

**MBL**

7 MBL Street

Woods Hole, MA 02543

USA

p: 508.289.7173

f: 508.289.7900

iacuc@mbl.edu

***Institutional Animal Care & Use Committee***

**ANNUAL RENEWAL APPLICATION**

**1ST Renewal**  **2nd Renewal**

***For renewal of protocols previously approved by the MBL Institutional Animal Care & Use Committee (IACUC)***

**Protocol No.**        **Date of Request**        **Date of Approval**

**Previously assigned Protocol No. (Initial Application):**        **(First Renewal):**

***Important: Please type or print clearly and submit preferably at least 6 weeks prior to expected date of First Use. ANY alterations to information provided in this document must be initiated by the Principal Investigator.***

**Expected Date of First Use:**

**Name of Investigator(s) and all responsible personnel (MUST include every individual involved in animal handling)**:

**Address of Home Institution:**

**Tel No:**        **Fax:**        **Email:**

At MBL: Bldg. &Room # \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ MBL Phone Ext. \_\_\_\_\_\_\_\_\_\_\_ MBL Account # \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Project Title:

Species (**include Common Name**) of animals to be used in this project:

MBL room(s) where animals will be housed:

**It is the PI’s responsibility to complete and submit a Tank Space Application form as soon as possible if using aquatic animals and/or non-indigenous species:** <https://www.mbl.edu/mrc/services/tank-space-application>

**For ACF animals (i.e. mammals and other vertebrates), Mammal and/or Vertebrate Order forms must be filled out, see pages 11-15.**

MBL room(s) where experiments will occur:

**It is the PI’s responsibility to communicate this information to the MBL Veterinarian (**[**vet@mbl.edu**](mailto:vet@mbl.edu)**, x7522) as soon as the room has been identified**

Is this application for an MBL course?  No  Yes **Course Name**:

Is this part of an ongoing study at another institution for which IACUC approval has been given?

No  Yes; If yes, date of approval:        Name of Institution:

**(Please attach a copy of the pending application and/or approval letter.)** Protocol No.

**1. Brief Synopsis of Specific Aims/Objectives from INITIAL Application:**

**2. Unnecessary Duplication of Work:** The current (October 2000) Animal Welfare Act requires that, “principal investigators provide written assurance that the proposed activities do not unnecessarily duplicate previous experiments.” Regardless of who performed the experiments, provide written justification for the need to duplicate any previously performed work. *Consider how you might REFINE your protocol to avoid* *unnecessary duplication and how you might REDUCE the total number of animals utilized.*

**3. INCLUDE Animal Protocol Procedures From Initial Application. CLEARLY indicate ANY deviations or changes since the initial protocol; and if necessary, attach a current literature search information page. Please be aware that significant changes in procedures (as determined by IACUC) will require submission of a new Initial Protocol.**

**Please note that the form has been revised August 2021.**

**Read through the following carefully to ensure you fill out the tables accordingly (add additional rows as needed).**

*Describe, in detail and chronological order, the experimental design (including behavioral exoperiments) in the space below; include aseptic techniques and methods used for each species or strain of animal. Please number the methods and include the following:*

1. The type of anesthesia/sedation.
2. Describe how often the animal will be monitored and by what method (e.g. toe/tail pinch, corneal reflex, body temperature, etc. every 5 min)
3. Describe interventions if the animal is not adequately anesthetized.
4. Fill in the applicable charts (Tables 1-3) following the description (pre, intra, and post-surgery/procedure medications).
5. For survival surgeries, describe post-operative monitoring (a Health Monitoring Log will be required).
6. For non-surgical procedures provide appropriate descriptions and fill out chart (Table 4).
7. Be sure to include duration, intervals, and frequency of and between each procedure (seconds, minutes, hours, days), including behavioral experiments.
8. Provide description of method for euthanasia and fill out the chart (Table 5).
9. List the personnel who will be performing each procedure and fill out the personnel experience chart (Table 6).
10. Include the final disposition of the animal (e.g. plastic, labeled, zip-lock bag in animal freezer).

