



Respiratory Virus Report

summer 2011

One Flu Roadmap

*An Outcome of the
One Flu Strategic Retreat*

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Upcoming Events

The Fourth ESWI Influenza
Conference

11-14 September 2011

Malta

isirv Antiviral Group Conference
Influenza Antivirals: Efficacy and
Resistance

8-10 November 2011

Rio de Janeiro, Brazil

One Flu Roadmap

*An Outcome of the
One Flu Strategic Retreat*

**One Flu Strategic Retreat, February 1 – 3, 2011
Treviso, Italy**

In recent years, the Food and Agriculture Organization of the United Nations (FAO), the World Organization for Animal Health (OIE) and the World Health Organization (WHO), in collaboration with the United Nations Children's Fund (UNICEF), the United Nations System for Influenza Coordinator (UNSIC) and the World Bank developed a joint strategy addressing risks associated with emerging and re-emerging infectious diseases. In 2008 these organizations published "Contributing to One World, One Health – A Strategic Framework for Reducing Risks of Infectious Diseases at the Animal-Human-Ecosystems Interface".¹ This document provided a framework for countries to consider regarding the control of zoonotic, emerging and re-emerging diseases and ignited a series of interdisciplinary meetings aiming at identifying means of implementing action plans within the scope of the document.^{2,3,4,5,6} Global recognition of the importance of the fundamental linkages between human and animal health and their relevance to public health concerned members of both disciplines.⁶ Involvement of key scientists and policy makers in these activities resulted in global recognition of the importance of the fundamental linkages between human and animal health and their relevance to public health. The resultant "One Health" approach urged greater interdisciplinary collaboration and communication.

One of the drivers of these events was the ongoing H5N1 panzootic, with its attendant human and animal suffering and its impact on food security. The "One Health" concept took on a new urgency with the unexpected emergence of the H1N1 2009 pandemic in Mexico. This served as an important reminder that the convergence of influenza viruses, people, animals and the environment are inextricably linked and require a novel, integrated approach. As such, the concept of "One Flu" has been identified as an example and model for the "One Health" approach.

The emergence and spread of the pandemic H1N1 2009 virus from an animal reservoir raises questions regarding the future approach to influenza virus infections. Studies of the pandemic 2009 H1N1 influenza virus identified that the eight genomic viral components originated from swine influenza viruses that had been circulating in both the eastern and western hemispheres. Detailed analysis

revealed that the 2009 H1N1 viral genome consisted of a mixture of gene segments with more distant origins in avian, human, European swine and North American swine hosts. The events of 2009-2010 served as a contemporary lesson illustrating the rapid spread of a novel influenza virus in a globally susceptible human population. The fact that the 2009 H1N1 pandemic virus' gene segments were all most closely related to those of swine influenza viruses reinforced the need for surveillance at the animal-human interface and the need for sample and data sharing between public health and animal health communities. Events such as these require a "One Flu" approach.

Sharing of information across disciplines is a cornerstone to develop a new integrated approach. In recent years the sharing of viruses and information across human and veterinary health disciplines has greatly improved, and was critical during the initial management of the H1N1 2009 pandemic. However old and new challenges continue to exist and resolving these challenges is dependent upon understanding and addressing the barriers facing the scientific, medical and public health communities as emerging and reemerging infectious diseases such as influenza are confronted. Cooperation between human and animal health experts is needed to improve surveillance, diagnosis, treatment, prevention and control of cross-species transmission of influenza viruses. Influenza remains one of the most tangible and significant threats to human and animal health.

The "One Flu" Strategic Retreat, convened February 1-3, 2011 in Treviso, Italy was jointly organized by the U.S. Centers for Disease Control and Prevention and the Italian Istituto Zooprofilattico Sperimentale delle Venezie. The forum brought together participants from multiple disciplines throughout the world to engage in a strategic discussion focusing on "One Flu" as the building block to a successful "One Health" approach.

