



# Johns Hopkins University

## Animal Care and Use Committee

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### Animal Surgical Suites<sup>1</sup>

**PURPOSE:** This document outlines the requirements that are necessary to ensure that surgical facilities and procedures comply with standards set forth in the *Guide*<sup>3</sup>.

**BACKGROUND:** The Animal Welfare Act<sup>2</sup> and the Public Health Services Policy<sup>3</sup> (as stated in the *Guide*) require use of aseptic procedures for survival surgical procedures. Aseptic technique includes preparation of the animal such as hair removal and disinfection of the operative site; preparation of the surgeon such as provision of decontaminated surgical attire, surgical scrub and sterile gloves; sterilization of instruments, supplies and implanted materials; and use of operative techniques to reduce the likelihood of infection. Major operative procedures on non-rodents mammals will be conducted only in facilities intended for that purpose (dedicated surgical facility), which are maintained for use under aseptic conditions. Non-major (minor) operative procedures and all surgery on rodents do not require a dedicated facility, but must be performed using aseptic procedures. Operative procedures conducted at field sites need not be performed in dedicated facilities, but must be performed using aseptic procedures. The following criteria should be met for such a facility:

### PROCEDURE:

#### Operating Room

1. The floor, ceiling, and walls must be created by a continuous connection, constructed of materials that are easily sanitizable and must be kept physically clean. Interior surfaces should be constructed of materials that are monolithic and impervious to moisture.
2. Supplies and equipment not relevant to the surgical procedures being performed should not be stored in the room. The operating room cannot be used as an office, laboratory or storage room.
3. A surgical light and an easily sanitizable surgical table must be available.
4. Appropriate scavenging must be provided whenever gas anesthesia is used.
5. The operating room must normally be used only for aseptic surgery. A non-aseptic surgery may be performed, however, provided the operating room is thoroughly decontaminated

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<sup>1</sup> Approved by the IACUC on: January 17, 2002, reviewed and refs. updated September 25, 2012; reviewed January 31, 2018, January 31, 2021

<sup>2</sup> 9 CFR Chapter 1 Subchapter A, Parts 1,2 and 3

<sup>3</sup> *Guide for the Care and Use of Laboratory Animals*, NRC, National Academy Press, 8<sup>th</sup> ed., 2011

prior to performing the next aseptic surgical procedure. Decontamination consists of cleaning the ceiling, walls, floors and equipment with a disinfectant. A record of decontamination must be maintained.

### **Surgical Support Rooms**

1. There must be at least two surgical support rooms separate from the operating room, one for surgeon's preparation and the other for animal preparation. The former may also be used for instrument and pack preparation and the latter for post-operative recovery.
2. Surgeon Preparation Room – the surgeon should scrub (prepare) in a room separate from both the animal preparation room and the operating room. There is also where the surgeon dons a facemask and head and shoe covers. The surgeon preparation room should be contiguous with the operating room. Instrument cleaning and pack preparation may be done in this area but must not occur in the operating room. If the surgeon preparation room is used for other activities as well, all other activities must cease prior to and during the surgeon's scrub so that aseptic preparation of the surgeon is not compromised.
3. Animal Preparation Room – preparation of the animal (i.e. inducing anesthesia, clipping and preliminary surgical scrub) must be performed in a room separate from the surgeon preparation room and the operating room. The animal preparation room need not be contiguous with the operating room. After the animal has been moved to the operating room, a final scrub should be performed on the operating table. The animal preparation room may also be used for intensive care and support treatment during the post-anesthetic recovery period. Only uncomplicated and short anesthetic recovery (less than one hour to sternal or sitting position) can occur in the animal's home cage. Postsurgical (post-anesthetic) monitoring and record keeping must be in accordance with current rules, regulations and standards.

### **Additional features for a well-designed and operated surgical suite:**

1. No recirculation of room air, unless particulate or noxious gaseous contaminants have been removed.
2. Air supply and exhaust plenum should not be located over the surgery table.
3. Operating room should be at positive pressure relative to the adjacent preparation areas or hallways to prevent dust contamination of the room.
4. Lockers and an area for dressing into surgical attire are desirable.
5. Convenient access to an autoclave and gas sterilization equipment.
6. Oxygen and suction should be available.