

WAYNE STATE UNIVERSITY DIVISION OF RESEARCH	Office of Environmental Health & Safety Animal Contact Occupational Health & Safety (AniCon)
	Standard Operating Procedure
TITLE: Non-Highly Attenuated Vaccinia Viruses In Vitro and Vivo	
SOP NO: 5-12-05 Issued: May 12, 2005 Revisions: August 27, 2010 August 27, 2014 May 29, 2018	Pg. 1 of 2

1. AGENT(S)

1.1 Non-highly attenuated strains of vaccinia, e.g., WR strain, NYCBOH, and non-highly attenuated strains of recombinant vaccinia are of concern.

2. SCOPE

2.1 Wayne State University (WSU) researchers handling; a) cell cultures or b) animals contaminated or infected with non-highly attenuated strains of vaccinia are at risk. Personnel working in laboratories during manipulation of non-highly attenuated vaccinia viruses are at risk. Also at risk are researcher's personal contacts with medical conditions, e.g., immune-compromised, that preclude exposure to vaccinia.

3. SAFETY PERCAUTIONS

3.1 Researchers handling strains of vaccinia viruses or work in laboratories during manipulation of vaccinia viruses must; have approval form Institution Biosafety Committee (IBC), enroll in Animal Contact Occupational Health Program (AniCon), take Biosafety/Bloodborne Pathogens training, receive Physician clearance to handle non-highly attenuated vaccinia, and be offered vaccinia vaccine.

3.2 Research involving non-highly attenuated strains of vaccinia requires biosafety level-2 (BSL-2) practices, containment equipment, and facility. Laboratory personnel must wear laboratory coat or gown, nitrile gloves, and safety glasses or goggles. Contact Biosafety Manager about Protocol submission, biosafety equipment, and practices: 313-993-7953.

4. OCCUPATIONAL HEALTH

4.1 Laboratory injuries can occur while manipulating cell cultures of vaccinia. Exposure to broken skin and splashes to mucous membranes with infectious vaccinia cells or fluids pose a risk. The virus can also be present in lesion fluids or crusts, secretions, or tissues of an infected host. Laboratory associated infections due to exposure to vaccinia viruses have occurred. Inadvertent exposure to vaccinia can range from minor infection to severe infection. Fatalities have also occurred due to vaccinia exposure

4.2 Vaccinia vaccination is recommended for personnel handling cultures or animals infected with non-highly attenuated strains of vaccinia or non-highly attenuated strains of recombinant vaccinia. Contact Occupational Health Nurse about vaccination: 313-577-5917.

4.3 Individuals with medical contraindication to receiving vaccinia vaccine, (e.g. pregnant, history of eczema, immune deficiency) can be prohibited from working with vaccinia viruses. Those with contraindication to receiving vaccinia vaccine due to personal contacts, e.g., immune-compromised family member, can be required to adhere to additional safety procedures. Research personnel can be assigned work restrictions based on medical history or assessment as determined by a Physician

5. EXPOSURE OR INJURY

5.1 If an injury or exposure occurs while manipulating vaccinia, i.e., a needle stick or other route which breaks the skin, wash the site with soap and water **for 5-15 minutes** then cover with a bandage. If the incident involves a splash to eyes or mucous membranes, irrigate thoroughly for **15 minutes** at an eye wash station or sink.

5.2 Promptly proceed to Detroit Medical Center (DMC) - Occupational Health Services-4K during business hours (Monday - Friday; 7:30 am to 5:00 pm). After hours, proceed to DMC-Detroit Receiving Hospital Emergency Department, 4201 St. Antoine. Inform your PI about accidents or exposures involving vaccinia and complete WSU "Report of Injury" Form.

Reference

<https://www.cdc.gov/mmwr/volumes/65/wr/pdfs/mm6510a2.pdf>
<https://www.cdc.gov/mmwr/preview/mmwrhtml/mm6416a2.htm>