



The use of live vertebrate animals in teaching, research, and testing at Northern Illinois University requires review and approval by the NIU Institutional Animal Care and Use Committee (IACUC) as mandated by Public Health Service Policy and USDA regulations. This Application for Approval form provides the basis for IACUC review. In addition, investigators and participants in approved protocols are required to complete annual training relating to the use of live vertebrate animals. Information on NIU IACUC, policies, training opportunities, and Occupational Health, can be found at <http://www.orc.niu.edu/orc/>.

This application form is designed to be completed electronically. Check (or uncheck) the blue boxes (highlighted in gray in MS WORD) using a single mouse click. Enter text by typing within gray rectangles (MS WORD). Text boxes will expand to accommodate as much text as you wish to provide. You may also cut-and-paste into text boxes from other documents. To facilitate cut-and-paste functions and to provide for flexibility in formatting, this electronic form has been left 'unlocked.' Use care when completing the form that you do not inadvertently edit or delete portions of the form itself.

If more than one species is included in your protocol, enter requested information for each species on separate lines (Section I). Similarly, enter requested information on each additional participant on separate lines (Section II). If there is a grant proposal associated with your protocol, provide the Office of Sponsored Projects (OSP) number and attach the 'Vertebrate Animals' portion of your proposal (see Section II). Note that each portion of Section V must be completed or marked 'Not applicable.' Section V.N. Euthanasia, Section V.O. Endpoints, and Section V.P. Occupational Health & Safety must be completed for **all** protocols. You are urged to provide appropriate literature citations throughout your protocol. Complete references should be provided in Section VI. Information on CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora) species (see Section III) can be found at the CITES web site: <http://www.cites.org/> (click on [Species database](#)). Information on euthanasia methods approved by the AVMA Panel on Euthanasia (see Section V.M) can be found at the AVMA web site: <http://www.avma.org> under the Scientific Resources section.

Once completed, print your Application and obtain the necessary signatures on the Certifications page. Submit the signed form to the Office of Research Compliance. Questions regarding completion of this form should be addressed to the Office of Research Compliance (753-8588) or Dr. Richard King, IACUC Chair (753-7833, [rbking@niu.edu](mailto:rbking@niu.edu)). Veterinary questions should be addressed to Dr. Corinna Kashuba, attending veterinarian (815-753-8524, [ckashuba@niu.edu](mailto:ckashuba@niu.edu)).

Applications must be complete for consideration by the IACUC. Protocols needing minor modifications or clarifications may be approved on a provisional basis. Final approval will not be granted until requested modifications or clarifications are provided. **No procedures may begin before final approval.**

The IACUC should be informed of minor changes to approved protocols (e.g., changes in student workers, increases in sample size of less than 20%, changes to husbandry practices). **Significant changes to approved protocols require IACUC review and approval prior to being instituted.** Significant changes include changes in project objectives, principle or co-investigators, or species; increases in sample size of more than 20%; increases in invasiveness or anticipated discomfort level; and changes involving analgesia, anesthesia, or surgery. Requests for modifications should be addressed to the Office of Research Compliance and should include Project Title and ORC #, investigator name, a description of requested modifications, justification, and the number of animals affected).

**NORTHERN ILLINOIS UNIVERSITY**  
**INSTITUTIONAL ANIMAL CARE & USE COMMITTEE**  
**APPLICATION FOR APPROVAL**

**Leave Blank**

ORC Protocol #:

Approval Date:

Expiration Date:

**I. SUMMARY**

Principal Investigator:		
Title: Faculty <input type="checkbox"/> Staff <input type="checkbox"/> Graduate Student <input type="checkbox"/> <i>[Graduate students - provide faculty advisor name and contact information: ]</i>		
Department:		
Telephone:	Fax:	Email:
Project Title:		
Proposed Start Date:	Completion Date <i>(not to exceed 3 yr)</i>	

**ANIMAL REQUIREMENTS**

Scientific name	Common name	Number of Animals to be Used			
		Year 1	Year 2	Year 3	Total

