SECTION M

BREEDING COLONY (INCLUDING TRANSGENIC/KO BREEDING AND USE)

Append to Part 1 if applicable.

1. JUSTIFICATION

1.1.

Could the animals that will be bred be purchased from commercial sources in the required number?

☐ NO. The animals are not available commercially in sufficient number.
☐ YES. The animals are available commercially.

1.2.

Please describe the rationale for breeding these animals at DU:

1.3.

Please identify the source of breeders:

☐ Colony managed by a DU Investigator.
Specify source protocol #:
☐ Obtained from another institution or non-DU investigator.
Identify source:
☐ Purchased from a vendor (e.g., Jackson Lab, Charles River, etc.)

2. BREEDING COLONY SPECIES AND NUMBERS

2.1.

On the chart below, indicate the number of breeders required, and provide estimates for the numbers of offspring expected and the anticipated disposition of those offspring, by strain, transgene, KO or KI. IACUC approved protocols have a life span of 3 years, list numbers anticipated over a 3 year period. Use this chart if you have less than 6-8 lines of information to list.

☐ Check here if you are attaching an Excel spreadsheet to the protocol (listing more than 6-8 lines of breeder information).

TABLE 2.1.A. COLONY SPECIES

To add additional species, please attach a separate document

SPECIES	STRAIN/ TRANSGENE /KO/KI/rDNA COLUMN A	# OF MALE BREEDERS REQUIRED COLUMN B	# OF FEMALE BREEDERS COLUMN C	EXPECTED TOTAL # OF OFFSPRING (sum of columns A, B, C)	ESTIMATED # OF OFFSPRING TRANSFERRED TO ANOTHER PROTOCOL (Column A)	ESTIMATED # OFFSPRING TRANSFERRED TO ANOTHER PROTOCOL (Column B)	ESTIMATED # OF OFFSPRING EUTHANIZED PRIOR TO WEANING (Column C)

NOTE: Genotyping animals by tail clip, blood collection, etc. is considered a 'use'.

3. DISPOSITION OF BREEDERS AND UNNEEDED OFFSPRING

3.1. DISPOSITION OF RETIRED BREEDERS:

Please select the method of disposition for retired breeders:

- ☐ Euthanasia according to protocol
- ☐ Used in experiments
- ☐ Other

If 'used in experiments' or 'other' were selected, please describe.

3.2. DISPOSITION OF NEONATES NOT REQUIRED FOR THESE EXPERIMENTS:

Please define the method of disposition for offspring which are used in completion of this protocol.

- ☐ Euthanized as unneeded or wrong genotype
- ☐ Transfer to another protocol
- ☐ Other

3.3. If transfer to another protocol is indicated in section Q3 above, please specify the DU IRBNet protocol number and identify the Principal Investigator. In the event that transfer is to a non-DU investigator, please explain the circumstances of the transfer and confirm that the transfer will be coordinated through the DU Vivarium.

3.4. If euthanasia without use is indicated in section Q3 above, please explain why the surplus offspring cannot be used for this protocol or by another investigator.

NOTE: Genotyping animals by tail clip, blood collection, etc. is considered a 'use.' Do not list these animals as 'euthanized as unneeded.'

4. Breeding Plan

4.1. Breeding Plan:

The breeding plan will be:

☐ Monogamous (single male and female per cage)
☐ Harem (single male and multiple females).

Please indicate which of the following will apply:

- ☐ Males will be removed once females are confirmed pregnant.
- ☐ Females will not bred again until the offspring are weaned.
- ☐ Individual pregnant females will be moved to new cages prior to delivery of offspring.
- ☐ Females and their litters will be moved to larger cages to provide required floor space.

4.2. Weaning Schedule:

Rodents will be weaned:

☐ 21 days of age or earlier
☐ 22 days of age or later (specify strains affected and justification of extending weaning beyond 21 days).

