



TERANODE®

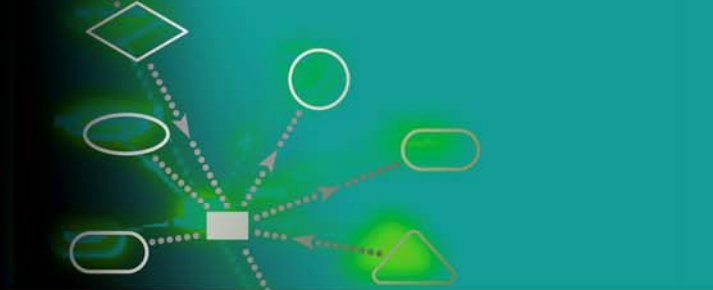
Pathway Visualization in Teranode Biological Modeler

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New Visualization



TERANODE Design Suite - New Workspace

Edit View Tools Preferences Help

Log

EGF_signaling x

logicalModel default

Overview

HierarchyTree

Root

- ExCell
 - Cell
 - MAPK
 - Shc_path
 - GAP
 - EGF_EGFR
 - GAPEi
 - Rxn8
 - Rxn62
 - EGFi
 - ADPi
 - EGFRideg
 - ATPi
 - EGF_EGFR2a
 - Rxn6
 - EGFRia2deg
 - Rxn11
 - EGF_EGFR2
 - Rxn14
 - EGFRi
 - Y

Property HierarchyTree

default Text Math

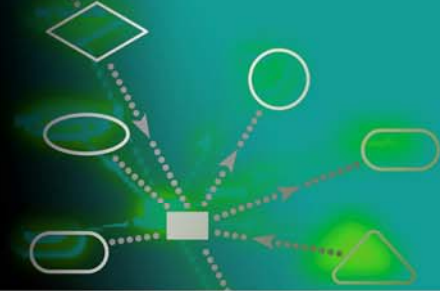
workspace\Blackwolf\examples\sim\EGFPathway\EGF_signaling.vlx loaded. Duration 0:09



Re-engineered Pathway Visualization

- **Clean separation of model and views**
 - Type dictionary and palettes
 - Allow style sheets,
 - Allow the use of other visual languages
- **More visual features**
 - Navigation map
 - Individual sizes and colors
 - Background image
 - Graphical annotations with free text labels and highlights
- **Multiple views**
 - Visual diff is coming
- **GraphML for view persistence**
- **Use of vector graphics**
 - Allow the use of SVG for browser-based viewer

Browser-based Viewer



Pathway Viewer

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites

Address C:\workspace\BMViewPrototype\NavigationMap\output.svg Go

The diagram illustrates a metabolic pathway. At the top, a dark blue node is connected to a yellow node labeled `_1_1_1_Trichloro_2_2_bis_4_`. Below this, a yellow node labeled `cis_2_3_Dihydrodiol_1_1_1_Trichloro_2_2_bis_4_chlorophenyl_ethane` is shown. This node is connected to a yellow node labeled `NADH` and a yellow node labeled `H`. A green oval labeled `ec_1_3_1` is connected to this node. Below, a yellow node labeled `NAD` is connected to the `cis_2_3_Dihydrodiol_1_1_1_Trichloro_2_2_bis_4_chlorophenyl_ethane` node. Further down, a yellow node labeled `_2_3_Dihydroxy_1_1_1_Trichloro_2_2_bis_4_chlorophenyl_ethane` is connected to the `NAD` node. A green oval labeled `ec_1_3_1` is also connected to this node. Below, a yellow node labeled `NADP` is connected to the `_2_3_Dihydroxy_1_1_1_Trichloro_2_2_bis_4_chlorophenyl_ethane` node. A yellow node labeled `H` is also connected to this node. Below, a yellow node labeled `NADPH` is connected to the `NADP` node. A green oval labeled `ec_1_13_11` is connected to the `NADPH` node. At the bottom, a yellow node labeled `_6_Oxo_2_hydroxy_7_4_` is connected to the `NADPH` node. The status bar shows "Mode: Infomode" and "Pathway Info: This is a demo". The source is listed as "KEGG".

Navigator

Name: NADP

Description: NADP+;NADP;Nicotinamide adenine dinucleotide phosphate;beta-Nicotinamide adenine dinucleotide phosphate;TPN;Triphosphopyridine nucleotide

Statusbar: Mode: Infomode

Pathway Info: This is a demo

Source: KEGG

My Computer

Docking Framework for managing multiple views



The screenshot displays the TERANODE Design Suite - New Workspace interface. The window title is "TERANODE Design Suite - New Workspace". The menu bar includes "File", "Edit", "View", "Tools", "Preferences", and "Help". The toolbar contains various icons for file operations, navigation, and editing, along with a "Log" button. The main workspace is divided into two panes: "default" and "View1". Both panes display a complex biological signaling pathway diagram with numerous nodes and connecting arrows. On the left side, there is a "BiologicalModel" palette with various colored shapes and arrows, and a "My Palette" section with a subset of these elements. On the right side, there is a vertical toolbar with "Overview" and "HierarchyTree" buttons. The status bar at the bottom shows the file path: "C:\workspace\BMViewPrototype\examples\KEGG_hsa04070.vlx loaded. Duration 0:05".