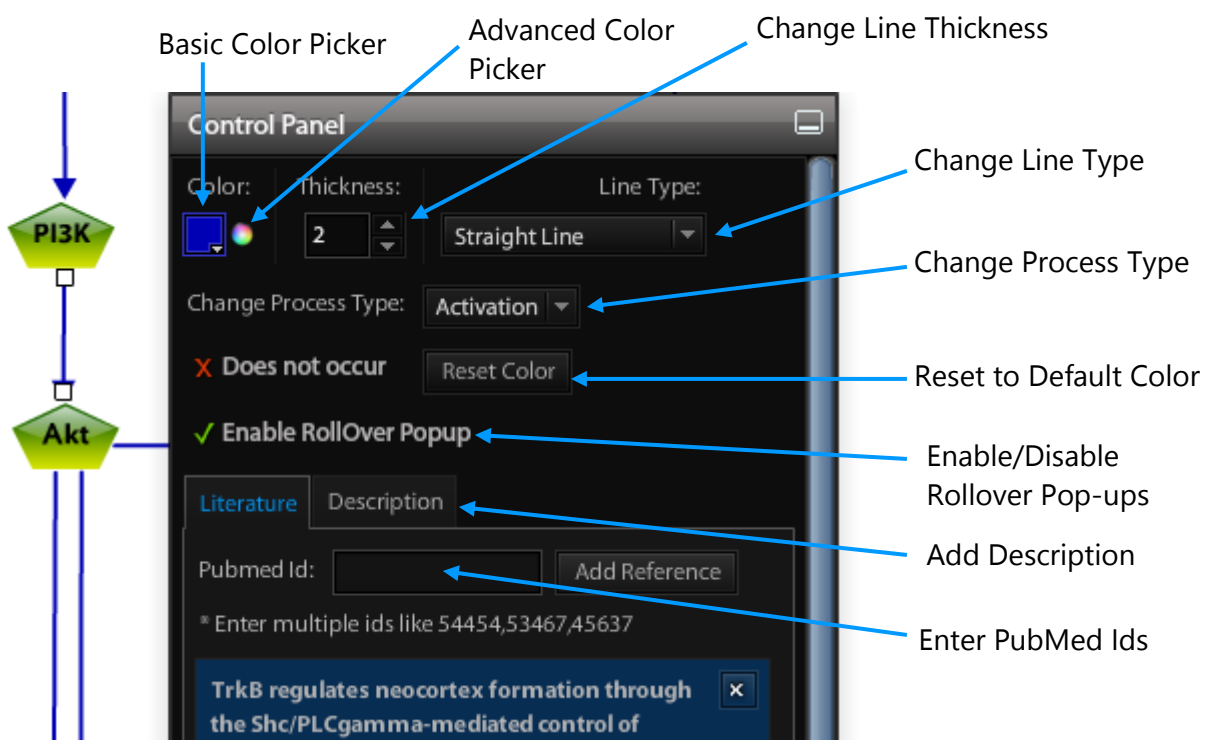
6.4 Editing Connectors

Click on the connector to select it. Once connector is selected it will show up movable Control Points (squares) as shown below.

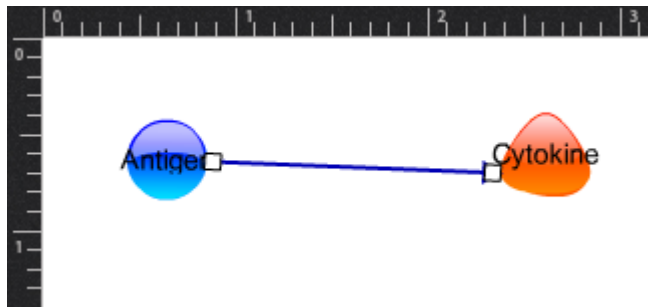


6.4.1 Connector Control Panel

Selected Connector's properties can be modified by changing settings provided on Connector's Control Panel as shown below.

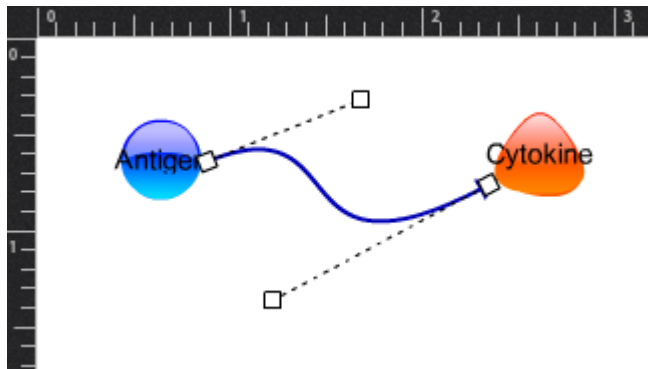


6.4.2 Working with Line Types



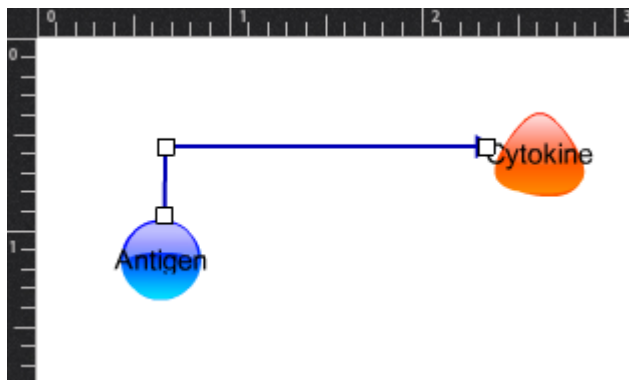
Straight Lines:

This is simplest form of line connector having two movable Control Points. These can be moved and placed at the edges of the connected Object as required.