**PROCEDURES** *[check all that apply and complete corresponding portions of Section V. PROCEDURES]*

<input type="checkbox"/> A. Teaching <i>[Check here if animals will be used in formal classroom teaching.]</i> Provide department, course number, and year(s) and semester(s) course will be offered
<input type="checkbox"/> B. Field research <i>[Check here if any portion of this protocol involves free-ranging animals.]</i>
<input type="checkbox"/> C. Transport of animals outside animal facility <i>[Check here if live animals will be removed from the Biology or Psychology Animal Facility for any activity included in this protocol.]</i>
<input type="checkbox"/> D. Housing <i>[Check here if USDA covered animals will be held for more than 12 hours or if non-USDA covered species will be held for more than 24 hours.]</i>
<input type="checkbox"/> E. Reproduction <i>[Check here ONLY if captive reproduction is a specific component of this protocol (e.g., to obtain genetic information, to study courtship behavior). Do not check here if this protocol makes use of animals bred 'in-house' and covered under a Facilities Protocol or if animals are obtained from other sources.]</i>
<input type="checkbox"/> F. Special food or water requirements <i>[Check here if the protocol involves special food or water requirements other than those described in Section V.D. Captive Maintenance (e.g., food or water deprivation).]</i>
<input type="checkbox"/> G. Behavioral testing <i>[Check here if this protocol involves behavioral observations of captive animals.]</i>
<input type="checkbox"/> H. Restraint <i>[Check here if unanesthetized animals are to be restrained other than by hand for any procedure (e.g., via restraint chairs, collars, vests, harnesses, slings) other than standard caging, field capture techniques, or transport.]</i>
<input type="checkbox"/> I. Radionuclides, biological agents, hazardous chemicals, recombinant DNA, controlled substances, and test substances <i>including those used in surgery and euthanasia</i>
<input type="checkbox"/> J. Invasive procedures for collection of tissues or fluids
<input type="checkbox"/> K. Surgery
<input type="checkbox"/> L. Other procedures
<input type="checkbox"/> M. USDA Covered Species <i>[Check here if this protocol involves USDA covered species. USDA covered species include all mammals other than rats of the genus Rattus and mice of the genus Mus specifically bred for research, teaching or testing and all birds other than those specifically bred for research, teaching or testing.]</i>

**OVERVIEW:** *[Provide a clear statement of objectives; how those objectives will be achieved; and why this protocol is important to human or animal health, the advancement of knowledge, or the good of society. It is essential that this overview be written in terms understandable to a lay person (avoid scientific jargon and technical terms). An inadequate or inappropriate (overly technical) overview can result in delayed IACUC application review.]*

**II. ADMINISTRATIVE DATA**

Funding Source: <i>[e.g., NIU, external agency]</i>
If external, provide OSP # _____ and attach the 'Vertebrate Animals' section (or comparable section) of grant proposal

<b>PI Training</b> <i>[check the appropriate box and provide a brief narrative description]</i> <input type="checkbox"/> The principal investigator has obtained experience and skills through graduate, postdoctoral, or other training and activities for all procedures described herein. <i>[Describe specialized training relevant to this protocol; e.g., approximate number of years of experience; approximate number of times a particular procedure has been conducted; subject &amp; approximate date of short courses, workshops or other training exercises.]</i> Description of training
<input type="checkbox"/> The principal investigator has obtained experience and skills through graduate, postdoctoral, or other training and activities for all procedures EXCEPT as described below. <i>[Describe specialized training relevant to this protocol; e.g., approximate number of years of experience; approximate number of times a particular procedure has been conducted; subject &amp; approximate date of short courses, workshops or other training exercises. <b>IN ADDITION</b>, list excepted procedures and indicate what additional training will be obtained or identify who will conduct them.]</i> Description of training

