

Sheraton Grand
CHICAGO
Hotel

OPTIONS **IX** *for* THE CONTROL OF **INFLUENZA**

24–28 AUGUST 2016

FINAL
Program

CELEBRATING

10 Years



isirv

International Society for
Influenza and other
Respiratory Virus Diseases

2016.isirv.org

CSL established by Australian Government

1916

Spanish flu response

1918

Insulin

1923

Snake antivenoms

1930

Influenza virus vaccine

1942

Penicillin

1944

CSL becomes a WHO flu reference lab

1951

Blood plasma therapies

1952

Polio vaccine

1956

Asian flu pandemic response

1957

Hong Kong flu pandemic response

1968

Influenza strain reassorting begins

1973

Q fever vaccine

1989

HPV vaccine collaboration

1991

CSL becomes a WHO Flu collaborating centre

1992

CSL privatized and listed on the ASX

1994

Plasma therapies for global markets

2000

Seasonal flu vaccine for global markets

2002

CSL Behring created for plasma therapies

2004

H1N1 (Swine) flu pandemic response

2009

Novartis flu vaccine business acquired

2015

Seqirus created for influenza products

2015

Adjuvanted seasonal flu vaccine

2015

Cell-based seasonal QIV

2016

100 YEARS

and just getting started

A century ago, we made a promise to protect the health of a nation. Today that promise is stronger than ever.

Set up by the Australian Government as the Commonwealth Serum Laboratories, our first major task was to combat the deadly Spanish flu pandemic. Working with the smartest minds, we have continued the fight against influenza ever since.

Recently, we acquired the Novartis influenza vaccine business and combined it with our own to create Seqirus, a new global force in influenza.

We're now better placed than ever to protect against influenza today, prepare for the pandemic threats of tomorrow and develop innovative solutions for the future.

We are Seqirus and we're just getting started.



CELEBRATING
100
CSL™

OPTIONS IX *for* THE CONTROL OF **INFLUENZA**

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WELCOME LETTER

Dear Colleague,

On behalf of the International Society for Influenza and Other Respiratory Viral Diseases, I would like to invite you to attend *Options for the Control of Influenza IX*. This meeting, which is held once every three years, remains the largest international conference devoted exclusively to influenza prevention, control and treatment of influenza. This year, the meeting will take place at the Sheraton Grand Chicago Hotel 24-28 August 2016, in Chicago, Illinois, USA.

The 2016 Options Meeting is being planned by three Scientific Advisory Committee Work Groups: Clinical Science (Nelson Lee and Frederick Hayden, Co-Chairs), Public Health (Jonathan Van Tam and Ben Cowling, Co-Chairs) and Virology and Pathogenesis (Robert Lamb and Jackie Katz, Co-Chairs) and promises to be one of the best Options meetings to date! The meeting will have a more modular schedule so that attendees will have more choice in topics to design a meeting that will be personalized to their research and clinical interests.

The meeting will start with an opening plenary session on Wednesday, August 24th at 5pm where we will welcome Nancy Cox, past director of the Influenza Division at the Centers for Disease Control and Prevention, as our keynote speaker. Nancy's talk will explore the lessons that we have learned about influenza during her exceptional career. On Thursday, Friday and Saturday, the day will start with a single plenary session to update attendees on the current state of the art in Clinical Sciences, Public Health and Virology and Pathogenesis as it applies to influenza. The remainder of the day will be concurrent symposia and oral presentations and will finish with interactive poster sessions. The last day, Sunday, will finish with a closing plenary session that will look forward to what challenges influenza promises for the future. The full schedule is in the following pages and online at 2016.isirv.org.

The meeting will take place at an incredible facility – the hotel was used to celebrate President Obama's re-election as president. The Sheraton Grand Chicago Hotel is located right on the Chicago River and is minutes away to the incredible restaurants and shops along Michigan Avenue. The Hotel is also just a few blocks away from the world famous Navy Pier and is a short distance to such cultural landmarks as the Adler Planetarium, the Shedd Aquarium, the Field Museum and the Art Institute of Chicago. The location is perfect for exploring the incredible food, architecture, music and sites that Chicago has to offer. A useful resource for planning your free time is available online at www.choosechicago.com.