Curved Lines:

Curved Lines have four movable Control Points. Two of those to place the end points of the curve and the other two to make the shape/angle of the curve.

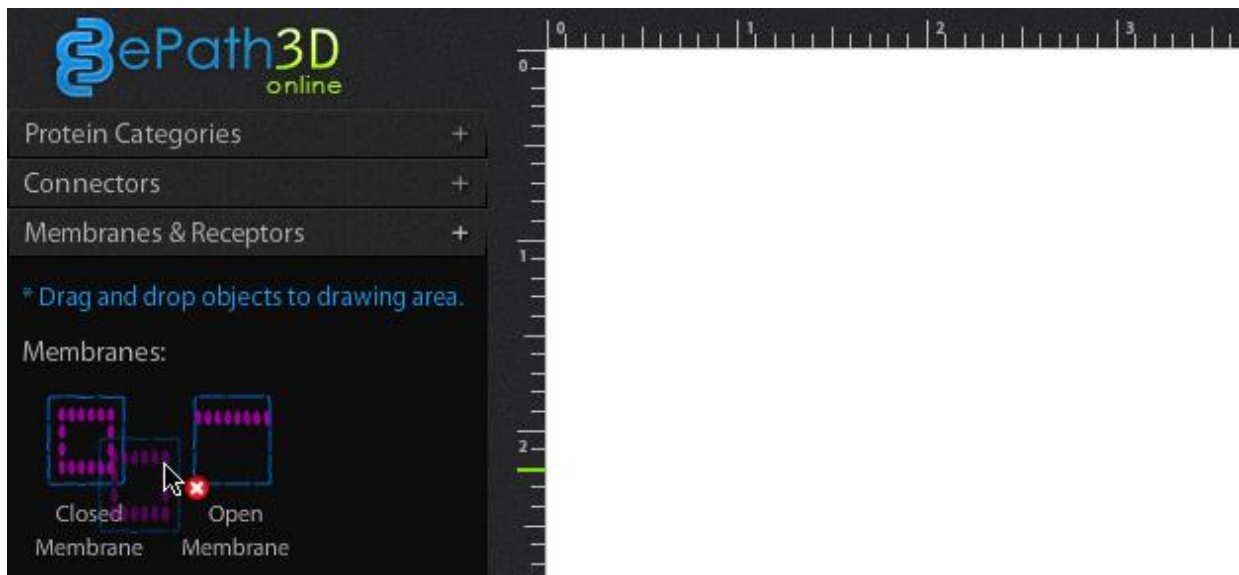


Point Break Lines:

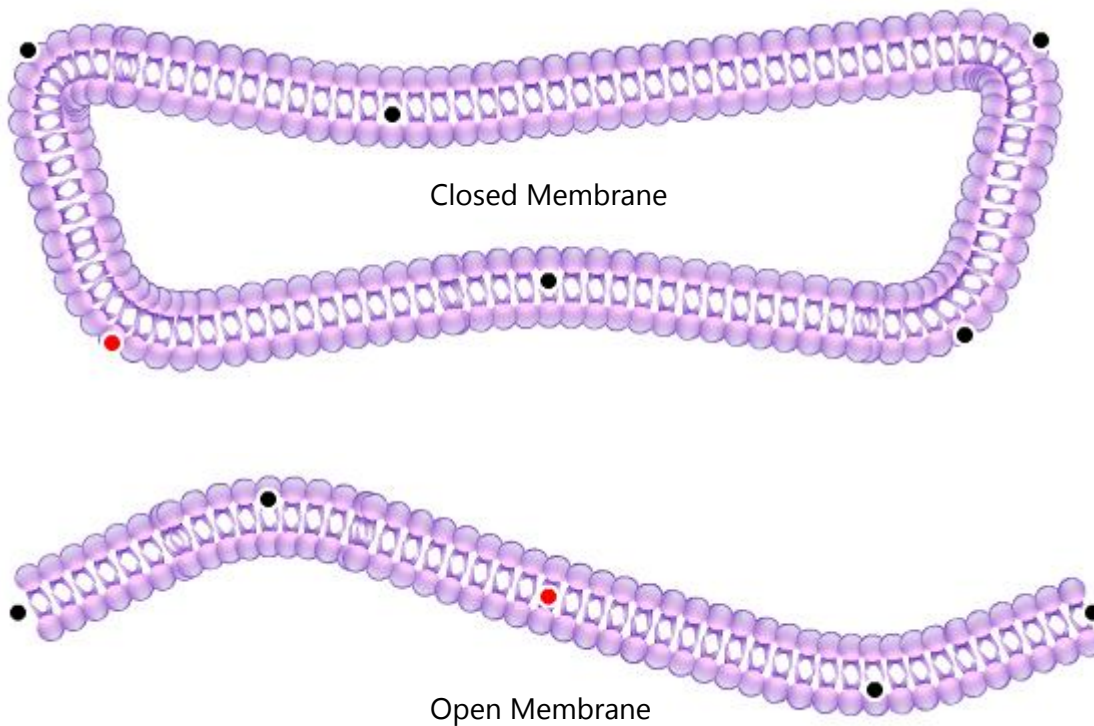
Point Break Lines have three movable Control Points. Two of those to place the end points of the line and the other to place the break point location.

