

Use of Vaccinia Virus & Vaccinia Virus Vectors

Purpose:

To provide guidance for the use of vaccinia virus and vaccinia virus vectors in the laboratory and animal facility environment.

Guidance Information:

Vaccinia virus is generally considered to be Risk Group 2 agents. Routes of exposure to humans are direct contact, mucous membranes, ingestion, percutaneous, or broken skin. Vaccination should be considered for personnel who may be occupationally exposed to select vaccinia virus strains. Contact Occupational Medicine at 265-5600 for additional information.

Precautions:

1. Personal Protective Equipment (PPE) Required: Lab coat, gloves (standard nitrile or latex) and safety glasses. When working outside of containment, an N95 respirator* and goggles are worn. *Respirator use requires medical clearance and fit testing through Occupational Medicine.
2. Laboratory: BSL-2 is required for administration and handling of vaccinia virus. A BSC (biosafety cabinet) or full mucosal protection is required anytime there is danger of aerosolization.
3. Animal housing and bedding/wastes:
 - a. Animals should be housed in microisolator or similar containment caging.
 - b. A biological safety cabinet (BSC) is needed when opening cages and handling animals.
 - c. ABSL 2 signage is required to be posted on the housing and procedure room where this material is present.
 - d. Cage labels are required on each individual cage containing the biohazard symbol and "Agent, end date (if applicable) and disposal method". Cage Labels are removed or crossed out when special handling time has ended. *Cage labels available at www.ehs.wisc.edu
 - e. 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. 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.

References:

"NIH Guidelines for Research Involving Recombinant and Synthetic Nucleic Acid Molecules", National Institutes of Health, current edition.

https://osp.od.nih.gov/wp-content/uploads/NIH_Guidelines.pdf

“Biosafety in Microbiological and Biomedical Laboratories”, Centers for Disease Control and Prevention, current edition.

<https://www.cdc.gov/labs/bmbi/>

“Institutional Biosafety Committee (IBC)” UW-Madison Policy Library, [Section 4.7 – Vaccinia.](#)

“Vaccinia (Smallpox) Vaccine Recommendations of the Advisory Committee on Immunization Practices (ACIP), 2001”, Morbidity and Mortality Weekly Report (MMWR), March 2001.

<http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5010a1.htm>