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.

Hepatitis C Virus

The following summary is provided by the McMaster Biosafety Office.

For a complete copy of the excerpted text below please refer to: http://www.phac-aspc.gc.ca/lab-bio/res/psds-ftss/msds77e-eng.php

TRANSMISSION: Percutaneous exposure to contaminated blood (102 - 103 infectious particles / mL of blood) and plasma derivatives; contaminated needles and syringes are important vehicles of spread; in over 40% of cases, the risk factor(s) for HCV transmission cannot be identified

DISINFECTANTS: The data available in the current literature on the susceptibility of HCV to disinfectants are limited. Because HCV is an enveloped virus, general disinfection measures against hepatitis B virus are applicable to HCV (1% sodium hypochlorite, 70% ethanol, 2% glutaraldehyde, formaldehyde). The data available in the current literature on the susceptibility of HCV to physical inactivation are limited. General inactivation measures against hepatitis B virus are applicable to HCV (stable at 37°C for 60 min but not at temperatures above 60°C; stable at pH 2.4 for up to 6 hours). May not be inactivated by UV. Survival suspected to be similar to hepatitis B virus (survives in dried blood for long periods-weeks)

Medical personnel have slightly higher antibody prevalence to HCV than the general population; therefore health care workers handling blood are at higher risk to HCV infection, however, not to the same degree as HBV infection. Over half of HCV infections in the United States are due to factors other than percutaneous exposure to HCV. These other factors are yet unknown

CONTAINMENT REQUIREMENTS: Containment level 2 practices for activities utilizing infectious body fluids and tissues; Containment level 3 and personnel precautions for activities with high potential for droplet or aerosol production and high production quantities or concentrations; Animal Pathogen containment level 2 for work with non-human primates. Laboratory coat; gloves when skin contact is
unavoidable and when working with animals; wrap-around gown and gloves for work in biosafety cabinet

General needle safety precautions important - do not bend, break or recap needles; dispose directly into puncture-proof container; universal precautions for blood

The following summary is provided by Employee Health Services.

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

**Facts**

Hepatitis C is a chronic liver disease caused by the hepatitis C virus (HCV). An estimated 250,000 people in Canada are infected with HCV. Because many people do not have symptoms when they are infected, it is important for those at risk to take action to avoid infecting others.

HCV is spread through contact with infected blood. In the past, many people became infected through blood and blood products. Now, between 70-80% of HCV transmission in Canada is due to injection drug use. This includes the sharing of contaminated needles and other drug-using equipment, such as straws, pipes, spoons and cookers.

You are most at risk for HCV infection if you:

- Inject or snort drugs or have done so in the past. The risk increases if you share needles, straws, pipes, spoons, cookers and other drug equipment which could be contaminated with blood. Cleaning equipment with bleach does not effectively kill the virus.
- Were exposed to contaminated blood or blood products or had an organ transplant before 1992.
- Get a tattoo, body piercing or acupuncture using unsterile equipment or techniques.
- Are pricked by a needle or sharp equipment that has infected blood on it, in a workplace situation such as a healthcare facility.
- Are exposed, either in Canada or abroad, to medical or dental practices where infection control precautions are not taken or contaminated equipment is used.
- Share personal care articles such as razors, scissors, nail clippers or a toothbrush with an infected person.
- Have unprotected sex with an infected person.

A mother with HCV can also pass on the infection to her infant at birth.

**Symptoms**

HCV attacks the liver, an essential organ that acts as a filter for chemicals and toxins that enter the body. The liver also helps in the digestion of food, stores vitamins and minerals, and aids in the manufacture of blood.
Although 75-85% of infections move on to chronic hepatitis C, progress may be slow. As most people who are infected do not experience symptoms and are unaware of their infection, they are not able to benefit from available treatment that may clear them of the virus. They may also unknowingly spread the virus to others.

For those who do experience symptoms, the most commonly reported ones are:

- fatigue
- lethargy
- reduced appetite
- sore muscles and joints
- nausea
- abdominal pain
- jaundice (a yellowing of the skin and eyes).

After 10 to 20 years, chronic hepatitis C can cause cirrhosis. After 20 to 40 years, it can cause liver cancer.

The incubation period Ranges from 2 weeks to 6 months; most commonly 7 - 10 weeks; chronic infection may persist for up to 20 years before onset of cirrhosis or heptoma.

**Diagnosis**
If you think you may be at risk for HCV infection, see your healthcare provider. The infection can be detected by a blood test.

**Treatment**
Currently, there is no vaccine to prevent HCV infection, but effective treatment involving a combination of the drugs interferon and ribavirin is available. Treatment can take from 24 to 72 weeks. The effectiveness of the treatment depends on a variety of factors.

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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: ___________________________