Forty-six participants representing the UN agencies, WHO, FAO; the OIE; the World Bank; and influenza experts from public health, veterinary medicine and academia actively participated in the meeting. Discussions centred on the retreat objective: to promote the timely sharing

of surveillance data and viruses from swine, avian and human populations with the ultimate goal of improving both human and animal health. Sessions included updates regarding influenza viruses identified at the animal-human interface; identifying approaches to overcome barriers to virus sharing between animal health and human health; exchanging information on ways to promote virus sharing; and defining ways to improve pre-pandemic candidate vaccine virus selection for human vaccines, utilizing an evidence-based approach.

Participants acknowledged opportunities for added value through data sharing between animal and public health communities, specifically noting the benefits of systemic surveillance systems, enhanced communications and a "One Voice" partnership. The "One Flu" approach could also serve as a model for other zoonotic infections, including enhanced working relationships between animal and public health representatives, possible dual use of diagnostic and research facilities and providing real time information for public and animal health responses.

Group discussions addressed barriers and perceived disadvantages of data sharing. Key barriers noted were:

1. Appropriate recognition and scientific credit for those involved with gathering the information,
2. Basic mistrust and suspicion on the part of critical players, essentially the fear that stronger groups may exploit information independently, and
3. The need to obtain support from the multiple entities involved in timely data sharing, including donors and international organisations.

Other issues discussed included the political will and financial resources to promote joint projects and studies; the need to balance public and private interests, including possible trade barriers and other negative repercussions; the lack of public health, veterinary health and/or information technology infrastructure in much of the world; lack of a productive working relationship between the animal and human health sectors at a local level; competing issues, i.e. the fact that influenza is not the only animal or human health issue facing the global community; and the failure to recognize the benefits of a "One Health" approach. Concerns were also expressed regarding inequity in access to vaccines, antivirals and other interventions. Finally, it was agreed that change itself represents a challenge and that some scientists may be reluctant to establish a new working methodology.

Ways to improve data sharing were discussed. The vision for the future included the need to advocate for funding;

appropriate and inclusive recognition for data cited and public acknowledgement of resources expended to gather such information. Several participants commented that sharing of information is not only based on trust, but on common experiences and personal contacts.

Group consensus identified five activities to advance the "One Flu" concept. Action points were allocated to key opinion leaders who agreed to proactively move the agenda forward. These activities include:

1. Development of a manuscript on 'Repositioning Influenza' to ensure a critical and ongoing integrated approach engaging the animal and public health communities addressing influenza preparedness and response efforts. The lessons learned from recent experience with pandemic H1N1 2009 reaffirm the continued threat of pandemic influenza, and these lessons provide opportunities for incorporating and enhancing our collective response. Such a strategy requires a cross sectional approach, ultimately ensuring a positive impact on the public good.
2. Development of an Influenza Risk Assessment Tool, recognizing that influenza pandemics and epidemics are unpredictable and that a better strategy is needed to respond appropriately to protect the public health. A risk assessment tool will be developed which will have the necessary surveillance elements defined and could be signal activated, widely available internationally, and can be used to identify data gaps to drive surveillance and research needs. Such a tool can also be used to compare viruses and provide the necessary signal that will drive more specific pre-pandemic vaccine development.
3. Data management-Data Banks, which will include: guidelines to enhance linkages; standardize terms; establish minimal data elements; address confidentiality concerns around the closed versus the open data bases; develop data filtration tools; validate results and secure long term funding for this endeavour.
4. Long Term Management Data Needs, recognizes the inequities and lack of benefits to data sharing, especially amongst the scientists in the developing countries and more junior level scientists. If the data is deposited in a public data base prior to publication (shared for the public good in a timely manner) and is used by others who are not involved with gathering the information but who publish first there will be conflicts with respect to ownership. To ensure continued data sharing, efforts to safeguard against scientific pirating of information must be adopted.

