McMaster University
Medical Monitoring Program Information Sheet

The purpose of this document is to provide information on an agent/virus in order for all McMaster University staff and students to make an informed decision about entering our medical monitoring program.

Please review this document, print your name, sign and date the Memorandum of Understanding and Agreement and then provide it to your supervisor.

Non-human Primate Material

The following summary is provided by the McMaster Biosafety Office.

For a complete copy of the excerpted text below please refer to:

Risk of using primate source cell line

1) the closer phylogenetically to humans, the greater the potential risk. Highest to lowest risk: human autologous, human heterologous, primate, other mammalian, avian, invertebrate

2) source population of the specimen from which the cell line was derived

3) the World Health Organization proposed a risk classification of cell lines based on each line's likelihood of carrying viruses pathogenic to humans. High likelihood: blood and bone marrow cells derived from human or non-human primates and hybridoma cells when at least one fusion partner is of human or non-human primate origin.

The biological hazards associated with primate cell lines must also be taken into consideration when determining the level of containment required. Primary cell lines derived from the genus Macaca may harbour herpesvirus simiae (Cercopithecine herpes virus, B-virus)

Tissues from Macaca must be manipulated as follows:

1) Containment level 2 is to be used when handling tissues or body fluids from macaques.
2) If material is suspected or known to contain herpesvirus simiae, containment level 3 is required.
3) In vitro primary diagnostic tests are to be done at containment level 3.
4) All propagation (culturing) of the virus is to be done at containment level 4.
CHV-1 is an enzootic virus present in up to 70% of captive macaques, including rhesus and cynomolgus non-human primates. Human infection has been documented in at least 50 instances, resulting in either severe disease or death. Except for one case of person-to-person transmission, all have occurred in people exposed to non-human primates or non-human primate tissues.

It is recommended that all macaque colonies be treated as naturally infected with CHV-1, even those that have been shown to be free of CHV-1 antibody.

**Under PHAC import permits the** following is required as of 2011. Item #1 differs from above.

If Macaca tissues are manipulated in the laboratory, the following manipulations are to be performed (Item #117):

1) CL2 facility with CL3 operational protocols when handling tissues or body fluids
2) CL3 facility for material that is suspected/known to contain herpesvirus simiae
3) CL3 facility for in vitro primary diagnostic tests
4) CL4 facility for propagation and culture of herpesvirus simiae

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The following summary is provided by Employee Health Services.

For a complete copy of the excerpted text below please refer to:

**Facts**

Working with non-human primates presents unique hazards related to naturally occurring pathogenic organisms and to the animals themselves. Their long canine teeth and powerful jaws can inflict serious and painful lacerations. The animals also have sharp fingernails and toenails that can scratch and abrade the skin of handlers. They are generally very messy, noisy and destructive animals, characteristics that must be considered when designing animal rooms used to house them.

Infectious hazards to people handling non-human primates include bacterial diseases (Salmonella, *Shigella*, *Campylobacter*, tuberculosis), viral diseases (hepatitis A virus, simian immunodeficiency virus and especially *Cercopithece herpesvirus 1* (CHV-1), also known as herpes B virus), protozoan and metazoan parasites (*Entamoeba, Blastocystis, Trichomonas, Balantidium*) and other agents.

CHV-1 is an enzootic virus present in up to 70% of captive macaques, including rhesus and cynomolgus non-human primates (8). Although the virus causes oral lesions in its natural simian host, asymptomatic shedding from the buccal mucosa and urogenital tract (though rare) and the presence of the virus in conjunctival fluid can occur without such clinical signs. Human infection has been documented in at least 50 instances, resulting in
either severe disease or death \(^{(9)}\). Except for one case of person-to-person transmission, all have occurred in people exposed to non-human primates or non-human primate tissues. Transmission to humans is believed to occur primarily by exposure to contaminated non-human primate saliva through bites and scratches, although one fatal case following mucocutaneous exposure without injury has been reported \(^{(8)}\). Guidelines are available for working safely with macaques, for the prevention of CHV-1 infection and for the treatment of such infections in exposed people, and these should be consulted \(^{(5, 8, 10-12)}\). Risk of exposure to pathogenic agents can also be reduced through an adequate animal health surveillance program, with emphasis on identification and treatment of diseased animals.

Everyone who handles non-human primates must be trained in proper methods of restraint and in the use of protective clothing to help prevent bites, scratches and splash exposures. Such methods include the use of squeeze-back cages, where feasible, transfer boxes, chutes, tunnels and squeeze mechanisms for non-human primates housed in groups. Cages and other equipment should be free of sharp edges and corners that may cause scratches or wounds. When feasible, chemical restraint may be used before removing animals from cages, especially in the case of macaques and other larger non-human primates. Behavioural conditioning can also be effectively used in combination with restraint procedures. Handlers are to be protected with arm-length reinforced leather gloves and long-sleeved gowns/coveralls to prevent scratches. Protection against aerosol exposure and splashes of mucous membranes (e.g., with surgical mask, face shield, eye goggles) should be provided to handlers and everyone entering animal rooms where non-human primates are housed. Reusable, protective clothing that has been in contact with non-human primates should be decontaminated before being sent to laundry. Animal handlers must be instructed to cleanse immediately and thoroughly all bites, scratches and abraded skin and to report these exposures at once. Postexposure procedures should also be instituted \(^{(5, 12)}\).

Facilities for housing non-human primates should conform to the recommendations for small animal containment facilities in the *Containment Standards for Veterinary Facilities* \(^{(1)}\). Unless experimentally infected with or known to have an infectious organism requiring a higher containment level, non-human primates can be handled in containment level 2 animal facilities with the additional practices and personnel precautions described above for working safely with these animals. It is recommended that all macaque colonies be treated as naturally infected with CHV-1, even those that have been shown to be free of CHV-1 antibody \(^{(5, 9)}\).
Memorandum of Understanding and Agreement (“MUA”) for BSL2 Medical Monitoring Program

Note: This MUA is to be signed by the employee/student and supervisor, filed and kept by the supervisor. It will be reviewed during the annual biosafety audit by the McMaster Biosafety office.

The employee/student named below acknowledges and agrees as follows:

- I have read and understand all of the information in this Medical Monitoring Information Sheet provided jointly by the McMaster Biosafety Office and Employee Health Services and reviewed the biologically hazardous agent to which I have potential exposure. Initial here____

- I will report a pregnancy or a compromised immune system (due to medication {steroid or other immunosuppressive therapy}, organ transplant, chemotherapy or radiation therapy, HIV infection etc.) to my supervisor and X (graduate students) or Employee Health Services Occupational Health Nurse at ext. 20310 (faculty and staff) Initial here____

- I will report an exposure to a biological agent to my supervisor immediately and complete a McMaster incident/accident report. Initial here____

- I will report any illness that resembles the symptoms listed in this Medical Monitoring Information Sheet to my supervisor. Initial here____

- I recognize my responsibility to observe all safety practices and precautions while present in the BSL2 laboratory. Initial here____

- I am aware of, and wish to participate in, the medical monitoring program (RMM #605) for this biological level 2 agent. Please circle: [yes] [no] Initial here _____

Employee/Student print name: ____________________________

Supervisor print name: ____________________________

Signature: ____________________________

Signature: ____________________________

Date: ____________________________

Date: ____________________________