💡 - Use SHIFT key while dragging Control Points to move horizontal constrained. Use CTRL/Command Key while dragging Control Points to move vertical constrained.

6.5 Adding Membranes



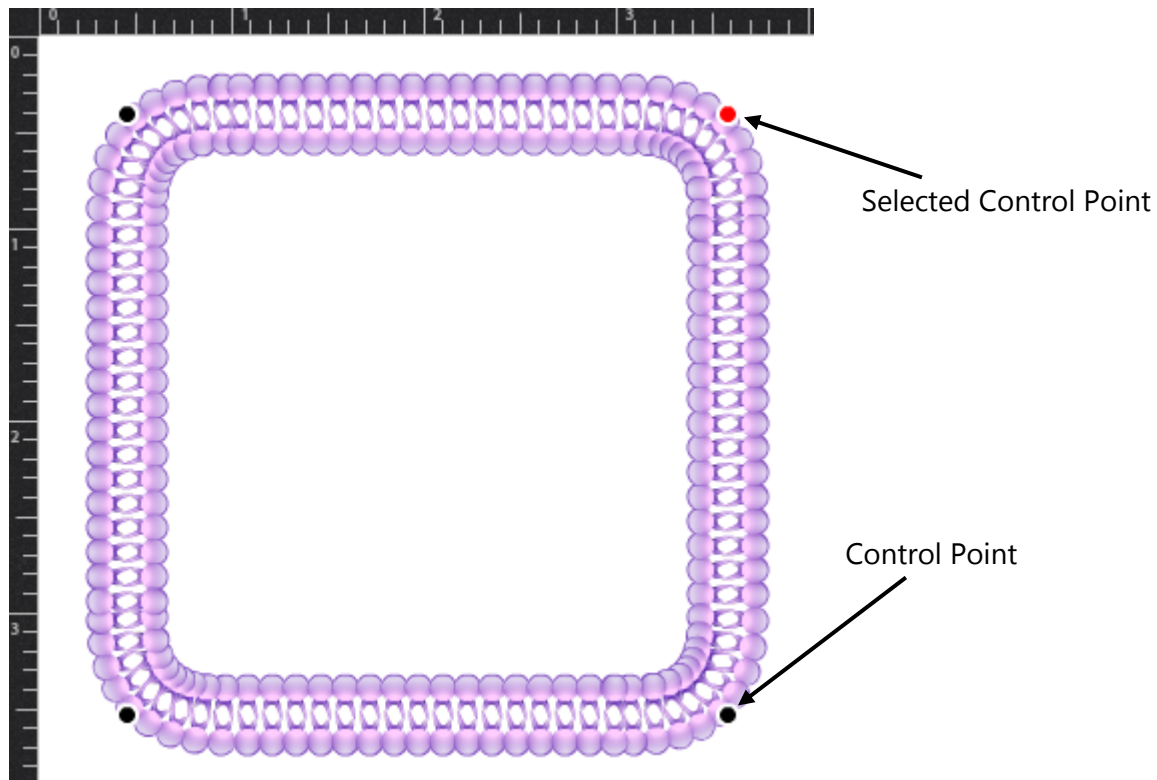
Drag Membrane Icon (Closed/Open) from left panel to the stage. It will add an instance of the dragged membrane to the stage as shown below. Open Membranes have open end points while Closed Membranes have their end points closed.



Once membrane is added to the stage, it can be moved, reshaped using Control Points and its color property can be changed using the color picker on Control Panel.

6.6 Editing Membranes

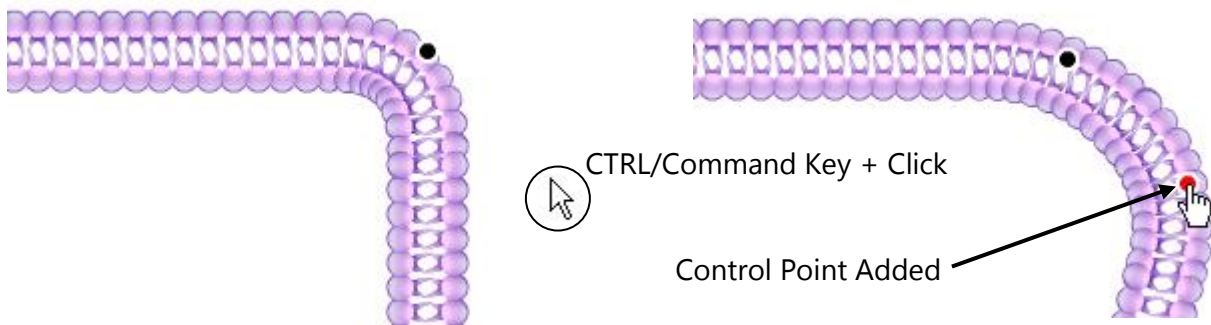
Click on the membrane to select it. Once membrane is selected it will show up movable Control Points (squares) as shown below.