Thanks to a grant from the Bill & Melinda Gates Foundation, we will be offering support for individuals from low and middle income countries to attend the meeting.

I look forward to welcoming you to the incredible city of Chicago to attend the *Options IX for the Control of Influenza* meeting 24 – 28 August, 2016!

Sincerely,



Michael G. Ison, MD MS

Associate Professor, Divisions of Infectious Diseases & Organ Transplantation
Northwestern University Feinberg School of Medicine
Chair, *Options IX for the Control of Influenza*
Chicago, Illinois, USA 24-28 August 2016



SCHEDULE OF ACTIVITIES

All activities will take place in the Sheraton Grand Chicago Hotel unless otherwise listed.

On-site Registration Hours

Room Location: Chicago Promenade, Level 4

24 August 2016	11:00 AM – 7:30 PM
25-27 August 2016	6:30 AM – 7:30 PM
28 August 2016	6:30 AM – 3:00 PM

Exhibitor Registration Hours

Room Location: Chicago Promenade, Level 4

24-27 August 2016	8:00 AM – 7:30 PM
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Speaker Ready Room Hours

Room Location: Gold Coast, Level 3

24 August 2016	2:00 PM – 6:30 PM
25-27 August 2016	6:30 AM – 6:30 PM
28 August 2016	6:30 AM – 2:00 PM

Exhibit Hours

Room Location: River Exhibit Hall A & B, Level 1

24 August 2016	6:30 PM – 7:30 PM
25 August 2016	10:30 AM – 12:30 PM 3:30 PM – 7:30 PM
26 August 2016	10:30 AM – 12:30 PM 3:30 PM – 7:30 PM
27 August 2016	10:30 AM – 12:30 PM 3:30 PM – 7:30 PM

Special Events in the Exhibit Hall

Room Location: River Exhibit Hall A & B, Level 1

24 August 2016	Welcome Reception	6:30 PM – 7:30 PM
25 August 2016	Morning Coffee Break	10:30 AM – 11:00 AM
	Afternoon Coffee Break	4:00 PM – 4:30 PM
	Poster Session I with Presenters in Attendance and Rapid Oral Session	6:00 PM – 7:30 PM
26 August 2016	Morning Coffee Break	10:45 AM – 11:15 AM
	Afternoon Coffee Break	4:00 PM – 4:30 PM
	Poster Session II with Presenters in Attendance and Rapid Oral Session	6:00 PM – 7:30 PM
27 August 2016	Morning Coffee Break	10:30 AM – 11:00 AM
	Afternoon Coffee Break	4:00 PM – 4:30 PM
	Poster Session III with Presenters in Attendance	6:00 PM – 7:30 PM

Poster Sessions (Presenters in Attendance)

Room Location: River Exhibit Hall A & B, Level 1

25 August 2016	Poster Session I with Presenters in Attendance and Rapid Oral Session	6:00 PM – 7:30 PM
26 August 2016	Poster Session II with Presenters in Attendance and Rapid Oral Session	6:00 PM – 7:30 PM
27 August 2016	Poster Session III with Presenters in Attendance	6:00 PM – 7:30 PM

Schedule of Social Activities

Room Location: River Exhibit Hall A & B, Level 1

24 August 2016	Welcome Reception	6:30 PM – 7:30 PM
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MYSTIC BLUE BOAT CRUISE

27 August 2016	Off-site – Mystic Blue Boat Cruise	7:45 PM – 11:30 PM
	Location: 600 E Grand Avenue Chicago, IL 606	

Join your Options IX colleagues for a fun evening on the Mystic Blue Boat Cruise. The Mystic Blue boasts the biggest panoramic windows on Lake Michigan with unbelievable views of the Chicago skyline. Taste the flavors of delicious contemporary dishes from the buffet-style menu. Experience Chicago's trendy downtown scene while departing from the famous Navy Pier. Dance the night away with DJ entertainment, and network with colleagues. Don't miss out on this fun evening, especially the city fireworks display!

