GeneWeaver.org
A system for the integration of functional genomics experiments.

1 UPLOAD GENE SETS

Go to **Manage GeneSets ▾** and select "Upload GeneSet." Upload or paste in your gene list

Describe your data

GeneSet MetaContent

Please enter some descriptive info about this GeneSet, please confirm that your GeneSet MetaContent meets the guidlines outlined in our **Curation Standards ↗** to ensure rapid acceptance by our curation team, or, in the case of private data, maximum integration into available GeneWeaver datasets.

GeneSet Name *:

GeneSet Figure Label *:

Score Type *:

GeneSet Description *:

Gene Information

Species *:

Gene Identifiers *:

Gene List ❶
Switch to File Upload ⬆
gene1[tab]value[newline]

Under "Reference Info" enter a PubMed ID if available

Click on **Review GeneSet Upload »**

SEARCH FOR GENE SETS

Locate the search tool on the home page or via the 🔍 icon.

Search GeneSets like "mouse, Ap3m2, alcohol"

Search — +

☑ GeneSets ☑ Genes ☑ Abstracts ☑ Annotations

- **Limit search fields by GeneSet, Genes, Abstract or Ontologies.**

- **After results are retrieved you can further refine by curation tier, species or attribution**

OR

2 CREATE PROJECTS

- **Check box beside gene sets of interest.**

- **Create a new project or add gene sets to an existing project using the menu:**

  📁 **Add Selected to Project**

- **Search for more gene sets and add them to your projects. Locate projects on the** **Analyze GeneSets ▾** **page**

PROJECTS AND TOOLS

View your gene sets on the "Analyze Genesets" page, rename or delete them. Select projects or sets and analyze.

Projects

- ➕ Alcohol
- ➕ Alzheimer
- ➕ BTEX
- ➕ BXD Sex * Tissue
- ➖ Demo
  - Tier I | Hs. | 134 | GS128223: Proteins found to be modified by at least two drugs of abuse
  - Tier III | Hs. | 92 | GS14904: Genes Harboring Allelic Variants That Distinguish Successful vs Unsuccessful Nicotine Abstainers in at Least 2 Samples
  - Tier III | Hs. | 53 | GS14908: Nicotine Abstinence Genes found in Genome-wide Association Studies (GWAS)

OR

3 ANALYZE GENE SETS

**Under** **Analyze GeneSets ▾** **click on one of the following tools.**
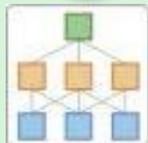
HiSim Graph Biclique-based analysis is used to generate hierarchical maps of gene set interactions
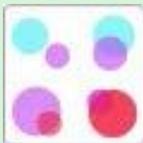
Jaccard Similarity This tool computes the Jaccard Coefficient (a measure of similarity) for multiple genesets.
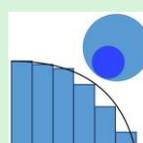
GeneSet Clustering Jaccard Distance (a measure of dissimilarity) is used to cluster GeneSets
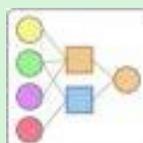
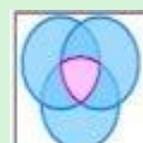**GeneSet Graph** Visualize the Gene-GeneSet graph.

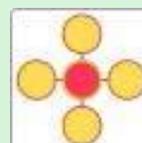**ABBA Gene-Centered Search** Find the genes most closely associated with your gene(s) of interest.

MSET Enrichment test for all GeneSets selected.

DBSCAN Gene Clustering Density-based clustering algorthim for genes.

