Background:
In accordance with the federal Animal Welfare Act Regulations, Public Health Service Policy, and as described in the Guide for the Care and Use of Laboratory Animals¹: All personnel involved with the care and use of animals must be adequately educated, trained, and/or qualified in basic principles of laboratory animal science to help ensure high-quality science and animal well-being. The IACUC is responsible for providing oversight and for evaluating the effectiveness of the training program. All personnel training should be documented. The IACUC, along with the Attending Veterinarian (AV), have the responsibility for determining that personnel performing surgical procedures are appropriately qualified and trained in the procedures to be performed.

At UCSB, training and instruction are available online, from the IACUC Coordinator and/or the Attending Veterinarian, and/or from designated trainers. New animal user training, and the verification of the completion of this training, is specifically provided according to the following system:

Responsibilities:
1. The Principal Investigator (PI) is responsible for ensuring that all personnel listed on her/his protocol(s) are appropriately trained and qualified, and for documenting that training and qualification. The PI is encouraged to use the protocol Training Roster or Procedural Training Template to document all personnel training.

2. The IACUC has established basic training requirements for all personnel (see below), and the IACUC Coordinator is responsible for verifying the completion and documentation of these requirements prior to any protocol personnel (including the PI) beginning to work with live animals. New animal user training is documented in the Researcher Training Checklist.

3. The Attending Veterinarian is responsible for assessing the competency of personnel that perform surgical procedures on animals.

Training Requirements for New Personnel, by Personnel Classification:

1. Principal Investigator working directly with live animals:
   a. Complete the following online training courses from Citiprogram (www.citiprogram.org):
      i. “Working with the IACUC” course for Investigators, Staff and Students
      ii. “Reducing Pain and Distress in Laboratory Mice and Rats” course, if she/he will be working with laboratory rats or mice.
      iii. Animal-specific courses relevant for the species of animal that she/he will be working with, if available.
      iv. “Aseptic Surgery” supplemental training course, if she/he will be performing a surgical procedure on, or providing postoperative care for, an animal.
      v. “Wildlife Research” for animal users working with wild animals in the field.
   b. If Citiprogram does not have an animal-specific course relevant to the research, then read and review the taxon-specific guidelines that are relevant to the protocol. For example, if they are named on a protocol using birds, protocol personnel should read and review the Ornithological Council Guidelines to the Use of Wild Birds in Research. Links to these guidelines are available on the IACUC website at https://www.research.ucsb.edu/policies#iacuc.
   c. Attend the IACUC Seminar
      i. The IACUC Seminar is offered at least once per year, or more frequently if needed, and is presented by the IACUC Chair and Coordinator. The seminar provides training on various regulatory matters, including reporting animal welfare concerns and other important topics.
      ii. This condition is not a requirement to begin work on a protocol.
   d. Read and review the IACUC Guidelines that are identified (i.e., checked) on the protocol. All of the IACUC Guidelines are available on the IACUC website at https://www.research.ucsb.edu/policies#iacuc.
   e. Read and review the Zoonotic Diseases reference material that pertains to the species and animal experimental procedures that are to be performed on her/his animal protocol(s). This reference material is available on the Centers for Disease Control and Prevention (CDC) website at http://www.cdc.gov/onehealth/zoonotic-diseases.html.
   f. Enroll in the UCSB Occupational Health and Safety (OHS) Program for animal users by completing and submitting (to the OHS Physician) the OHS Evaluation form, which includes questions about the animal work to be done, risks that will be encountered during this work, and personal medical history. This form is available

g. If working in a laboratory setting, complete the UC Laboratory Safety Fundamentals Initial course, or Refresher course, through the UC Learning Center.

h. If responsible for an animal housing facility (either a satellite or centralized), complete the Disaster Contingency Planning for Research Animal Facilities course through the UC Learning Center and read through the Animal Facilities Disaster Contingency Plan.

i. If working in the ARC, once all other training has been completed, contact the ARC Manager to schedule a date and time for the Vivarium Facility Orientation.

2. **Principal Investigator NOT working directly with live animals:**
   a. Complete the following online training courses from Citiprogram (www.citiprogram.org):
      i. “Working with the IACUC” course for Investigators, Students, Staff
   b. Confirm with the IACUC Coordinator that the PI will not be in direct contact with animals. The Coordinator will supply the PI with an Occupational Health and Safety Waiver form acknowledging that she/he will not come into contact with live animals in research settings. Submit this waiver to the IACUC Office where it will be kept on file.
   c. If responsible for an animal housing facility (either a satellite or centralized), complete the Disaster Contingency Planning for Research Animal Facilities course through the UC Learning Center and read through the Animal Facilities Disaster Contingency Plan.