This is a ticketed event. Entry will only be granted to attendees that purchase tickets in advance in addition to Options IX registration. Please note that there is limited ticket availability for this event. No entry is permitted without a ticket. Transportation is not provided to this event. Walking directions will be provided onsite at Options IX registration.

Cruise boarding will start promptly at 7:45 PM and end at 8:30 pm.

Attire: Business Casual

***Guest registration allows entrance into the Welcome Reception and to the Off-site Event Mystic Blue Boat Cruise.**

COMMITTEES

OPTION IX LOCAL ORGANIZING COMMITTEE

Michael G. Ison, MD, MS–Chairperson, Options IX for the Control of Influenza

Infectious Diseases and Organ Transplantation
Northwestern University
Feinberg School of Medicine
Chicago, Illinois, USA

Lance Jennings, QSO, PhD–Co-Chairperson

Canterbury Laboratories
Christchurch, New Zealand

Pedro C. Avilla, MD

Allergy and Immunology
Northwestern University
Feinberg School of Medicine
Chicago, Illinois, USA

Regina Dutkowski, PhD

Chief Development Officer
D3 Medicine
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Influenza Division
US Centers for Disease Control
Atlanta, Georgia, USA

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Influenza Division
National Institute of Allergies and Infectious Diseases
Rockville, Maryland, USA

Kathy Neuzil, MD, MPH

Center for Vaccine Development
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Baltimore, Maryland, USA

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Salt Lake City, Utah, USA

Jane Ryan, PhD

Melbourne, Australia

Stacey L. Schultz-Cherry, PhD

Infectious Diseases
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Memphis, Tennessee, USA

Richard J. Whitley, MD

Pediatrics
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Birmingham, Alabama, USA

Richard G. Wunderink, MD

Professor, Medicine–Pulmonary
Northwestern University
Feinberg School of Medicine
Chicago, Illinois, USA

Melissa S. Willis, PhD

Chief, Influenza Therapeutics, Influenza Division
Biomedical Advanced Research and Development Authority (BARDA)
Office of the Assistant Secretary for Preparedness and Response (ASPR)
U. S. Department of Health and Human Services (DHHS)
Washington, DC, USA

SCIENTIFIC ADVISORY EXECUTIVE COMMITTEE

Robert Lamb, PhD ScD–Chairperson

Northwestern University
Evanston, Illinois, USA

Ben Cowling, PhD

Professor
The University of Hong Kong
Pokfulam, Hong Kong SAR, China

Frederick Hayden, MD

Infectious Diseases
University of Virginia
Charlottesville, Virginia, USA

Jackie Katz, PhD

US Centers for Disease Control and Prevention
Atlanta, Georgia, USA

Nelson Lee, MD

Infectious Diseases
Chinese University of Hong Kong
Hong Kong SAR, China

CLINICAL SCIENCE WORKGROUP

Nelson Lee, MD–Workgroup Chairperson

Infectious Diseases
Chinese University of Hong Kong
Hong Kong SAR, China

Frederick Hayden, MD–Workgroup Co-Chairperson/Board Liaison

Infectious Diseases
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Perth, Australia

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Public Health
Public Health England
London, UK

PUBLIC HEALTH WORKGROUP

Jonathan Van Tam, MD, PhD–Workgroup Chairperson

University of Nottingham
Nottingham, UK

Ben Cowling, PhD–Workgroup Co-Chairperson/Board Liaison

Professor
The University of Hong Kong
Pokfulam, Hong Kong SAR, China

Udo Buckholz

Robert Koch Institut
Berlin, Germany

Cheryl Cohen

National Institute for Communicable Diseases
Johannesburg, South Africa

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EpiConcept
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Atlanta, Georgia, USA

