

**STANDARD OPERATING PROCEDURES**  
**DIVISION OF COMPARATIVE MEDICINE**  
**UNIVERSITY OF SOUTH FLORIDA**

SOP#: 609.12

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Page 1 of 5

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**TITLE:** Response Following Suspect Exposure to Macacine herpesvirus-1  
**SCOPE:** All Staff  
**RESPONSIBILITY:** Area Supervisors, Attending Veterinarian  
**PURPOSE:** To Provide a Procedure to Follow in the Event of a Suspect Exposure to B virus

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## I. PROCEDURES

### Before Suspect Exposure

1. **Prior to working** with nonhuman primates, and before any risk of suspect exposure to B virus, personnel must be aware of the following procedures which reflect published recommendations ([Clin Infect Dis 35:1191, 2002](#)).
2. **All nonhuman primates** of the genus *Macaca* (herein referred to as NHP) will be considered sero-positive for, and **potential shedders** of, Macacine herpesvirus-1 (also known as Cercopithecine herpesvirus-1, Herpesvirus simiae, Herpes B virus, herein referred to as B virus).
3. B virus infection in humans **may develop following seemingly trivial exposures** to infectious tissues, fluids, or animals, or develop in animal caretakers who do not recall obvious potential exposures to B virus.
4. Personnel working in facilities that house NHP or that process NHP tissue **must report** to their supervisor and health care provider **any episode** of:
  - a. prolonged fever (>48 hours),
  - b. flu-like symptoms, or
  - c. symptoms compatible with B virus infection, including a,
    1. progression of localized symptoms near the site of suspect exposure, including a,
      - a. vesicular rash,
      - b. abnormal sensation (e.g., burning, prickling) proceeding along the affected extremity
      - c. regional lymphadenopathy
    2. flu-like illness with fever, chills, myalgias (i.e., muscle aches)
    3. symptoms referable to the peripheral or central nervous system, including,
      - a. persistent headache
      - b. nausea
      - c. vomiting
      - d. confusion
      - e. dizziness

5. **Personal protective garments and equipment must be worn** whenever individuals enter rooms housing NHP, or handle equipment, material, or supplies that have come in contact with NHP in accordance with **SOP 603**.
6. **NHP Exposure Response Kits** are maintained in accordance with **SOP 614** when animals are present, and **must be used** in response to any suspect exposure to B virus. At the COM facility, **NHP Exposure Response Kits are available in** cage wash, procedure rooms, necropsy, and in the surgical core hallway (surgical scrub area).
7. **Eyewashes must be used** in response to any suspect ocular or mucous membrane exposure to B virus (injury or splash). At the COM facility, **eyewash stations are available in rooms** 1311 (procedure room), 1348 (clean storage), 1340 (cage wash), 1300A & 1301 (surgical core lab), and 1317 (necropsy).
8. Most (46%) well documented cases of B virus infection in humans have occurred following a monkey **bite or scratch**, but other documented routes of infection include,
  - a. exposure to tissues (e.g., CNS) or fluids (e.g., ocular, oral, or genital secretions, CSF fluid),
  - b. needlestick injury,
  - c. mucosal splash,
  - d. cage scratches,
  - e. human-to-human transmission.
9. Exposure to blood from monkeys has **not** been documented as a cause of infection in humans.
10. Types of potential B virus **exposure that may pose a greater risk of infection**, include,
  - a. **deep** puncture,
  - b. **inadequately cleansed** wounds,
  - c. wounds sustained to the **head** (especially eye), **neck, or torso**.
11. Personnel **must report** to their supervisor and occupational health care provider **any suspect exposure** and perform the following procedures.

### **Response After Suspect Exposure – Personnel Health**

1. In the event that an individual suspects exposure to B virus, **immediately cleanse** the skin or mucosa affected by the suspect exposure **for at least 15 minutes**.
2. **Skin** should be washed and flushed thoroughly with water and povidone iodine/Betadine®, or chlorhexidine/Hibiclens® for 15 minutes. **Betadine or chlorhexidine solution and scrub** brushes are provided in the NHP Exposure Response Kits.