3. **Personnel Working in the Animal Resource Center (ARC):**
   Training procedures are outlined in the Researcher Training Checklist.
   a. Complete the following online training courses from Citiprogram (www.citiprogram.org):
      i. “Working with the IACUC” course for Investigators, Staff and Students
      ii. “Reducing Pain and Distress in Laboratory Mice and Rats” course, if she/he will be working with laboratory rats or mice.
      iii. Animal-specific courses relevant for the species of animal that she/he will be working with, if available.
         * If working with Grass (Nile) Rats, researchers must also read the “2016 Guidelines of the American Society of Mammalogists for the use of wild mammals in research and education” and complete the “Wildlife Research” course, in addition to the other Citiprogram requirements.
      iv. “Aseptic Surgery” supplemental training course, if she/he will be performing a surgical procedure on, or providing postoperative care for, an animal.
   b. Attend the IACUC Seminar
      i. The IACUC Seminar is offered at least once per year, or more frequently if needed, and is presented by the IACUC Chair and Coordinator. The seminar
provides training on various regulatory matters, including reporting animal welfare concerns and other important topics.

ii. Note this condition is not a requirement to begin work on a protocol.

c. Read and review the IACUC Guidelines that are identified (i.e., checked) on the protocol(s). All of the IACUC Guidelines are available on the IACUC website at https://www.research.ucsb.edu/policies#iacuc.

d. Read and review the Zoonotic Diseases reference material that pertains to the species and animal experimental procedures that are to be performed on the protocol. This reference material is available on the Centers for Disease Control and Prevention (CDC) website at http://www.cdc.gov/onehealth/zoonotic-diseases.html.

e. Enroll in the Occupational Health and Safety (OHS) Program by completing and submitting (to the OHS Physician) the OHS Evaluation form, which includes questions about the animal work to be done, risks that will be encountered during this work, and personal medical history. This form is available on the IACUC website at https://www.research.ucsb.edu/sites/default/files/forms/iacuc/ohs_form.pdf.

f. Complete the UC Laboratory Safety Fundamentals Initial course, or Refresher course, through the UC Learning Center.

g. Once all other training has been completed, contact the ARC Manager to schedule a date and time for the Vivarium Facility Orientation.

h. ARC staff must complete the Disaster Contingency Planning for Research Animal Facilities course through the UC Learning Center and read through the Animal Facilities Disaster Contingency Plan. This training is not required for personnel that are not providing husbandry to animals.

4. Personnel Working in Non-ARC Animal Holding Facilities:
Training procedures are outlined in the Researcher Training Checklist.

   a. Complete the on-line training courses from Citiprogram (www.citiprogram.org) including:

      i. “Working with the IACUC” course for Investigators, Staff and Students

      ii. “Reducing Pain and Distress in Laboratory Mice and Rats” course, if she/he will be working with laboratory rats or mice.

      iii. Animal-specific courses relevant for the species of animal that she/he will be working with, if available.

      iv. “Aseptic Surgery” supplemental training course, if she/he will be performing a surgical procedure on, or providing postoperative care for, an animal.

      v. “Wildlife Research” for animal users working with wild animals in the field.

   b. If Citiprogram does not have an animal-specific course relevant to the research, then read and review the taxon-specific guidelines that are relevant to the protocol. For example, protocol personnel should read and review the Ornithological Council Guidelines to the Use of Wild Birds in Research, if they are named on a protocol using birds. Links to these guidelines are available on the IACUC website at https://www.research.ucsb.edu/policies#iacuc.

   c. Attend the IACUC Seminar
i. The IACUC Seminar is offered at least once per year, or more frequently if needed, and is presented by the IACUC Chair and Coordinator. The seminar provides training on various regulatory matters, including reporting animal welfare concerns and other important topics.

ii. Note this condition is not a requirement to begin work on a protocol.

d. Read and review the IACUC Guidelines that are identified (i.e., checked) on the protocol. All of the IACUC Guidelines are available on the IACUC website at https://www.research.ucsb.edu/policies#iacuc.