<b>Other Participants</b> <i>[Complete the table below to include all co-investigators, technicians, graduate students, undergraduate students, and other individuals authorized to conduct procedures involving animals under this protocol. Include collaborators at other institutions.]</i>				
Name	Title	Department (& institution if not NIU)	Telephone	E-mail

<b>Training of Other Participants</b> <i>[check the appropriate box and provide a brief narrative description]</i> <input type="checkbox"/> Other participants have obtained experience and skills through graduate, postdoctoral, or other training and activities for all procedures described herein <i>[Describe specialized training relevant to this protocol; e.g., approximate number of years of experience; approximate number of times a particular procedure has been conducted; subject &amp; approximate date of short courses, workshops or other training exercises.]</i> Description of training:
<input type="checkbox"/> Other participants have obtained experience and skills through graduate, postdoctoral, or other training and activities for all procedures EXCEPT as described. <i>[Describe specialized training relevant to this protocol; e.g., approximate number of years of experience; approximate number of times a particular procedure has been conducted; subject &amp; approximate date of short courses, workshops or other training exercises. <b>IN ADDITION</b>, list excepted procedures and indicate what additional training will be obtained or identify who will conduct them.]</i> Description of training:

Will any aspect of this protocol involving live vertebrate animals be conducted at another institution? <b>Yes</b> <input type="checkbox"/> <b>No</b> <input type="checkbox"/>
If 'Yes', provide name of institution and department
Was the protocol approved by their IACUC? <b>Yes</b> <i>[attach approval notification]</i> <input type="checkbox"/> <b>No</b> <input type="checkbox"/> <b>Pending</b> <input type="checkbox"/>

Is this a continuation of a previous IACUC protocol? <b>Yes</b> <input type="checkbox"/> <b>No</b> <input type="checkbox"/> If 'Yes', provide ORC #
If this is a continuation of a previous IACUC protocol, information on the number of animals used, major accomplishments, or problems encountered (if any) may aid the IACUC in evaluating the current application. Such information may be provided optionally here or elsewhere in this protocol as appropriate.

### III. ANIMAL REQUIREMENTS

Special characteristics of animals, if any: <i>(subspecies, strain, breed, genotype, bacteriological/viral status, transgenic/knockout status)</i>
Sex, age, weight or size, if applicable:
Source(s): <input type="checkbox"/> Bred in-house
<input type="checkbox"/> External breeder or vendor <i>[provide name of vendor or breeder]</i>

<input type="checkbox"/> Wild-caught <i>[provide US state &amp; county or country of origin]</i>
If "wild-caught," are permits required? Yes <input type="checkbox"/> No <input type="checkbox"/> <i>[If 'Yes', append copies of permits.]</i>
Are any species included in this protocol listed as threatened or endangered by state or federal agencies or CITES? Yes <input type="checkbox"/> No <input type="checkbox"/> <i>[If 'Yes', list species and provide documentation that legal criteria have been met]</i>

#### IV. RATIONALE FOR ANIMAL USE

<b>A. Rationale for animal use</b> <i>[Check all appropriate reasons and explain why the use of any live vertebrate animals is necessary. If non-animal alternatives are available, it is important to provide a clear explanation for why they do not meet the needs of the protocol. In the case of teaching protocols, explain why it is necessary that live vertebrate animals be used <u>each semester</u> (rather than using data, videotapes, or other media obtained from a previous semester).]</i>
<input type="checkbox"/> Non-animal alternatives (computer simulations, tissue culture) are available but do not meet the needs of this protocol
<input type="checkbox"/> Non-animal alternatives are not available
<input type="checkbox"/> Animals are used to model a human condition, disease, disorder, or biological process which cannot be investigated directly in humans for practical or ethical reasons
<input type="checkbox"/> The protocol is specific to non-humans
<input type="checkbox"/> Other
Rationale for animal use:

