# Public release date: 29-Sep-2006 Contact: Aoife Gallagher aoife\_gallagher@uk.cohnwolfe.com American Society for Biochemistry and Molecular Biology

#### Tamiflu significantly reduces the risk of death from influenza

InterScience Conference on Antimicrobial Agents and Chemotherapy (ICAAC), San Francisco, 29th September 2006: Tamiflu (oseltamivir), is effective in reducing the risk of death associated with seasonal influenza in severely ill patients, 1 according to new data presented today. Treatment of infected adults was associated with a 71 per cent reduction in mortality.1 These results demonstrate the importance of the role of antivirals in the management of seasonal influenza and highlights the seriousness and risk of mortality associated with it.

"The neuraminidase class of antivirals were originally assessed during their clinical development for their ability to reduce influenza symptom severity and duration in healthy adults", comments Dr. Allison McGeer, Primary Investigator who led today's research and Microbiologist and Infection Disease Consultant at the Department of Microbiology, Mount Sinai Hospital, Toronto, Ontario, "This new analysis contributes to the accumulating evidence that oseltamivir also has a significant impact in preventing serious complications including death in older at-risk individuals".

The population-based surveillance study was conducted during the two consecutive influenza seasons on a total of 512 patients who were admitted to hospital for illness associated with a positive test for influenza in Ontario, Canada. Over half of patients, mainly those with underlying illness, had been previously vaccinated. 84% were treated with antibacterial agents and 32% with antivirals (3% amantadine; 97% oseltamivir) at time of admission/diagnosis. Of the total patients with influenza who required hospital admission, 67% were diagnosed with influenza with or without pneumonia, 13% with respiratory infection (e.g. acute bronchitis) and 62% with fever/viral syndrome. 1 Of all adult patients, 6.4% patients died and these deaths were attributed to influenza.1 Treatment of adults with an antiviral was associated with more than a two third reduction in death from influenza.

The authors conclude that influenza remains a major cause of morbidity and mortality in patients with underlying illness, despite prior vaccination. In addition they suggest that hospitalization may be better avoided by antiviral rather than anti-bacterial therapy in patients with influenza-like illness.

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#### Notes to Editors

# About the study

Since January 1, 2005, the Toronto Invasive Bacterial Diseases Network (TIBDN) has performed population-based surveillance for laboratory confirmed influenza associated with hospital admission in Ontario, Canada. Eligible patients were those hospitalized for illness associated with a rapid antigen test and/or culture positive for influenza are enrolled.

Allison McGeer led the TIBDN team's analysis of the clinical features and outcomes associated with the 541 cases of severe influenza associated illness identified between 1 January 2005 and 30 April.

#### Toronto Invasive Bacterial Diseases Network (TIBDN)

The TIBDN is a collaboration of all hospitals, microbiology laboratories, infection control practitioners, physicians and public health units serving the population of metropolitan Toronto and Peel Region (population 3.7 million). The goal of the network is to reduce morbidity and mortality from infectious disease by using surveillance to better understand risk factors for infection, and to improve the prevention, diagnosis and treatment of serious bacterial and viral infections.

TIBDN performs population-based surveillance for selected serious bacterial and viral infections in residents of metropolitan Toronto and Peel region. The organisation also aims to leverage information from the system to advance knowledge and understanding of serious diseases: the network collaborates actively with investigators wishing to initiate population-based surveillance for new diseases and aims to provide isolates and information to investigators studying pathogenesis, illness burden, impact of vaccination or treatment programs, and antimicrobial resistance.

More information about TIBDN can be found at: http://microbiology.mtsinai.on.ca/tibdn/

#### About influenza

Influenza, commonly called the 'flu', is a serious disease and annual outbreaks and epidemics are caused by influenza A and B viruses2. Influenza is a highly contagious viral illness and is characterised by a sudden onset of debilitating clinical symptoms which affect the entire body. Up to 500 million people are infected by influenza3 and up to 500,000 deaths are attributed to influenza each year4. Influenza complications occur in all patient groups and include bronchitis, sinusitis, otitis media, and pneumonia.

#### About Tamiflu

Tamiflu is designed to be active against all clinically relevant influenza viruses and works by blocking the action of the neuraminidase (NAI) enzyme on the surface of the virus. When neuraminidase is inhibited, the virus is not able to spread to and infect other cells in the body.

It is licensed for the treatment and prophylaxis of influenza in children aged one year and above and in adults.

# About Roche

Headquartered in Basel, Switzerland, Roche is one of the world's leading research-focused healthcare groups in the fields of pharmaceuticals and diagnostics. As a supplier of innovative products and services for the early detection, prevention, diagnosis and treatment of disease, the Group contributes on a broad range of fronts to improving people's health and quality of life. Roche is a world leader in diagnostics, the leading supplier of medicines for cancer and transplantation and a market leader in virology. In 2005 sales by the Pharmaceuticals Division totalled 27.3 billion Swiss francs, and the Diagnostics Division posted sales of 8.2 billion Swiss francs. Roche employs roughly 70,000 people in 150 countries and has R&D agreements and strategic alliances with numerous partners, including majority ownership interests in Genentech and Chugai. Additional information about the Roche Group is available on the Internet (www.roche.com).

#### **Roche and Gilead**

Tamiflu was invented by Gilead Sciences and licensed to Roche in 1996. Roche and Gilead partnered on clinical development, with Roche leading efforts to produce,

register and bring the product to the markets. Under the terms of the companies' agreement, amended in November 2005, Gilead participates with Roche in the consideration of sub-licenses for the pandemic supply of Tamiflu in resource-limited countries. To ensure broader access to Tamiflu for all patients in need, Gilead has agreed to waive its right to full royalty payments for product sold under these sub-licenses.

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# Additional information

- Roche Health Kiosk, Influenza: www.health-kiosk.ch/start\_grip.htm
- About Tamiflu: www.roche.com/med\_mbtamiflu05e.pdf
- About influenza: www.roche.com/med\_mbinfluenza05e.pdf
- WHO: Global influenza programme: www.who.int/csr/disease/influenza/en/

- WHO: Avian flu: www.who.int/mediacentre/factsheets/avian\_influenza/en/

# **References:**

1. McGeer, A. Siddiqi, N. Green, K.A. Low, D.E., Toronto Invasive Bacterial Diseases Network (TIBDN). Outcomes of Influenza Requiring Hospital Admission in Ontario, Canada: Two Years of Surveillance. Abstract presented at the InterScience Conference on Antimicrobial Agents and Chemotherapy (ICAAC), San Francisco on 29 September 2006

2. WHO checklist for influenza pandemic preparedness planning. Geneva, World Health Organization, 2005.

http://www.who.int/csr/resources/publications/influenza/WHO\_CDS\_CSR\_GIP\_2005\_4/en/

Ghendon Y. Influenza ·its impact and control. World Health Stat Q 1992;45(2-3):306-311.

WHO Influenza Factsheet No 211, March 2003.

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