NOTE 1: Delayed weaning of a single dam and her litter DOES NOT require the submission of Section P: Exemption from Animal Welfare Standards.
NOTE 2: Extended weaning REQUIRES removal of the male to prevent postpartum mating and subsequent delivery of a second litter prior to removal of the first litter from the cage.

Please review the IACUC Policy for Cage Density to assure you meet the expectations of this policy. After review of this policy, if you determine an exemption from IACUC policy is required, please complete and submit Section P: Exemption from Animal Welfare Standards with your protocol application.

4.3. Special Care Requirements:

Certain fragile strains may require special provisions to assure their well-being. Please specify if any special care provisions are required to facilitate the survival and development of these offspring.

☐ Special care beyond routine animal care IS NOT necessary.
☐ Special care IS necessary to keep these animals healthy.
☐ Special care is described in 'Appendix S.'

The required special care is as follows (describe):

4.4. Single Housing:

Please complete Section P

4.5. Genotyping:

In certain cases, an animal must be genotyped prior to use. Genotyping is defined by federal policy as a 'procedure.' Therefore, it must be described and approved by the IACUC. Animals which are genotyped must be reported as 'used,' even if the genotype indicates the animal is not of the desired experimental construct and the animal is euthanized without further use.

☐ Genotyping is not necessary for this protocol.
☐ Genotyping will be performed on tissue obtained by the method(s) defined below.

- ☐ ***Tail clipping (mice)***. Please review the IACUC Tail Clipping policy.

  ☐ The tail snip will be taken PRIOR TO 21 days of age.
  ☐ The tail snip will be limited to a maximum of 5 mm of the tail tip.
  ☐ The tail snip will exceed 5 mm of the tail tip.
  ☐ The tail snip will be taken AFTER 21 days of age.

  Specify the maximum length of tail tip that will be taken and explain the need for the larger tissue specimen (if applicable):

  Justify the delayed genotyping and describe the anesthetic regimen to be used for the procedure (if applicable):

- ☐ ***Oral swabs.***
- ☐ ***Blood collection.***

☐ ***Other (describe):***

5. TRANSGENIC/KNOCKOUT ANIMALS

(Complete this section only if breeding genetically engineered animals. Otherwise, go to section 7.)

Approval of genetic engineering by the University of Denver Institutional Biosafety Committee (IBC):

☐ Has been received. ☐ Has not yet been received. ☐ Is not required.

IRBNET Protocol Number:
Approval date:

If IBC approval has not yet been received or is not required, please explain the circumstances.

Briefly describe the genetic alteration of interest:

The phenotypic expression of this genetic alteration will likely result in:

☐ No morphologic or functional impairment
☐ Increased early mortality
☐ Physical impairment as follows: Describe in detail here (if applicable):
☐ Functional deficit as follows:
☐ Possible impairments that are presently unknown. Describe in detail here (if applicable):

Please describe the monitoring plan that will be used for early detection of potential impairments:

6. SPECIES AND GENOTYPE

(Complete this section only if breeding genetically engineered animals. Otherwise, go to section Q7.)
List species to be used, identify genetic lines, and indicate any induction method that is necessary.
To add additional species, please attach a separate document.

SPECIES	STRAIN/GENOTYPE	PHENOTYPE INDUCTION	
		☐	Pharmacologically activated
		☐	Environmentally activated
		☐	siRNA
		☐	Viral induced

		☐	Constitutive (gene is always 'on')
		☐	Other (specify):

7. RECORD KEEPING

(Applies to all breeding colonies of conventional and genetically engineered animals.)
Indicate the record-keeping system that will be used to document health surveillance and the maintenance of well-being for the conventional and/or genetically-engineered animals.

☐ Special care is not required and documentation will be provided by standard observation records.
☐ Special care outlined in section Q4 will be documented by the record-keeping sheet attached to this application.
☐ Special care outlined in section Q4 will be documented as follows:

Describe here (if applicable):