

WVU IACUC - APPROVED SOP:**Animal Models and Imaging Facility Boilerplate Language – IVIS Lumina Optical Imaging or Vevo 2100 Ultrasound**

PI's can modify the insertions below, or remove irrelevant parts, as relates to their project. This information would generally go in "15."

IVIS Lumina Optical ImagingGeneral information applicable for all investigators

For optical imaging using the IVIS Lumina, animals will be anesthetized for 30 min or less at one time. Supplemental heat is provided while the animals are under anesthesia to maintain body temperature. The IVIS imaging chamber must be closed during imaging to maintain complete darkness, but the door will be opened between images to monitor the animals (pulse and respiration). The level of anesthesia will be adjusted, as needed. These procedures in expected to cause minimal pain or discomfort.

Recovery of animals will be monitored until normal temperature and/or righting are complete. The **IACUC rodent anesthesia and surgery policy** will be followed, and pink surgery/anesthesia cards or AMIF imaging cards will be placed on the home cages of rodents undergoing anesthesia. No procedures in excess of minor pain or discomfort are anticipated from this procedure. AMIF personnel are responsible for imaging facilities hygiene, disinfection and cleaning. Careful attention to disinfection, cleanliness and PPE procedures will be followed in AMIF personnel supervised areas, and during transport of AMIF animals. . Animals once in the holding room do not enter other rooms, and personnel entering the imaging holding room do so as the last room of the day. When infectious agents with aerosol potential are used, the isolation box is used and loaded and disinfected between use in the BSL-2 hood using Virkon under AMIF personnel direction.

OLAR staff will transport animals to the imaging holding room. AMIF personnel will transport animals between the AMIF holding and imaging rooms. Once animals have entered the AMIF rooms, they will not enter other rooms. Personnel entering the imaging holding room do so as the last room of the day. The AMIF will authorize limited access to AMIF space, as needed, and will train others to on proper technique in the AMIF space.

The AMIF will receive a copy of the approved IACUC protocol, as well as any protocols addressing chemical or biological safety procedures. AMIF staff will handle the animals for anesthesia and imaging procedures.

Information specific to each imaging experiment-include the details that are relevant to your project

____ animals will be visualized ____ times at ____ intervals to follow the progression of the study. Animals can be imaged multiple times with no harmful effects. . If injectable anesthetics, or inhalant anesthesia of duration over 20 minutes are used, the frequency of imaging will not be more frequent than 3 2 times a week. If more frequent imaging or of longer duration is required, the OLAR veterinary staff will be contacted, and monitoring animals for loss of condition, weight loss and anorexia will be performed.

For some bioluminescent studies, animals will be given a dose of luciferin (the substrate for luciferase) by IP injection.

For known infectious agents that pose a special risk, an isolation box with inflow/outflow HEPA filters will be used and accessed only in the BSL-2 biosafety cabinet. Cleaning of this box with Virkon (or other OLAR-approved disinfectants) occurs after every use.

Anesthetics will be either inhalant isoflurane anesthesia or injectables (tribromoethanol, brevitol, or ketamine/xylazine with yohimbine reversal) as outlined in the AMIF IACUC protocol.

VisualSonics Vevo 2100 Ultrasound Imaging

General information applicable for all investigators

For ultrasound imaging using the Vevo, animals will be anesthetized for 2 hours or less at one time. Supplemental heat and close monitoring of temperature, pulse and respiration will be provided during study. The animal studied is accessible to monitoring throughout. The level of anesthesia will be adjusted, as needed. These procedures are expected to cause minimal pain or discomfort.

Recovery of animals will be monitored until normal temperature and/or righting are complete. The **IACUC rodent anesthesia and surgery policy will be followed**, and pink surgery/anesthesia cards or AMIF imaging cards will be placed on the home cages of rodents undergoing anesthesia. No procedures in excess of minor pain or discomfort are anticipated from this procedure. AMIF personnel are responsible for imaging facilities hygiene, disinfection and cleaning. Careful attention to disinfection and PPE procedures will be followed for the AMIF, transport and home cage areas.

OLAR staff will transport animals to the imaging holding room. AMIF personnel will transport animals between the AMIF holding and imaging rooms. Once animals have entered the AMIF rooms, they will not enter other rooms. Personnel entering the imaging holding room do so as the last room of the day. The AMIF will authorize limited access to AMIF space, as needed, and will train others to on proper technique in the AMIF space.

The AMIF will receive a copy of the approved IACUC protocol, as well as any protocols addressing chemical or biological safety procedures. AMIF staff will handle the animals for anesthesia and imaging procedures.

Information specific to each imaging experiment-include the details that are relevant to your project

_____ animals will be visualized _____ times at _____ intervals to follow the progression of the study. Animals can be imaged multiple times with no harmful effects. If injectable anesthetics, or inhalant anesthesia of duration over 20 minutes are used, the frequency of imaging will not be more frequent than twice a week. If more frequent imaging or of longer duration is required, the OLAR veterinary staff will be contacted, and monitoring animals for loss of condition, weight loss and anorexia will be performed.

For some experiments, non-toxic contrast agents (micro-bubbles) will be injected immediately prior to imaging.

Anesthetics will be either inhalant isoflurane anesthesia or injectables (tribromoethanol, brevitol, or ketamine/xylazine with yohimbine reversal) as outlined in the AMIF IACUC protocol.