3. Less extensive wounds may be gently **massaged** to increase their contact with the cleansing solutions.
4. **Eyes, mouth, or mucous membranes** potentially exposed to B virus must be **irrigated** immediately with large volumes of sterile **saline solution or water** for 15 minutes.
5. Individuals with extensive wounds, (i.e., a threat to loss of life or limb), must seek immediate medical attention at the closest emergency medical facility (i.e., **Florida Hospital-Tampa Emergency Room** for the COM facility)
6. The individual suspecting exposure to B virus must **call for assistance** while performing the initial wash, scrub, or irrigation of the affected area. This assistant helps ensure that the affected individual has accomplished thorough cleansing of the area for at least 15 minutes, and must call for, or **notify the Facility Manager** or veterinarian, if present within the facility.
7. After completing thorough wound cleansing and first aid, the Facility Manager or other designated staff member immediately available within or near the facility, must complete an **Supervisor's Incident/Injury Report**, and with the employee present report the exposure to the USF Worker's Compensation provider, **AmeriSys, at 1-800-455-2079** for a referral to an appropriate medical facility. (See **SOP #029** entitled **Procedures for Reporting/Tracking Work Related Injury/Illness**).
8. The following **documents**, included in an envelope labeled "**Physician B virus Information**" must accompany the affected individual to the medical facility. This envelope can be found in each NHP Exposure Response Kit.
  - a. A copy of the **article** entitled "[Recommendations for Prevention of and Therapy for Exposure to B Virus \(Cercopithecine Herpesvirus 1\)](#)", (*Clin Infect Dis 35:1191, 2002*).
  - b. A brief **summary** of these recommendations entitled "[Recommendations for Management of Suspected Exposure to Macacine herpesvirus-1 \(B virus\)](#)".
9. Hand the "**Physician - B virus Information**" envelope to the attending physician.
10. The affected individual or escorting assistant should point out to the attending physician that veterinarians and B virus laboratory **consultants are available**. These are listed on the summary sheet now in the physician's possession, entitled "*Recommendations for Management of Suspected Exposure to Macacine herpesvirus-1 (B virus)*," (CMDC 135), and enclosed in the envelope labeled "Information Regarding Suspect Exposure to B virus".
11. The Facility Manager or other uninvolved personnel left behind within the facility, or the affected individual if no one else is immediately available should **notify a Director** of the incident during regular work hours. On weekends, holidays, after hours or when a Director cannot be contacted, the affected individual or escort must page or otherwise contact a veterinarian directly (veterinarian on call cell 394-1236).

12. When notified an Assistant Director must **ensure that a veterinarian is aware of the incident.**
13. The veterinarian must **ensure that the affected individual is sufficiently supported** and cared for, and must be available by telephone or pager to the attending physician for any clarification or assistance.
14. The affected individual or escorting assistant must **ensure that a whole blood sample is collected in a red top tube** from the affected individual for baseline B virus serologic assessments and is **delivered to the Surgical Core Laboratory** as soon as possible for processing and shipment per **SOP 616**.
15. The Facility Manager must **ensure that the used NHP Exposure Response Kit is replenished** per **SOP 614**.
16. The Assistant Director must ensure that any subsequent whole blood sample(s) requested by the attending physician for B virus serologic assessments are delivered to the Surgical Core Laboratory for processing and shipment per **SOP 616**.
17. The Assistant Director must ensure that all positive B virus serologic tests are confirmed by the diagnostic laboratory by Western immunoblot, competition ELISA, or similar method.
18. The Assistant Director must ensure that all results of B virus diagnostic tests are copied to the attending physician for inclusion in the patient's medical record, and to the employee's file.

### **Veterinarian Response After Suspect Exposure – Animal Health**

1. A veterinarian, or their designee, unaffected by the suspect exposure incident must ensure that:
  - a. the NHP associated with the suspect exposure is identified,
  - b. the animal is anesthetized with ketamine at 10mg/kg IM,
  - c. the general health of the animal is assessed and this assessment is recorded in the animal's medical record,
  - d. the presence or absence of conjunctivitis or any mucosal lesions (e.g., vesicles, ulcers) is determined and recorded in the animal's medical record,
  - e. the serologic history, including that of B virus and simian immunodeficiency virus is determined and recorded in the animal's medical record,
  - f. the TB status is determined and recorded in the animal's medical record,
  - g. whole blood for B-virus serologic assessment is collected
  - h. specimens for viral culture are collected from the
    1. mucosal lesion(s) (e.g., vesicles, ulcers) if present,
    2. conjunctiva of each eye,
    3. cheek lining inside of the mouth,
    4. wall of the vagina, or tip of the penis/urethral orifice , and recorded in the animal's medical record.

2. Viral transport media is located in the refrigerator in room 1300, Surgical Core Laboratory, and available from Bartel's (Division of MarDX), 1-800-331-2291, VTM: #B1029-35 Flex Trans: #B1029-90, or from Microtest (Division of Remel), 1-800-255-6730, VTM: #m4-3).
3. Ensure that all information necessary for sample submission accompanies the samples to the Surgical Core Laboratory.
4. All NHP are considered sero-positive and potential shedders of B virus. Additional serologic assessments of the NHP are made at the discretion of the attending veterinarian.
5. Inoculated viral transport media are labeled with the animal's ID, date, and source of specimen. Samples are held at 2-6<sup>0</sup>C (e.g., refrigerated, or on ice or on ice packs) and immediately taken to the Surgical Core Laboratory for processing and shipment per **SOP 616**.
6. Ensure that an entry describing the incident is made in the **Work Related Injury/Illness Log** (CMDC 129).
7. Assess all NHP practices and procedures, and present a summary of the incident and any observations or recommendations at the next Program Development meeting.

**Approved:**

**Date:**