5. Building Partnerships for Better Integration of Public and Animal Health New Way Forward requires both short and long term goals. Short term, pre-established communication channels for both notifiable and non-notifiable disease entities are necessary at the local, national and international levels. Pre-established response plans containing templates for best practices, communications and table top scenarios are critical to this process. Long term efforts require reaching out to other disciplines, who may not be currently engaged in this process, including industry and environmental scientists. Cross training, exchange programs and fellowships in "One Health" were noted as possible ideas to pursue. Meeting attendees agreed to assume responsibility for outreach and educational endeavours, within the context of their own network at relevant national and international meetings, to obtain buy in for the "One Flu/One Health" concept.

The meeting attendees left enthusiastic and stimulated by the opportunities at hand. This is not a stagnant discussion, but a dynamic process, which cannot move forward rapidly enough, given the ever-evolving world of microbes in which we live. Meeting attendees agreed to continue to champion the above concepts and work groups were established. Advocating for "One Flu" will be achieved by reaching out to our partners at the local, regional, national and international

levels. This increased awareness and new mindset will ultimately help ensure that we are better prepared globally to meet the next influenza pandemic or emerging infectious disease crisis.

Presentations from this meeting, along with this executive summary, are posted at:

<http://www.cdc.gov/onehealth/meetings.html#four>

Footnotes:

1. <ftp://ftp.fao.org/docrep/fao/011/aj137e/aj137e00.pdf>
2. <http://un-influenza.org/node/4043>
3. <http://www.cdc.gov/onehealth/archived-meetings/march2009-may2010.html>
4. http://www.fao.org/avianflu/en/conferences/verona_2010.html
5. http://www.fao.org/avianflu/en/conferences/verona_2008.html
6. <http://news.idsociety.org/idsa/textonly/printall.php?id=idsa20110101>



"One Health is the collaborative efforts of multiple disciplines working locally, nationally, and globally to attain optimal health for people, animals, plants and our environment."

"One Health implementation will help protect and/or save untold millions of lives in our generation and for those to come."

"Between animal and human medicine there are no dividing lines--nor should there be." Rudolf Virchow, MD (the father of cellular pathology)

“According to the World Health Organization (WHO), the majority of recently characterized viruses are antigenically similar to the WHO recommended vaccines for the 2010-2011 northern hemisphere and the 2011 southern hemisphere influenza seasons.”



Great News for the Influenza and Other Respiratory Viruses Journal

By: Alan Hampson, Editor in Chief

Shortly after its formation in September 2005, the Board of the Influenza and Other Respiratory Viruses (*isirv*) society approached the publisher Blackwell (now incorporated into Wiley-Blackwell) with a proposal to launch a new journal dedicated to the field of influenza and other respiratory viruses. The newly formed journal recruited a strong Editorial Board and published its first issue in January 2007. This consisted of invited position papers and reviews by prominent experts with a scheduled 6 issues a year containing reviews, commentary and research articles to follow. The journal has been strongly supported and last year received its first ISI Journal Citation Reports® Ranking: (for 2009): 24th of 30 Virology, and 43rd of 57 Infectious Diseases journals with an Impact Factor of 1.754.

Recently-released figures for 2010 show that the journal has climbed to 8th of 32 Virology, and 12th of 58 Infectious Diseases journals, with a 2010 Impact Factor of 3.812.

The philosophy that has been promoted for the journal is to encourage manuscripts encompassing a diverse range of topics from cutting edge science through public health applications, regulatory issues and attitudinal studies, all of these relevant to minimizing the global impact of respiratory viral illness. This is a similar philosophy to that for the triennial *Options for the Control of Influenza* conference conducted by *isirv* but encompassing a wider

range of viruses. There has also been a positive attempt to provide the opportunity, and support, for broad geographic representation in the journal. It is recognized that these are global diseases and that encouragement of surveillance, public health interventions and other contributions in less affluent regions are essential to understanding and combating them. Our Editorial Board members have often gone that extra yard in assisting authors to bring manuscripts to a publishable standard.

