

## **Murine Ulcerative Dermatitis (MUD)**

**Background:** Mice, especially on a C57BL6 background, are prone to the development of a severe debilitating idiopathic dermatitis. This condition is genetically linked, progressive, and poorly treatable. Pruritic and painful ulcerated skin lesions are typically found on the dorsum, head, and neck.

**Policy:** Animal care staff and investigators are obliged to detect, manage and when necessary euthanize animals suffering from this condition. The following parameters must be used as guidelines in the management of MUD.

### **Size of Lesion and Treatment**

As soon as MUD lesions are detected treatment must be initiated. If on detection MUD lesions are greater than 10 mm diameter then the animal must be promptly euthanized. Topical treatment using agents approved by the veterinary staff may slow or reverse the onset of MUD, and can be initiated if the lesion is less than 10 mm diameter. If treatment is contraindicated due to experimental considerations then untreated lesions may be allowed to progress to no larger than 10 mm diameter at which point the animal must be humanely euthanized. Any single inflammatory lesions of the head or face exceeding 3 mm diameter which involve sensory areas (eyes, vibrissae, ears, oral cavity) are grounds for immediate euthanasia. Any facial or head lesion totaling in area 10 mm squared is grounds for immediate euthanasia.

Some of the commonly prescribed veterinary treatments for MUD may include: topical antibacterial cream or ointment, ophthalmic ointment, and/or oral antibiotics in the drinking water, and a diet high in Vitamin E (NIH-31 diet). In addition, fighting animals will be housed separately from the aggressor, and environmental enrichment may be provided. A combination of the individual treatments may be recommended. For example: separate a wounded animal into its own cage, provide enrichment, apply topical ointment, and provide systemic antibiotic in the drinking water. The type and frequency of treatment varies with the severity of the condition and will be prescribed by the veterinarian with the recommended treatment regime provided to the researcher.

### **Examples of approved maximum diameter of lesions:**

Mouse showing maximum 10 mm lesion on body and 3 mm lesion on face.

