POLICY STATEMENT
The use of footpad injections is discouraged, since rodent forefeet are used for handling food and hind feet are considered major weight-bearing structures. Footpad injections have the capacity to cause inflammation, tissue necrosis, discomfort, and pain. Ventral footpad injections can result in inflammation and swelling at the injection site, resulting in unrelieved pain and distress or progressive debilitation. The magnitude of the inflammatory and pain response is known to be dependent on a number of factors, including dose and immunogenicity of the antigen and/or adjuvant (e.g., Freund's Complete Adjuvant).

The hock may be a viable alternate injection site, possibly preventing movement impediment. Injection into the hock drains to the same lymph nodes as the footpad yet is a non-weight bearing structure. If the study requires administration of an adjuvant into the footpad, adjuvants known to produce less intense inflammatory responses and pain should be considered.

Footpad injection must be adequately scientifically justified in an IACUC approved protocol prior to use.

REASON FOR POLICY
The GRU IACUC is responsible for overseeing humane care and use of animals used in research and teaching and for ensuring adherence to regulatory expectations in the Public Health Service (PHS) Policy on Humane Care and Use of Laboratory Animals, and the Animal Welfare Act as well as standards contained in the Guide for the Care and Use of Laboratory Animals. The purpose of this policy is to educate personnel in proper technique to ensure humane treatment of animals receiving footpad injections.

AFFEKTED STAKEHOLDER AND ORGANIZATION(S)
Any employee, student, contractor, or external consultant involved with rodent research at GRU.

DEFINITIONS
- **Applicable Species**
  - Mice
  - Rats
- **Footpad injection** – combination of an intradermal and subcutaneous injection used primarily in models of immunization, inflammation, arthritis, pain and to administer certain types of neurotracer dyes.
- **Freund's Complete Adjuvant** - a solution of antigen emulsified in mineral oil and used as an immunopotentiator (booster)
- **Hock** – lateral torsal region just above the ankle

PROCESS & PROCEDURES
Proposals to use Footpad injection must be reviewed by the full IACUC and the following must be detailed in the animal care and use protocol:

1. Scientific justification
2. Injection into only one hind foot per animal
3. Injection limited to a maximum volume of 0.05 ml in mice; 0.10 ml for rats
4. **Daily monitoring** for pain/distress or complications at injection site for four weeks or until all lesions have healed or there is no evidence of pain or discomfort
5. An appropriate analgesic regimen to be implemented (determined in consultation with a veterinarian)
6. Rodents exhibiting signs of severe pain or distress must be euthanized promptly

The following technique should be used:

1. Disinfect the injection site with an approved skin disinfectant.
2. Use a 25G needle or smaller.
3. Inject with the bevel facing the skin while inserting the needle. Push the needle past the bevel into the skin before injecting.
4. Withdraw the needle slowly from the injection site, while pressing down lightly on top of the injection site.
5. Keep firm pressure on the injection site for a few seconds once the needle is removed. No injected material should be leaking from the injection site.
9.0629 IACUC Footpad Injection Policy

FORMS AND RELATED DOCUMENTS

- Public Health Service Policy on Humane Care and Use of Laboratory Animals http://grants.nih.gov/grants/olaw/references/phspol.htm

Approved by the Institutional Animal Care and Use Committee on 21 August 2014.

AUTHORIZING SIGNATURE

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David W. Stepp, Ph.D. Date
Chairman Institutional Animal Care and Use Committee, Georgia Regents University

TO BE USED BY THE OFFICE OF COMPLIANCE & ENTERPRISE RISK MANAGEMENT

Policy No.: 9.0629
Policy Owner: Institutional Animal Care and Use Committee
Point of Contact: Jenny Whitlock/ Tim Wilson
Effective Date: 21 August 2014
Version Number: 1
Revision History: 
Next Review Date: 21 August 2015