While the journal now publishes mainly original articles, up-to-date comprehensive reviews are an important part of the scientific and medical literature and it is our intention to continue to proactively source commissioned reviews. To facilitate this John Wood, recently retired from his role at the National Institute for Biological Standards and Control UK, has accepted an important senior editorial role as Reviews Editor.

We are grateful to all those who contribute manuscripts, those who act as expert reviewers, the members of our Editorial Board and to the excellent and very supportive editorial team at Wiley-Blackwell.

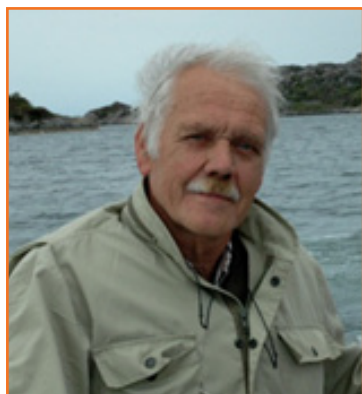
Voices of *isirv*

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



The Influenza Community Mourns the Loss of a Great Friend

Lars R. Haaheim, PhD | 1945-2011

On Tuesday 28 June 2011, Lars Haaheim tragically died whilst on a fishing trip in a fjord near his summer home in Sveio, Norway. Lars was an internationally-renowned influenza scientist and a founder member of the International Society for Influenza and Other Respiratory Viruses (*isirv*).

From his formative academic years at the University of Bergen, Lars was an influenza enthusiast. He specialised in "host antigens in egg grown influenza virus" during his graduate degree in 1973 and his PhD project completed in 1981 involved a study of antigenic variation of influenza proteins. In the earlier stages of his career he was deeply involved and responsible for the production of influenza vaccines in Norway (Norwegian Institute of Public Health, Oslo) and then became Director of the WHO National influenza Centre in Oslo.

Lars was an eminent speaker at international scientific conferences. He had a style all of his own, combining humour with scientific rigour and he was not afraid to take the scientific community to task if action was needed. Lars was acutely aware of our shortcomings in preparing for an influenza pandemic, in particular the plight of small countries with no resident vaccine producer. By bringing this to our attention, Lars has been instrumental in making available "swine flu" pandemic vaccine to countless vulnerable people over the world. Lars has successfully organised several international conferences, most notably the acclaimed series on "Immune Correlates of Protective Immunity to Influenza", the first of which was held in Bergen in 2002 and the most recent with Dr Jackie Katz as a joint organiser of an *isirv*-sponsored meeting in Miami in 2010. Lars recognised where gaps in our knowledge lay and he knew the key people and opinion leaders around the world to try to come up with answers. Lars was most recently working with Prof Emanuele Montomoli on an *isirv*-sponsored "Summer School on

Influenza" scheduled for 1-5 August 2011 in Siena, Italy. Lars was a Scientific Advisor to the Vaccine Department at the Norwegian Institute of Public Health in Oslo, served for 12 years on the Norwegian Influenza Pandemic Preparedness Committee and was a member of the ad hoc ECDC Expert Advisory Group on Human H5N1 Vaccines.

In 2002, Lars was a driving force and one of six enthusiastic founder members of *isirv*. From such small beginnings, the founding membership was expanded during 2003 when Lars helped to draft the guiding principles and mission statement of *isirv*. The inaugural meeting of *isirv* was held in September 2005. Lars was an important member of the *isirv* Board from the very beginning until his untimely death. Lars could be relied upon to come up with good ideas for the promotion of *isirv* and its activities. When *isirv* and Wiley-Blackwell created the *isirv* journal "Influenza and Other Respiratory Viruses" in January 2007, Lars became a key member of the Editorial Board and his expertise on editorial policy and on manuscript evaluation will be sorely missed.

On a personal level, we will miss Lars for his friendship, his positive approach to life, his excellent command of English which put many a native speaker to shame; his sharp wit and eloquence; his scientific integrity and innovative spirit; his courage to take on others when he saw an injustice; and lastly his free and independent spirit as exemplified by his one man stance against smoking reforms. Lars loved the outdoor life and it is fitting that he ended his days in his fishing boat in his beloved Norway. Lars is survived by his wife Vigdis, three children and five grandchildren.

