

# The GenTaR Web Application Sandbox

<https://www.gentar.org/production-tracker-sandbox/#/>

A stable prototype for you to test

- Data replaced every Saturday
- **NOT** the final version
- feedback really welcome

## Sandbox data

Some public data from iMits has been loaded into the database.

For demonstration purposes a few changes have been made to the data:

Projects with genes starting with an 'A' have been made restricted

Projects with genes starting with a 'B' have been made protected

In iMits all the data is associated with CMG, but in the sandbox the project associated with the gene Atrx has been made an internal Baylor (BCM) project.

Difference in the data model compared to iMits:

- **Work Units / Work Group / Consortium**
  - GenTaR Work Units == iMits Centre (e.g. Harwell)
  - GenTaR Work Group == iMits Consortium (e.g. BASH)
  - GenTaR Consortium - collaborating projects - (e.g. CMG, Kids First)
  -
- **Projects & plans**
  - GenTaR project == iMits plan
  - GenTaR plan (production) == iMits mi\_attempt
- A GenTaR production plan can have multiple Outcomes
- Outcomes are linked to a colony or a specimen (haplo-essential project)
- Projects, Plans and Outcomes have identifiers

## Working with the application

## Public data

If you are not logged into the system you can view and search public data

This is the project view showing all public projects. This opens by default, but you can also open this view from the “Search Projects” item of the “Search” menu.

Gene symbol (s)

Search

Filters

Work units

Work groups

Search

Account

Reports

Manual

Privacy Notice

i

| Project summary         | Allele Intentions | Gene Symbol / Location | Project Assignment | Privacy | Access Status |
|-------------------------|-------------------|------------------------|--------------------|---------|---------------|
| <a href="#">Summary</a> | Null              | Cdc16                  | Assigned           | public  | ✓             |
| <a href="#">Summary</a> | Null              | Cnm1                   | Assigned           | public  | ✓             |
| <a href="#">Summary</a> | Null              | Ctnnd1                 | Assigned           | public  | ✓             |
| <a href="#">Summary</a> | Null              | Cwf19l1                | Assigned           | public  | ✓             |
| <a href="#">Summary</a> | Null              | Dnah10                 | Assigned           | public  | ✓             |
| <a href="#">Summary</a> | Null              | Efl1                   | Assigned           | public  | ✓             |
| <a href="#">Summary</a> | Null              | Fsd1l                  | Assigned           | public  | ✓             |
| <a href="#">Summary</a> | Null              | Klh133                 | Assigned           | public  | ✓             |
| <a href="#">Summary</a> | Null              | Lbr                    | Inspect - Conflict | public  | ✓             |
| <a href="#">Summary</a> | Null              | Nsdhl                  | Assigned           | public  | ✓             |

Specific projects can be found by gene symbol or synonym

Gene symbol (s)

Prex2

Search

Search

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| Search term | Search Result comments | Project summary         | Allele Intentions | Gene Symbol / Location | Project Assignment | Privacy | Access Status |
|-------------|------------------------|-------------------------|-------------------|------------------------|--------------------|---------|---------------|
| Prex2       |                        | <a href="#">Summary</a> | Null              | Prex2                  | Inspect - Conflict | public  | ✓             |

Filters

Work units

Work groups

Items per page: 20

1 - 1 of 1

< >

Alternatively, the projects can be filtered by Work Unit (a production centre such as TCP), or by a Work Group (e.g. BASH)

| Search Account Reports Manual Privacy Notice  |                         |                   |                        |                    |         |               |
|---|-------------------------|-------------------|------------------------|--------------------|---------|---------------|
| Gene symbol (s)   | Project summary         | Allele Intentions | Gene Symbol / Location | Project Assignment | Privacy | Access Status |
| <input type="button" value="Search"/>   | <a href="#">Summary</a> | Null              | Cdc16                  | Assigned           | public  | ✓             |
| <b>Filters</b><br><br>Work units<br><input type="checkbox"/> Select/ Unselect All<br><input type="checkbox"/> APN<br><input checked="" type="checkbox"/> BCM<br><input type="checkbox"/> CAM-SU GRC<br><input type="checkbox"/> CCP-IMG<br><input type="checkbox"/> CDTA<br><input type="checkbox"/> CIPHE<br><input type="checkbox"/> CNB<br><input type="checkbox"/> CNRS | <a href="#">Summary</a> | Null              | Dnah10                 | Assigned           | public  | ✓             |
|   | <a href="#">Summary</a> | Null              | Efl1                   | Assigned           | public  | ✓             |
|   | <a href="#">Summary</a> | Null              | Fsd11                  | Assigned           | public  | ✓             |
|   | <a href="#">Summary</a> | Null              | Kihl33                 | Assigned           | public  | ✓             |
|   | <a href="#">Summary</a> | Null              | Lbr                    | Inspect - Conflict | public  | ✓             |
|   | <a href="#">Summary</a> | Null              | Prex2                  | Inspect - Conflict | public  | ✓             |
|   | <a href="#">Summary</a> | Null              | Prpf8                  | Assigned           | public  | ✓             |
|   | <a href="#">Summary</a> | Null              |                        |                    |         |               |