**Use LAY TERMINOLOGY when possible. *Add additional pages as needed for textual descriptions.***

**Please note that the tables are not a substitute for textual descriptions.**

Add additional rows as needed.

See <https://www.mbl.edu/services/iacuc/> for examples of how to fill in the tables

***Table 1. Pre-procedure medications (sedative, analgesic, anti-inflammatory drug, etc.)***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Procedure** | **Species** | **Medication**  **(include dosage)** | **Route**  **(topical, inhale, SQ, IP, IM IV)** | **Frequency & Duration** |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

***Table 2. Procedural/ intra-procedural medications (anesthesia, paralytic, analgesia, etc.)***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Procedure** | **Species** | **Medication**  **(include dosage)** | **Route**  **(topical, inhale, SQ, IP, IM IV)** | **Frequency & Duration of Procedure\*\*** |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

\*\*Provide details of how anesthesia will be monitored in the main text.

***Table 3. Post-procedural medications (sedative, analgesic, anti-inflammatory drug, antibiotics, etc.)***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Procedure** | **Species** | **Medication**  **(include dosage)** | **Route**  **(topical, inhale, SQ, IP, IM IV)** | **Frequency** |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

***Table 4. Non-surgical Procedures (Injections, inoculations, tail biopsies, blood collection, toe/ear clipping, web punches, etc.)***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Procedure** | **Species** | **Medication**  **(include dosage)** | **Route**  **(topical, inhale, SQ, IP, IM IV)** | **Frequency & Duration of Procedure** |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

***Table 5. Euthanasia (include description of euthanasia and method of disposal in text)***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Method**  **(e.g. anesthetic overdose, decapitation, etc.)** | **Species** | **Medication**  **(include dosage)** | **Route**  **(topical, inhale, SQ, IP, IM IV)** | **Secondary method, Instrument (include descriptor)** |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

**4. Personnel Details:** Please fill out the table below for each individual named on the protocol describing their experience in the named procedure. Please reference procedures to those defined above, including animal transfer from facilities to lab, health monitoring, and any animal handling including behavioral and non-invasive procedures.

For any personnel who has not been trained or needs additional training, and before beginning animal handling or procedures, contact the appropriate Facilities Manager (i.e. ACF, MRC, NXR) and MBL veterinarian.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Name** | **Species** | **Procedure** | **Years/Months of experience** | **Description of experience** |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

**5. Estimation of Amount of Pain:** Estimation of amount of pain each animal will undergo from

procedures outlined above (pg. 2). **Check Appropriate Pain Category**

**DEGREE OF PAIN \***

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

B & C – No Anesthesia Required

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Procedure no. and brief description | Species of animal & strain | # animals | Duration | B  No pain | C  Slight or momentary pain | D  Pain relieved by anesthetics/ analgesics | E  Pain not relieved |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |

\*Degree of Pain (B, C, D, E) is defined as follows: (B) No pain or distress will occur (animals not subject to any procedures); (C) slight or momentary pain will occur as a result of handling, injections, blood sampling, etc.; (D) only slight or momentary pain will occur because appropriate anesthetics/analgesics will be used (surgery, euthanasia with anesthesia); (E) No method is available to completely alleviate pain or distress, **or** the appropriate drugs would interfere with the experiment. Please place an **X** in the appropriate box for Degree of Pain.

**\*\* USDA/OLAW consider ALL invasive procedures with alleviated or unalleviated pain as painful procedures. For D & E complete literature search below. For E, also provide a concise scientific justification why pain and/or distress could not be relieved. State methods or means used to determine that pain and/or distress relief would interfere with test results.**

**6. Justification of Animal Numbers:** Justify in detail the TOTAL number(s) of animals including all mothers, pups, and embryos of each species/strain requested (*i.e.* animals/experiment/day-wk-yr; animals/experiment/student; animals necessary for statistical significance; etc.):

**7.** **ANIMAL DATA for CURRENT RENEWAL PERIOD\***:

***First Species***

• Species and strain

• Common name

• Animal numbers (Separately indicate numbers of adults, juveniles, fetuses or embryos)

