

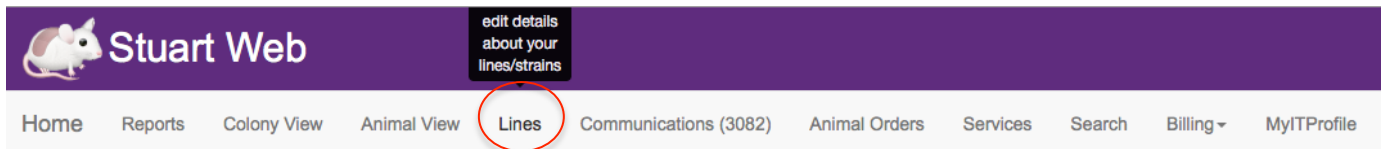



Managing Breeding of Research Colonies Using StuartWeb

Entering Line Instructions to Manage Research Colonies

The *Lines* section of StuartWeb is used for issuing instructions about the everyday management of your mouse colonies including *Tissue Collection*, *Phenotype information*, *Culling at Weaning*, *Stock Culling*, and *Breeding Instructions*. This section will replace the use of the Communications interface for on-going instructions. The communications interface will still be used for more specific instructions about individual mice or groups of mice.

To access the *Line Instructions* for your lines click the *Lines* tab on the StuartWeb main menu.



A table of your lines will appear. The table can be rearranged using arrows  in the table. Select the line from the table and click on it to open the *Line Instructions* window.

| Line ID | Shortlinename | Longlinename | Owner | Status |
|---------|-------------------|-------------------|---------------|--------|
| 268 | 129S6/SvEvTacAusb | 129S6/SvEvTacAusb | Jenny Kingham | Active |
| 571 | CBA/CaHArcAusb | CBA/caHArcAusb | Jenny Kingham | Active |
| 579 | 129X1/SvJArcAusb | 129X1/SvJArcAusb | Jenny Kingham | Active |

The *Line Details* will be pre-filled with information provided in the *Line Information* form originally submitted when the line was introduced to ABR. The required *Instructions* are either text boxes or drop-down lists with limited options.

In the *Breeding Choice* drop down box there are the following options: *Contact Researcher for Instructions*, *Maintenance Breeding*, and *Follow Breeding Plan* (below).

- *Contact Researcher for Instructions* - we will wait for your instructions on all colony management (eg setting up new breeders)
- *Maintenance* - We will hold the minimum number of animals (2 BPs and 4x stock) to ensure the line is kept going. We will select breeders and replace stock as required (based on any details you put into plan (below))
- *Follow plan* - you give us a plan to follow (in the *Breeding Plan* box below) - eg maintain 4 het x het pairs and we will select the most appropriate mice.

129S6/SvEvTacAusb

Line Details

| | |
|---|-------------------------------|
| Short Line Name: 129S6/SvEvTacAusb | Line ID: 268 |
| Long Line Name: 129S6/SvEvTacAusb | Owner: Jenny Kingham |
| Status: Active | Publicly Viewable: Yes |

Instructions

Phenotype Instructions

| | |
|---|---------------------|
| Monitoring: | 200 characters left |
| Phenotype Action: | 200 characters left |
| Include special housing, dietary or other requirements. Include instructions on what staff should do if the phenotype is causing clinical disease | |
| Contact Details: | 200 characters left |

Weaning Instructions

| | |
|-------------------------|----|
| Cull at weaning: | No |
|-------------------------|----|

Tissue Collection

| | |
|--|---------------------|
| Type: | None |
| Anticoagulant type: | 200 characters left |
| Comment: | 200 characters left |
| Detail restrictions on tissue collection here e.g. first litters only or pair 25,26 only | |
| Identification: | Tail Tattooing |
| Identification Comments: | 200 characters left |
| Detail restrictions on identification here e.g. tail tattoo only when collecting tissue | |
| Genotype Service: | None |
| Automatically upload genotype results from Garvan's GMG: | No |

Stock Culling Instructions

| | |
|---|---------------------|
| Cull Males: | No |
| Cull Females: | No |
| Comments: | 200 characters left |
| Note any deviations from the above culling instructions e.g. Save all blue pedigree males | |

Breeding Instructions

| | |
|--------------------------------------|-------------------------------------|
| Breeding Choice: | Contact Researcher for instructions |
| Breeding Plan: | 200 characters left |
| End of breeding instructions: | 200 characters left |

Save Changes

Complete all the fields as required and click *Save Changes*. These instructions are now available to ABR Animal Technicians for them to manage your colony accordingly.