Clicking on the Summary link of a project gives you an overview of that project

History  
[Go back](#)

Project Details.  
Project id: TPN:000000005  
Intentions:  

Cdc16 - CDC16 cell division cycle 16  
Mus musculus  
Accession Id: MGI:1917207  
Allele Type: Null  
Molecular: Deletion  
Mutation Type:

  
Assignment: Assigned  
Status:  
Active?: ☒  
Privacy: public  
Withdrawn?: ☐  
Recovery?: ☐  
Comment:

Status Stamps

Production Plans  

Plan Details  
Plan id: PIN:0000000005  
Status: Micro-injection Complete  
WorkUnit: BCM  
[See plan](#)

Phenotyping Plans  

Plan Details  
Plan id: PIN:0000000006  
Status: Phenotyping Started  
WorkUnit: BCM  
[See plan](#)

The project identifier

Production and phenotyping plans associated with the project

Each plan shows its current status

Clicking the “See plan” link shows detailed information about the plan.

## Production plan

A production plan has information about the strategy used to produce the mouse line

SearchAccountReportsManual

Privacy Notice

Project TPN:000000005/ Plan PIN:000000005

HistoryGo back

Plan Details

Id:

PIN:000000005

Type:

production

Status:

Micro-injection Complete

Work Unit:

BCM

Funder:

KOMP2

Products available for general public?:

☒

Comment:

Project id:

Crispr Attempt Details

Attempt Type:

MI date:

Jan 23, 2018

MI external Ref:

Cdc16 Cas9ZyElectroA

Experimental:

☐

Comments:

LIMS Colony Prefix: CDZE B6/N Electroporation (30V, 12 pulses, 1 msec, 100 msec interval) Cas9 protein 480ng/ul 2 sgRNA pools 53.25ng/ul each in a total volume of 20ul Modified TE+OptiMem

Mutagenesis Details

Mutagenesis External Ref:

MF-23667

Delivery Method:

Electroporation

Voltage:

30

Number of pulses:

12

Guides

| Sequence                | Chr | Chr Start | Chr Stop    | Truncated Guide | gRNA Concentration |
|-------------------------|-----|-----------|-------------|-----------------|--------------------|
| CCTGGTGAAGCTAAGGCTTCGTT |     | 13762678  | Not defined |                 | 53.25              |
| TATTGATTATACCTGTGCCTTGG |     | 13762716  | Not defined |                 |                    |
| TTAAGGGCAAGGTACACAATAGG |     | 13763130  | Not defined |                 |                    |
| CCTAATGTCTTCAGGTAGTAAGC |     | 13763172  | Not defined |                 |                    |

Genotype Primers

| Name         | Sequence              | Start Coordinate | End Coordinate |
|--------------|-----------------------|------------------|----------------|
| Cdc16 KO F   | AGTGTCAGGAAAGACAGGC   | Not defined      | Not defined    |
| Cdc16 KO R   | GCTCTGAGATTGGGACTTGGA | Not defined      | Not defined    |
| Cdc16 Endo R | CAACCTTCCTGTGCTGTCAAG | Not defined      | Not defined    |
| Cdc16 Endo F | AGTGTCAGGAAAGACAGGC   | Not defined      | Not defined    |

Vector/Ologos (Mutagenesis Donors)

| Concentration | Sequence | Preparation |
|---------------|----------|-------------|
|---------------|----------|-------------|

# Phenotype plan

A phenotype plan view has details about who is phenotyping the mouse

[Search](#) [Account](#) [Reports](#) [Manual](#) [Privacy Notice](#)

Project TPN:000000005/ Plan PIN:000000006

[History](#)  
[Go back](#)

Plan Details

Id: PIN:000000006  
Type: phenotyping  
Production Plan reference:  
Status: Phenotyping Started  
Work Unit: BCM  
Funder: KOMP2  
Products available for general public?: ☒  
Comment:

To edit the information, you need to log into the system

## GenTaR Sandbox Users

We have created a number of users in the sandbox so that you can explore the system from different perspectives.

| Name               | E-mail                | Password    | Workunit | Work unit Role | Consortium | Consortium Role | Description             |
|--------------------|-----------------------|-------------|----------|----------------|------------|-----------------|-------------------------|
| <b>CMG Manager</b> | cmg-manager@ebi.ac.uk | cmg-manager |          |                | CMG        | Manager         | CMG only user (manager) |
| <b>CMG</b>         | cmg@ebi.ac.uk         | cmg         |          |                | CMG        | General         | CMG only user (general) |
| <b>BCM Manager</b> | bcm-manager@ebi.ac.uk | bcm-manager | BCM      | Manager        |            |                 | BCM Manager             |
| <b>BCM</b>         | bcm@ebi.ac.uk         | bcm         | BCM      | General        |            |                 | BCM General             |
| <b>TCP</b>         | tcp@ebi.ac.uk         | tcp         | TCP      | General        |            |                 | TCP General             |

# Logging into the Web Application

You can find the “Sign In” option under the Account tab

SearchAccountReportsManual

Privacy Notice

Sign in

Login

Email

Password

Login

## Data Access – Protected and Restricted Projects

Signing in as the Baylor (BCM) general user:

Shows all the public, protected and restricted projects and their access status for the Baylor user. Baylor has an association with the CMG consortium, so all CMG projects are visible to the Baylor user.

BCM

Search

Account

Projects

Reports

Manual

Privacy Notice

Gene symbol (s)

Search

Filters

Work units

Work groups

| Project summary         | Allele Intentions | Gene Symbol / Location | Project Assignment | Privacy    | Access Status |
|-------------------------|-------------------|------------------------|--------------------|------------|---------------|
| <a href="#">Summary</a> | Null              | Atrx                   | Assigned           | restricted | ✓             |
| <a href="#">Summary</a> | Null              | Bcor                   | Inspect - Conflict | protected  | ✓             |
| <a href="#">Summary</a> | Null              | Bricd5                 | Assigned           | protected  | ✓             |
| <a href="#">Summary</a> | Null              | Bsdc1                  | Assigned           | protected  | ✓             |
| <a href="#">Summary</a> | Null              | Cdc16                  | Assigned           | public     | ✓             |
| <a href="#">Summary</a> | Null              | Cnm1                   | Assigned           | public     | ✓             |
| <a href="#">Summary</a> | Null              | Ctnnd1                 | Assigned           | public     | ✓             |
| <a href="#">Summary</a> | Null              | Cwf19l1                | Assigned           | public     | ✓             |
| <a href="#">Summary</a> | Null              | Dnah10                 | Assigned           | public     | ✓             |
| <a href="#">Summary</a> | Null              | Efl1                   | Assigned           | public     | ✓             |

Signing in as the TCP general user:

TCP has an association with the CMG consortium, so all CMG projects are visible, however the restricted project specific to Baylor is flagged with a different access status.

| eTCP  |                 |                   |                        |                    |            |               |
|---|-----------------|-------------------|------------------------|--------------------|------------|---------------|
| Search Account Projects Reports Manual Privacy Notice |                 |                   |                        |                    |            |               |
| Gene symbol (s) Search                                | Project summary | Allele Intentions | Gene Symbol / Location | Project Assignment | Privacy    | Access Status |
|   | Summary         | Null              | Atrx                   |                    | restricted | ⊘             |
| Filters   | Summary         | Null              | Bcor                   | Inspect - Conflict | protected  | ✓             |
| Work units  | Summary         | Null              | Brcd5                  | Assigned           | protected  | ✓             |
| Work groups   | Summary         | Null              | Bsdc1                  | Assigned           | protected  | ✓             |
|   | Summary         | Null              | Cdc16                  | Assigned           | public     | ✓             |
|   | Summary         | Null              | Cnm1                   | Assigned           | public     | ✓             |
|   | Summary         | Null              | Ctnnd1                 | Assigned           | public     | ✓             |
|   | Summary         | Null              | Cwf19l1                | Assigned           | public     | ✓             |
|   | Summary         | Null              | Dnah10                 | Assigned           | public     | ✓             |
|   | Summary         | Null              | Efl1                   | Assigned           | public     | ✓             |

Clicking on the project summary link as a TCP user just shows high level information about the project, the plans associated with the project are not shown.

eTCP

Search Account Projects Reports Manual Privacy Notice


History  
Go back

Project Details.

Project id: TPN:000000001  
Intentions:  
[Atrx - ATRX, chromatin remodeler](#)  
Mus musculus  
Accession Id: MGI:103067  
Allele Type: Null  
Molecular: Deletion  
Mutation Type:  
Assignment  
Status:  
Active?: ☒  
Privacy: restricted  
Withdrawn?: ☐  
Recovery?: ☐  
Comment:

Status Stamps

In contrast the BCM user has access to details of the plans to produce and phenotype the mice.



Search

Account

Projects

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Manual

[Privacy Notice](#)

[History](#)  
[Go back](#)

Project Details.

Project id: TPN:000000001

Intentions:

[Atrx - ATRX, chromatin remodeler](#)

Mus musculus

Accession Id: MGI:103067

Allele Type: Null

Molecular Deletion

Mutation Type:

Assignment Assigned

Status:

Active?: ☒

Privacy: restricted

Withdrawn?: ☐

Recovery?: ☐

Comment:

Update

Status Stamps

Production Plans

Plan Details

Plan id: PIN:0000000001

Status: Micro-injection aborted

WorkUnit: BCM

[See plan](#)



## Editing a Record

A user logged into the system from a Work Unit that is directly associated with a project or a plan has a different view of the data that allows them to update it.

### Compare the view of a protected project between the BCM and TCP users

BCM user:

BCM

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Project TPN:000000004/ Plan PIN:0000000003

History

Go back

Plan Details

Id:

PIN:0000000003

Type:

production

Status:

Micro-injection Complete

Work Unit:

BCM

Funder:

KOMP2

Products available for general public?:

☒

Comment:

Project id:

Crispr Attempt Details

Attempt Type:

MI date:

1/23/2018

MI external Ref:

Bsdc1 Cas9ZyElectroA

Experimental:

☐

Comments:

LIMS Colony Prefix: BDZE

The data can be edited in this view.

The view for the TCP user of the same plan:

TCF

Search

Account

Projects

Reports

Manual

Privacy Notice

Project TPN:000000004/ Plan PIN:0000000003

History

Go back

Plan Details

Id:

PIN:0000000003

Type:

production

Status:

Micro-injection Complete

Work Unit:

BCM

Funder:

KOMP2

Products available for general public?:

☒

Comment:

Project id:

Crispr Attempt Details

Attempt Type:

MI date:

Jan 23, 2018

MI external Ref:

Bsdc1 Cas9ZyElectroA

Experimental:

☐

Comments:

LIMS Colony Prefix: BDZE B6/N Electroporation (30V, 12 pulses, 1 msec, 100 msec interval) Cas9 protein 480ng/ul 2 sgRNA pools 53.25ng/ul each in a total of 20ul Modified TE+OptiMem

Mutagenesis Details

Mutagenesis External Ref:

MF-23666

Delivery Method:

Electroporation

The TCP user can see the details but is not able to edit the data.

# Managed Projects

A list of all projects that you manage can be obtained under the Projects menu when logged into the system as a member of a work unit.

| <div><div>BCM</div><div><div>Search</div><div>Account</div><div>Projects</div><div>Reports</div><div>Manual</div></div><div><div>Privacy Notice</div></div></div> |                    |                  |                  |                    |                  |                 |           |
|---|--------------------|------------------|------------------|--------------------|------------------|-----------------|-----------|
| Project Id  | External Reference | Marker Symbol(s) | Intention        | Project Assignment | Privacy          | Active/Inactive | Consortia |
| Type to filter  | Type to filter     | Type to filter   | Select to filter | Select to filter   | Select to filter | Active/Inactive | Consortia |
| TPN:000000001   |                    | Atrx             | Null             | Assigned           | restricted       | Active          |           |
| TPN:000000002   |                    | Bcor             | Null             | Inspect - Conflict | protected        | Active          |           |
| TPN:000000004   |                    | Bsd1             | Null             | Assigned           | protected        | Active          |           |
| TPN:000000005   |                    | Cdc16            | Null             | Assigned           | public           | Active          |           |
| TPN:000000009   |                    | Dnah10           | Null             | Assigned           | public           | Active          |           |
| TPN:000000010   |                    | Etf1             | Null             | Assigned           | public           | Active          |           |
| TPN:000000011   |                    | Fsd11            | Null             | Assigned           | public           | Active          |           |
| TPN:000000012   |                    | Kih133           | Null             | Assigned           | public           | Active          |           |
| TPN:000000013   |                    | Lbr              | Null             | Inspect - Conflict | public           | Active          |           |
| TPN:000000015   |                    | Prex2            | Null             | Inspect - Conflict | public           | Active          |           |
| TPN:000000016   |                    | Prp18            | Null             | Assigned           | public           | Active          |           |

Filters present at the top of the list can be used to locate specific projects

Filtered by Marker symbol

| <div><div>BCM</div><div><div>Search</div><div>Account</div><div>Projects</div><div>Reports</div><div>Manual</div></div><div><div>Privacy Notice</div></div></div> |                    |                  |                  |                    |                  |                 |           |
|---|--------------------|------------------|------------------|--------------------|------------------|-----------------|-----------|
| Project Id  | External Reference | Marker Symbol(s) | Intention        | Project Assignment | Privacy          | Active/Inactive | Consortia |
| Type to filter  | Type to filter     | Type to filter   | Select to filter | Select to filter   | Select to filter | Active/Inactive | Consortia |
| TPN:000000005   |                    | Cdc16            | Null             | Assigned           | public           | Active          |           |

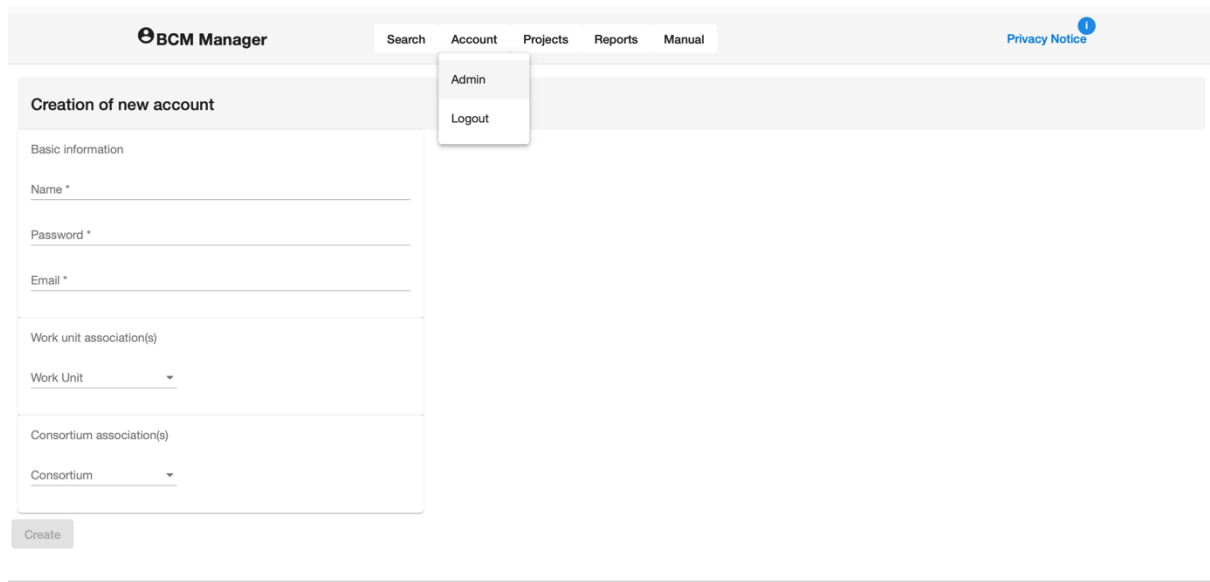
Filtered by data access policy

| <div><div>BCM</div><div><div>Search</div><div>Account</div><div>Projects</div><div>Reports</div><div>Manual</div></div><div><div>Privacy Notice</div></div></div> |                    |                  |                  |                    |                  |                 |           |
|---|--------------------|------------------|------------------|--------------------|------------------|-----------------|-----------|
| Project Id  | External Reference | Marker Symbol(s) | Intention        | Project Assignment | Privacy          | Active/Inactive | Consortia |
| Type to filter  | Type to filter     | Type to filter   | Select to filter | Select to filter   | Select to filter | Active/Inactive | Consortia |
| TPN:000000001   |                    | Atrx             | Null             | Assigned           | restricted       | Active          |           |
| TPN:000000002   |                    | Bcor             | Null             | Inspect - Conflict | protected        | Active          |           |
| TPN:000000004   |                    | Bsd1             | Null             | Assigned           | protected        | Active          |           |

## Creating new users

Users who have the Manager role can create users associated with their Work Unit or Consortium.

This function is available from the “Admin” item of the “Account” menu, which only appears for a manager logged into the system.



The screenshot shows the 'BCM Manager' interface. At the top, there is a navigation bar with the logo 'BCM Manager' on the left and a menu with 'Search', 'Account', 'Projects', 'Reports', and 'Manual' in the center. On the far right of the navigation bar is a 'Privacy Notice' link with a blue information icon. Below the navigation bar, the 'Account' menu is expanded, showing 'Admin' and 'Logout' options. The main content area is titled 'Creation of new account'. It contains a form with the following sections: 'Basic information' with fields for 'Name \*', 'Password \*', and 'Email \*'; 'Work unit association(s)' with a 'Work Unit' dropdown menu; and 'Consortium association(s)' with a 'Consortium' dropdown menu. At the bottom left of the form is a 'Create' button.


The ability to delete users or reset the password will be added in the future.

# Managed Gene Lists

A member of a consortium has access to the consortium gene list. There are separate lists for each consortium. The list can be used to record all genes of interest to the consortium, not just those entered into the production tracking system.

## For genes on the list in the production pipeline

Every project associated with the gene is shown



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[Privacy Notice](#)

**Gene List for CMG**  
Please select the consortium for which you want to view/manage the gene list:  

[Consortium](#)  
CMG

Export

| Gene(s)  | Note  | Associated Projects                                  |
|----------|-------|--|
| Togaram1 | Tier1 | <a href="#">TPN:000000177</a> [ Status not defined ] |
| Fivcr2   |       |  |
| Tomm40l  |       |  |
| Myh6     | Tier1 |  |
| Acta2    | Tier1 |  |
| Myh7     | Tier1 |  |
| Csnk2a1  |       |  |
| Fam126a  | Tier1 |  |
| Rac3     |       |  |

The gene lists can be maintained by members of the consortium who have been assigned the Manager role. When they open the gene list page, they have a different view that allows them to edit the list or import additional genes from a CSV file.

The screenshot shows the 'Gene List for CMG' page in the CMG Manager application. The header includes the 'CMG Manager' logo and navigation links for Search, Account, Projects, Reports, and Manual. A 'Privacy Notice' link with an information icon is also present. Below the header, the page title is 'Gene List for CMG'. A message states: 'Please select the consortium for which you want to view/manage the gene list:'. A dropdown menu labeled 'Consortium' is set to 'CMG'. Below this, there are 'Import' and 'Export' buttons. The main content area displays a table with three columns: 'Gene(s)', 'Note', and 'Associated Projects'. The table contains five rows of data, each with a gene symbol in a pill-shaped button, a note, and an associated project ID.


| Gene(s) | Note  | Associated Projects                  |
|---------|-------|--------------------------------------|
| Togam1  | Tier1 | TPN:000000177 [ Status not defined ] |
| Flvcr2  |       |                                      |
| Tomm40l |       |                                      |
| Myh6    | Tier1 |                                      |
| Acta2   | Tier1 |                                      |

The format of a CSV file is:  
< gene symbol >, <note>

However, this is something that could change in a future version of the application.

Members of a work unit who are not a member of the consortium cannot view the gene list.

Members of the consortium can see all the information about public plans, as well as protected and restricted plans that are associated with the consortium, however they do not have permission to edit the plans or projects.



Search

Account

Projects

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History

Go back

Project Details.

Project id: TPN:000000041

Intentions:

Cpsf1 - cleavage and polyadenylation specific factor 1

Mus musculus

Accession Id: MGI:2679722

Allele Type: Null

Molecular Deletion

Mutation Type:

Assignment Assigned

Status:

Active?: ☒

Privacy: public

Withdrawn?: ☐

Recovery?: ☐

Comment:

Status Stamps

Production Plans

Plan Details

Plan id: PIN:0000000044

Status: Micro-injection Complete

WorkUnit: BCM

See plan