• Duration of need (incl. dates if known)

***Second Species***

• Species and strain

• Common name

• Animal numbers (Separately indicate numbers of adults, juveniles, fetuses or embryos)

• Duration of need (incl. dates if known)

***Third Species***

• Species and strain

• Common name

• Animal numbers (Separately indicate numbers of adults, juveniles, fetuses or embryos)

• Duration of need (incl. dates if known)

## Fourth Species

• Species and strain

• Common name

• Animal numbers (Separately indicate numbers of adults, juveniles, fetuses or embryos)

• Duration of need (incl. dates if known)

***Fifth Species***

• Species and strain

• Common name

• Animal numbers (Separately indicate numbers of adults, juveniles, fetuses or embryos)

• Duration of need (incl. dates if known)

***Please complete the Animal Ordering Information for every species/strain of mammal and bird (including eggs) to be used. This ordering Information must accompany your submittal for protocol consideration by IACUC.***

The MBL wants to eliminate unnecessary waste of animal life. All investigators are encouraged to notify the attending veterinarian if they wish to share animals with another researcher. Under most circumstances, these requests may be granted and can significantly reduce the needless loss of animal life, relieve peak demand on animal facilities, and decrease overall costs to the MBL and its researchers. **Please Note: *Animals arriving without prior approval or notification must be destroyed.***

**10. PRINCIPAL INVESTIGATOR CERTIFICATION:**

I HAVE PROVIDED AN ACCURATE DESCRIPTION OF THE ANIMAL CARE AND USE TO BE FOLLOWED IN THE PROPOSED RESEARCH ACTIVITY AT THE MBL. I ACKNOWLEDGE THAT FAILURE TO REPORT TO THE IACUC SIGNIFICANT CHANGES IN THE PROTOCOL MAY PLACE THE MBL AND THE INVESTIGATOR IN VIOLATION OF FEDERAL AND INSTITUTIONAL REGULATIONS AND THAT THESE PROCEDURES ARE NOT AN UNNECESSARY DUPLICATION OF PREVIOUS EXPERIMENTS. I ASSUME FULL RESPONSIBILITY FOR COMPLIANCE WITH SUCH REGULATIONS FOR ALL PERSONNEL INVOLVED WITH THIS PROTOCOL. I ASSURE THAT ALL PERSONS ASSOCIATED WITH THIS RESEARCH HAVE BEEN APPROPRIATELY TRAINED AND QUALIFIED.

**ANIMAL ABANDONMENT: ABSENCE OR DEPARTURE/TERMINATION FROM THE MBL**

I HEREBY ATTEST THAT AS PRINCIPAL INVESTIGATOR, I WILL:

1) INSURE CONTINUOUS, AND PROPER CARE AND FEEDING OF ALL VERTEBRATE ANIMALS LISTED IN THIS PROTOCOL.

2) IF CUSTOMARY CARE PROVIDERS ARE ABSENT FROM THE MBL FOR TWENTY FOUR (24) HOURS, I ACKNOWLEDGE THAT IT IS MY RESPONSIBILITY TO PROVIDE ALTERNATE ANIMAL CARE DURING THIS ABSENCE EITHER BY ARRANGEMENTS WITH OTHER PERSONS OR THROUGH THE MBL’S VETERINARIAN. I WILL PROVIDE THE MBL VETERINARIAN WITH NAMES OF ALTERNATE PERSONS, THEIR CONTACT INFORMATION, AND THE INCLUSIVE DATES REQUIRED FOR ALTERNATE CARE.

