

CTAC Suggested IACUC Language

Transportation

Small animals may be hand-carried/ carted from your vivarium. They must be transported directly to the facility imaging room or procedure room. When leaving the vivarium facility, the animals must be covered from view and secured so that the containment is escape-proof during transport, in addition to their primary cage.

Room MBI LG-180D is scheduled for use in advance using ICBR's iLab system. During these usages, no other animal species will be allowed into room. Animals will remain in the required room, secured in the primary housing cage when not being imaged, attended to when not being imaged and not for more than 8 hours.

Anesthesia

If injecting...

- Injection of anesthesia should be standard practice. For more information, please review ACS Guideline: Administering Injections to Small Laboratory Animals (<https://my.acs.ufl.edu/guidelines.aspx>).
- Injectable Anesthesia, as approved in the Client Researcher's Animal Care and Use Protocol, is induced in approved locations, using the Animal Prep and Recovery Area associated with the imaging system in use.

If vaporizing...

- Isoflurane Anesthesia, as approved in the Client Researcher's Animal Care and Use Protocol, is induced in approved locations, using the induction chamber associated with the individual imaging system.
 - o All CTAC-associated Isoflurane systems have anesthetic gas waste scavenging systems, monitored monthly, and disposed of as prescribed by the manufacturer.
 - o Isoflurane gas anesthesia is recommended by CTAC as it is minimally metabolized by the liver, therefore less toxic to the animal's metabolism as compared to injectable anesthetics.

- Monitoring the animal for vital signs and depth of anesthesia should be standard practice. Depth of anesthesia should be monitored every 10m via toe-pinch reflex and visual verification of respiration.
- An ocular lubricant is applied to all animals while under anesthesia to prevent corneal dehydration, as anesthesia inhibits the blinking reflex in rodents.

Injection Non-Anesthesia

- Injection of bioactive substances should be standard practice. For more information, please review ACS Guideline: Administering Injections to Small Laboratory Animals (<https://my.acs.ufl.edu/guidelines.aspx>).
- Injectable microbubbles as a contrast agent, as approved in the Client Researcher's Animal Care and Use Protocol is introduced in approved locations, using the Animal Prep and Recovery Area associated with the imaging system in use.

Depilatory Treatment to allow Signal Acquisition

For imaging modalities, it may be necessary, either due to depth of signal or pigmentation, for the hair over the site of interest to be removed. The site and area should be documented in the animal protocol describing this procedure should it be employed. Depilation will be conducted on anesthetized animals. Any animals undergoing this procedure will be shaved with a small animal trimmer, and if further removal is necessary, an exfoliant such as Nair or equivalent should be used consistent with its directions. Care should be taken to leave the exfoliant on for the minimum length of time to accomplish the task.

Imaging Procedure (VisualSonics VEVO770 Small Animal Ultrasound)

Location: LG-180D

Once induced, animals will be moved to the heated stereotaxic platform, and its limbs gently secured with medical cloth tape. If using isoflurane, the animal will be placed such that it can readily be maintained under anesthesia by inhalation via a nose cone manifold.

The animal will then be positioned below the ultrasound scanhead of the Vevo 770. Water-soluble, non-toxic (and if needed, sterile) ultrasound wave transmission gel will be applied to the area of the animal to be imaged. The animal will be imaged via ultrasound, which may take up to one half hour of total time. Once finished, the gel will be removed from the animal while still under anesthesia. The animal will then be removed from the heated imaging platform and placed back into its cage which is rested upon a warming platform, located in the Animal Prep and Recovery Area specific to the Vevo 770 system. Animals will be observed until they regain righting reflex, and are moving freely and normally about the cage.

Imaging Procedure (Caliper / Xenogen IVIS100)

Location: LG-180D

Once induced, animals are moved to the heated internal platform. If using isoflurane, the animal will be placed such that it can readily be maintained under anesthesia by inhalation via a nose cone manifold. The animal(s) will then be positioned below the Luminescent / Fluorescent Camera and detectors of the Caliper / Xenogen IVIS100. The animal will be imaged via detection of photonic emissions from either luminescent or fluorescent probes located within the subject(s), which may take up to one half hour of total time. The animal will then be removed from the heated imaging platform and placed back into its cage which is rested upon a warming platform, located in the Animal Prep and Recovery Area specific to the IVIS100 system. Animals will be observed until they regain righting reflex, and are moving freely and normally about the cage.

Decontamination

CTAC has an [SOP](#) located at all animal use sites with instructions for Users. Briefly, for any area where animals have come in contact:

- Loose debris is to be removed with a c-fold paper towel, and disposed of in the Biohazardous Waste barrel.
- The area(s) should be sprayed with 5% Bio-Clean solution, allowed to soak for 30sec to one minute, and wiped down with c-fold towels.
- These areas should then be sprayed with 70% ethanol, and wiped down, and allowed to dry.