Marilda Sequiera

Fio Cruz
Rio de Janeiro, Brazil

Cecile Viboud

Fogarty International Center
National Institutes of Health
Bethesda, Maryland, USA

VIROLOGY AND PATHOGENESIS WORKGROUP

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Jackie Katz, PhD –Workgroup Co-Chairperson/Board Liaison

US Centers for Disease Control and Prevention
Atlanta, Georgia, USA

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Associate Professor
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Wendy Barclay, PhD

Imperial College
London, UK

Paul Digard, PhD

The Roslin Institute
University of Edinburgh
Edinburgh, UK

Gülsah Gabriel, PhD

University of Hamburg
Hamburg, Germany

Aeron Hurt, PhD

Deputy Director
WHO Collaborating Centre for Reference and Research on Influenza
Victorian Infectious Disease Reference Laboratory (VIDRL) at Peter Doherty Institute
Melbourne, Australia

Yoshihiro Kawaoka, DVM, MS, PhD

University of Wisconsin
Madison, Wisconsin, USA
University of Tokyo
Tokyo, Japan

Julie McAuley, PhD

University of Melbourne
Melbourne, Australia

Leo Poon, DPhil

University of Hong Kong
Hong Kong SAR, China

Patrick Wilson, PhD

University of Chicago
Chicago, Illinois, USA



OPTIONS IX SUPPORTERS

ISIRV WOULD LIKE TO THANK THE FOLLOWING ORGANIZATIONS FOR THEIR SUPPORT OF THE OPTIONS IX FOR THE CONTROL OF INFLUENZA CONFERENCE:

Travel Fellowship Award

BILL & MELINDA
GATES *foundation*

Platinum Supporter



Silver Supporter



Bronze Supporter

JANSSEN PHARMACEUTICALS
QUIDEL CORPORATION
ROMARK LC

Thanks for the generous support of the



GENERAL INFORMATION

What is ISIRV?

The International Society for Influenza and Other Respiratory Virus Diseases (ISIRV) is an independent and international scientific professional society promoting the prevention, detection, treatment, and control of influenza and other respiratory virus diseases.

For more information, visit www.isirv.org

Options for the Control of Influenza Conference

The Society has lead responsibility for organizing the largest international conference exclusively devoted to influenza prevention, control and treatment, including seasonal flu and pandemic preparedness, the ***Options for the Control of Influenza Conference***, which takes place every 3 to 4 years.

Who Should Attend

Options IX is the premier conference designed for leading virologists, infectious diseases, pulmonary/critical care specialist and other clinicians, scientists, public health and epidemiology researchers and specialists, health care policy makers and government and non-government agency staff.

Target Audience

- » Clinicians
- » Concerned business leaders
- » Epidemiologists
- » Government officials
- » Health education specialists
- » Healthcare policy makers
- » Medical and scientific media
- » Physicians
- » Public health specialists
- » Researchers
- » Scientists
- » Vaccine experts

Objectives

- » Provide comprehensive, state-of-the art scientific information for all disciplines involved in influenza prevention, control, and treatment, including seasonal and pandemic planning.
- » Promote genuine international and multidisciplinary collaboration supporting the full spectrum of influenza research, from basic science to the development of new vaccines and antiviral agents, to epidemiology and control programs.

- » Provide a collegial atmosphere where scientists working in both public health and agricultural/veterinary agencies may exchange information to develop collaborative approaches to the control and prevention of pandemic influenza.
- » Maximize the opportunities for informal discussions and exchange of ideas between representatives of government agencies, academia, and industry.

Continuing Medical Education

Options IX offers CME to eligible participants.

For more information regarding CME, please visit 2016.isirv.org/continuing-education.

