# Project plan for breeding and rederivation of mice and rats 2024

*A project plan must be filled in before a new experiment can start.* ***The project plan is send by email to*** ***EMED-Projektplaner@sund.ku.dk****, where an AEM veterinarian will go through it and return to researcher, when the project plan is approved, with a project plan number* ***A24-xxx****. This P-number has to be put on the animal order form and on the cage card for animals used in the project. The project plan is then* ***valid until 31-12-2025 or earlier if the license expires****.* ***NB all fields must be filled in****.*

***For AEM use at approval***

|  |  |  |
| --- | --- | --- |
| **A-number** | **Date** | **Veterinarian** |
| A24-xxx |  |  |

|  |  |
| --- | --- |
|  | **Emed-adm: Oplysninger som AEM bruger til tildeling af adgang** |
|  | **AEM: Oplysning til faktura** |

***Housing and rederivation***

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| --- | --- |
| Animal unit in AEM. Read more in Appendix 1. | \*) Please note that there may be space problems, or that space in a particular unit may be reserved for special users or types of experiments. Therefore, an approved project plan is not a guarantee that your breeding can be initiated immediately, or can be done in the unit indicated in the plan. |
|  |
| Special requirements for housing of the animals (e.g. precautions for immunodeficient animals) | Source of the animals? | Is it a new strain arriving at AEM? |
|  |  | Yes/no |
| Are the animals going to be rederived? Read more and give details in Appendix 1 |
| Yes/no |
| If yes: are you importing live animals, sperm or embryos:  |
|  |

***Researcher information***

|  |  |  |  |
| --- | --- | --- | --- |
| Name of holder of GMO breeding license from Dyreforsøgstilsynet (if animals are GMO) | Address, phone, e-mail | GMO breeding license number, title of extension(s) | Expiration date of license |
|  |  |  |  |
| Name of holder of license for gene technological research project from Arbejdstilsynet(if animals are GMO) | Address, phone, e-mail | License number, title of extension(s) | Expiration date of license |
|  |  |  |  |
| \*) Name of responsible person for the breeding (contact person):  | Address, phone, e-mail | Certificate from a Danish FELASA course? | Has the person obtained a dispensation |
|  |  |  |  |
| Name of AEM account holder  | Address, phone, e-mail | Account number  |  |
|  |  |  |  |
| Vendor of animals |  | Account number at vendor of animals |  |
|  |  |  |  |
| \*) Name of other participants (use the tabulator to add more rows if necessary) | Address, phone, e-mail | Certificate from a Danish FELASA course? | If no Danish FELASA course - Has the person obtained a dispensation |
|  |  |  |  |
|  |  |  |  |

*\*) Outside normal working hours it is the researcher who is responsible for extra monitoring of the animals, and the researcher can also be expected to be called in during weekends if their animals are sick.*

***Animal information***

|  |  |
| --- | --- |
| Please list all strains below (both inbred, outbred, genetically modified and spontaneous mutants).Use tabulator to add rows | If the strain is a spontaneous mutant or genetically modified, please describe sickness or other impact caused by the genetic alteration. Do the animals need special care? |
| “scientific name” of strain | Short name of strain to use on cage card and in communication with animal caretakers |
|  |  |  |
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***If your animals are bred in an experimental unit: Breeding protocol in experimental unit***

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| **Standard setup**: The researcher performs all tasks themselves including setup of breeding cages, observations for pregnancy and births, weaning, ID marking, and genotyping. If the researcher wants animal caretakers to perform some or all tasks, this must be agreed with AEM. Please indicate if you want AEM to perform any tasks in relation to breeding. All breeding tasks are billed separately and not included in the cage cost. |
|  |

***If your animals are bred in an SPF breeding barrier: Breeding protocol in SPF***

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| **Standard setup**: normally three breeding cages with each one male and two females (trio), age 2-10 months, and a number of cages for weaned male and female offspring, some of which should be kept in reserve to replace breeders. The breeding trio is kept together permanently throughout their breeding life. Births are observed at cage change. Pups are weaned, counted and sexed at 4 weeks and ID-marked by ear punching. Pups of same sex and size/birth week are pooled in cages. The ear punch is used for genotyping. The animal caretakers create a monthly breeding report which is sent to the researcher. The researcher keeps their own breeding records and gives precise written instructions to the animal caretakers of which individual animals to use for breeding, which animals to euthanise, and which animals to send out for experiments.*NB. Be aware that the standard set-up can change if measures need to be taken to comply with AEM’s Mouse Cage Density Policy* [*https://emed.ku.dk/documents/Mouse\_Cage\_Density\_Policy.pdf*](https://emed.ku.dk/documents/Mouse_Cage_Density_Policy.pdf)Please indicate if you want any change to the standard setup, and if you have any special requirements for genotype sampling. All standard breeding tasks are included in the cage cost. |
|  |
| AEM will offer your animals a dietary supplement (DietGel Boost) if we think it necessary, typically at weaning. Is this acceptable? | Yes/no |
| What should AEM do if an animal needs to be euthanized? Should AEM contact the scientist first or can the animal be euthanized immediately? Please notice that the animal will be euthanized if the scientist does not respond within 1 day. Animals that experience severe suffering, pain or distress will always be euthanized immediately.  |  |

**Appendix 1**

**Rederivation**

If you have your mice or rats rederived to an AEM unit, the rederived animals will obtain the health status of that unit. Please notice that all AEM units are positive for Helicobacter spp.. Ask the veterinarians for updated information.

AEM recommends that breeding of mice is done in our breeding barriers, SPF 10-2 and 10-4. These two units have been built and are managed to provide a high level of biosecurity: New animals can only enter via rederivation; all materials are autoclaved or sterilized before they are taken in; and only the permanent staff is allowed access, which involves a full change of clothes and showering.
AEM considers the animals in the breeding barriers to be of a superior health status, and the animals can therefore be taken from the SPF to any unit in AEM, depending on the scientists’ needs.

For the researcher, the lack of access to the breeding animals in an SPF is a disadvantage. All the work with the animals is done by the animal caretakers based on communication with the researcher. However, it is important to realize that in an experimental unit, much more responsibility rests with the researcher to keep track of the breeding and perform or request necessary breeding services.

The table below provides an overview of pros and cons.

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| --- | --- | --- |
|  | **SPF** | **Experimental unit** |
| **Barrier protection** | Optimal | Less secure |
| **Access to your breeding animals** | No | Yes |
| **Animal movement between units** | Can go to all units | Limited by quarantine rules |
| **Breeding services: mating, observations for births, weaning, tissue sampling, and reporting** | Done as a routine by animal caretakers based on the breeding plan or instructions | Researcher has to supervise colony and request services |
| **Cost per cage** | Services included | Services paid additionally |
| **Cost for initiation** | Rederivation time and cost | No extra time and cost |

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| --- |
| If the animals are going to be rederived – please fill in this form |
| Has the Core Facility for Transgenic Mice been contacted about the rederivation process? | Yes/no |
| To which animal unit are the animals to be rederived?  |  |
| For the first rederived litter of pups born, do you want tissue sampling for genotyping (ear tissue is standard)  | Yes/no |
| For the first rederived litter of pups born, do you want to breed the animals | Yes/no – if yes, please describe the breeding in the section “Breeding protocol in experimental unit/SPF” |