e. Read and review the Zoonotic Diseases reference material that pertains to the species and animal experimental procedures that are to be performed on the protocol. This reference material is available on the Centers for Disease Control and Prevention (CDC) website at http://www.cdc.gov/onehealth/zoonotic-diseases.html.

f. Enroll in the Occupational Health and Safety (OHS) Program by completing and submitting (to the OHS Physician) the OHS Evaluation form, which includes questions about the animal work to be done, risks that will be encountered during this work, and personal medical history. This form is available on the IACUC website at https://www.research.ucsb.edu/sites/default/files/forms/iacuc/ohs_form.pdf.

g. Complete the UC Laboratory Safety Fundamentals Initial course, or Refresher course, through the UC Learning Center.

h. If providing husbandry for animals, complete the Disaster Contingency Planning for Research Animal Facilities course through the UC Learning Center and read through the Animal Facilities Disaster Contingency Plan.

5. Personnel Working Only in the Field (no lab work):
Training procedures are outline in the Researcher Training Checklist.

a. Complete the online training courses from Citiprogram (www.citiprogram.org) including:
   i. “Working with the IACUC” course for Investigators, Staff and Students
   ii. Animal-specific courses relevant for the species of animal that she/he will be working with, if available.
   iii. “Aseptic Surgery” supplemental training course, if she/he will be performing a surgical procedure on, or providing postoperative care for, an animal.
   iv. “Wildlife Research” for animal users working with wild animals in the field.

b. If Citiprogram does not have an animal-specific course relevant to the research, then read and review the taxon-specific guidelines that are relevant to the protocol. For example, if they are named on a protocol using birds, protocol personnel should read and review the Ornithological Council Guidelines to the Use of Wild Birds in Research. Links to these guidelines are available on the IACUC website at https://www.research.ucsb.edu/policies#iacuc.

c. Attend the IACUC Seminar
   i. The IACUC Seminar is offered at least once per year, or more frequently if needed, and is presented by the IACUC Chair and Coordinator. The seminar
provides training on various regulatory matters, including reporting animal welfare concerns and other important topics.

ii. If a researcher who will be working in the field resides outside of the Santa Barbara area, inform the IACUC Coordinator. For these personnel, confirming review of the IACUC Seminar will be required prior to being approved for animal work, except under extenuating circumstances.

iii. For researchers that reside in the Santa Barbara area, this requirement is not a condition of approval.

d. Read and review the IACUC Guidelines that are identified (i.e., checked) on the protocol. All of the IACUC Guidelines are available on the IACUC website at https://www.research.ucsb.edu/policies#iacuc.

e. Read and review the Zoonotic Diseases reference material that pertains to the species and animal experimental procedures that are to be performed on the protocol. This reference material is available on the Centers for Disease Control and Prevention (CDC) website at http://www.cdc.gov/onehealth/zoonotic-diseases.html.

f. Enroll in the Occupational Health and Safety (OHS) Program by completing and submitting (to the OHS Physician) the OHS Evaluation form, which includes questions about the animal work to be done, risks that will be encountered during this work, and personal medical history. This form is available on the IACUC website at https://www.research.ucsb.edu/sites/default/files/forms/iacuc/ohs_form.pdf.

   i. If a researcher who will be working in the field resides outside of the Santa Barbara area, inform the IACUC Coordinator. The signed Researcher Training Checklist must be emailed to the IACUC Office, and a hard copy of the OHS Evaluation form must be mailed to the OHS Physician.

6. Personnel not affiliated with UCSB:

   a. Personnel who are not UCSB students or employees may still participate in research projects with UCSB PIs. Before beginning any of the above training, these researchers must affiliate themselves with UCSB as a "Volunteer", usually through the PI’s home department. Non-UCSB personnel may not enroll in the OHS program or take courses through Citiprogram.org.

