

# TARRANT

The Alberta Recording and Research Network  
Tracking Influenza in Alberta



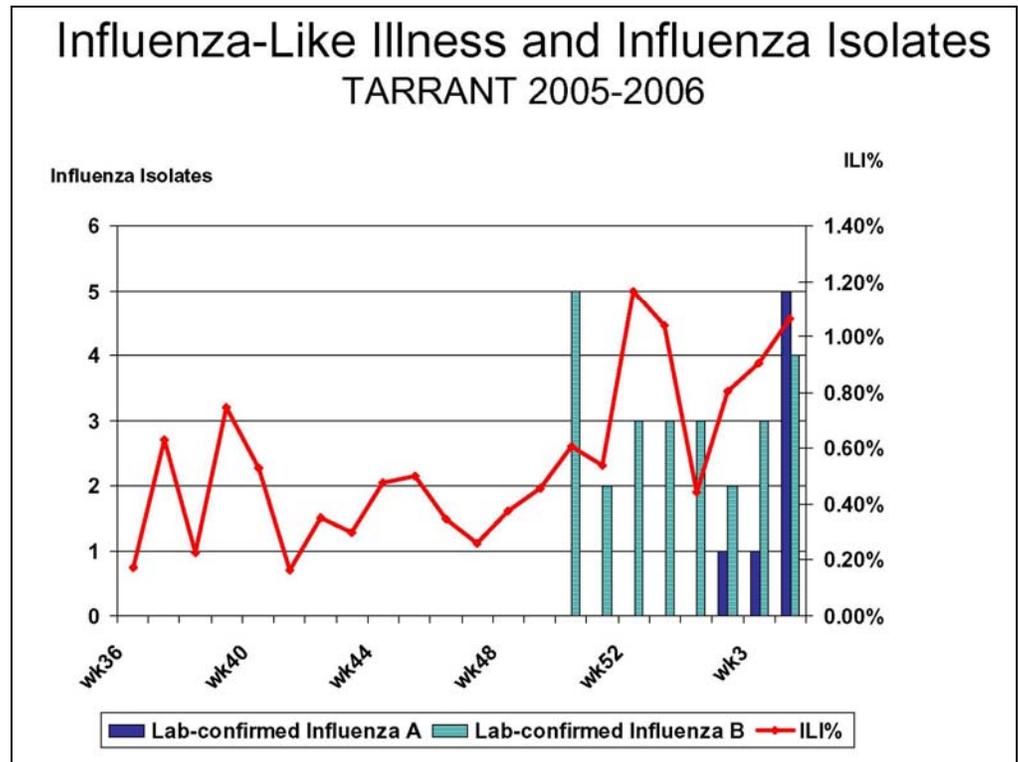
## NEWSLETTER February 2005

1635, 1632-14 Ave. NW ▪ Calgary, AB T2N 1M7 ▪ Ph: (403) 220-2750 ▪ Fax: (403) 270-4329 [www.ucalgary.ca/tarrant](http://www.ucalgary.ca/tarrant)

Dear Colleagues,

### Influenza Activity Update

This year's epidemic is slowly building up. The provincial Lab confirmed 326 influenza cases in Alberta up to February 4, 2006, with 53 influenza A and 272 influenza B. The predominant strain has been influenza B. TARRANT recorders have submitted 230 samples this flu season and 32 of them were confirmed to be influenza (7 influenza A and 25 influenza B).



Every week, samples of positive influenza isolates are sent to National Microbiology Laboratory (NML) for subtyping from each province. To date, all of the influenza A strains characterized by the NML have matched those included in the 2005-2006 Canadian vaccine. However, only 5% of the influenza B characterizations have matched current vaccine strain. The remaining 95% of the influenza B strains characterized have been B/Hong Kong/330/2001-like viruses, which belong to a separate lineage of viruses not covered by this year's vaccine.

NML also tested 70 influenza A virus isolates received from this flu season and found that 64 (91%) were resistant to amantadine.

## Amantadine Resistance among Influenza A Viruses

Vaccination is the primary means for preventing influenza infections. In addition, 2 classes of drugs are currently available for treatment and prophylaxis: the adamantanes, e.g., amantadine and the neuraminidase inhibitors e.g. oseltamivir (Tamiflu).

However, resistance to antiviral drugs can emerge during treatment. A paper in the February 2 issue of JAMA reported the frequency of adamantine resistance influenza A viruses during the initial months of the 2005-2006 influenza season<sup>1</sup>. A total of 209 influenza A(H3N2) viruses isolated from patients in 26 states in the United States were screened, of which 193 (92.3%) contained a change at amino acid 31 in the M2 gene known to be correlated with adamantane resistance.

Amantadine has been the first-choice antiviral drug against community outbreaks of influenza A viruses for many years. The increasing proportion of viruses resistant to amantadine demonstrates the importance of rapid surveillance to assess emergence of resistant viruses and appropriate use of antiviral drugs.

The same concern is arising about use of Tamiflu, which was widely used during the avian flu epidemic in Southeast Asia. In response to the epidemic, many countries including Canada stockpiled quantities of Tamiflu in preparation for a possible pandemic. Although development of resistance during Tamiflu therapy among adults infected with influenza A has been rare, resistant strains have been reported in up to 18% of Japanese children<sup>2</sup>.

### TARRANT Annual Meeting Delta Calgary Airport March 10, 2006



This half-day meeting (8:15 AM – 1:30 PM) is directed at TARRANT sentinels as well as anyone interested in influenza surveillance programs in Canada.

Experts in influenza surveillance will give us updates on Alberta influenza surveillance, as well as what can be done to evaluate influenza vaccination programs. We will also consider how to develop the program and get more value from the work we do. Please see attached draft agenda in our orientation document.

If you are interested to attend the meeting, please fill out the attached sheet and get back to us by February 20, 2006 (if you haven't done so).

Fax: (403) 270-4329 OR Tel: (403) 220-2750

*Hope to see you in Calgary next month!*

<sup>1</sup> Bright RA, Shay DK, Shu B, Cox NJ, Klimov AI. Adamantane Resistance Among Influenza A Viruses Isolated Early During the 2005-2006 Influenza Season in the United States. JAMA 2006 Feb 2;295

<sup>2</sup> Kiso M, Mitamura K, Sakai-Tagawa Y, et al. Resistant influenza A viruses in children treated with oseltamivir: descriptive study. *Lancet*. 2004;364:759-765.