Use of Listeria and Listeria vectors

1.0 Purpose and Scope: To provide guidance for the use of Listeria and Listeria vectors in the laboratory and animal facility environment.

2.0 Definitions:

Listeria: A Gram-positive rod-shaped bacterium that can lead to Listeriosis

Listeriosis: a serious infection usually caused by eating food contaminated with the bacterium Listeria monocytogenes

Vector: a construct used to deliver genetic material into cells or an organism.

3.0 Guidance Information:

Several factors should be considered when working with Listeria or Listeria vectors, including containment and handling large volumes or high concentrations. Pregnant women and elderly, young, and immunocompromised persons are at greater risk of infection.

4.0 Precautions:

1. Personal Protective Equipment (PPE) Required: Lab coat, gloves (standard nitrile or latex) and safety glasses.

2. Laboratory: BSL-2 is required for administration and handling of Listeria. A BSC (biosafety cabinet) or full mucosal protection is required anytime there is danger of aerosolization. When working outside of containment, an N95 respirator* and goggles are worn with the above mentioned PPE. *Respirator use requires medical clearance and fit testing.

3. Animal Housing and bedding/waste:
   a. Animals should be housed in microisolator or similar containment housing.
   b. A biological safety cabinet (BSC) is needed when opening cages and handling animals.
   c. Signage is required on each individual cage containing the biohazard symbol and “Agent, End date and Disposal method”. *Cage signage available at www.ehs.wisc.edu
   d. Decontamination of animal waste, caging and any other contaminated equipment is required before disposal. Autoclaving or a suitable chemical disinfectant is used prior to disposal into standard waste streams; proper contact time of the disinfectant must be observed. Caging must be either bagged into biohazard bags for transport to the autoclave or must remain sealed during transport and at all times prior to autoclaving.
5.0 Related Documents and References:
“Biosafety in Microbiological and Biomedical Laboratories”, Centers for Disease Control and Prevention, current edition.
http://www.cdc.gov/biosafety/publications/bmbl5/


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