7. IACUC Members:

   a. Complete the “Essentials for IACUC Members” and “Working with the IACUC” for Investigators, Staff and Students online training courses from Citiprogram (www.citiprogram.org).

      i. The IACUC Community (i.e., Non-Affiliated) member is also required to complete the “IACUC Community Member” course.

   b. IACUC members may be exposed to hazards or allergens during the Semiannual Facility Inspections. Enroll in the Occupational Health and Safety (OHS) Program by completing and submitting (to the OHS Physician) the OHS Evaluation form, which includes questions about the animal work to be done, risks that will be encountered during this work, and personal medical history. This form is available on the IACUC

c. Meet with the IACUC Coordinator to receive copies of reference materials (e.g., Member Handbook, Guide for the Care and Use of Laboratory Animals, Animal Welfare Act, etc.) and discuss the training covered in the “Essentials for IACUC Members” Citiprogram course. The Coordinator will also provide new IACUC members with additional details on regulatory entities, basic roles of IACUC members, overview of IACUC meetings and responsibilities, conducting semiannual inspections and program reviews, and evaluating concerns of animal welfare or noncompliance.

Training Verification and Documentation, and Clearance to Begin Working with Animals:
1. Once new personnel have completed the necessary training described on the Researcher Training Checklist and have gotten it signed by their PI, or their designee, they must email a copy to the IACUC Coordinator. The IACUC Coordinator will verify that new personnel have completed the required Citiprogram basic training courses. If the new animal user still has any uncompleted Citiprogram courses at this time, the IACUC Coordinator will notify them.
   a. The AV has designated the ARC Manager as someone who may sign the Researcher Training Checklist for new ARC staff. The REEF PI has designated the REEF Facility Director as someone who may sign the Researcher Training Checklist for new REEF hires.
2. Upon completion of the Citiprogram training and submission of the signed Researcher Training Checklist, the Coordinator will set up an appointment via Zoom to discuss the training. OHS clearance may still be pending when setting up the meeting with the Coordinator. During this meeting the IACUC Coordinator will:
   a. Emphasize that working with animals is not a right, but a privilege.
   b. Confirm that personnel have read the protocol(s) in its entirety, as well as any associated housing or procedural Standard Operating Procedures (SOPs). Personnel are responsible for knowing which of the animal procedures described in the protocol(s) or SOP(s) they will be responsible for, as well as being responsible for performing those procedures as described.
      i. If an animal user will be working on more than one protocol or SOP, emphasize that procedures from one protocol or SOP may not be used on animals associated with a different protocol or SOP (i.e., no “mixing-and-matching”).
   c. Confirm that personnel have read the IACUC Guidelines that are identified (i.e., checked) towards the back of the protocol(s).
   d. Remind personnel that protocols, SOPs, and Guidelines will occasionally be updated and that they should always make sure they are working from the current version.
      i. Revisions to guidelines will be communicated through the IACUC Newsletters.
**Anesthesia & Surgery (either non-survival or survival) Training Requirement:**
On-the-job surgical training and the surgical technique proficiency evaluation are provided according to the following system:

1. Protocol personnel performing surgical procedures on rodents species (e.g., rats and mice), which accounts for nearly all of the surgical procedures performed in our animal care and use program, will be required to complete the following training and proficiency program:
   a. **Aseptic Rodent Surgery and Postoperative Care IACUC Guideline:**
      An individual must read this guideline prior to beginning surgical procedure training or providing postoperative care. It is possible this was not read by the individual
during their initial training if they or their PI were unsure of whether they would be conducting surgical or postoperative procedures.

b. Citiprogram Aseptic Surgery Course:
An individual must complete this course prior to beginning surgical procedure training or providing postoperative care. It is possible this was not completed by the individual during their initial training if they or their PI were unsure of whether they would be conducting surgical or postoperative procedures.

c. Basic Aseptic Surgical Technique Seminar:
The AV, or his designee, will cover basic rodent surgery training topics, such as: asepsis, gentle tissue handling, minimal dissection of tissue, appropriate use of instruments, anesthesia monitoring, and correct use of suture materials and patterns. Personnel performing anesthesia, surgery, and/or post-operative procedures are encouraged to attend this training prior to engaging in surgical procedures on live animals. However, personnel may perform anesthesia and surgery without first attending this seminar, if they are receiving assistance and direct supervision from a surgical trainer (i.e., someone who has successfully completed a proficiency evaluation with the AV or his designee). Post-operative care may also be performed without first attending this seminar, but direct supervision is not required after being trained.

d. Procedure-Specific Surgical Training:
All individuals to be engaged in surgical procedures must receive procedure-specific training from a qualified surgical trainer within the lab. A qualified surgical trainer is someone who has successfully completed a proficiency evaluation with the AV for the surgical procedure in the particular species. Contact the AV if a qualified surgical trainer is not available in your lab.