Visit www.isirv.org for a full obituary.

Written by Dr John Wood, Dr Geoffrey Schild and Prof. Rebecca Cox



Call for Nomination of *isirv* Board Members and Notice of Annual General Meeting

By Dr Gavin Smith and Paul Sommerfeld

Central to the International Society for Influenza and other Respiratory Virus Diseases (*isirv*) is a desire to ensure that it be a democratic and global scientific society. Since last year the Board has reviewed our procedures and has especially looked at the process for appointment of Board members.

As a result, this year for the first time, all individual members will be asked to vote among candidates nominated. In the past, all members could nominate candidates but nominees were then voted on by the Board before being put to the annual general meeting (AGM) for approval.

isirv is registered under British law as both a charity and a 'company limited by guarantee' - a company format designed for not-for-profit organisations. As such, under Clause 9.4 of our Articles of Association (constitutional document) the Board itself must 'recommend' new Board members to the AGM for appointment.

How the Board arrives at those recommendations, however, is not stipulated. So, after taking legal advice, the current Board has agreed that a full electoral process allowing all members to vote can be used. From now on, the Board will recommend to the AGM those candidates who receive the greatest number of votes from the membership.

In order to ensure that there is also reasonable balance as regards such matters as geography, gender, and scientific interests, the Board may occasionally use its right to co-opt additional individuals but these would then sit only until the next AGM when they could stand for re-appointment.

Formal details of the Call for Nominations and the Notice of Annual General Meeting are given below:

1. **Call for Nomination of Board Members (Deadline: 7th August 2011)**

This is an invitation to you to nominate either yourself or others as candidate(s) for appointment to the Board of *isirv*. Those who are successful will serve for three years from the time of the AGM on 8th September 2011.

One third of the appointed positions on the Board of *isirv* are up for election each year. There are 7 vacancies to be filled this year.

One is due to the very sad recent death of Professor Lars Haaheim and will be to complete his term of office.

The others relate to 6 individuals whose terms of office are ending. The Rules allow them to stand for re-appointment and 4 have indicated a wish to do so. They are subject to the same election process as the other candidates.

The current Board is conscious that its membership remains predominantly drawn from Europe, North America and Australia/New Zealand, with some from Asia. It would, therefore, especially encourage nominations this year from Africa and South America.

The procedure is as follows:

- All members are invited to make nominations of individuals who are members of **isirv** to be candidates for appointment to the Board. A member may also nominate her or himself.

Please first check with anyone you intend to nominate that they are willing to serve and are already a member of **isirv**.
- To nominate either yourself or another member, simply send an email to say so **with a short biographic note (max. half a page)** to isirvlondon@btinternet.com **by midnight (UK time) on Sunday, 7th August 2011.**
Please include a statement to the effect that you have been in contact with the person you are nominating and they have confirmed their willingness to stand.
- The names and bio-notes of all nominated candidates who are members of **isirv** will be circulated to the full membership by four weeks before the AGM (details below). This year that means by 11th August 2011.
- Arrangements will be made for voting online or by email. The deadline for voting will be 2 weeks before the AGM.
- Just prior to the AGM, the Board will circulate, and recommend for appointment, the names of the 7 candidates with the greatest number of votes.
- Note that Prof. Haaheim had one year left of his term of office. Thus the person appointed this year to replace him will only sit for one year before being due for re-appointment. Among the successful candidates, that will be one with the least number of votes.

The Board has a minimum size of three and the current Board has determined that the maximum for the coming year should be 20. There are 18 appointed members plus the Journal Editor-in-Chief and the Chair of the **isirv** Antiviral Group *ex-officio*.

As regards the commitment expected of members, the Board meets roughly quarterly with most participants joining by conference call. Board members do a great deal to generate ideas for **isirv** meetings, to advise on publications and other initiatives for scientific interchange, as well as being responsible for the governance of the society.

