

Basel/San Francisco, 13. September 2009

## **Two new studies report increased survival rates in Tamiflu-treated patients with avian flu (H5N1) and severe seasonal flu**

**53% of patients with H5N1 infection survived when treated with Tamiflu compared with 12% of untreated patients**

**Rate of death was reduced by 37% in high-risk patients with severe seasonal flu compared with no treatment**

Tamiflu (oseltamivir) demonstrated significantly improved survival rates in patients with the highly pathogenic H5N1 influenza (avian flu) and severe cases of seasonal influenza, according to two new studies presented at the 49<sup>th</sup> Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC) in San Francisco.<sup>1,2</sup>

“In two different observational studies, the data continues to indicate that there is clinical benefit provided by Tamiflu, including improving survival in patients with H5N1 infection or seasonal influenza”, said Jean-Jacques Garaud, Global Head of Pharma Development at Roche. “Both studies reinforce the important role that Tamiflu can provide particularly among the most vulnerable patients and those infected with the most deadly strains”.

This is the first multinational study to systematically assess human H5N1 infection. The study, which retrospectively examined outcomes in 215 patients from 10 countries, showed that the H5N1 virus had an extremely high mortality rate of 88%, with only 11 out of 89 untreated patients surviving. In contrast, 45 out of 85 (53%) patients who received at least one dose of Tamiflu survived. Furthermore, among the subset of patients who received Tamiflu within 2 days of symptom onset, an even higher percentage (71%; 5 out of 7 patients) survived. These data confirm the importance of prompt diagnosis and treatment with Tamiflu. The study also showed that there was some survival benefit even in patients that initiated treatment 6 to 8 days after symptom onset compared to untreated patients. This provides important evidence to support treatment even in those patients who present late with influenza symptoms.

The research is based on a collaborative analysis conducted by the Avex Avian Influenza Expert Group, Outcomes Research, and the London School of Hygiene and Tropical Medicine. The study is supported by Roche.

The H5N1 virus continues to spread throughout parts of Southeast Asia and Africa. Since 2003, the WHO has reported 438 human cases of H5N1, 262 of them fatal.<sup>3</sup> Most recently, 2 new human cases were reported in Egypt on August 11, 2009.

A second study conducted by the Chinese University of Hong Kong analysed 760 patients hospitalised with severe seasonal influenza during 2007-2008. Half of these patients received Tamiflu. The majority of these patients were older (mean age  $70\pm 18$  years) and 60% had underlying chronic illnesses. These data showed that the rate of death was reduced by 37% in patients treated with Tamiflu compared to patients who were not treated [3.8% treated vs. 6.0% untreated; adjusted Hazard Ratio 0.38(0.19,0.78)]. These data indicate that treatment with Tamiflu in high risk patients with severe influenza reduced mortality.

#### **About Tamiflu**

Tamiflu, co-developed by Gilead Sciences Inc, is designed to be active against all clinically relevant influenza viruses and works by blocking the action of the neuraminidase enzyme on the surface of the virus. When neuraminidase is inhibited, the spread of the virus to other cells in the body is inhibited. Tamiflu is indicated for the treatment and prevention of uncomplicated influenza caused by type A and B viruses in patients one year and older.

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<sup>1</sup> Toovey S. Avex Avian Influenza Expert Group. First results from an avian influenza case registry. Oral presentation at Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC) 2009. Abstract V-533, 9/13/2009

<sup>2</sup> N Lee, *et al.* Outcomes of adults hospitalised with influenza 2007-2008. Poster presented at Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC) 2009. Abstract V-1074k, 9/13/2009

<sup>3</sup> Cumulative number of confirmed human cases of avian influenza A/(H5N1) Reported to WHO, 11 August 2009.  
[http://www.who.int/csr/disease/avian\\_influenza/country/cases\\_table\\_2009\\_08\\_11/en/index.html](http://www.who.int/csr/disease/avian_influenza/country/cases_table_2009_08_11/en/index.html) (last accessed 03/09/2009)