

## **In Vivo Core Facility Personnel**

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## **USC Translational Research In Vivo Core Standard Operating Protocols (SOPs)**

### **1. General SOP for USC Translational Research In Vivo Core**

The Translational Research In Vivo Core provide access to state-of-the art imaging and surgical instrumentation to facilitate an investigators pre-clinical and translational research efforts. For more information please visit <http://ibt.usc.edu/translational-research-vivo-core>.

General Core Policy:

- New users of the core must be trained and certified on designated instrumentation and equipment.
- All guidelines/recommendations for handling of animals, anesthesia, monitoring, sedation and record keeping for both non-USDA animals (small rodents, mice rats), sedation and USDA animals (Rabbits, pigs, dogs, primates) must be followed as outlined by USC IACUC and DAR (please visit <https://iacuc.usc.edu/> for more details).
- The Core Facility uses standard forms provided by DAR for reporting and monitoring of all USDA and NON-USDA animals. In the event that the PI wishes to customize the forms, they must be provided in advance to Core technician(s) prior to the procedure.
- In case of requesting any modification from the previous authorized protocol, the PI representative must provide a physical copy of the authorized IACUC protocol to the core technicians before carrying out the experiment.
- Duration of use, date, name of user, PI and protocol must be recorded in the designated instrument logbook for all imaging and surgical procedures being carried out.
- Any issues with instrumentation or equipment provided by the core must be reported immediately to Core staff.
- When working in the core you must have a printed copy of the protocol with you at all times.
- A designated PI (representative) must be on the protocol for all procedures that you are working on.
- All records must be kept in the core facility, dated and labeled with PI's name and contact information.
- PI may be subject to audit by core personnel at any time. Regular inspections will be carried out.

Our technician(s) are responsible for the following:

- Maintenance of facility and all equipment provided by the core.
- Provide general supplies.
- Assist during anesthesia, surgical & imaging procedures and post-operative care.
- Assist in training and certifying new users on instrumentation and equipment.

While the Core technician staff may assist in either imaging or surgical procedures, unless otherwise indicated in writing, the Principal Investigator's (PI's) (and/or designated personnel under the PI) will be responsible for oversight of anesthesia, monitoring, post-operative care and documentation.

**The PI must include identify key personnel from their group who will be responsible in all IACUC protocols (non-surgical/surgical) for the following:**

- (i) Anesthesia dose calculation and oversight of administration of anesthesia
- (ii) Overseeing that the Monitoring of animals undergoing procedures is being done according to protocol.
- (iii) Overseeing that the Recovery of animals from anesthesia's according to protocol
- (iv) Completion of all documentation pertaining to procedure(s).

**A. Imaging/Nonsurgical Procedures**

Completion of all documentation pertaining to procedure(s):a – In protocols where there is no surgery (i.e. section 16 is not filled out) this information should be entered in the section where you describe procedures that are performed under anesthesia, see section 19 “Other procedures”. Enter Principal Investigator’s (PI’s) (and/or designated personnel under the PI) for i-iv.

**B. Surgical procedures**

In protocols where surgical procedures are described (i.e. section 16 has been completed) you should enter in section 16.6 those individual(s) Enter Principal Investigator’s (PI’s) (and/or designated personnel under the PI) for i-iv. In section 16.7 you must enter those individual(s) responsible for monitoring recovery of animals post-surgery from anesthesia.

**2. In Vivo Core SOP for Anesthesia**

Procedures that require application of anesthesia will be performed jointly by the laboratory technician provided by the In Vivo Core Facility and a technician/researcher assigned by the PI, who will be in charge of supervising the development of the study. The laboratory technician provided by the Core is NOT authorized to anesthetize any animal without the authorization and presence of the PI representative.

All procedures will be carried out based on USC IACUC and DAR guidelines and recommendations. Both, laboratory technician from the Core Facility and the representative provided by the PI will calculate and administer the anesthetics. Medications and doses administered are based on the updated protocol provided by the PI or his/her collaborator in the core. Adjustments or modifications are not allowed without the corresponding approved protocol amendment.