Using Colony View

Colony View allows you to view breeders, litters and stock within a line. The following information can be seen:

- **Number of active pairs** –An active pair (A) is a pair that has the male and female still associated and involved in breeding. A status of inactive (I) can indicate that the male and female are permanently separated and one or both may be dead. By clicking on the Status title in the Breeding Pair box the active pairs can be sorted. Note the total numbers under the line box include stud pairings however stud pairings do not appear in the breeding pair list box.
- **Genotype of breeders**- Sorting on the male or female genotype on the breeding pair list box allows you to review the males or females of a specified genotype.
- **Location of breeders** - The zone the pairs are housed in will indicate whether they are still in quarantine or are breeding in the clean zone. A zone name including Q indicates they are in quarantine while a B in the zone name indicates that the line is breeding in the clean bio bubble pavilion.
- **Mating date of breeders**- Sorting the breeder pair list box by joining date will allow you to view when pairs have been mated. It is generally better to have a good spread of joining dates so that all your breeders don't suddenly need replacing.

- **Performance of current pairs** - Clicking on any pair in the Breeder pair list opens the Litters view of the pair. If you want to look at the current performance of pairs- compare the born count to the males and females weaned counts. This also shows how many litters a pair has produced. Pairs are usually retired after 6 litters.
- **Number of reserved breeders**- Click on a specific litter to see all animals in that litter. Click on *status* to sort and all mice with a B status are reserve breeders. If not specified via the Breeding Plan or Communications our technicians will reserve breeding animals to ensure the survival of the colony. It is important that these animals are NOT requested for issue without consulting the animal technicians. If you assign a status of B to an animal our technicians don't automatically pair them, they will await instructions.
- **Checking for litters**- Both colony view and animal view give you a list of litters born in the preceding 21 days including details of pair no. and no. born. This can be useful for planning experiments.

The image shows a sequence of screenshots from a software interface, illustrating the workflow for viewing animal data:

- Colony View:** Shows a table with columns for Line name, Litters in last 21 days, and Litter Details. A red circle highlights a specific litter entry in the Litter Details column.
- Litters: C57BL/6JAusb.6993:** A detailed view of the selected litter, showing a table with columns for Litter Seq, DOB, Males, Females, Culled, Mortality, Date Identified, Traffic Light Colour, and Destroyed. A red circle highlights a specific litter entry.
- C57BL/6JAusb.6993 LitterSeq: 5:** A view showing filters for Sex (Male, Female, Males & Females) and Status (Alive, Dead or Alive), along with a Refresh button and a View Details of Selected Animals button.
- Animal View:** A table listing animals with columns for Animal ID, Pair, Litter, Sex, DOB, Date Identified, Genotype, Status, ContainerID, Zone Name, Origin, and Comments. A red circle highlights a specific animal entry.
- Animal Details:** A detailed view of the selected animal, showing fields for Line, Sex, DOB, Origin, Arrival, DOD, Traffic Light Colour, Transferred, Father, and Mother.
- History:** A table showing the history of the animal, with columns for Animal ID, Date, Comments, Status, and EmployeeID.

Using Animal View

Animal view will list all the lines under the ownership of the researcher nominated as Owner that you are associated with. Select the line of interest by clicking on the short line name link.

- **Age, sex, genotype and housing of stock**- Using Animal View and sorting the list by age, genotype or container ID will assist in managing stock. Information from this list can be copied and pasted into excel. Check for mice of unwanted age, sex or genotype. By sorting the list by container ID you can see which mice are co-housed and attempt to cull whole cages or single housed animals when cutting back on stock.

- **Status** – The status of the animal indicates if it is in an active breeding pair (A), available for issue (-), requested for issue (RI) or a reserve breeder (B). To change the status of an animal click on the animal ID and change the status within the Animal View. Select several animals using the tick box and “View details of selected animals” button.
- **Issuing animals** – Use Animal View to select and issue animals via the Animal Details screen. Please refer to Procedure for Ordering Mice from a Researcher's Own Colony on StuartWEB. *Issue instructions* relate to packing and sending animals only and are not visible until the time of packing. Requests for tattoos or other procedures should be placed in a communication.
- **Comments** – this section is for general comments about the animals rather than instructions. Animal technicians are not prompted by the addition of comments. Please use Communications to issue instructions for specific animals.