3) ALSO, UPON **DEPARTURE OR TERMINATION OF RESEARCH AT THE MBL** I WILL PROVIDE

VIA EMAIL OR IN WRITING TO THE **MBL VETERINARIAN (**[**vet@mbl.edu**](http://vet@mbl.edu)**, x 7522).** A CENSUS OF ALL REMAINING ANIMALS, AND INFORMATION ON THEIR FINAL DISPOSITION

I FURTHER ACKNOWLEDGE THAT ANY INCIDENT OF **“ANIMAL ABANDONMENT”** WILL BE TREATED AS SERIOUS INCIDENT OF NON-COMPLIANCE WITH PUBLIC HEALTH SERVICE (PHS) POLICIES CONCERNING THE HUMANE CARE AND USE OF LABORATORY ANIMALS, A VIOLATION OF THE MBL’S ANIMAL WELFARE ASSURANCE DOCUMENT, AND AS SUCH, WILL PUT AT RISK MY ABILITY TO CONDUCT ANIMAL RESEARCH AT THE MBL.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Signature of Principal Investigator

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Signature of IACUC Chair

**ANIMAL ORDERING PROCESS**

**Animals approved for use by the MBL IACUC may be provided, housed and cared for by different departments at the MBL. Please use the following information to determine your particular requirements**

1. For marine and freshwater fish (including zebrafish), please contact the Marine Resources Department specimen order entry desk at [specimens@mbl.edu](mailto:specimens@mbl.edu) or 508-274-4055.
2. For *Xenopus* frog species, please refer to the MBL’s National *Xenopus* Resource website (<http://www.mbl.edu/xenopus/how-to-order>) or contact [Xenopus@mbl.edu](mailto:Xenopus@mbl.edu) or call 508-289-7240.
3. For laboratory mammals, please refer to the form below.
4. For birds, reptiles, amphibians (except for *Xenopus*) or other non-traditional research vertebrates, please contact the Animal Care Facility at [acf@mbl.edu](mailto:acf@mbl.edu) or 508-289-7288

Some vertebrates species such as *Xenopus*, zebrafish, and some marine fish species, may be sourced directly from the MBL. Others must be sourced from a commercial vendor. In this case, pleaseprovide the name and phone number of the animal source contact and reference for any vertebrate/invertebrate to be ordered by the MRC and housed in MBL wet labs. Before any animal can be sent to the MBL from a non-approved source, a health survey indicating the lack of disease must be submitted and reviewed by the MBL Veterinarian.

**MBL**

**MAMMAL Order Form**

(This form must accompany your application

in order for the protocol to be reviewed)

Name of Investigator:

MBL Office/Lab phone:        Home Institution phone:

Cell phone:        Email Address:

MBL Account No:        Date:

***For questions concerning this form please contact the ACF Manager, Daniel Johnson @ 508-289-7288 or djohnson@mbl.edu.***

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Genus/Species** | **Strain/Breed** | **# needed** | **\*Arrival Date**  **(See Below)** | **First Use Date** | **End Use Date** | **Age or Weight**  **On Arrival** | **Day Post-Fertilization On Arrival** |
| Mice-pregnant female |  |  |  |  |  |  |  |  |
| Mice-pregnant female |  |  |  |  |  |  |  |  |
| Mice-pregnant female |  |  |  |  |  |  |  |  |
| Mice-pregnant female |  |  |  |  |  |  |  |  |
| Mice-non-pregnant females |  |  |  |  |  |  |  |  |
| Mice-intact male |  |  |  |  |  |  |  |  |
| Mice-neutered male |  |  |  |  |  |  |  |  |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Rat-pregnant females |  |  |  |  |  |  |  |  |
| Rat-pregnant females |  |  |  |  |  |  |  |  |
| Rat-pregnant females |  |  |  |  |  |  |  |  |
| Rat-non-pregnant female |  |  |  |  |  |  |  |  |
| Rat-intact males |  |  |  |  |  |  |  |  |
| Rat-neutered males |  |  |  |  |  |  |  |  |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Genus/Species** | **Strain/Breed** | **# needed** | **\*Arrival Date**  **(See below)** | **First Use Date** | **End Use Date** | **Age or Weight**  **On Arrival** | **Day Post-Fertilization On Arrival** |
| Hamster |  |  |  |  |  |  |  |  |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Rabbit |  |  |  |  |  |  |  |  |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Guinea Pig |  |  |  |  |  |  |  |  |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Other Mammal |  |  |  |  |  |  |  |  |