While the core technician will complete the anesthesia forms, it is the PI (representative) who will oversee and be responsible for checking the accuracy of the documentation and reporting. Doses, route and time of administration will be included into the document. The Core technician responsible for the anesthesia must document his/her full name and signature. At the end of the procedure, the person assigned by the PI to supervise the study will evaluate all documentation. All the documents will be kept perfectly identified inside the core facility in the housing room until the end of the study.

At the end of the study, PI (representative) will be responsible for collecting all the data and documents and storage. The Core Facility is not responsible for storing and archiving the records of procedures. The PI and/or representative of the study is solely responsible for the documents used in their study.

### **3. SOP for pre-surgical, during surgery and post-surgical management**

The procedures and surgeries performed on anesthetized animals require at least the following personnel:

- (i) Laboratory / veterinary technician provided by the Core Facility
- (ii) Laboratory technician (representative) provided by the PI in charge of the procedure.

Both core and PI personnel, must remain present until the end of the procedure and until the animal is fully recovered according to IACUC guidelines or after euthanasia and tissue collection.

Both personnel are responsible for the monitoring during, before and after procedure. All documents must include name and signature of the laboratory technician, as well as the name and signature of the responsible person assigned by the PI to supervise the study within the Core Facility. Adjustments or modifications are not allowed without the corresponding approved protocol amendment.

Postoperative recovery or after any procedure under anesthesia, the animal must be supervised at all times by designated personnel who are identified in the protocol. The animal cannot be left unattended during this process. The animal should not be placed back into its cage until it is fully recovered from anesthesia as specified in the IACUC/DAR guidelines.

Surgical reports/procedures must be filled out by the responsible investigator and must be included with the animal monitoring reports.

Monitoring and animal care during procedures are based on USC IACUC and DAR guidelines and recommendations as stated in the general core policy.

The person assigned by the PI must verify the following documents at the end of the procedure: 1) Anesthesia / monitoring sheet, surgical/procedures records and postoperative cage card (white cards). All the documents will be kept perfectly identified inside the vivarium in the housing room until the end of the study.

At the end of the study, PI (representative) will be responsible for collecting all the data and documents. Then, PI will keep them at his/her laboratory. The Core Facility is not responsible for storing and archiving the records of procedures. The PI of the study is solely responsible for the documents used in their study.

### **4. SOP for Euthanasia**

Procedures that require application of euthanasia will be performed jointly by the laboratory technician provided by the In Vivo Core Facility and a technician/researcher assigned by the PI, who will be in charge of supervising the development of the study. The laboratory technician provided by the Core is NOT authorized to euthanize any animal without the authorization and presence of the PI (representative).

All procedures will be carried out based on USC IACUC and DAR guidelines and recommendations. Both, laboratory technician from the Core Facility and the laboratory technician provided by the PI will calculate and administer the anesthetics. Medications and doses administered are based on the updated protocol provided by the PI (representative) in the core. Adjustments or modifications are not allowed without the corresponding approved protocol amendment. As previously noted, any modifications to protocol must be approved and provided in writing to the core technician in advance.

The Core Facility uses the standard forms provided by DAR for reporting and monitoring of all animals, including USDA and NON-USDA animals. In the event that the PI wishes to use his/her own form, this must be provided to the Core Facility technician prior the beginning of the procedure.

Personnel following the procedure must complete all forms properly. Doses, route and time of administration will be included into the document. The Core technician responsible must write down his full name and signature. At the end of the procedure, the person assigned by the PI to supervise the study will evaluate all documentation.

At the end of the study, PI (representative) will be responsible for collecting all the data and documents. Then, PI will keep them at his/her laboratory. The Core Facility is not responsible for storing and archiving the records of procedures. The PI and/or representative of the study is solely responsible for the documents used in their study.