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.

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**Treponema pallidum**  Syphilis, Lues

The following summary is provided by the McMaster Biosafety Office.


**CHARACTERISTICS:** Spirochete, helically coiled, corkscrew-shaped cell, 6-15 µm long 0.1-0.2 µm wide; outer membrane, axial membrane (membrane-covered flagella), cytoplasmic tubules, an inner cytoplasmic membrane

Diverse clinical manifestations; initial genital tract lesion followed by disseminated lesions and cardiovascular and neurologic problems; CNS disease manifested as acute syphilitic meningitis; infection during pregnancy results in fetal death and numerous birth defects; infections are usually chronic; death or serious disability is rare

**MODE OF TRANSMISSION:** By direct contact with skin lesions, mucous membranes, body fluids and secretions (semen, vaginal discharge, saliva, blood) of infected persons during sexual contact; rarely by kissing, blood transfusion; congenital transmission is possible

**SUSCEPTIBILITY TO DISINFECTANTS:** Susceptible to 70% ethanol, 1% sodium hypochlorite, 2% glutaraldehyde. Sensitive to heating at 65° C for 30 minutes. Survives up 24 hours in blood at room temperature

**LABORATORY-ACQUIRED INFECTIONS:** Fifteen cases were reported up to 1980. Semen, vaginal secretions, lesion material. Accidental parenteral inoculation, droplet exposure on mucous membrane
CONTAINMENT REQUIREMENTS: Biosafety level 2 practices and containment equipment for all activities involving the bacteria and potentially infectious tissues or fluids. Laboratory coat; gloves when skin contact with infectious materials is unavoidable. Pregnant women should avoid contact with infectious material.

The following summary is provided by Employee Health Services.

For a complete copy of the excerpted text below please refer to:
http://www.cdc.gov/std/syphilis/STDFact-syphilis.htm

Facts

Syphilis is a sexually transmitted disease (STD) caused by the bacterium Treponema pallidum. It has often been called "the great imitator" because so many of the signs and symptoms are indistinguishable from those of other diseases. Syphilis is transmitted by direct contact with skin lesions, mucous membranes, body fluids and secretions (semen, vaginal discharge, saliva, blood) of infected persons during sexual contact; rarely by kissing, blood transfusion; congenital transmission is possible.

Symptoms

Syphilis is often referred to as "the great imitator" because of the wide range of symptoms that infected people may experience. These symptoms can easily be confused with those of other conditions. Also, a doctor may overlook syphilis as a possible diagnosis because the rate of infection in Canada has been low until recently. Syphilis moves through five stages: primary, secondary, early latent, late latent, and tertiary.

Syphilis is infectious mostly during the primary, secondary and early latent (less than one year) stages. During the latent stage, syphilis may progress into a tertiary infection. It is at this stage that syphilis can do the most damage to the body, affecting the brain, blood vessels, the heart and bones. It can eventually lead to death. Not everyone infected with syphilis will develop symptoms. That is why it is important to know if you are at risk and how to take preventative action.

In primary syphilis, a painless open sore or ulcer appears at the site where the bacteria first entered the body, usually the genital area, throat or anus. Symptoms can occur within a few weeks or a couple of months after infection. Because the ulcer is painless, you may not know you have been infected. While the sore may go away on its own without treatment, the infection remains and progresses to secondary syphilis.

In secondary syphilis, the symptoms can include: patchy hair loss, a rash on the soles of the feet, the palms of the hands or elsewhere on the body, fever, swollen glands, and muscle and joint pain. Again, these symptoms usually disappear without treatment.
Of particular concern is the interaction between syphilis and HIV/AIDS. Individuals with the genital ulcers that appear in primary syphilis are three to five times more likely to contract HIV. Furthermore, people who are HIV positive and also have syphilis are at greater risk of transmitting the infection to others. It can be difficult to successfully treat HIV patients who have syphilis.

**Diagnosis**
Syphilis is diagnosed through a simple blood test.

**Treatment**
Syphilis is easily treated with penicillin or other antibiotics. There is no immunization available.

**Special Precautions**
Pregnant women should avoid contact with infectious material.

**Prevention**
Biosafety level 2 practices and containment equipment for all activities involving the bacteria and potentially infectious tissues or fluids. Laboratory coat; gloves when skin contact with infectious materials is unavoidable.

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**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: ____________________________