Closed membranes have four default control points while Open membrane have three default control points. Control points can be selected by clicking and turns to red dot. Shape/Path of the membrane can be changed by dragging the selected control point.

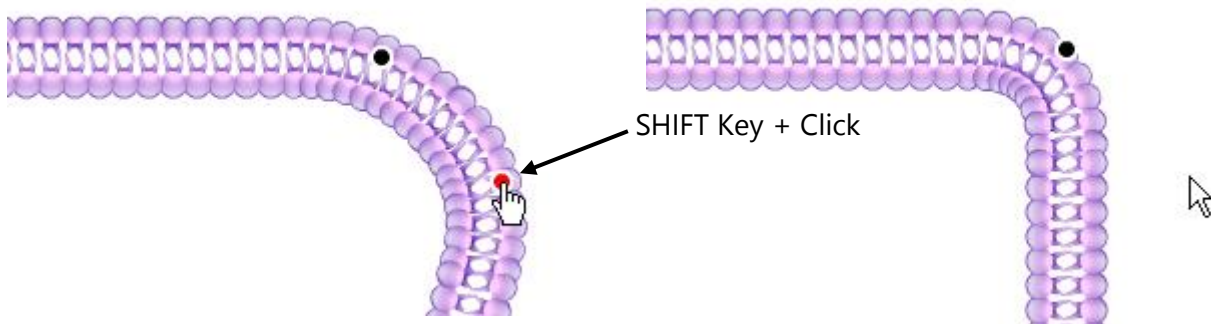
6.6.1 Adding Control Points

While membrane is selected, clicking at any point on the stage (except on membrane itself) while pressing the CTRL/Command key will add control point to it. Any number of additional control points can be added to the membrane.