<b>B. Appropriateness of the species</b> <i>[Check all appropriate reasons and explain why the species selected is appropriate. In particular, provide information on why other species or life stages that might experience less pain or distress would not meet the objectives of this protocol.]</i>
<input type="checkbox"/> This protocol builds on previous work on this species
<input type="checkbox"/> Technical or practical reasons favor the use of this species
<input type="checkbox"/> Scientific reasons favor the use of this species
<input type="checkbox"/> Less sentient species/life stages are available but do not meet the needs of this protocol
<input type="checkbox"/> Other
Explanation of appropriateness of the species:

<b>C. Justification for number of animals used</b> <i>[Check all appropriate reasons and justify the number of animals used. In teaching protocols, this justification may relate to the number of students in the class and the group size of students that can effectively work together. In field research protocols, this justification may relate to the anticipated number of captures under a particular trapping regime. In protocols of all types, this justification may relate to statistical considerations. Use of statistical power analysis is encouraged in determining the number of animals needed. Use of a summary table specifying control and treatment groups and the number of animals in each is also encouraged. It is understood that the actual number of animals used may sometimes exceed that specified in this protocol. A Request for Modification must be submitted if the number of animals used will exceed the number specified by more than 20%.]</i>
<input type="checkbox"/> Statistical considerations dictate the number of animals used
<input type="checkbox"/> Other considerations dictate the number of animals used
Justification for number of animals used:

#### V. PROCEDURES

<b>General Description</b> <i>[Provide a general description of the sequence of procedures to be performed. More detailed information (e.g., of behavioral tests, surgical procedures) should be provided in the following sections. This description should allow the IACUC to understand the course of events an animal experiences from its entry into the experiment to the endpoint of the study. Include a description of endpoint criteria and criteria for euthanasia (death as an endpoint is unacceptable).]</i>
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*For each procedure checked in Section I. PROJECT SUMMARY, complete all of the requested information in the corresponding section below. Check 'Not applicable' for all other sections. Section V.N. Euthanasia, Section V.O. Endpoints, and Section V.P. Occupational Health & Safety must be completed for all protocols.*

<b>A. Teaching</b> <i>[Attach pertinent portions of course description, syllabus, or lab manual. Note that potential risks to students or instructors must be described in Section V.P. Occupational Health &amp; Safety]</i>	Not applicable <input type="checkbox"/>
Department & course number	Semester and year(s)
	Anticipated enrollment

Benefit to students above and beyond that provided by non-animal alternatives:	
Estimated number of animals per year:	Location (building and room number):

<b>B. Field Research</b> <i>[Attach copies of pertinent permits. Note that potential risks to investigators must be described in Section V.P. Occupational Health &amp; Safety.]</i>	<b>Not applicable</b> <input type="checkbox"/>
Location (Country, state or province, county):	
Potential impacts on non-target species:	
Arrangements for local veterinary care or rehabilitation:	
Estimated number of animals per year:	
Field procedures: <i>[Provide a summary of observations and measurements, capture and handling methods, and marking techniques. Describe potential pain, discomfort, or harm (including increased risk of predation, interference with species-specific behavior), habitat manipulations (e.g., enclosures, food augmentation), and staged interactions. Photos, videotape, or electronic images may aid the IACUC in evaluating protocols involving field research.]</i>	
Voucher specimens: <i>[If voucher specimens are to be collected as part of this protocol, provide justification and state where specimens will be deposited (method of euthanasia should be included in Section V.N. Euthanasia)]</i>	

<b>C. Transport of animals outside animal facility</b> <i>[Complete this section if live animals will be transported outside of the Biology or Psychology Animal Facility.]</i>	<b>Not applicable</b> <input type="checkbox"/>
Locations between which animals will be transported:	
Method of transport:	
Estimated number of animals per year:	

