

## Standard Operating Procedure

SOP Number: **02-18-4262**  
Service: **Research**  
Operating Section: **Husbandry**  
Unit: **CMF**  
Title: **Herpes B-Virus Post-Exposure**

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### **Purpose:**

To describe the first aid and sampling procedures for exposure to herpes B-virus.

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### **Definitions:**

Although B virus infection in humans is extremely rare, when it does occur, it is often fatal unless treated right away - about 70% of untreated patients die of complications associated with the infection. Diligence in recognizing possible exposures, followed by recommended first aid and rapid diagnosis of B virus infection, are the keys to controlling human B virus infection.

### **Procedure:**

- 1) A specimen for PCR testing should **not** be obtained from the wound area prior to washing the site because it could force virus more deeply into the wound, reducing the effectiveness of the cleansing protocol.
- 2) First aid must begin immediately.
- 3) For mucosal exposure (eye, nose, or mouth splashes):
  - a) Irrigate with water at the nearest eye wash station (procedure room 078) and continue rinsing for 15 to 20 minutes.
- 4) For all other exposures (needlesticks, bites, scratches):
  - a) Cleanse the exposed area by thoroughly washing and gently scrubbing the area or wound with soap, concentrated solution of detergent, povidone-iodine, or chlorhexidine and water for 15 minutes. Expiration dates on the bite/scratch kit supplies are checked monthly by CMF staff.
  - b) Irrigate the washed area with running water for 15 to 20 minutes.
- 5) After the site is cleansed, the individual must go immediately to Employee/Student Health during business hours or the LUMC Emergency department during non-business hours.
  - a) Medical personnel should be given information for B-Virus and specialists in the field in the form of a B-Virus medical alert card, CDC B-virus website (<https://www.cdc.gov/herpesvirus/index.html>), B-Virus Laboratory website (<http://www2.gsu.edu/~wwwvir/index.html>), or this SOP.
- 6) Medical personnel will obtain a blood sample (5-10 ml), as close as possible to the time of injury, to provide a baseline antibody level. Post-cleansing virology swab samples of the wound site or exposed area are not recommended by the CDC ("Samples for PCR are also not recommended immediately following cleansing, because the sample is unlikely to contain detectable levels of virus and could lead to false negative results"), but may be obtained at the discretion of medical personnel.
- 7) Any samples taken outside the CMF are returned from Employee/Student Health and will be submitted to the Diagnostic Laboratory with the samples obtained by CMF veterinary staff.
- 8) Comparative Medicine veterinary staff will obtain a blood sample (at least 5ml), as close as possible to the time of injury, to provide a baseline antibody level from the source animal(s). Primate virology swab samples of the buccal cavity, right eye, left eye, and

- genitalia are also obtained. Use one swab per site and send in separate media tubes. These specimens must be collected as close as possible to the time of injury, as specimens collected later may not accurately reflect the NHPs status at the time of injury.
- 9) Follow-up serum samples are taken 14 - 21 days post injury. Employee/Student Health will obtain a 5-10 ml blood sample from the human patient. CMF staff will obtain a 5-10 ml blood sample from the non-human primate patient(s).
  - 10) These samples are returned from Employee/Student Health and will be submitted to the Diagnostic Laboratory with the samples obtained by CMF veterinary staff.
  - 11) The Diagnostic Laboratory will send the samples priority overnight to the National B Virus Resource Center (see the Diagnostic Laboratory SOP "Herpes B-Virus Exposure Sampling and Shipping").

### **Herpes B-Virus Post-Exposure First Aid**

**WARNING: a specimen for PCR testing should not be obtained from the wound area prior to washing the site because it could force virus more deeply into the wound, reducing the effectiveness of the cleansing protocol.**

#### **First aid should begin immediately:**

For mucosal exposure (eye, nose, or mouth splashes):

- Irrigate with water at the nearest eye wash station (procedure room 078) and continue rinsing for 15 to 20 minutes. Do not use any solutions in your eyes!

For all other exposures (needlesticks, bites, scratches):

- Cleanse the exposed area by thoroughly washing and gently scrubbing the area or wound with soap, concentrated solution of detergent, povidone-iodine, or chlorhexidine and water for 15 minutes.
- Irrigate the washed area with running water for 15 to 20 minutes.
- After rinsing immediately seek medical attention.
  - Go to Employee/Student Health (Outpatient 2<sup>nd</sup> floor) during normal business hours.
  - Go to the LUMC Emergency department outside of normal business hours.
  - Tell the healthcare provider that you have been exposed to a macaque monkey that may be infected with B virus.
  - Show the healthcare provider your B-virus medical alert card, Post-Exposure SOP, or this sheet if you have it.
  - A blood sample should be taken to provide a baseline antibody level.
  - A viral swab can be taken, if deemed necessary by the healthcare professional, but only after the cleansing procedure (above).
  - Any samples taken should be brought back to the CMF for shipment to the National B-Virus Laboratory.

Employee/Student Health - 708-216-3400  
Emergency - 708-216-3848

For Medical Personnel:  
Specialist contacts for more information:

Julia Hilliard, PhD at the National B Virus Resource Center at 404/358-8168.

J. Scott Schmid, PhD and colleagues at the Centers for Disease Control at 404/639-0066.

<https://www.cdc.gov/herpesbvirus/index.html>

Adapted from the CDC guidelines  
<https://www.cdc.gov/herpesbvirus/firstaid-treatment.html>

**Medical Alert Information**

The person carrying this card has an occupational exposure to macaque monkeys or their tissues. Macaques are the natural host for B Virus (*Macaque Herpesvirus 1*) which is transmissible to humans and may produce disease with any of the following symptoms:

- Generalized flu-like symptoms • Dizziness and/or weakness •
- Dyspnea • Diplopia and/or photophobia • Neuralgias and/or
- parasthesias • Severe persistent headache • Elevated temperature
- +/- vesicles at inoculation site • Pruritic rash
- Conjunctivitis

Progression of this disease leads to ascending meningoencephalitis and may result in cardiac or respiratory arrest in as little as 3 days after symptoms manifest. This disease can be treated successfully if identified early. Universal precautions should be taken. Additional information can be located at <http://www.gsu.edu/bvirus>. If the person with this card exhibits any of these symptoms, please contact Julia Hilliard, PhD at the National B Virus Resource Center at 404/358-8168 or J. Scott Schmid, PhD and colleagues at the Centers For Disease Control at 404/639-0066.

**OFFICE USE ONLY:**

**APPROVALS**

Responsible Official Signature		Date	
		5/30/19	
QA Signature		Date	
		06/14/2019	
Version	Effective Date	Supersedes	Original Date
#1		N/A	