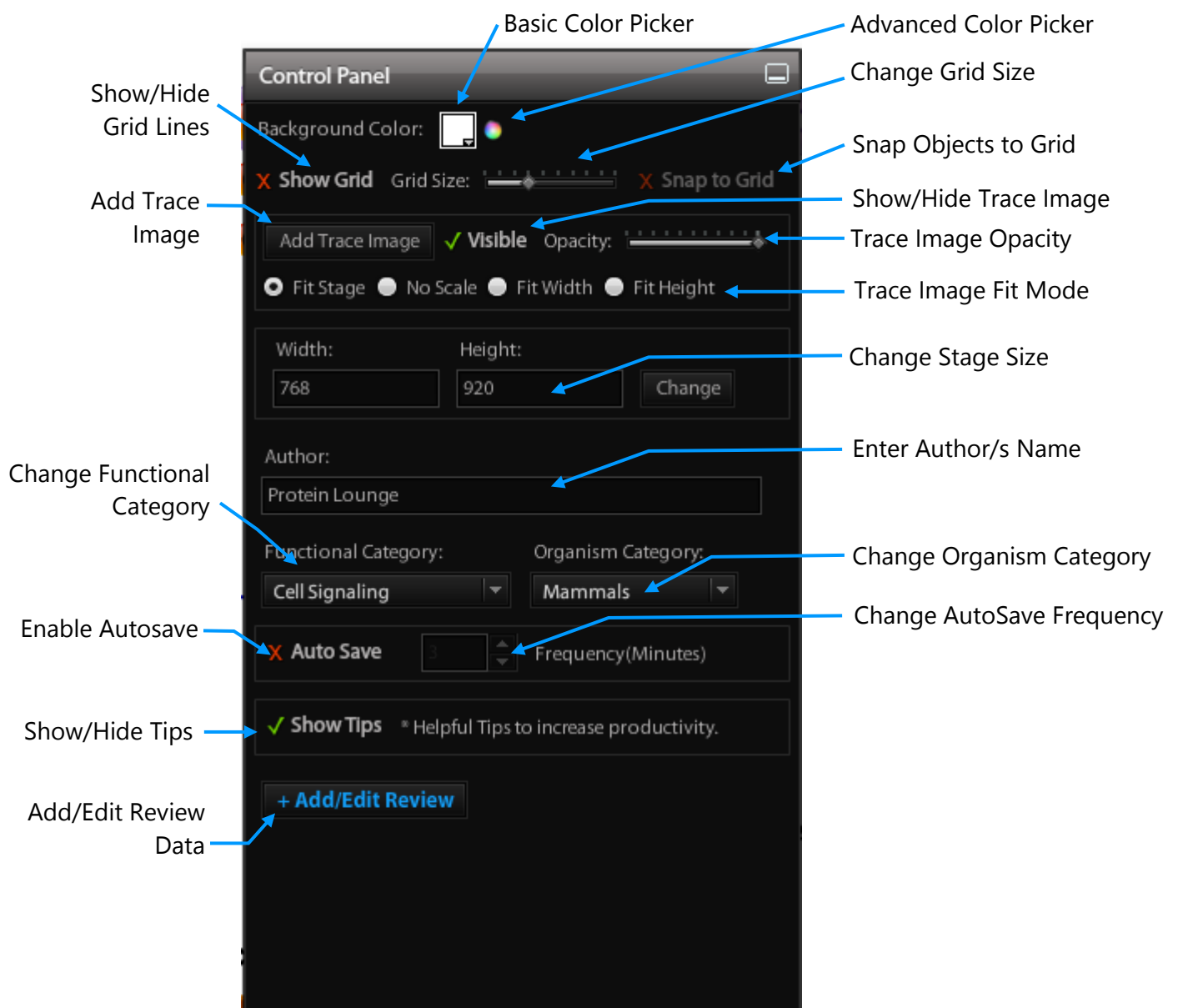


6.6.2 Deleting Control Points

Control points can be removed from the membrane by clicking on the Control Point while pressing the SHIFT key.



6.7 Editing Project Settings

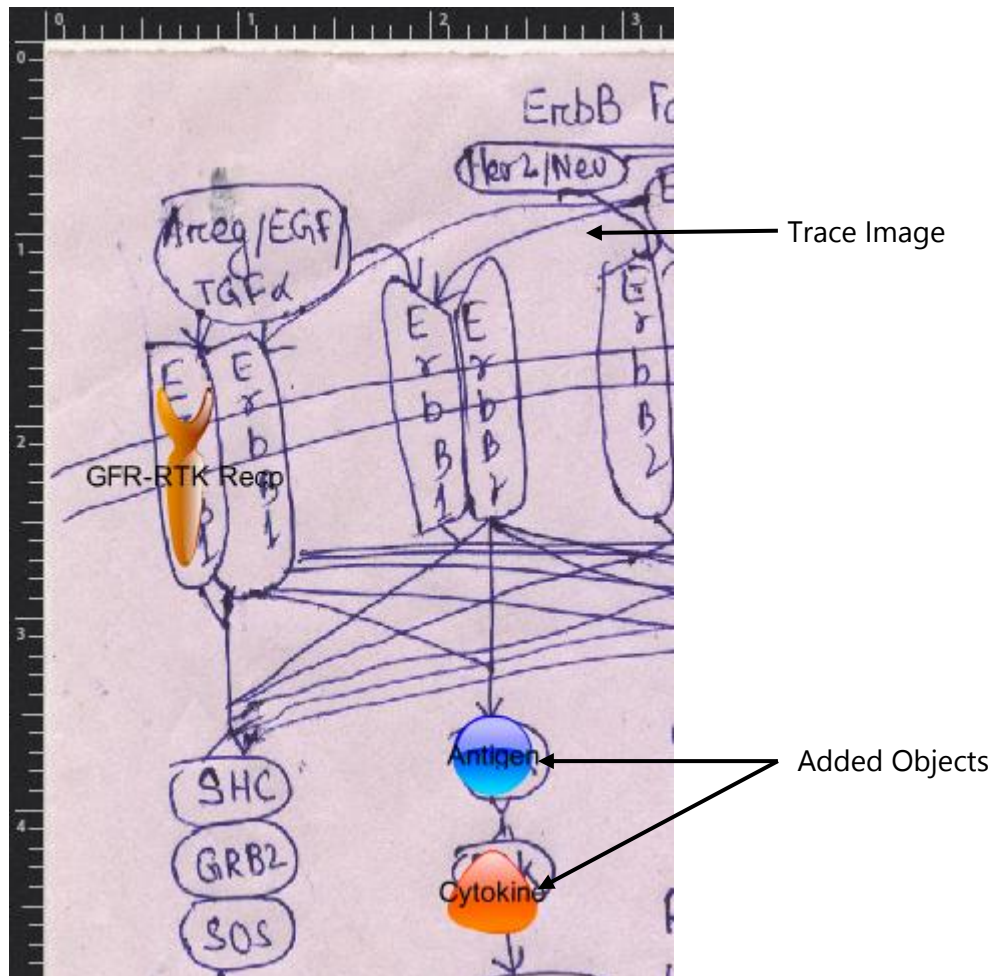


6.7.1 Using Trace Image

Trace image is useful if you have any reference image to keep in the background over which you can overlay your elements. This reference image can be any scanned image or any downloaded image. Size of the trace image can be set using various 'Fit To' options provided. Visibility and Opacity of Trace Image can be controlled using visibility toggle and opacity slider respectively.