<b>D. Housing</b> <i>[Husbandry methods must be specified for all animals held for more than 12 (USDA covered species) or 24 (other species) hours. If animals are housed within the Biology or Psychology Animal Facility and husbandry methods are included in a facility protocol, further methods need not be described here. Note that the IACUC is mandated to inspect all facilities where animals are held captive for more than 12 (USDA covered species) or 24 (other species) hours. Because this may not be logistically feasible for animals housed off-campus (e.g., at a field study site), photos, videotape, or electronic images may aid the IACUC in evaluating such protocols.]</i>	<b>Not applicable</b> <input type="checkbox"/>
Primary housing location(s): <i>[For animals housed within the Biology or Psychology animal facilities, the Department Chair must certify that space is available in Section VII.B.2]</i>	
Other location(s) where animals will be housed for more than 12 (USDA covered species) or 24 (other species) hours:	
Facility protocol under which methods of captive housing are specified: <input type="checkbox"/> Biology <input type="checkbox"/> Psychology <input type="checkbox"/> Neither If 'Neither', provide a description of husbandry methods: <i>[Include cage size; number of animals per cage; environmental enrichment; animal identification methods (e.g., ear tags, tattoos, collar, cage card); schedule of food, water, bedding, and cage changes; temperature, humidity, and L:D cycle.]</i>	
Estimated number of animals per year:	

<b>E. Reproduction</b> <i>[Complete this section only if reproduction is a specific component of this protocol. Mark 'Not applicable' if this protocol makes use of animals bred 'in-house' and covered under a facilities protocol or if animals are obtained from other sources.]</i>	<b>Not applicable</b> <input type="checkbox"/>
Justification for captive reproduction:	
Special conditions necessary to elicit breeding or control matings:	
Fate of offspring produced:	
Estimated number of matings per year:	
Estimated number of offspring per year:	Location (building and room number):

<b>F. Special Food or Water Requirements</b> <i>[Complete this section if the protocol involves special food or water requirements not included in Section V.D. (e.g., food or water deprivation).]</i>	<b>Not applicable</b> <input type="checkbox"/>
Special food or water requirements:	
Justification:	

Criteria for assessment of stress to animals:
Estimated number of animals per year:

<b>G. Behavioral Testing</b>	Not applicable <input type="checkbox"/>
Justification:	
Methods of behavioral testing: <i>[Provide a detailed description of behavioral tests, including the test apparatus, stimuli, special testing conditions, and anticipated responses.]</i>	
Estimated number of animals per year:	Location (building and room number):

<b>H. Restraint</b> <i>[Complete this section if unanesthetized animals are to be restrained other than by hand for any procedure (e.g., via restraint chairs, collars, vests, harnesses, slings). Standard caging, field capture techniques, or transport containers need not be described here.]</i>	Not applicable <input type="checkbox"/>
Justification:	
Methods of restraint:	
Estimated number of animals per year:	Location (building and room number):

<b>I. Radionuclides, biological agents, hazardous chemicals, recombinant DNA, controlled substances, and test substances including those used in surgery and euthanasia</b> <i>[Precautions for minimizing human exposure and for disposal of waste, bedding, or carcasses must be described in Section V.P. Occupational Health &amp; Safety.]</i>	Not applicable <input type="checkbox"/>		
Hazardous Agent	Agent	Dose/duration	Animals/year
Radionuclides <sup>1</sup>			
Biological agents <sup>2</sup>			
Hazardous chemicals			
Recombinant DNA <sup>2</sup>			
Controlled substances <sup>3</sup>			
Other test substances			
<sup>1</sup> Radiation Safety Officer approval attached <input type="checkbox"/> pending <input type="checkbox"/>			
<sup>2</sup> Institutional Biosafety Committee approval attached <input type="checkbox"/> pending <input type="checkbox"/>			
<sup>3</sup> Controlled substances must be dispensed by a State of Illinois licensee or sub-licensee. Name of licensee/sub-licensee and license number:			Licensee/ sub-licensee initialization:
Justification:			
Route of administration:			
Anticipated effects:			
Method of sedation, anesthesia, or analgesia (if none, provide justification):			
Location (building and room number):			

