



isirv
International Society for
Influenza and other
Respiratory Virus Diseases

Influenza in
the News

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Respiratory Virus Report

Winter 2011



isirv Antiviral Group Conference Influenza Antivirals: Efficacy and Resistance

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isirv wishes you
and your loved
ones a happy and
healthy holiday
season!



isirv Antiviral Group Conference

Influenza Antivirals: Efficacy and Resistance

8-10 November, 2011, Rio de Janeiro, Brazil

By: Alan Hay

The inaugural conference of the newly established Antiviral Group of the International Society for Influenza and other Respiratory Virus Diseases (**isirv**-AVG) was organised in conjunction with the Oswaldo Cruz Foundation (FIOCRUZ) in Rio de Janeiro, Brazil on 8th to 10th November. The purpose of the meeting was to increase awareness of the antivirals available for combating influenza and understanding of their efficacy and effectiveness in different situations, policies for use against pandemic and seasonal influenza, and the limitations posed by development of resistance.

The focus on Latin America was reflected in just under half of the 130 participants being from that region. Delegates were drawn from clinical, laboratory and policy backgrounds at national and international level. Organisations represented included national public health agencies and academic institutions from North and South America, Europe and Asia, and the WHO. The opening address was given by Dr Paulo Gadelha, President of FIOCRUZ, who explained the importance of the conference for Public Health and its timeliness in the aftermath of the 2009 pandemic and continued threat of H5N1.

A keynote lecture which introduced the context of antivirals, in relation to vaccines, in the control of influenza was followed by three symposium sessions in which a further eleven international experts provided a comprehensive review of the current state of the art and recent developments of newer antivirals, development of resistance and future perspectives on alternative antiviral strategies to combat influenza.

Six workshops provided a forum for more detailed discussion of particular aspects. These included national policies for use of antivirals and the challenges faced during the emergent 2009 pandemic, how policies were modified over the course of the pandemic and how difficulties in mobilising 'pandemic' stockpiles emphasised the importance of established practice in effective distribution of antivirals. With the currently circulating viruses resistant to the M2 inhibitors, amantadine and rimantadine, the meeting focussed on the neuraminidase inhibitors, with an emphasis on the emergence of resistance, particularly to oseltamivir. The importance of effective surveillance and monitoring of antiviral susceptibility, especially in relation to antiviral use, was stressed, and there was lively discussion of the relative merits of different assays for detection and

characterisation of resistance mutations, and of the *in vivo* consequences of reduced sensitivity of the neuraminidase in terms of clinical and epidemiological significance. Of particular concern in relation to the emergence and spread of oseltamivir-resistant seasonal H1N1 viruses during 2007-2008, is the apparent relative fitness of 2009 H1N1 pandemic viruses with a H275Y resistance mutation and, despite the generally low frequency of resistant variants, the possible wider spread of a recent cluster of such oseltamivir-resistant viruses in Australia.

Interactive demonstrations facilitated discussion of the use of a reference panel of resistant and sensitive viruses in susceptibility monitoring, of methods for IC_{50} determination and statistical analyses of antiviral susceptibility data, and of databases for collation and sharing of phenotypic and genetic data. Information presented in the various sessions was also complemented by 25 poster presentations on various themes.

Discussion of recent developments included the relative merits of other recently approved neuraminidase inhibitors, peramivir and laninamivir, and of phase II/III clinical studies of the polymerase inhibitor favipiravir (T-705), but also stressed the need for more effective therapies for clinical management of influenza. Future perspectives included a review of other potential targets and the structural data

now available to assist in the design of alternative antivirals. The meeting concluded on a very positive note with a presentation illustrating the efforts of numerous small pharmaceutical companies to develop novel antivirals against influenza.

A conference dinner at *Rio Scenarium* on the evening of the first day afforded delegates the opportunity to experience the delights of Brazilian cuisine and culture as well as to meet and interact. An informative excursion to the historic FIOCRUZ campus on the afternoon of the second day was particularly appreciated by many of the participants. Generous support of the conference allowed provision of travel grants to assist some twenty delegates to attend.

Following the close of the conference, the first annual meeting of the Antiviral Group was held to explain to the delegates, who became members by virtue of attending the conference, the objectives, development and structure of the group and role of the AVG committee, and ways in which members may participate in the activities and future development of the group.