e. Competency Evaluation:
Protocol personnel (e.g., graduates, research assistants/associates, post-docs and PIs) performing survival surgical procedures are required to demonstrate competency to the AV, unless exempted by the IACUC, and must NOT perform surgical procedures without the assistance and direct supervision of the surgical trainer or AV, until they have successfully completed a proficiency assessment. Personnel will be deemed competent if they can demonstrate to the AV that they possess the necessary knowledge and technical skill to successfully complete the surgical procedure. Anyone that cannot competently perform the surgical procedure (i.e., fails their evaluation) should receive additional training under the direct supervision of a trained and qualified individual.

f. Records Review:
The regular review of the completed anesthesia, surgery, and postoperative care records is a critical and effective monitoring strategy for ensuring the health and well-being of rodents undergoing surgical procedures. This review process has been delegated to the AV by the IACUC.

2. Protocol personnel performing surgical procedures on non-mammalian species (e.g., fish, birds, reptiles, or amphibians) must be appropriately trained and qualified. To perform surgeries without direct supervision, personnel will be required to demonstrate proficiency
in their surgical technique to the AV, unless they are specifically exempted by the IACUC. Direct supervision must be provided by a qualified surgical trainer (i.e., someone who has either successfully completed a proficiency evaluation with the AV or received an exemption for the surgical procedure in the particular species). If social distancing measures are required at the time of surgery (i.e., during Covid-19 pandemic), direct supervision of the surgeon may be provided via a live video feed. Contact the AV if a qualified surgical trainer is not available in your lab.

**Continuing Education Requirement for Approved Personnel:**
1. Every three years, all personnel working with live animals must complete the “Working With Animals in Biomedical Research – Refresher” course from Citiprogram (www.citiprogram.org). PIs who have submitted an OHS Program Waiver and have no contact with live animals do still need to complete the Refresher course to stay up-to-date on policies and regulations.
2. Either once a year, once every three years, or when someone’s health history and/or animal model has changed, personnel working directly with live animals must renew their enrollment in the Occupational Health and Safety Program by completing and submitting (to the OHS Physician) the *OHS Evaluation Form*, which includes questions about personal medical history. This form is available on the IACUC website at https://www.research.ucsb.edu/sites/default/files/forms/iacuc/ohs_form.pdf.
3. Once a year, personnel working in a laboratory setting must complete a Laboratory Safety Refresher course through the UC Learning Center. Personnel will receive UC Learning Center email notifications to complete the Refresher course one year after completing the UC Laboratory Safety Fundamentals Initial course.

**Notes:**
1. If new personnel submit their signed *Researcher Training Checklist* to the IACUC Office, they may meet with the Coordinator to discuss their training prior to receiving notification that the OHS Physician has reviewed their *OHS Evaluation* form.
2. Some protocols may be approved to work with several species and/or procedures, but not all protocol personnel may be working with all listed species or on all of the animal procedures described in the protocol. Therefore, each person to be added to the protocol only needs to complete the training requirements that are relevant to the work that she/he will be performing on the protocol. The IACUC Coordinator will note the species that each researcher has been cleared to work with, as well as the date they were cleared for participation in the notification to the researcher, PI, and ARC Manager, if applicable.
   a. If a researcher will be working in the ARC, the IACUC Coordinator will copy the ARC Manager on the clearance for participation email.
3. In some instances, personnel may belong to more than one classification. For example, field study protocols often contain a laboratory research component, and personnel on such protocols may be conducting research in both the laboratory and field. In instances such as these, it is important for the researcher to complete ALL applicable training requirements (i.e., those listed under #3 and/or 4, and 5 above).
4. Due to the large number of protocol personnel working at the REEF and high rate of turnover, the IACUC Coordinator will meet with the MSI Aquarist at least once per quarter to review and update the training roster. The REEF Director, or their designee, is responsible for ensuring that newly hired REEF personnel complete the training as described on the Researcher Training Checklist.

5. UC personnel working in animal housing areas, but not performing research (e.g., custodians, maintenance workers), are required to enroll in the Occupational Health and Safety Program. Non-UCSB personnel (e.g., service technicians, contractors) do not enroll in the OHS program.

6. If a PI or surgeon notices a pattern of poor surgical outcomes (e.g., animal deaths peri- or post-operatively), the AV should be promptly contacted for advice and assistance on surgical technique.