What's Included with Registration

Full Conference, Student, Press & One-Day Pass Badges permits access to the Keynote lecture, Plenary Sessions, Featured Symposia, Poster Receptions and all Exhibit Hall events. Along with your badge, all will receive a conference bag, conference lanyard, conference program, with a notebook and pen.

Accompanying Guest Badge holders will have access into the Welcome Reception in the Exhibit Hall and to the Off-site Event Mystic Blue Boat Cruise. Accompanying guests will not have access to the Keynote lecture, Plenary Sessions, Featured Symposia, Poster Receptions, or any other sessions within the conference. Accompanying guests will not receive a conference bag or conference program, or notebook and pen.

Exhibitor Badge holders will have access to the Exhibit Hall only. Exhibitor Badge holders will not have access to the Keynote lecture, Plenary Sessions, Featured Symposia, or any other sessions within the conference.



Food and Beverage functions included with conference registration.

WEDNESDAY, AUGUST 24, 2016

- Welcome Reception in the Exhibit Hall, 6:30 pm – 7:30 pm

THURSDAY, AUGUST 25, 2016

- AM Coffee Break in the Exhibit Hall, 10:30 am – 11:00 am
- PM Coffee Break in the Exhibit Hall, 4:00 pm – 4:30 pm
- Poster Session I in the Exhibit Hall, 6:00 pm – 7:30 pm

FRIDAY, AUGUST 26, 2016

- AM Coffee Break in the Exhibit Hall, 10:45 am – 11:15 am
- PM Coffee Break in the Exhibit Hall, 4:00 pm – 4:30 pm
- Poster Session II in the Exhibit Hall, 6:00 pm – 7:30 pm

SATURDAY, AUGUST 27, 2016

- AM Coffee Break in the Exhibit Hall, 10:30 am – 11:00 am
- PM Coffee Break in the Exhibit Hall, 4:00 pm – 4:30 pm
- Poster Session III in the Exhibit Hall, 6:00 pm – 7:30 pm

SUNDAY, AUGUST 28, 2016

- AM Coffee Break, 10:30 am – 11:00 am
- Boxed Lunch, 12:30 pm – 1:00 pm

Mobile Application

Options IX has designed a mobile application that includes all program information and abstracts. Easily access sessions, speakers, exhibitors and organizer messages.

How to Download

iOS App Store

1. On your device, open the App Store app
2. Search for **Event Pilot Conference App**
3. Download and Open
4. Enter the Event Code all in CAPS and Click on Find Event: **ISIRVOPTIONSIX**
5. You will need to click on the “Event Pilot” application icon when you want to access the information.

Android Google Play or Amazon App Store

1. On your device, open the Android Market app
2. Search for **Event Pilot Conference App**
3. Download and Open
4. Enter the Event Code all in CAPS and Click on Find Event: **ISIRVOPTIONSIX**
5. You will need to click on the “Event Pilot” application icon when you want to access the information.

Conference App Tips

- Explore everything the app has to offer - simply try out all the buttons to see what they do.
- Use filters to only see items that are pertinent to you. Be sure to turn the filter back off in order to view the full conference schedule.
- Check the visual schedule for empty time blocks to maximize your time at Options IX.

Free Wifi Access

Free WIFI access is available to allow Options IX attendees the ability to download and use the conference mobile application.

In order to connect, click on **ISIRV2016**.

Enter the password in all lowercase type: **optionsix**

Free WIFI access is available to Options IX attendees in the following areas:

- Sheraton Chicago Ballroom 4,5,6,7
- Chicago Ballroom 8,9
- Chicago Ballroom 10
- Chicago Promenade

SPONSORED SATELLITE SYMPOSIA

There are a number of satellite symposia and/or events taking place during Options IX. These are open to all attendees of Options IX, and there is no separate registration fee to attend. Although not directly affiliated with Options IX, we urge you to attend and support these additional educational opportunities.

Lunch will be provided on a first come first serve basis.

