

## REQUEST

### Rederivation of Mouse strain

#### Contact information

Investigator :

Group leader :

Email :

Phone :

#### Project information

Strain:

Homozygous or heterozygous strain: **HO**            **HE**

If homozygous : must the rederivation keep the homozygosity: **YES**            **NO**

Location of the animals :

#### Homozygous rederivation

Number of males provided:

Number of female provided:

#### Heterozygous rederivation:

Number of males provided:

Background required for the WT female :

Important :

**Males** provided: minimal **2 to 4**, **breeders competent** proved, **older than 2 months** of age, and **less than a year old**. Males should be housed individually for at least one week prior to mating.

**Females** provided: ideally 2 females per male provided, females should be either **3-4 weeks old** or **6-8 weeks old**.

- Recipient female will be screened for pathogens.
- Mice will be transferred to the researcher after results of the female screening, and will then be under his responsibility (phenotype, mating, ...)

Date:

## Procedure Rederivation of Mouse strain

The investigator has to contact the facility: [tcf@epfl.ch](mailto:tcf@epfl.ch) and fill in the request form.

Rederivation is used to establish Specific Pathogen Free (SPF) mice.

Sanitary status of mice is established by the EPFL veterinary: Arthur Humbert: [animalvetservices@epfl.ch](mailto:animalvetservices@epfl.ch)

**Importantly the genotyping protocol to identify transgenic animals has to set up by the investigator before starting the redrivation.**

We transfer preimplantation embryos, washed several times for removal of the pathogen into SPF pseudopregnant recipient females.

All strains of mice can be rederived, but the efficiency of the procedure depends on the robustness and fecundity of the strain. Inbred strains require larger starting numbers of mice for a reasonable chance of success. The number of mice/breeding pairs required depends on the Investigator's needs.

To maximize chances of successful rederivation, the stud males, at least 2 or 4, must be proven breeders that are older than 2 months of age, and less than a year old. Males should be housed individually for at least one week prior to mating. If it has been some time since they have mated or if it is their first time, a female should be placed with the male 2 weeks before mating for rederivation, and then removed one week before use for rederivation.

Superovulation works best on sexually immature females in a narrow window of 3-4 weeks of age, and on sexually mature young females. Thus, females should be either 3-4 weeks old or 6-8 weeks old.

For homozygous rederivation, female have to be provided by the researcher. Please note these mice may respond with reduced efficiency to the superovulation than WT females.

For WT female we used to work with FVB/N or C57bl6 strain.

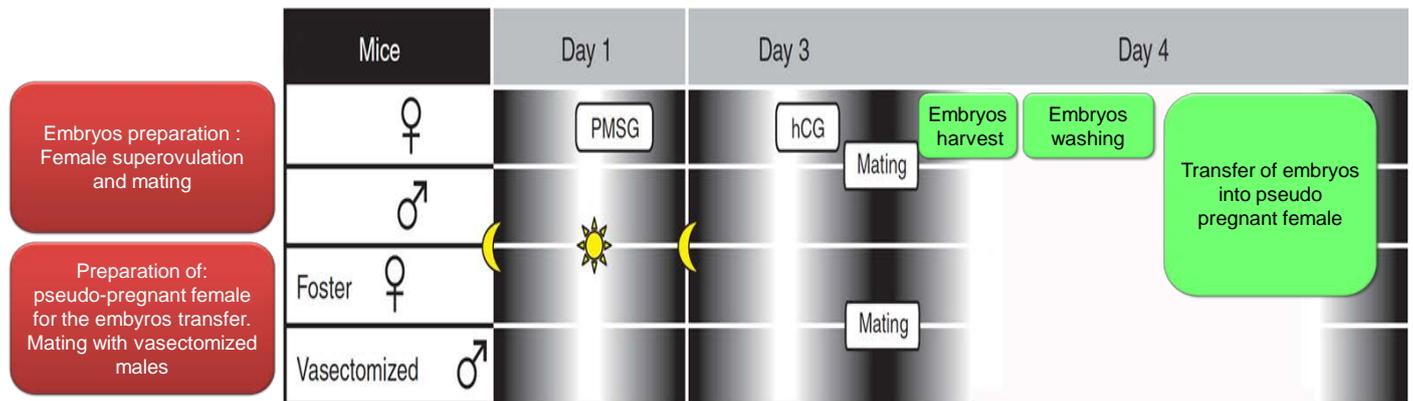
Rederivation includes the breeding of males with superovulated females, collection of pre-implantation stage embryos, washing/culturing of embryos, and the transfer of embryos into recipient females. The Core Facility will provide the hormones for superovulation, perform the hormone injections and mating of the mice to be rederived, provide pseudopregnant recipient females, transfer the embryos to recipients, and house the resultant mice until weaning (3-4 weeks after mating).

Recipient female will be screened for pathogens. Mice will be transferred to the researcher after results of the female screening, and will then be under his responsibility (phenotype, mating, ...)

Our goal is to provide you with sufficient rederived mice of the correct genotype to reestablish the line.

## Time Frame

### Rederivation session :



### Rederivation session (+ 2 weeks)

Two weeks after transfer the females are checked for pregnancy:

If the females are pregnant, the rederivation facility will wait till birth

If none of them are pregnant, another rederivation session will be organized

### Rederivation session (+ 3 weeks)

Three weeks after transfer, the females should deliver. The researcher will be updated a few days later about the birth and number.

### Rederivation session (+ 6 weeks)

At three weeks, the pups will be weaned and the negative ones will be euthanized (tell us if you want to keep them).

### Rederivation session (+ 6 to 9 weeks)

Once a month, the mice used as recipients for embryos transfer will be sent for pathogen screening.

### Rederivation session (+ 8 to 11 weeks)

It takes around 2 weeks to receive the results which will be analyzed by Dr Ferrand. If the results are OK, the positive mice will be transferred to the rack you asked for (the pups will be around 6 to 9 weeks old).

### PyRat:

The mice will be in PyRat system under CPG Transgenesis login till their physical transfer to your rack is performed. At that moment we will also transfer them into your PyRat account.

### **Costs**

1500 CHF for internal EPFL users

**If you have any question, please contact:**

[tcf@epfl.ch](mailto:tcf@epfl.ch)