



## Influenza Antivirals: Efficacy and Resistance

Tuesday 8<sup>th</sup> - Thursday 10<sup>th</sup> November 2011  
Rio Othon Palace Hotel, Rio de Janeiro, Brazil

### Abstract Submission

The organizers invite abstracts for oral or poster presentations in the following areas:

- Efficacy of influenza antivirals
- Clinical use in different patient groups and settings
- National policies for antiviral use and regulatory considerations
- Surveillance of antiviral resistance emergence
- Assays of antiviral susceptibility
- *In vitro* and *in vivo* analyses of the effects of resistance mutations
- Modelling of antiviral use and resistance emergence
- Recent developments in licensure of new influenza antivirals
- Development of inhibitors against novel targets

**The Deadline for submission of abstracts is 29<sup>th</sup> July 2011.** Please note that you need to be a registered delegate in order to have your abstract reviewed and considered for inclusion in the programme. Please insert your Conference Registration Number: Member of the program committee

### Abstract format:

The abstract in English is required in **Microsoft Word** only.

The abstract should include the objectives of the study, the results obtained and conclusions. The entire Abstract, including title, author(s) and affiliation(s) must be no more than 350 words and typed single space in Arial 11 point font on a single page with 1½ inch margins, top and bottom.

Please indicate whether the abstract is for:

A: Oral presentation

B: Poster presentation

by ticking the appropriate boxes. Final selection of oral presentations will be made by the Programme Committee. Please also provide details of the presenting/corresponding author and address/email address for correspondence:

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### Abstract

**Title: Peramivir Retains Therapeutic Activity Against the Influenza A/H1N1 H275Y Mutant in a Mouse Model.**

**Background:** Peramivir is a potent influenza virus neuraminidase (NA) inhibitor that obtained marketing authorization in 2010 in Japan and South Korea. Systemic administration of peramivir may result in peak levels sufficient to eradicate oseltamivir-resistant A/H1N1 viruses with the H275Y NA mutation.

**Methods:** The therapeutic activities of intramuscular (IM) peramivir and oral oseltamivir were evaluated in BALB/c mice infected with wild-type (WT) or oseltamivir-resistant (H275Y NA mutant) recombinant influenza A/WSN/33 (H1N1) viruses. Peramivir treatment regimens consisted of single (90 mg/kg) or multiple (45 mg/kg daily for 5 days) IM injections that started 24 h after viral challenge. Oseltamivir was administered by oral gavage at 1 mg/kg daily during 5 days.

**Results:** Both peramivir regimens and oseltamivir completely prevented mortality in mice infected with the WT virus (mortality of 75% in untreated group). Peramivir regimens also completely prevented mortality in mice infected with the H275Y mutant (mortality of 62.5% in untreated group) contrasting with oseltamivir (mortality of 37.5%). Additionally, both peramivir regimens prevented weight loss in mice infected with the WT and H275Y mutant viruses whereas weight losses of 7% and 8%, respectively, were observed on day 6 post-infection in oseltamivir-treated mice. Finally, lung titers (day 5) for the H275Y virus were not reduced by oseltamivir multiple doses whereas they were reduced by 2log<sub>10</sub> and 3log<sub>10</sub> by peramivir single dose and peramivir multiple doses, respectively.

**Conclusions:** Our results suggest that, despite some decrease in susceptibility in vitro, peramivir retains activity against oseltamivir-resistant H275Y strains even when the treatment is delayed for 24 h after infection.



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