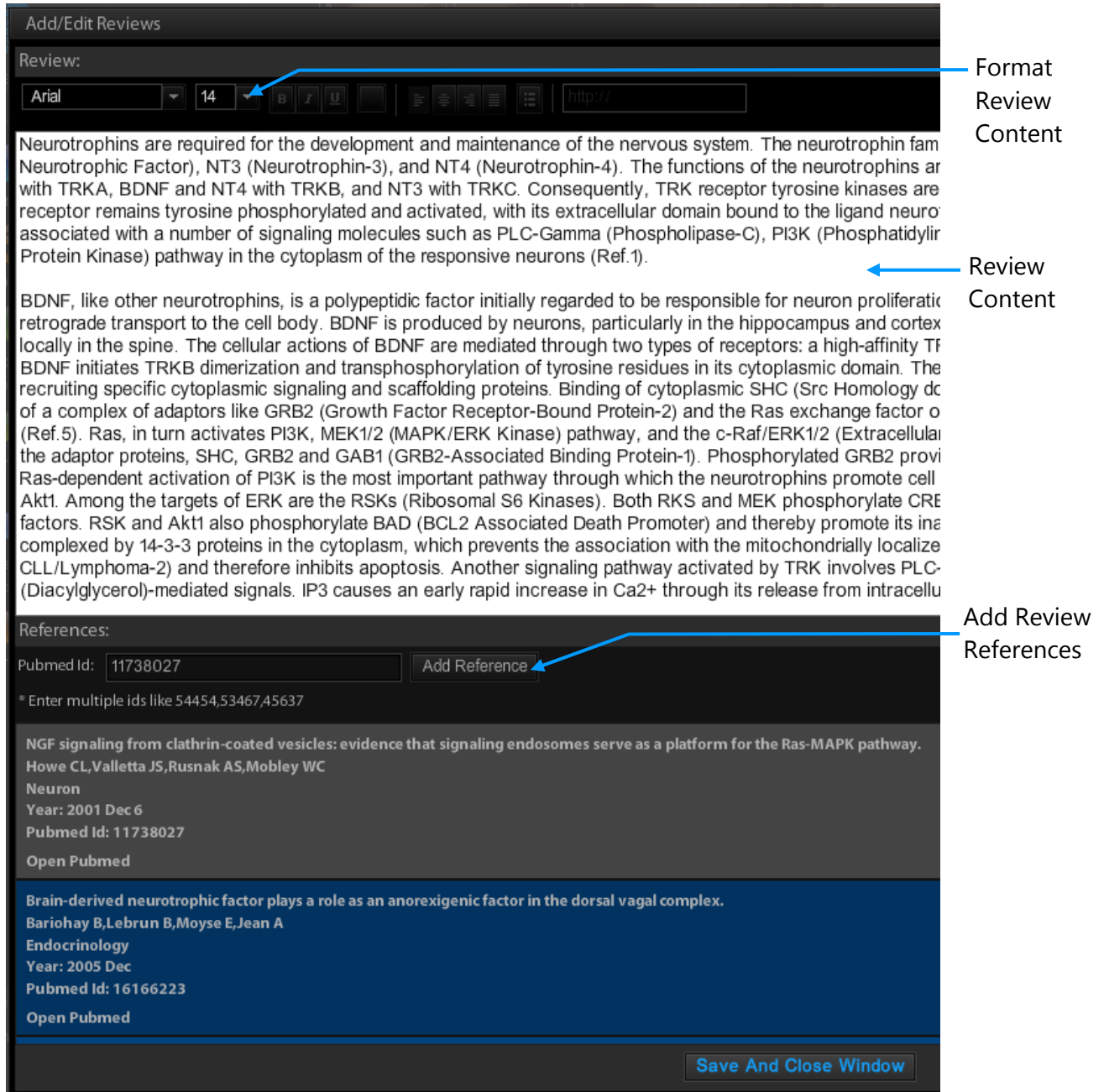
* Trace image will not be visible in output image or ePath3D Online Viewer

Example of using Trace Image:



6.7.2 Adding/Editing Review Content

Review content can be added/edited from the 'Add/Edit Reviews' panel. This panel can be opened by clicking on 'Add/Edit Review' button on the Project control panel. Formatting options are available above the review content entry box as shown below. Review references can also be added by entering Pubmed ids as shown below.



Format Review Content

Review Content

Add Review References

Add/Edit Reviews

Review:

Arial 14 B I U http://

Neurotrophins are required for the development and maintenance of the nervous system. The neurotrophin family (Neurotrophin-3, NT3 (Neurotrophin-3), and NT4 (Neurotrophin-4). The functions of the neurotrophins are associated with TRKA, BDNF and NT4 with TRKB, and NT3 with TRKC. Consequently, TRK receptor tyrosine kinases are receptor remains tyrosine phosphorylated and activated, with its extracellular domain bound to the ligand neurotrophin associated with a number of signaling molecules such as PLC-Gamma (Phospholipase-C), PI3K (Phosphatidylinositol 3-OH Kinase) pathway in the cytoplasm of the responsive neurons (Ref.1).

BDNF, like other neurotrophins, is a polypeptidic factor initially regarded to be responsible for neuron proliferative retrograde transport to the cell body. BDNF is produced by neurons, particularly in the hippocampus and cortex locally in the spine. The cellular actions of BDNF are mediated through two types of receptors: a high-affinity TrkB BDNF initiates TRKB dimerization and transphosphorylation of tyrosine residues in its cytoplasmic domain. The recruiting specific cytoplasmic signaling and scaffolding proteins. Binding of cytoplasmic SHC (Src Homology domain) of a complex of adaptors like GRB2 (Growth Factor Receptor-Bound Protein-2) and the Ras exchange factor Raf (Ref.5). Ras, in turn activates PI3K, MEK1/2 (MAPK/ERK Kinase) pathway, and the c-Raf/ERK1/2 (Extracellular signal-regulated kinase) pathway. The adaptor proteins, SHC, GRB2 and GAB1 (GRB2-Associated Binding Protein-1). Phosphorylated GRB2 provides Ras-dependent activation of PI3K is the most important pathway through which the neurotrophins promote cell survival. Among the targets of ERK are the RSKs (Ribosomal S6 Kinases). Both RSKs and MEK phosphorylate CREB factors. RSK and Akt1 also phosphorylate BAD (BCL2 Associated Death Promoter) and thereby promote its interaction with BCL2. BCL2 is complexed by 14-3-3 proteins in the cytoplasm, which prevents the association with the mitochondrially localized BAX/BCL2L1 (Lymphoma-2) and therefore inhibits apoptosis. Another signaling pathway activated by TRK involves PLC-IP3 (Diaclyglycerol)-mediated signals. IP3 causes an early rapid increase in Ca²⁺ through its release from intracellular stores.

References:


Pubmed Id: 11738027 Add Reference

* Enter multiple ids like 54454,53467,45637


NGF signaling from clathrin-coated vesicles: evidence that signaling endosomes serve as a platform for the Ras-MAPK pathway.
Howe CL,Valletta JS,Rusnak AS,Mobley WC
Neuron
Year: 2001 Dec 6
Pubmed Id: 11738027
Open Pubmed

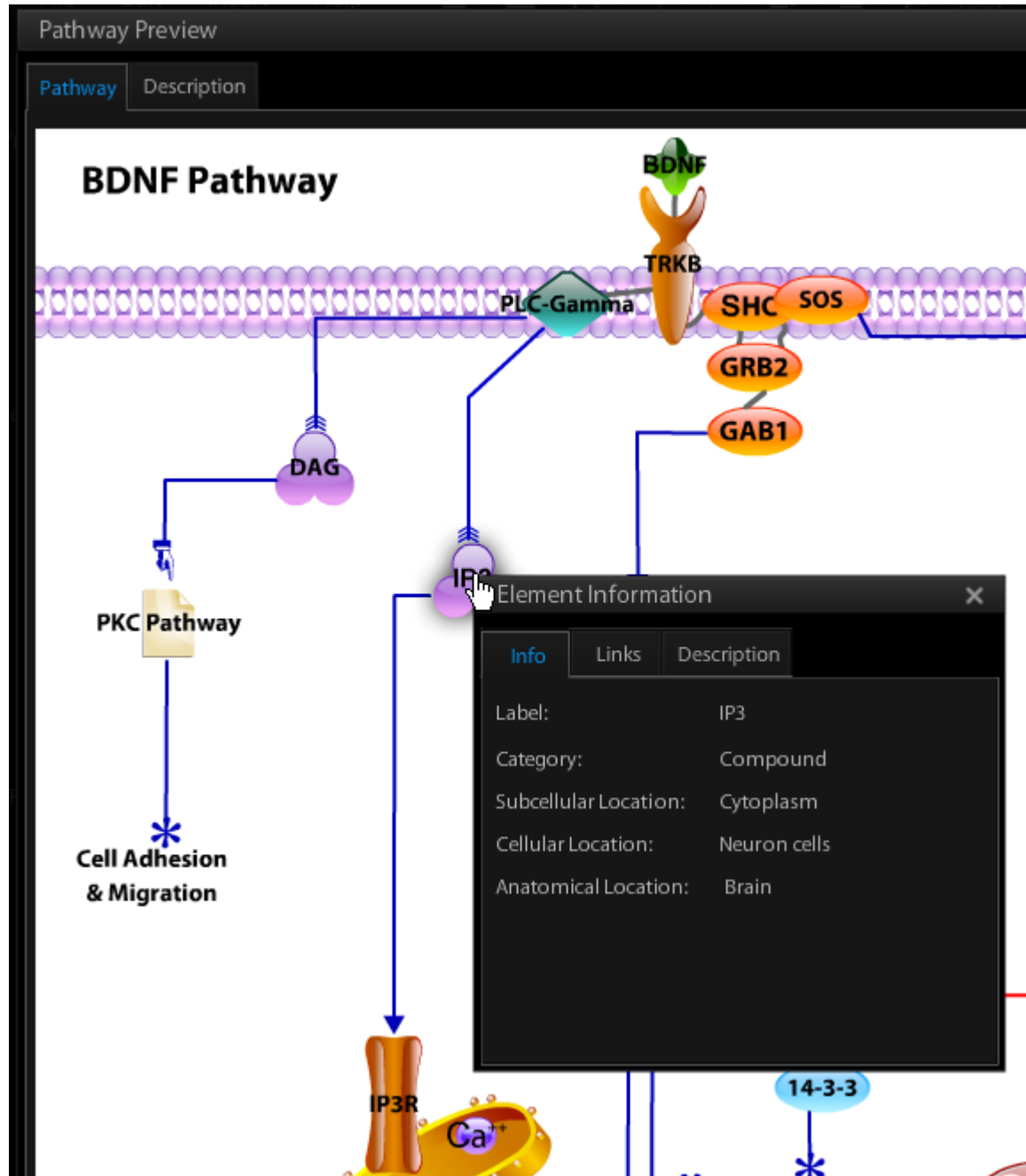
Brain-derived neurotrophic factor plays a role as an anorexigenic factor in the dorsal vagal complex.
Barishay B,Lebrun B,Moyse E,Jean A
Endocrinology
Year: 2005 Dec
Pubmed Id: 16166223
Open Pubmed

Save And Close Window


 - Retrieve multiple PubMed data at one click by entering multiple id into entry field like: 54454, 53467, 45637

6.8 Preview Pathway

Users can Preview their creations before Sharing/Presentation. Preview Panel can be opened by clicking on the  icon in the toolbar. This panel is useful for checking the accuracy of content and graphics before sharing. Clicking on each element on the graphics pops up its information box.

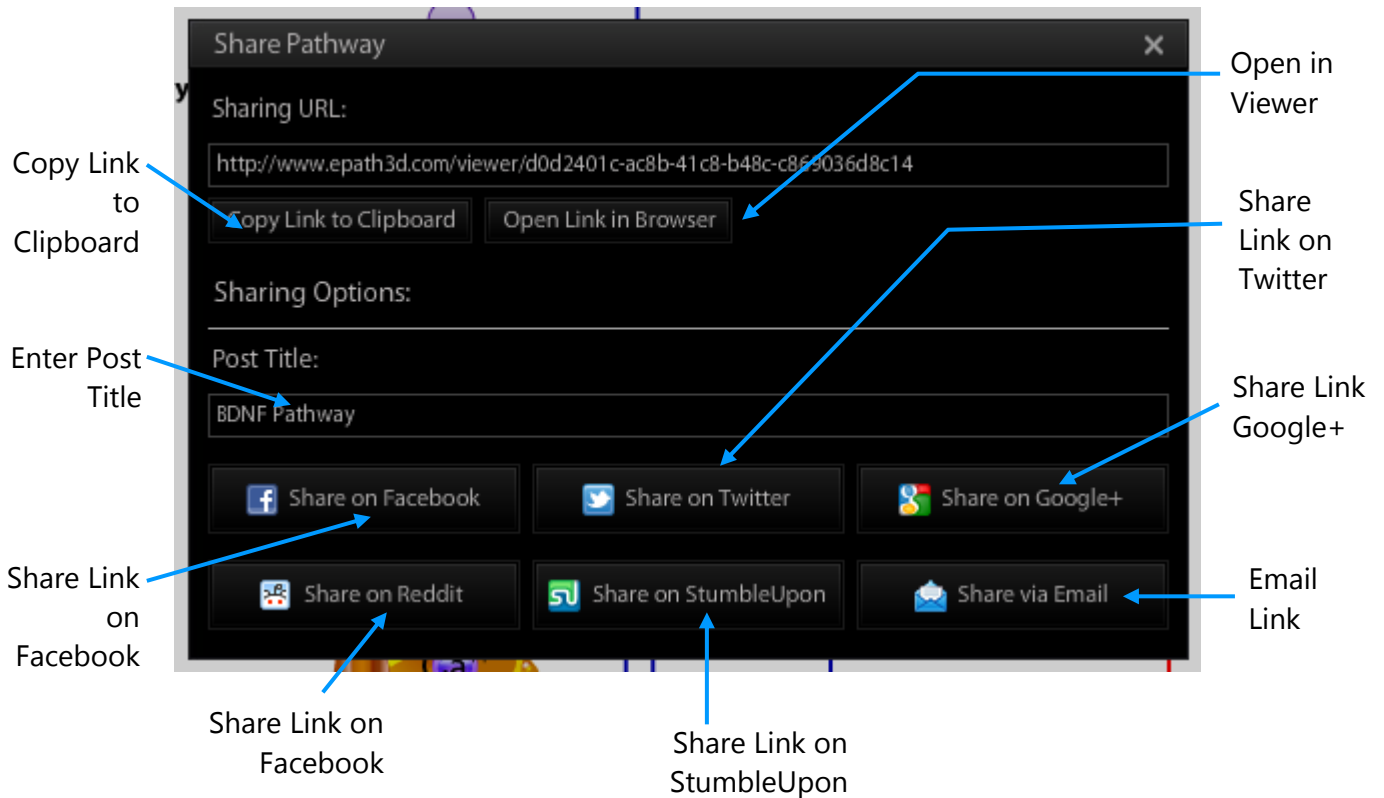


6.9 Share Pathway

Using the sharing options, users can share their creations via email and also on various online social media like Twitter and Facebook. Sharing Panel can be opened by clicking on  icon in the toolbar.

Users can do following tasks using 'Share Pathway' panel:

1. Copy Pathway link to clipboard.
2. Open ePath3D online viewer to view pathway.
3. Share it on Facebook, Twitter and via Email.



7. Troubleshooting

Users facing trouble running ePath3D online tool should follow the following steps.

1. Update your browser if any updates available.
2. Point your browser to '<http://www.adobe.com/support/flashplayer/downloads.html>'. This will automatically detect if your browser needs any updates on Flash Player and download it for you. ePath3D Online should run fine after these updates.

Contact support@epath3d.com if you still have issues with running ePath3D Online, we will be glad to help you with troubleshooting.