

**Biosafety Advisory for Veterinary Facilities**  
**Highly Pathogenic Avian Influenza**  
**Interim Guidelines**  
**March 10, 2004**

Subsequent to the recent Avian Influenza outbreaks in several Asian countries, the United States and any additional areas as identified<sup>1,2,3</sup>, we are providing you with the following interim biosafety advisory regarding the laboratory handling of diagnostic specimens associated with this strain of influenza.

**Precautions for laboratories receiving and processing veterinary diagnostic specimens from suspected Avian Influenza cases<sup>3</sup>:**

- # specimens may be processed for packaging and distribution to diagnostic laboratories for further testing in a Containment Level 2 laboratory<sup>4,5</sup> using the additional operational practices as outlined below
- # routine diagnostic testing to rule out Avian Influenza may be performed in a Containment Level 2 laboratory<sup>4,5</sup> using the additional operational practices as outlined below

**Additional operational practices:**

- # laboratory workers should wear protective clothing (e.g. protective solid-front gowns, gloves, shoe covers, eye protection and N95 respiratory protection) in accordance with the risk of exposure when handling specimens
- # manipulations that may produce aerosols should be carried in a certified biological safety cabinet
- # centrifugation of specimens should be carried out using sealed centrifuge cups or rotors that are unloaded in a biological safety cabinet
- # all contaminated liquid and solid waste to be decontaminated autoclaving, or by other effective method, prior to disposal<sup>6,7</sup>

**Precautions for laboratories handling veterinary diagnostic specimens from suspect or confirmed Avian Influenza cases<sup>3</sup> for isolation and further manipulation of the agent:**

- # specimens must be sent to the National Centre for Foreign Animal Diseases (NCFAD) in Winnipeg for confirmation
- # specimens may be processed in a Containment Level 2 laboratory<sup>4,5</sup> for packaging and distribution to NCFAD for further testing using the additional operational practices as outlined above
- # manipulations involving growth of the agent should be in a Containment Level 3

- laboratory<sup>4,5</sup> using Containment Level 3 operational practices<sup>4,5</sup>
- # Manipulations involving growth of the agent must not be performed in the same laboratory that is simultaneously culturing material that may contain other influenza viruses
  - # PCR testing of extracted genetic material may be performed in a Containment Level 2 laboratory<sup>4,5</sup>

*Note:* For Containment Level 3 facilities manipulating specimens from confirmed Avian Influenza cases, the Canadian Food Inspection Agency (CFIA) requires, under the authority of the *Health of Animals Act*<sup>8</sup>, that operational procedures must be reviewed and certified by the CFIA prior to work commencing. In addition, all staff and visitors must agree before entering the laboratory, not to have contact with avian and porcine species for a period of five (5) days.

For information on biosafety precautions for other activities (e.g. research with Highly Pathogenic Avian Influenza), contact the Biohazard Containment and Safety Division at the Canadian Food Inspection Agency (613) 221-7088.

#### **Transportation of diagnostic 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>9</sup> and the Dangerous Goods Regulations, International Air Transport Association<sup>10</sup>. These requirements state:
  - # For air shipment, clinical specimens from suspicious and confirmed cases (ie. samples from patients meeting case definition) must be shipped as UN 3373 diagnostic specimens or clinical specimens
  - # For air shipment, cultures of Highly Pathogenic Avian Influenza Virus, must be shipped as UN 2814 Infectious Substance affecting humans (Highly Pathogenic Avian Influenza Virus)(Risk Group 3).

Further biosafety information may be obtained from the Biohazard Containment and Safety Division of the Canadian Food Inspection Agency at (613) 221-7088, fax (613) 228-6129 or web site at: <http://www.inspection.gc.ca/english/sci/lab/bioe.shtml> or the Office of Laboratory Security, Centre for Emergency Preparedness and Response, Health Canada at (613) 957-1779, fax (613) 941-0596 or web site at: <http://www.hc-sc.gc.ca/pphb-dgsp/ols-bsl/index.html>

#### **References:**

1. *Current SARS/Avian influenza (H5N1) affected areas*, Health Canada  
<http://www.hc-sc.gc.ca/pphb-dgsp/h5n1/index.html>
2. *Flu Information - Avian Influenza*, Health Canada  
<http://www.hc-sc.gc.ca/english/diseases/flu/avian.html>
3. Canadian Food Inspection Agency, Animal Products, Animal Health and Production

March 10, 2004

Biohazard Containment and Safety Division, Canadian Food Inspection Agency  
Office of Laboratory Security, Centre for Emergency Preparedness and Response, Health Canada

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Division. *Avian Influenza*,

<http://www.inspection.gc.ca/english/anima/heasan/disemala/avflu/avflue.shtml>

4. *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>
5. *Laboratory Biosafety Guidelines, 3<sup>rd</sup> Edition (Draft)*, Health Canada <http://www.hc-sc.gc.ca/pphb-dgspsp/ols-bsl/lbg-ldmbl/index.html>
6. *Highly Pathogenic Avian Influenza Pathogen Data Sheet*. Canadian Food Inspection Agency. Version 1.1, March 10, 2004.
7. *Highly Pathogenic Avian Influenza MSDS*. **Office International des Epizooties**. Updated April 22, 2002. [http://www.oie.int/eng/maladies/fiches/a\\_a150.htm](http://www.oie.int/eng/maladies/fiches/a_a150.htm)
8. Health of Animals Act, June 19, 1990, <http://laws.justice.gc.ca/en/H-3.3/63034.html>
9. *Transport Dangerous Goods*, Transport Canada, <http://www.tc.gc.ca/tdg/menu.htm>
10. *Dangerous Goods Regulations*, International Air Transport Association, <http://www.iataonline.com>