

**1 UPLOAD GENE SETS**

Go to **Manage GeneSets** and select "Upload GeneSet."

Describe your data

GeneSet Metadata

GeneSet Name\*:

GeneSet Figure Label\*:

GeneSet Description\*:

Availability\*:  Public:  Private:  Group:

Upload or paste in your gene list

Input File

Species\*:

Gene ID Type\*:

Gene Score Type\*:

Threshold\*:

Input File\*:

OR

Under "Ontologies" click on annotations that describe your gene set

Click on "Submit"

**SEARCH FOR GENE SETS**

Locate the search tool on the home page or via the **Search** tab.

- Enter genes, text terms, or OBO IDs in search box.

All Species

All Species

Mus musculus

Homo sapiens

Rattus norvegicus

**Danio rerio**

Drosophila melanogaster

- Select a species:

- Set Limits:

All Fields

All Fields

GeneSet Metadata

GeneSet References

**Gene IDs**

Probeset IDs

**2 CREATE PROJECTS**

- Check the box next to any gene set(s) of interest.

- Add gene sets to an existing project, or create a new project using the menu:

Add to Project...

Add to Project...

**Create New Project...**

- Search for more gene sets and add them to your projects. Locate projects on the

**Analyze GeneSets** page.

**PROJECTS AND TOOLS**

View your projects on the "Analyze GeneSets" page, where you can rename or delete them. Select projects or gene sets to analyze.

**My Projects & Tools**

CEREBELLUM - 10 GeneSets

Cocaine\_addiction - 8 GeneSets

Hypothalamus - 19 GeneSets

INITA - 4 GeneSets

Nicotine\_addiction - 9 GeneSets

Stress - 9 GeneSets

**3 ANALYZE GENE SETS**

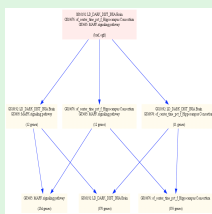
Under **Analyze GeneSets** select a project then click on one of the following tools:

**PhISH**



Decomposes phenome map into partitioned phenotype sets.

**Phenome Map**



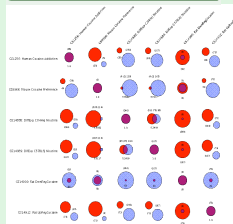
Uses intersections of multiple gene sets to create a hierarchy of gene-phenotype associations.

**Hypergeometric Tests**

GS1132	GS1229
or: 0.0	or: 0.0
ut: 0.0	ut: 1.5e-40
tt: 0.0	tt: 1.5e-40
hg: 1.0	hg: 1.0
or: 0.0	or: 0.0
ut: 1.5e-40	ut: 0.0
tt: 1.5e-40	tt: 0.0
hg: 1.0	hg: 1.0
or: 0.0	or: 0.0
ut: 2.6e-16	ut: 0.0
tt: 2.6e-16	tt: 0.0
hg: ~1.000	hg: 1.0

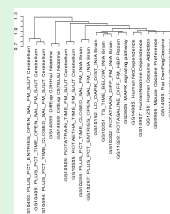
Gives probability of overlap between pairs of gene sets.

**Jaccard Similarity**



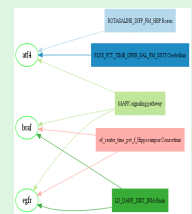
Shows matrix of pair wise gene set similarity and Venn Diagrams of set relations.

**Clustering**



Uses Jaccard distances to cluster gene sets.

**GeneSet Graph**



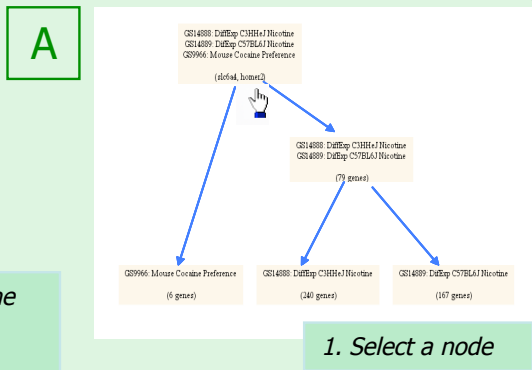
Navigate a gene-phenotype network among gene sets.

# 4

## INTERPRET AND ANNOTATE RESULTS

Click on any gene set interaction to:

- A. See the genes it contains and link out.
- B. Broadcast gene sets to GAGGLE to compare or analyze with other tools.



- B** 1. Select a gene set from here
- 2. Choose destination resource
- 3. Broadcast the set through GAGGLE

4. Analyze/view result

1. Select a node

2. Choose external link

3. View result

# 5

## USER GROUPS AND SHARING DATA

### USER GROUPS

Welcome, Guest  
Register | Login

To store projects in ODE, create an account by providing a user name and password.

### AVAILABILITY

Availability\*:  Public:  Private:  Group:

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

Group Name	Actions
StephensLab	[admin] [leave]
Stress	[admin] [leave]
Addiction	[admin] [leave]
Autism	[admin] [leave]
Group: <input type="text"/>	[Join] [Create]

### SET UP A GROUP

Registered users can create groups on the [Accounts & Groups](#) page. A list of your groups is shown. Enter the new group name and hit "Create." Click on [\[admin\]](#) to modify groups that you administer. You may use this tool to add members or assign additional administrator privileges. Click [\[leave\]](#) to exit group. Click [\[list\]](#) to see the other members in your group.

### MORE INFORMATION

- Visit the homepage at [www.ontologicaldiscovery.org](http://www.ontologicaldiscovery.org) for the following:
- **Introduction to ODE** – More detailed information.
  - **ODE Interactive Help** – An interactive, step-by-step guide.
  - **ODE GAGGLE usage screencast** – a demo of GAGGLE usage.

Download Firegoose, the GAGGLE Firefox toolbar, from: <http://qaqgle.systemsbiology.net/>.

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