Dissecting the Influenza Challenge: Perspectives on Prevention and Management

Supported by Seqirus

Location: Sheraton Grand Hotel, Sheraton Chicago Ballroom 4, 5, 6, 7

Date: Thursday, August 25, 2016

Time: 12:30 pm–2:00 pm

Influenza Vaccination in Children – Costs and Benefits

Supported by AstraZeneca

Location: Sheraton Grand Hotel, Sheraton Chicago Ballroom 4, 5, 6, 7

Date: Friday, August 26, 2016

Time: 12:30 pm–2:00 pm

Respiratory Syncytial Virus: An Underrecognized Health Burden in Older Adults

Supported by Novavax

Location: Sheraton Grand Hotel, Sheraton Chicago Ballroom 4, 5, 6, 7

Date: Saturday, August 27, 2016

Time: 12:30 pm–2:00 pm

AWARD INFORMATION

Travel Fellowship Awards

BILL & MELINDA GATES *foundation*

The Options IX for the Control of Influenza conference is pleased to announce that the Bill & Melinda Gates Foundation has supported fellows from economically disadvantaged areas to attend the Options IX conference.

Dwi Agustian
Indonesia

Oksana Artemchuk
Ukraine

Gisela Barrera
Mexico

Golubinka Boshevska
Macedonia

Sukanta Chowdhury
Bangladesh

Ulziimaa Daramragchaa
Mongolia

Ragai Fouda
Egypt

Mai Le thi Quynh
Vietnam

Florence Max-Macarthy
Sierra Leone

Barbara Namagambo
Uganda

Richard Njouom
Cameroon

Diep Nguyen Thi
Vietnam

Suset Orepesa
Cuba

Gloria Ramirz-Nieto
Colombia

Naila Siddique
Pakistan

Francis Termeteet
Palau

Mesfin Tsegaye
Ethiopia

Bishnu Prasad
Nepal

Cynthia Vazquez
Paraguay

Mame Mbayame Ndiaye-Niang
Senegal





ABOUT CHICAGO

As the third-largest city in the country, Chicago has a ton to offer you while visiting. Chicago is situated squarely in the center of the country and is accessible from virtually anywhere. A big part of what makes Chicago so picturesque is Lake Michigan. Relax along the 18 miles of Lakefront Path and/or enjoy the 15 miles of sandy beaches. Root for one of the incredible professional sports teams. Enjoy the beautiful views of Lake Michigan. Or, simply sit in one of the many city parks for lunch. More information on public transportation and getting to Chicago by plane can be found by visiting <http://2016.isirv.org/location>.

Meeting Location

Sheraton Grand Chicago
301 E. North Water Street
Chicago, IL, USA

The great location of Sheraton Grand Chicago puts you in the heart of the city and offers views of the river and lake. Directly on the riverfront, the hotel is within walking distance of Navy Pier, Millennium Park and Michigan Avenue. Chic but not fussy, the downtown hotel has everything you need to be comfortable and productive. There are six fine dining options with a brand-new patisserie.

Attractions near the Sheraton Grand Chicago Hotel

ARTS & CULTURE

- Art Institute of Chicago 0.9 km/0.6 miles
- Field Museum of Natural History 1.6 km/1.0 miles
- Adler Planetarium 3.2 km/2.0 miles
- The Museum of Science and Industry 8.0 km/5.0 miles

RECREATION

- Architectural River Tours 0.2 km/0.1 miles
- Navy Pier 0.3 km/0.2 miles
- Grant Park/Buckingham Fountain 1.6 km/1.0 miles
- Buckingham Fountain 1.6 km/1.0 miles
- Lincoln Park 3.2 km/2.0 miles
- Shedd Aquarium 3.2 km/2.0 miles
- Soldier Field (Home of the Chicago Bears) 3.2 km/2.0 miles
- United Center (Home of Chicago Bulls/Blackhawks) 4.8 km/3.0 miles
- U.S. Cellular Field (Home of the Chicago White Sox) 9.6 km/6.0 miles
- Wrigley Field (Home of the Chicago Cubs) 11.3 km/7.0 miles