Boolean Algebra Use advanced set logic to integrate multiple GeneSets

Combine GeneSets Advanced tool to combine multiple GeneSets into a single association matrix

INTERPRETE AND ANNOTATE RESULTS

4

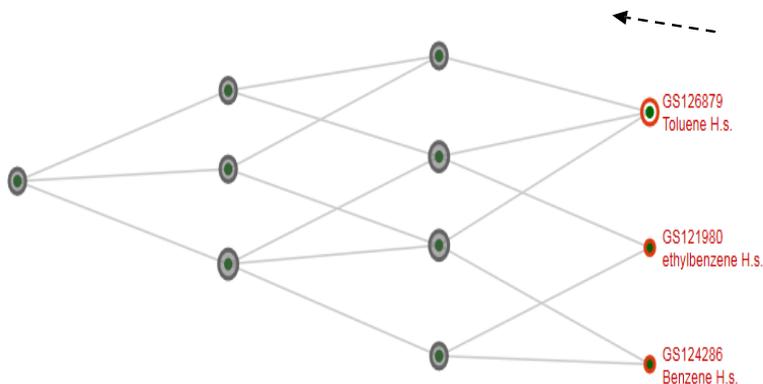Click on any gene set interaction to:

B
A. See the genes it contains and link out.
B. Modify and export your result.
1. *Click 'Tool Options' to alter levels or number of genes displayed.*
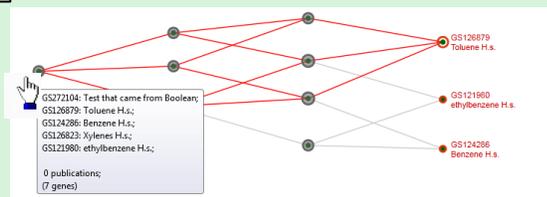2. *Click 'Visualization Options' to highlight genes or export as a PDF, SVG or PNG.*

A *1. Select a node*

HiSim Graph Results

Tool Options ◄

Visualization Options ◄

Help ◄

GS272104: Test that came from Boolean;
GS126879: Toluene H.s.;
GS124286: Benzene H.s.;
GS126823: Xylenes H.s.;
GS121980: ethylbenzene H.s.;

0 publications;
(7 genes)

GS126879 Toluene H.s.
GS121980 ethylbenzene H.s.
GS124286 Benzene H.s.

2. Choose external link

Gene Intersection Table

Download as... ▾

● = Exact same gene in all sets
● = Homologous gene cluster

Test that came from Boolean
Xylenes H.s.
ethylbenzene H.s.
Benzene H.s.
Toluene H.s.

Gene Symbol	Links
HSPA5	
NAMPT	
KLF4	
GRIN1	
CYP1A1	
GRIN2B	
GRIN2A	
NCF2	
FLVCR1	

3. View result

GS126879 Toluene H.s.

GS121980 ethylbenzene H.s.

GS124286 Benzene H.s.
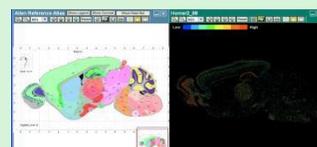
USER GROUPS AND SHARING DATA

5

USER GROUPS

Welcome Guest! ▾

⊕ Sign In
? Forgot Password
Create Account

To store projects in GeneWeaver , users must first create an account by providing a user name and password.

AVAILABILITY

Access Permissions

Access Restrictions
ℹ ＊:   Private

Group(s):
CTC
Addiction12
GeneWeaver Testing
Test Group
Sharing

When uploading gene sets onto GeneWeaver (Step 1), users have the option of making gene sets public, private or available to only members of a specific group.

SET UP A GROUP

Manage Groups

Groups That I Administer

CTC	Public	None	
Addiction12	Public	None	
GeneWeaver Testing	Public	2017-09-25	
Test Group	Private	2017-10-13	
Sharing	Public	None	

👥 Create New Group

If you are a registered user on GeneWeaver, you can create groups on the Accounts Settings page. A list of your groups is shown. Click on [Create New Group] enter the new group name and hit "Create." . You may use this tool to add members or assign additional administrator privileges. Click ✖ to exit a group. Click on 👥 to see the other members of groups that you belong to.

MORE INFORMATION

See "Introduction to GeneWeaver" at http://www.geneweaver.org/. See GeneWeaver "Interactive Help" at http://www.geneweaver.org/help.

Scan the QR code to take a tour of the site or submit your data with 'Manage Gene Sets'.

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