**Agent Summary– *Influenza Virus* A (H1N1, H3N2 strains)**

* Virus Classification: *Orthomyxoviridae, Influenzavirus A;* segmented negative sense, single stranded RNA viruses.
* Influenza A is also classified into subtypes by the surface glycoproteins that possess either hemagglutinin (H) or neuraminidase (N) activity. Emergence of completely new subtypes (antigenic shift) occurs at irregular intervals with Type A viruses.
* There are 18 different hemagglutinin subtypes and 11 different neuraminidase subtypes (H1 through H18 and N1 through N11, respectively).
* Current subtypes of influenza A viruses that routinely circulate in people include: A(H1N1) and A(H3N2).
* Current flu vaccines include the H1N1 and H3N2 subtypes.
* Antigenic alterations, in the HA and NA sites, occur frequently in influenza A, and may alter virulence and be responsible for the occurrences of pandemics. Reassortment of related subtypes, including trans-species reassortment, may also attribute to pandemics.
* Influenza viral infections, with different antigenic subtypes, occur naturally in swine, horses, mink, seals, and in many domestic and wild avian species.
* Mode of transmission: airborne spread especially in crowded, enclosed spaces. Transmission may also occur through direct contact since influenza viruses may persist for hours on surfaces particularly in the cold and under conditions of low humidity. The incubation period is from one to three days.
* Influenza A virus is an infectious agent and requires biosafety level 2 containment (BSL2). Infected animals require ABSL2 containment.
* Use personal protective equipment (PPE) as described in the associated SOP 2.0.

**References:**

1. [*Biosafety in Microbiological and Biomedical Laboratories*, 6th edition. U.S. Department of Health and Human Services; CDC](https://www.cdc.gov/labs/pdf/SF__19_308133-A_BMBL6_00-BOOK-WEB-final-3.pdf)  (BMBL6)
2. <https://www.canada.ca/en/public-health/services/laboratory-biosafety-biosecurity/pathogen-safety-data-sheets-risk-assessment/influenza-virus-type-a.html>
3. <https://www.cdc.gov/flu/about/viruses/types.htm>

Enter the following information:

1. Name of the Principal Investigator: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_­­­\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Applicable IBC protocol number(s) (approved or submitted): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. List the laboratory work locations (Building/room[s]) for Influenza A, a BSL2 agent:
* Procedures:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and Storage: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
1. List the animal facility building/room(s) for Influenza A, ABSL2 containment:
* Procedures:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and Housing:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\*Note: confirm with ULAR that the rooms listed above are suitable for ABSL2 animals.

Date of Agent Summary form completion: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_