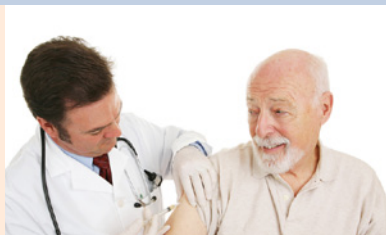
Voices of isirv

The **isirv** board would like to broaden the society's reach to be of greatest interest to current and potential **isirv** members, and is keenly interested in your ideas for future events and newsletter articles. Is there a topic you'd like to write about for the newsletter? Do you have an idea for a meeting or satellite symposium? What are the most pressing issues in viral respiratory disease? Please send your thoughts to chris.carter@meditechmedia.com.

About isirv

isirv is a scientific professional society to promote the prevention, detection, treatment, and control of influenza and other respiratory virus diseases. It will:

- Provide a forum for the exchange of information and for international collaboration
- Advocate for research and effective public health measures
- Promote relevant scientific and clinical training and education
- Organize scientific meetings and workshops on key topics and develop international consensus
- Support and develop partnerships with international bodies such as the WHO and other agencies



Influenza in the News

Summary Report of the Joint ECDC/WHO Regional Office for Europe Meeting on Influenza Surveillance now Published

On 7-9 June 2011, the Slovenian Ministry of Health hosted the ECDC and WHO/Europe's first joint influenza surveillance meeting. The objectives of the meeting were to review the 2010-2011 influenza season in the European region, to present the current recommendations for influenza surveillance and to address key issues related to virological and epidemiological influenza surveillance covering a wide variety of topics. The meeting report was recently published online and contains a summary of the main content of the workshop group sessions and the recommendations and next steps identified during the meeting.

To view the full report, please go to: http://www.ecdc.europa.eu/en/publications/Publications/1112_MER_ECDC_WHO_Influenza_surveillance_meeting_Ljubljana.pdf

CDC Reports United States Influenza Vaccination Coverage for 2011-2012 Season

The CDC has released an updated report on vaccination coverage for the 2011-2012 season. The report includes national estimates of the proportion of people vaccinated by approximately November 6, 2011. One of the key findings from this report was that a majority of adults and children in the United States were still unvaccinated by this time point, but this finding was similar to the reported findings from the 2010-2011 season.

To read the full report, please go to: <http://www.cdc.gov/flu/professionals/vaccination/national-flu-survey.htm>

Influenza Patients Receiving Statins may Have a Decreased Risk of Death

A recent study published in the Journal of Infectious Diseases found an association between influenza patients receiving cholesterol-lowering statins and decreased risk of death. The study involved 3043 patients hospitalized with laboratory-confirmed influenza. Of these patients, 33% received statins. In this study, it was observed that influenza patients not receiving statins had almost twice the risk of death as those who did receive the medication (adjusted odds ratio, 0.59 [95% CI, .38-.92]).

To read the full report, please go to: <http://jid.oxfordjournals.org/content/early/2011/12/12/infdis.jir695.abstract>



ESWI Announces Second European Flu Summit

ESWI recently announced that their upcoming European Flu Summit will be held in Brussels, Belgium on 21 May 2012. The goal of the meeting will be to provide an informal platform for exchanging good practices and to initiate concrete actions to improve public health protection against influenza. The meeting will be free for all attendees.

Information will be available at <http://www.flusummit.org> in the near future.



Options VIII Update

Options for the Control of Influenza VIII will be held in Cape Town, South Africa, 5-10 September 2013. The members of both the Scientific and Organizing Committees have now been chosen. Moving forward, **isirv** will work closely with these committees on a number of projects, including identifying workshop topics and Chairs for the upcoming meeting.

Please visit the Options VIII website at <http://www.controlinfluenza.com> for more information.

In the Loop



Recent publications and news items of special interest to isirv members

Dolz R, Vergara-Alert J, Perez M, et al. New insights on infectious bronchitis virus pathogenesis: Characterization of Italy 02 serotype in chicks and adults hens. *Vet Microbiol.* 2011. [Published online ahead of print 6 Nov 2011].