Officer appointments (Chair, Deputy Chair, Secretary, and Treasurer) are a matter for election by Board members from among themselves. This is normally done at the first meeting of the new Board after an AGM.

2. **Notice of Annual General Meeting**

The 2011 AGM of **isirv** will take place at **13.00 British Summer Time on Thursday, 8th September 2011** by conference call.

We very much hope that you will be able to join this call and thereby contribute to the proper governance of your society.

Agenda, papers and call codes will be sent to you nearer the time.

Board Members whose terms of office end in 2011. They are eligible for re-appointment and are considered as self-nominated candidates by having indicated a wish to continue.

Prof Anne Kelso (Australia)

Dr Jim Robertson (UK)

Dr Masato Tashiro (Japan)

Dr John Wood (UK)

Deputy Chair

Continuing Board Members

Dr Reinhard Glück (India)

Dr Gregory Gray (USA)

Dr Lance Jennings (New Zealand)

Dr Jackie Katz (USA)

Treasurer

Prof Pagbajabyn Nymadawa (Mongolia)

Dr Stacey Schultz-Cherry (USA)

Dr Alan Shaw (USA)

Dr Gavin Smith (Hong Kong)

Secretary

Dr Klaus Stöhr (USA)

Dr Norio Sugaya (Japan)

Prof. John Watsion (UK)

Chair

Ex-officio Members

Dr Alan Hampson (Australia)

Editor-in-Chief of the **isirv** Journal,

Influenza and other respiratory viruses

Dr Alan Hay (United Kingdom)

Chair, **isirv** Antiviral Group

Current members not seeking re-appointment

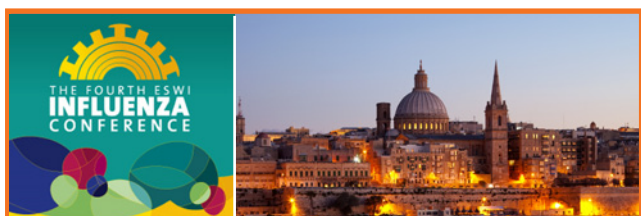
Dr Rick Bright (USA)

Dr Douglas Fleming (UK)

Deceased

Prof Lars Haaheim (Norway)

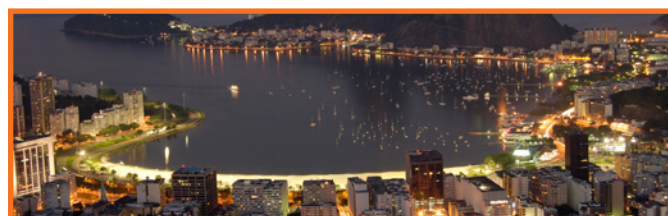
isirv Conference Activities Update



The Fourth ESWI Influenza Conference
11-14 September 2011
Malta

The fourth ESWI conference will be held at the InterContinental hotel on beautiful St. George's Bay, Malta. This year, the conference will have two clearly delineated programme tracks: a programme for public health officials, called 'Science Policy Interface' and a scientific programme. Science Policy Interface will have seven sessions on topics such as treatment and prevention of seasonal flu, animal influenza, promotion of influenza vaccination, etc. chaired by top experts in the field. The scientific programme will provide a platform to discuss the recent pandemic, advances in influenza research as well as control, prevention and treatment of influenza. In addition, the scientific programme will feature renowned keynote speakers, chairpersons and lecturers. The conference is represented by Dr Ab Osterhaus as the Conference Chair and Dr Derek Smith as the Co-Chair. Sixty scholarships are offered through the ESWI Young Scientist Fund in honour of Claude Hannoun to applicants who have held a PhD or a clinical qualification for no longer than 5 years. In addition, an award of €10,000 will go to The Best Body of Work Award winner. For more information on the abstract submission, scholarships, accommodations or to view the programme or register visit

<http://www.eswiconference.org>.