SHOPPING

- Michigan Avenue/The Magnificent Mile 0.1 km/0.1 miles
- American Girl Place 0.5 km/0.3 miles
- Merchandise Mart 1.6 km/1.0 miles



SCHEDULE AT A GLANCE

WEDNESDAY | 24 AUGUST 2016

5:00 pm - 5:15 pm	Welcome from the ISIRV President
5:15 pm - 5:30 pm	Welcome from Options Organizing Chair
5:30 pm - 6:30 pm	Keynote Address
6:30 pm - 7:30 pm	Welcome Reception in the Exhibit Hall

THURSDAY | 25 AUGUST 2016

8:30 am - 10:30 am	Morning Plenary Session – Public Health Focus
10:30 am - 11:00 am	Coffee Break in the Exhibit Hall
11:00 am - 12:30 pm	Concurrent Oral Abstract Sessions
12:30 pm - 2:00 pm	Sponsored Lunch Symposium
2:00 pm - 4:00 pm	Concurrent Featured Symposia
4:00 pm - 4:30 pm	Coffee Break in the Exhibit Hall
4:30 pm - 6:00 pm	Concurrent Oral Abstract Sessions
6:00 pm - 7:30 pm	Poster Reception I with Presenters in Attendance and Rapid Oral Session

FRIDAY | 26 AUGUST 2016

8:00 am - 10:00 am	Morning Plenary Session – Virology & Pathogenesis Focus
10:00 am - 10:45 am	ISIRV General Meeting
10:45 am - 11:15 am	Coffee Break in the Exhibit Hall
11:15 am - 12:30 pm	Concurrent Oral Abstract Sessions
12:30 pm - 2:00 pm	Sponsored Lunch Symposium
2:00 pm - 4:00 pm	Concurrent Featured Symposia
4:00 pm - 4:30 pm	Coffee Break in the Exhibit Hall
4:30 pm - 6:00 pm	Concurrent Oral Abstract Sessions
6:00 pm - 7:30 pm	Poster Reception II with Presenters in Attendance and Rapid Oral Session

SATURDAY | 27 AUGUST 2016

8:30 am - 10:30 am	Morning Plenary Session – Clinical Science Focus
10:30 am - 11:00 am	Coffee Break in the Exhibit Hall
11:00 am - 12:30 pm	Concurrent Oral Abstract Sessions
12:30 pm - 2:00 pm	Sponsored Lunch Symposium
2:00 pm - 4:00 pm	Concurrent Featured Symposia
4:00 pm - 4:30 pm	Coffee Break in the Exhibit Hall
4:30 pm - 6:00 pm	Oral Abstract Session - Virology & Pathogenesis Focus
4:30 pm - 6:00 pm	Public Health/Clinical Science Pregnancy Symposium
6:00 pm - 7:30 pm	Poster Reception III with Presenters in Attendance
7:45 pm - 11:30 pm	Off-site Event - Mystic Blue Boat Cruise

SUNDAY | 28 AUGUST 2016

8:30 am - 10:30 am	Concurrent Featured Symposia
10:30 am - 11:00 am	Coffee Break
11:00 am - 12:30 pm	Concurrent Oral Abstract Sessions
12:30 pm - 1:00 pm	Lunch Break
1:00 pm - 3:00 pm	Closing Plenary Session

SCIENTIFIC PROGRAM

24 AUGUST 2016 WEDNESDAY

5:00 pm – 6:30 pm Opening Plenary Session

Moderators: Michael Ison, MD, MS and Lance Jennings, QSO, PhD

Room Location: Sheraton Chicago Ballroom 4, 5, 6, 7, Level 4

5:00 pm – 5:15 pm Welcome from ISIRV President
Lance Jennings, QSO, PhD
Canterbury Laboratories
Christchurch, New Zealand