<b>J. Invasive procedures for collection of tissues or body fluids</b>	Not applicable <input type="checkbox"/>
Tissues or body fluids to be collected:	
Justification:	
Method: <i>[include volume, frequency, withdrawal site]</i>	
Sedation, anesthesia, or analgesia <i>[if none, provide justification]:</i>	
Estimated number of animals per year:	Location (building and room number):
If not all participants in this protocol are so authorized, identify those individuals who will conduct procedures listed in this section:	

<b>K. Surgery</b>	Not applicable <input type="checkbox"/>
Description of surgical procedure: <i>[Attach surgical forms and Standard Operating Procedure.]</i>	
Justification:	

Describe pre- and post-operative analgesia: <i>[Include agent, dose, and method of administration. If analgesia is to be used only on an 'as-needed' basis, describe specific thresholds and criteria to determine use.]</i>	
Describe anesthesia: <i>[Include agent, dose, and method of administration.]</i>	
If survival surgery, describe post-operative care and monitoring: <i>[Attach an example of the postoperative care and monitoring form to be used with this protocol.]</i>	
If non-survival surgery, describe how euthanasia will be accomplished and ensured:	
If more than one survival surgery will be performed on any individual animal, provide justification:	
Estimated number of animals per year:	Location (building and room number):
If not all participants in this protocol are so authorized, identify those individuals who will conduct procedures listed in this section:	
<b>Note: Section V.I must be completed if controlled substances are to be used as analgesics or anesthetics.</b>	

<b>L. Other procedures</b>	<b>Not applicable</b> <input type="checkbox"/>
Describe procedures which may cause pain or distress other than those included in previous sections:	
Justification:	
Estimated number of animals per year:	Location (building and room number):

<b>M. USDA Covered Species</b> <i>[USDA covered species include all mammals other than rats of the genus Rattus and mice of the genus Mus specifically bred for research, teaching or testing and all birds other than those specifically bred for research, teaching or testing.]</i>	<b>Not applicable</b> <input type="checkbox"/>
Would any of the procedures in this protocol cause more than momentary or slight pain or distress if performed without anesthesia, analgesia, or tranquilization? <b>Yes</b> <input type="checkbox"/> <b>No</b> <input type="checkbox"/> <i>[Answer 'No' for procedures such as brief restraint, injections, blood draws. Answer 'Yes' for surgery and for other procedures that would cause more than momentary or slight pain or distress if performed without anesthesia, analgesia, or tranquilization.]</i>	
If 'Yes', complete the following table documenting methods and sources used to determine that there are no alternatives to these procedures. You can contact the Animal Welfare Information Center to request literature searches at 301-504-6212 or <a href="http://www.nal.usda.gov/awic/">http://www.nal.usda.gov/awic/</a> .	
Databases consulted: <input type="checkbox"/> Medline <input type="checkbox"/> Biological Abstracts <input type="checkbox"/> Index Medicus <input type="checkbox"/> Animal Welfare Information Center <input type="checkbox"/> Other (describe)	
Date of search:	Years covered by search:
Keywords used in search:	
If alternatives were found, justify why they are not being used:	
<b>Note: When potentially painful procedures are considered, a veterinarian must be consulted in the development of the project.</b> Veterinary questions should be addressed to Dr. Corinna Kashuba, attending veterinarian, (815-753-8524, <a href="mailto:ckashuba@niu.edu">ckashuba@niu.edu</a> ).	

<b>N. Euthanasia</b> <i>[check the appropriate category]</i>		
<input type="checkbox"/> All animals will be euthanized	<input type="checkbox"/> Some animals will be euthanized	<input type="checkbox"/> No animals will be euthanized
Fate of animals not euthanized:		
Method of euthanasia: <i>[check applicable methods and provide narrative description]</i>		
<input type="checkbox"/> Cervical dislocation under sedation or light anesthesia		
<input type="checkbox"/> Decapitation under sedation or light anesthesia		
<input type="checkbox"/> Carbon dioxide inhalation		
<input type="checkbox"/> Exsanguination under anesthesia		
<input type="checkbox"/> Injection		
<input type="checkbox"/> Other		