Animal View

Show 100 entries Search within lines:

| Line ID | Short Line Name | Long Line Name | Background Strain | Genes | Phenotype |
|---------|-------------------|-------------------|-------------------|-------|-----------|
| 5415 | --S | B10.S | B10.S | | None |
| 5410 | -D28 | -D28 | C57BL/6J | CD28 | None |
| 5417 | -DBR | -DBR | B10.BR | Dmut | None |
| 5413 | -DBX | -DBX | B10.Br | | None |
| 5416 | -VBR | -VBR | B10.BR | | None |
| 268 | 129S6/SvEvTacAusb | 129S6/SvEvTacAusb | 129 | | None |
| 580 | 129T2/SvEmsAusb | 129T2/SvEmsAusb | 129 | | None |

129S6/SvEvTacAusb

Sex: Male Female Males & Females

Status: Alive Dead or Alive

[Refresh](#)

[View Details of Selected Animals](#)

Show 100 entries Search within animals:

[Column visibility](#) [Copy](#) [Print](#)

| Animal ID | Pair | Litter | Sex | DOB | Date Identified | Genotype | Status | ContainerID | Zone Name | Origin | Comments | Traffic Light Colour | Select |
|-----------|------|--------|-----|-------------|-----------------|----------|--------|-------------|-----------|--------|----------|----------------------|--------------------------|
| 7316 | 398 | 2 | M | Jun 22 2019 | Jul 10, 2019 | | - | 1045101 | JK(B10) | | | White | <input type="checkbox"/> |
| 7317 | 398 | 2 | M | Jun 22 2019 | Jul 10, 2019 | | - | 1045101 | JK(B10) | | | White | <input type="checkbox"/> |
| 7316 | 398 | 2 | M | Jun 22 2019 | Jul 10, 2019 | | - | 1045101 | JK(B10) | | | White | <input type="checkbox"/> |
| 7315 | 398 | 2 | M | Jun 22 2019 | Jul 10, 2019 | | - | 1045100 | JK(B10) | | | White | <input type="checkbox"/> |
| 7314 | 398 | 2 | M | Jun 22 2019 | Jul 10, 2019 | | - | 1045100 | JK(B10) | | | White | <input type="checkbox"/> |

Animal Details [Genotype](#) [Status/Request](#) [Comments](#)

Line: 129S6/SvEvTacAusb
Animal ID(s): 7316
UAI(s): 3194105

| | | | |
|----------------------|-------------------|-----------------|------|
| Line | 129S6/SvEvTacAusb | Ethics Number | 4926 |
| Sex | M | Breeding Pair | |
| DOB | Jun 22, 2019 | Date Identified | |
| Origin | | Line Phenotype | |
| Arrival | | Generation | |
| DOD | | Issued | |
| Traffic Light Colour | White | Genotype | |
| Transferred | | Mother | |
| Father | 7215 | | |

History

| Animal ID | Date | Comments |
|-----------|---------------------|----------------------------|
| 7316 | Jul 10 2019 11:01AM | Animal created/identified. |

Line: 129S6/SvEvTacAusb
Animal ID(s): 7316
UAI(s): 3194105

Status:

For issue requests, please complete below details

Protocol:

Owner:

To Zone:

Van Run:

Using reports

- **Draw pedigree-Pedigree diagrams can give you a visual representation of how mice are related to each other within the line.** If you are interested in the ancestors of a particular mouse include the ID number when asked for proband and then select ancestors of proband using the Animal Types dropdown list. Alternatively the proband can be left empty and the choices then are to include all animals, living and ancestors or unassigned (ancestors of the unassigned will also appear).
- **Poor Breeders By Room-** Enter the zone name and the report will provide you with a list of any breeders that are considered to have had poor breeding performance in the last 3 months. Note: this is a guide only, some lines breed so poorly that all breeding pairs may appear on this list. **This report allows you to check for problem breeders and should prompt you to discuss progress of breeding with ABR staff.**
- **Production Summary** – Enter a start and finish date. Enter the line name (for one line) or leave empty to see all your lines. If you want the detail of every litter indicate Yes on the detail dropdown. Indicating No will provide a summary of production for each mouse line. **This report allows you to predict future production on the basis of past production.** It is always more reliable if a longer period is chosen eg. at least a 6 month period.
- **Animal View-** This report provides a list of live animals similar to that appearing on StuartWEB's animal view. This avoids the need to copy and paste from Stuart. This is generally **used for planning purposes.**
- **Activity by Owner** – This report shows all activity for each line including animals issued, mated & culled. Below each section on a specific line the total number of live animals in the line and the total number of cages in the line is listed for the day the report is run.
- **Frozen Lines by Owner** – This report will show all lines frozen under a specified Owner.

General guidelines

Fortnightly or monthly (depending on activity and type of breeding)

- Check breeders in each line in colony view
- Check the number, genotype, age of existing pairs
- Run the poor breeders report
- Check for unwanted stock and provide staff with cull lists

Every 6 months

- Run the pedigree diagram to check the progress of backcrossing or to check if backcrossing of a homozygous line is needed

As required

- Check housing of mice when requesting issues or culls – don't leave one mouse behind
- Use the pedigree diagram to assist in the planning of future breeders if parentage and relationships are important
- Check the genotypes of the first litter of new pairs to make sure it is as expected

If you have any issues please contact ABR on (02) 9295 8565 or enquiries@abr.org.au