**\*PRIMARY COMMERICAL VENDOR(S):**

**\*Charles River Laboratories and The Jackson Laboratory are the primary approved commercial vendors.**

**\*Animals supplied by Charles River Laboratories arrive ONLY ON TUESDAYS.**

**\*Animals supplied by The Jackson Laboratory arrive TUE, WED, or THU.**

**\*Shipments from both commercial and non-commercial vendors may only be scheduled to arrive on TUE, WED, or THU.**

**If animal(s) is (are) being requested for import from a source OTHER THAN A COMMERCIAL VENDOR, provide the name, phone number and email address of the animal source contact and reference which animals (noted above) are being requested for import:**

**\*\*Before any anima1(s) can be requested for import to the MBL from a non-commercial source, a health survey including serology and parasitology dating back 1.5 years and covering all facilities/areas/rooms that the animal(s) have been housed in since birth, must be submitted to the Animal Care Facility Manager @ djohnson@mbl.edu, reviewed and approved by the MBL Veterinarian, before the import is ultimately arranged and approved by the ACF Manager.**

**The health reports must be submitted in a timely manner to allow for review and importing arrangements. Submit at least 3 weeks before the requested shipping date.**

**SPECIAL ANIMAL CARE NEEDS/INSTRUCTIONS – (*special feeding or housing instructions, etc.*):**

**MBL**

**Vertebrate Order Form (*Amphibian, reptile, chicken and bird only*)**

(This form must accompany your application before the MBL IACUC will allow review)

Name of Investigator:

MBL Office/Lab phone:        Home Institution phone:

Cell phone:        Email Address:

MBL Account No:        Date:

***For questions concerning this form please contact the ACF Manager Daniel Johnson @ 508-289-7288 or djohnson@mbl.edu.***

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Genus/Species** | **Strain/Breed** | **# needed** | **\*Arrival Date**  **(See Below)** | **First Use Date** | **End Use Date** | **Age or Weight**  **On Arrival** | **Day Post-Fertilization On Arrival** |
| Xenopus laevis  (Not ordered from NXR) |  |  |  |  |  |  |  |  |
| Xenopus tropicalis  (Not ordered from NXR) |  |  |  |  |  |  |  |  |
| *Lithobates catesbeianus* |  |  |  |  |  |  |  |  |
| *Lithobates pipiens* |  |  |  |  |  |  |  |  |
| *Ambystoma* |  |  |  |  |  |  |  |  |
| Other Amphibian |  |  |  |  |  |  |  |  |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Chickens |  |  |  |  |  |  |  |  |
| Chicken Eggs, (fertile) |  |  |  |  |  |  |  |  |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Genus/Species** | **Strain/Breed** | **# needed** | **\*Arrival Date**  **(See Below)** | **First Use Date** | **End Use Date** | **Age or Weight**  **On Arrival** | **Day Post-Fertilization On Arrival** |
| Zebrafinch |  |  |  |  |  |  |  |  |
| Other Birds |  |  |  |  |  |  |  |  |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Turtle |  |  |  |  |  |  |  |  |
| Tortoise |  |  |  |  |  |  |  |  |
| Other Reptile |  |  |  |  |  |  |  |  |

**\*Shipments from both commercial and non-commercial vendors may only be scheduled to arrive on TUE, WED, or THU.**

**If animal(s) is (are) being requested for import from a source OTHER THAN A COMMERCIAL VENDOR, provide the name, phone number and email address of the animal source contact and reference which animals (noted above) are being requested for import:**

**\*\*Before any anima1(s) can be requested for import to the MBL from a non-commercial source, a health survey including serology and parasitology dating back 1.5 years and covering all facilities/areas/rooms that the animal(s) have been housed in since birth, must be submitted to the Animal Care Facility Manager @ djohnson@mbl.edu, reviewed and approved by the MBL Veterinarian, before the import is ultimately arranged and approved by the ACF Manager.**

**The health reports must be submitted in a timely manner to allow for review and importing arrangements. Submit at least 3 weeks before the requested shipping date.**

**SPECIAL ANIMAL CARE NEEDS/INSTRUCTIONS – (*special feeding or housing instructions, etc.*):**