Influenza Antivirals: Efficacy and Resistance -
Extended abstract deadline
8 -10 November 2011
Rio de Janeiro (Copacabana Beach), Brazil

The deadline for abstract submission has been extended to **15th August 2011**.

Specific topics to be covered in the programme include: the available anti-influenza drugs and their use in different situations and settings; the emergence and molecular basis of resistance; surveillance and detection of resistant phenotypes and resistance mutations, especially in relation to drug use; associated studies of potential local and community spread; animal studies of virus fitness and the potential clinical/epidemiological significance of resistant mutants; new antiviral approaches and drug combinations. Register and book your accommodation as soon as possible.

The **isirv** AVG is delighted to announce that a number of bursaries are available for *Young Investigators who require financial assistance in order to attend this Conference. The bursary will cover conference registration, hotel accommodation and a contribution towards the cost of travel. *must have a PhD or clinical qualification and be less than 40 years of age.

Visit isirv.org for complete details.



Cape Town, South Africa • 5-10 September, 2013

Options VIII Update

Options for the Control of Influenza VIII will be held in beautiful Cape Town, South Africa 5-10 September 2013. The Conference Chairs are as follows:

Marc Mendelson
Conference Chairman

John Watson
Organizing Committee Deputy Chair


Neil Cameron
Organizing Committee Co-Deputy Chair

Wolfgang Preiser
Scientific Committee Deputy Chair

Stacey Schutz-Cherry
Scientific Committee Co-Deputy Chair

Watch <http://www.controlinfluenza.com> in the coming months for more information.

In the Loop



Recent publications and news items of special interest to *isirv* members

Stebbins S, Cummings D, Stark J, et al. Reduction in the Incidence of Influenza A but not Influenza B Associated with Use of Hand Sanitizer and Cough Hygiene in Schools: A Randomized Controlled Trial. *Pediatr Infect Dis J*. [Published online ahead of print 17 June 2011].

Wu W, Munday DC, Howell G, et al. Characterization of the Interaction Between Human Respiratory Syncytial Virus and the Cell Cycle in Continuous Cell Culture and Primary Human Airway Epithelial Cells. *J Virol*. [Published online ahead of print 27 July 2011].

Gong D, Farley K, White M, et al. Critical Role of SerpinB1 in Regulating Inflammatory Responses in Pulmonary Influenza Infection. *J Infect Dis*. 2011;204(4):592-600.

Saglanmak N, Andreassen V, Simonsen L, et al. Gradual Changes in the age Distribution of Excess Deaths in the Years Following the 1918 Influenza Pandemic in Copenhagen: Using Epidemiological Evidence to Detect Antigenic Drift. *Vaccine*. 2011;29 Suppl 2:B42-48.

Lam TT, Zhu H, Wang J, et al. Reassortment Events Among Swine Influenza A Viruses in China: Implications for the Origin of the 2009 Influenza Pandemic. *J Virol*. [Published online ahead of print 27 July 2011].

Chao DY, Cheng KF, Li TC, et al. Factors Associated with Infection by 2009 Pandemic H1N1 Influenza Virus During Different Phases of the Epidemic. *Int J Infect Dis*. [Published online ahead of print 16 July 2011].

Ali SA, Gern JE, Hartert TV, et al. Real-World Comparison of Two Molecular Methods for Detection of Respiratory Viruses. *Virology*. 2001;8(1):332.

***isirv* Solicits Member Input**

Do you have suggestions for recent articles that you believe your colleagues should not miss? *isirv* is asking members to submit recommendations for recently published articles of particular interest and relevance to the membership to the *isirv* Editorial Board for publication in an upcoming issue of Respiratory Virus Report. Please submit references for articles (and optional headshot) to chris.carter@meditechmedia.com. The Editorial Board welcomes all suggestions and ideas for continuing to improve and publish a newsletter that serves as a valuable means of communication and service for the *isirv* membership.

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:

Membership fees of €100 may be paid by cheque or bank transfer to the *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.