**Standard Operating Procedure (SOP) for Stereotactic injections on Benchtops**

**Scope:**

This SOP applies to all laboratory personnel who will perform stereotactic injections of recombinant DNA constructs into animals in an open bench. Recombinant DNA includes recombination incompetent adenoviruses and adeno-associated viruses, replication incompetent lentiviruses, and G-deleted rabies viruses.

**Before performing stereotactic surgery:**

* Approvals are granted for a single virus-insert combination. Any other recombinant viruses will require IBC review before initiation of experiments. The IBC may include additional safety measures as indicated by a risk assessment.
* All research personnel must be added to the appropriate biosafety protocol (BSP) and must complete Initial Biosafety and Bloodborne Pathogen Training; refresher training must be completed annually.
* All research personnel must complete the NIH guidelines for Research Involving Recombinant or Synthetic Nucleic Acid Molecules prior to initiating any experiments.

**Attire and personal protective equipment (PPE) requirements:**

* Long pants or ankle length skirts (no shorts or short skirts) and shoes that cover the entire foot (no sandals or flip flops, no ballet flats) are required for entry into areas where stereotactic injections are performed.
* Hair cover, surgical mask, closed front gowns, gloves, and eye protection (i.e. safety glasses) are required when performing stereotactic surgeries.

**General Safety Procedures:**

* Stereotactic injections will be performed by experienced personnel only. The Principal Investigator (PI) must ensure that personnel are appropriately trained on the procedure and all related safety measures.
* All persons entering the laboratory must be advised of the potential hazards associated with the use of recombinant DNA during stereotactic surgery.
* Access to the laboratory must be limited to staff, or other persons with permission of the Principal Investigator, when performing stereotactic injections.
* Signs must be placed on the doors during the procedures to restrict access.
* Laboratory must be decluttered before starting these experiments:
  + Remove all non-essential items.
  + Remove non-cleanable materials (i.e. cardboard, cloth).
* Under NO CIRCUMSTANCES will gloves be reused.
* All procedures must be performed in a manner that minimizes creation of splashes or aerosols.
* Luer Lock or Hamilton syringes must be used to prevent separation of needle and syringe.
* After surgery, close injection site with staples or tissue glue.

**After completion of procedures:**

* All laboratory surfaces and equipment must be decontaminated immediately following injection procedure.
* Animals must be transported to the animal facility in banded cages.
* Cages must be placed in secondary containment during transport.
* Arrange with Laboratory Animal Services (LAS) prior to experiments to provide assistance with transport.
* Soiled cages and bedding should be returned to the appropriate animal facility for disposal (facility where animals are housed).

**Animal housing requirements:**

* Animals injected with adeno-associated viruses may be housed at ABSL1 after inoculation.
* Animals injected with G-deleted rabies virus may be housed at BSL1 after inoculation.
* Animals injected with lentivirus must be housed at ABS2 for 72 hours after inoculation; the PI may request a downgrade to ABLS1 after 72 hours.
* Animal injected with Vaccinia virus, adenovirus, or Herpes Simples Virus must be housed art ABSL2; no downgrade at this time.

**Biological spills/accidents/exposures:**

1. All spills, injuries or exposures involving recombinant or synthetic nucleic acids should be treated and reported to the Principal Investigator and the Biological Safety Office.
2. Please consult the Biological Safety Office webpage for guidance documents that are specific to spill clean-up, accidents and injuries: <http://www.augusta.edu/services/ehs/biosafe/>