Description: *[include agent, dose, route of administration, criteria for ensuring death; justification must be provided for methods other than those recommended by the AVMA Panel on Euthanasia]*

Location (building and room number):

If not all participants in this protocol are so authorized, identify those individuals who will conduct procedures listed in this section:

**Note: Section V.I. must be completed if controlled substances are to be used in euthanasia.**

Will animals be made available to other investigators for tissue harvest following euthanasia? Yes  No  *[If 'Yes', identify tissues to be harvested and provide the name, institutional address, phone number, and email address of the investigator to whom tissues may be provided.]*

Will animals be made available for adoption following their use in this protocol? Yes  No   
*[If 'Yes', identify the circumstances under which animals will be made available for adoption.]*

### O. Endpoints

Unless described elsewhere, under what circumstances will animals be removed or eliminated from procedures included in this protocol? *[Identify the criteria to be used and the fate of animals removed or eliminated from this protocol.]*

**P. Occupational Health & Safety** *[Identify potential risks to investigators, instructors, students or other participants (e.g., possible allergic reactions, zoonoses (e.g., Hantavirus, rabies), envenomation, bites); or problems posed by exposure to or disposal of radionuclides, biological agents, hazardous chemicals, recombinant DNA, controlled substances, or other test substances. If no such risks exist, a clear statement to that effect should be provided.]*

Potential risks to investigators, instructors, students, or other participants:

Efforts to minimize risks:

In order to ensure that all researchers who work with animals are familiar with these policies, the Institutional Animal Care and Use Committee (IACUC) is now requiring that the principal investigator and all other personnel associated with the project review the Occupational Health and Safety Program guidelines and return the OHSP certification form with applications for new protocols and applications for continuations of existing protocols.

The link to the OHSP guidelines may be found on the Office of Research Compliance website:  
[http://www.orc.niu.edu/orc/animal\\_research/index.shtml](http://www.orc.niu.edu/orc/animal_research/index.shtml)

Click on the link to the PDF file **Occupational Health for Animal Workers**. The last page of this PDF file is the certification form, which can be printed, filled out, and returned with your application.

### VI. LITERATURE CITED

Provide complete references for any literature citations in the sections above

**VII. CERTIFICATIONS**

**A. Principal Investigator**

1. I certify that I have obtained the institutionally required investigator training.
2. I certify that I have determined that the research proposed herein is not unnecessarily duplicative of previously reported research.
3. I certify that all individuals working on this proposal who are at risk are participating in the Institution's Occupational Health and Safety Program.
4. I certify that the individuals listed in Section II are authorized to conduct procedures involving animals under this proposal, have obtained the institutionally required investigator training, and have received training in: the biology, handling, and care of included species; aseptic surgical methods and techniques (if necessary); the concept, availability, and use of research or testing methods that limit the use of animals or minimize distress; the proper use of anesthetics, analgesics, and tranquilizers (if necessary); and procedures for reporting animal welfare concerns.
5. For protocols involving USDA covered species (see section M): I certify that, for any procedures described herein which may cause more than momentary pain or distress, whether it is relieved or not, I have reviewed the pertinent scientific literature and databases and have found no valid alternative.
6. I certify that I will obtain approval from the IACUC before initiating any significant changes in this study.
7. I certify that I will notify the IACUC regarding any unexpected study results that impact the animals. Any unanticipated pain or distress, morbidity or mortality will be reported to the attending veterinarian and the IACUC.
8. I certify that I am familiar with and will comply with all pertinent institutional, state, and federal rules and policies.

Signature:

Date:

**B. Concurrences as applicable**

1. Major Professor *[required for protocols submitted by graduate students]*

Signature:

Date:

2. Department Chair certification of available space (if applicable), resources, and scientific merit *[required for all protocols]*

Signature:

Date:

3. Chair of Department providing space for captive maintenance *[if different from 2]*

Signature:

Date:

List any attachments here: