



## **Biosafety Advisory H1N1 flu virus (Human Swine Flu) Interim Guidelines June 15<sup>th</sup>, 2009**

This biosafety advisory is being provided by the Public Health Agency of Canada in response to the recent outbreak of H1N1 flu virus (Human Swine Flu) in North America. This document has been developed to assist laboratories in developing proper biosafety procedures when handling clinical samples associated with H1N1 flu virus (Human Swine Flu). This advisory is based on current available scientific evidence about this emerging disease, and is subject to review and change as new information becomes available.

### **Precautions for laboratories receiving and processing human respiratory specimens and tissue samples from suspected H1N1 flu virus (Human Swine Flu) cases:**

- specimens should at minimum be processed for packaging and distribution to diagnostic laboratories for further testing in a Containment Level 2 laboratory<sup>1,2</sup>
- Diagnostic testing (excluding viral culture) to rule out H1N1 flu virus (Human Swine Flu) should at minimum be performed in a Containment Level 2 laboratory<sup>1,2</sup>.
- Setup of viral culture should at minimum be performed in a Containment Level 2 laboratory<sup>1,2</sup> however, manipulation of the cultured agent should be performed in a Containment Level 2 laboratory<sup>1,2</sup> using the additional operational practices as outlined below.
- PCR testing of extracted non-infectious genetic material should at minimum be performed in a Containment Level 2 laboratory<sup>1,2</sup>.

### **Additional operational practices:**

- laboratory workers should wear protective clothing (e.g. protective solid-front gowns, gloves, shoe covers, eye protection with face seal and N-95 respiratory protection<sup>a</sup>) in accordance with the risk of exposure when handling specimens
- Manipulations are to be carried out in a certified biological safety cabinet.
- Centrifugation of respiratory specimens and tissue samples should be carried out using sealed centrifuge cups or rotors, both of which are unloaded in a biological safety cabinet.

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<sup>a</sup>To use N - 95 respirators a Respiratory Protection Program (RPP) including a RPP Manager, must be in place; training and fit testing must be provided for all users<sup>3</sup>.



### **Precautions for laboratories handling human respiratory specimens from confirmed H1N1 flu virus (Human Swine Flu) cases for isolation and further manipulation of the agent:**

- specimens should at minimum be processed for packaging and distribution to laboratories for further testing in a Containment Level 2 laboratory<sup>1,2</sup>
- Manipulation of the agent should be in a Containment Level 2 laboratory<sup>1,2</sup> using the additional operational practices as outlined above.

### **Transportation of clinical specimens:**

- Packaging, shipping and transport of specimens must, as a minimum, comply with the requirements of the Transportation of Dangerous Goods Regulations, Transport Canada<sup>4</sup>.
- For air shipment, clinical specimens from suspicious and confirmed cases and laboratory cultures of H1N1 flu virus (Human Swine Flu) should be shipped as UN 3373 Biological Substance, Category B.

Further biosafety information may be obtained from the Office of Laboratory Security, Centre for Emergency Preparedness and Response, Public Health Agency of Canada at (613) 957-1779, fax (613) 941-0596 or web site at [www.phac-aspc.gc.ca/ols-bsl/](http://www.phac-aspc.gc.ca/ols-bsl/) and the Biohazard Containment and Safety Division of the Canadian Food Inspection Agency at (613) 221-7068, fax (613) 228-6129 or web site at: <http://www.inspection.gc.ca/english/sci/bio/bioe.shtml>

### **References:**

1. Laboratory Biosafety Guidelines, 3<sup>rd</sup> Edition, Public Health Agency of Canada <http://www.phac-aspc.gc.ca/ols-bsl/lbg-ldmbl/index-eng.php>
2. Containment Standards for Veterinary Facilities, 1<sup>st</sup> edition, 1996, Agriculture and Agri-Food Canada, <http://www.inspection.gc.ca/english/sci/lab/convet/convete.shtml>
3. Selection, Use, and Care of Respirators. CSA Standard Z94.4-02. Toronto: Canadian Standards Association, 2002.
4. Transport Dangerous Goods, Transport Canada, <http://www.tc.gc.ca/tdg/menu.htm>