Ehrlich HJ, Berezuk G, Fritsch S, et al. Clinical development of a Vero cell culture-derived seasonal influenza vaccine. *Vaccine.* 2011. [Published online ahead of print 12 Dec 2011].

Fan X, Zhu H, Zhou B, et al. Emergence and dissemination of a swine H3N2 reassortant with 2009 pandemic H1N1 genes in pigs in China. *J Virol.* 2011. [Published online ahead of print 14 Dec 2011].

Fehrholz M, Kendl S, Prifert C, et al. The innate antiviral factor APOBEC3G targets replication of measles, mumps, and respiratory syncytial virus. *J Gen Virol.* 2011. [Published online ahead of print 14 Dec 2011].

Liao Q, Cowling BJ, Lam WT, et al. Changing perception of avian influenza risk, Hong Kong, 2006-2010. *Emerg Infect Dis.* 2011;17(12):2379.

Ling MT, Tu W, Mao H, et al. Mannose-binding lectin contributes to deleterious inflammatory response in pandemic H1N1 and avian H9N2 infection. *J Infect Dis.* 2011. [Published online ahead of print 11 Nov 2011].

Loomba RS, Aggarwal S, Shah PH, et al. Influenza vaccination and cardiovascular morbidity and mortality: Analysis of 292 383 patients. *J Cardiovasc Pharmacol Ther.* 2011. [Published online ahead of print 14 Dec 2011].

Maines TR, Belser JA, Gustin KM, et al. Local innate immune responses and influenza virus transmission and virulence in ferrets. *J Infect Dis.* 2011. [Published online ahead of print 9 Dec 2011].

Vandermeer ML, Thomas AR, Kamimoto L, et al. Association between use of statins and mortality among patients hospitalized with laboratory-confirmed influenza virus infections: A multistate study. *J Infect Dis.* 2011. [Published online ahead of print 13 Dec 2011].

Yassine HM, Lee CW, Saif YM. Interspecies transmission of influenza A viruses between swine and poultry. *Curr Top Microbiol Immunol.* 2011. [Published online ahead of print 14 Dec 2011].

Yu X, Zhang X, Zhao B, et al. Intensive cytokine production in pandemic H1N1 influenza virus infection accompanied by robust production of IL-10 and IL-6. *Plos One.* 2011;6(12):e28680.

isirv Membership Application

First Name

Last Name

Current Position

Academic Title

Institution Name

Institution Type: Academic Industry Public Health Governmental

Industry

Department

Address 1

Address 2

City

State

Postal Code

Country

Phone

Fax

E-mail Address

Please indicate your five main areas of interest (rate from '1' to '5', with 5 as the highest score):

- | | |
|--|--|
| <input type="checkbox"/> Animal health/disease | <input type="checkbox"/> Diagnostics, epidemiology, and surveillance |
| <input type="checkbox"/> Human health/disease | <input type="checkbox"/> Vaccines |
| <input type="checkbox"/> Zoonoses/ecology | <input type="checkbox"/> Immunology |
| <input type="checkbox"/> Pandemic preparedness | <input type="checkbox"/> Antivirals |
| <input type="checkbox"/> Policy for control and prevention | <input type="checkbox"/> Viral structure & replication |
| <input type="checkbox"/> Cost benefit and health economics | <input type="checkbox"/> Other? _____ |

Which virus(es) are your main interest?

The Society's members will elect the officers of isirv.

If proposed, would you accept nomination for election? _____

Please give any general suggestions you have on priorities for **isirv** activities for the first 1-2 years:

New membership fee is 85 GBP (approximately 134 USD or 102 EUR, as of Dec 2011) payable by cheque or bank transfer to **isirv** account: Barclays Bank, Edgware Branch, 126 Station Road, Edgware, London, HA8 7RY. Sort code 20 29 41. Account #307 876 20. To register for **isirv** and pay online: visit www.isirv.org. Payment confirmation will be mailed to the address provided on the membership form.

If using a cheque please print and mail a copy of this form together with payment to:

isirv Organiser
22 Tiverton Road
LONDON NW10.3HL
United Kingdom

Make the cheque payable to **isirv** and write the member's name legibly on the cheque. The amount of the cheque must match the annual membership fee.