5:15 pm – 5:30 pm Welcome from Options Organizing Chair
Michael Ison, MD, MS
Infectious Diseases and Organ Transplantation
Northwestern University Feinberg School of Medicine
Chicago, IL, United States

5:30 pm – 6:30 pm Opening Plenary Session: Keynote Address
Nancy Cox, PhD
Past Director of the Influenza Division at the Centers for Disease Control and Prevention (CDC) and Director of CDC's World Health Organization (WHO) Collaborating Center for Surveillance, Epidemiology and Control of Influenza

6:30 pm – 7:30 pm Welcome Reception in the Exhibit Hall

Room Location: River Hall A & B, Level 1

25 AUGUST 2016 THURSDAY

8:00 am – 8:30 am Late Breaking Oral Abstract Session: Public Health

Moderators: Ben Cowling, BSc, PhD and Jonathan Nguyen-Van-Tam, DM, FRCPATH

Room Location: Sheraton Chicago Ballroom 4, 5, 6, 7, Level 4

8:00 am – 8:15 am Burden of seasonal influenza in pregnant women (Abstract#LBO-4)
Annette Regan
Wesfarmers Centre for Vaccines and Infectious Diseases, Telethon Kids Institute
Bicton, Australia ▲

8:15 am – 8:30 am

How and where influenza kills: Using modelling and linked data to partition influenza deaths into useful categories (**Abstract #LBO-5**)
Michael Baker
University of Otago
Wellington, New Zealand ▲

8:30 am – 10:30 am Public Health Plenary Session: Addressing the Public Health Threat of Influenza: Recognition, Prevention and Treatment ▲

Moderators: Ben Cowling, BSc, PhD and Jonathan Nguyen-Van-Tam, DM, FRCPATH

Room Location: Sheraton Chicago Ballroom 4, 5, 6, 7, Level 4

8:30 am – 9:10 am Outbreak and Pandemic Response: Role of Antivirals
Nahoko Shindo, MD, PhD
World Health Organization
Geneva, Switzerland ▲

9:10 am – 9:50 am Exposure to Influenza in the Healthcare Environment
Werner Bischoff, MD, PhD, Wake Forest University School of Medicine
Salem, NC, United States ▲

9:50 am – 10:30 am The Market as an Influenza Risk Factor: The Animal Human Interface
Yuelong Shu, PhD
Chinese National Influenza Center
National Institute for Viral Disease Control and Prevention
Beijing, China ▲

10:30 am – 11:00 am Coffee Break in the Exhibit Hall

Room Location: River Hall A & B, Level 1

11:00 am – 12:30 pm Oral Abstract Sessions

11:00 am – 12:30 pm Oral Abstract Session: Public Health ▲

Moderators: Udo Buchholz, MD, MPH and Michael Cooper, PhD

Room Location: Sheraton Chicago Ballroom 4, 5, 6, 7, Level 4

11:00 am – 11:15 am Estimates of Global Seasonal Influenza-associated Respiratory Deaths (Abstract #O-7)
A. Danielle Iuliano
Centers for Disease Control and Prevention
Atlanta, GA, United States ▲

11:15 am – 11:30 am Estimating the Global Number Of Deaths Due to Seasonal Influenza: The WHO-Funded Glamor Project (Abstract #O-8)
John Paget
Netherlands Institute for Health Services Research (NIVEL)
Utrecht, The Netherlands ▲



11:30 am – 11:45 am The Epidemiological Characteristics of Influenza B Based on Surveillance Data from 30 Countries Around the World: Findings from the Global Influenza B Study **(Abstract #O-9)**
Saverio Caini
Netherlands Institute for Health Services Research (NIVEL)
Utrecht, The Netherlands ▲

11:45 am – 12:00 pm Systematic Assessment of Multiple Routine and Near-Real Time Indicators to Classify the Severity of Influenza Seasons in the United States, 2002-03 Through 2014-2015 **(Abstract #O-10)**
Matthew Biggerstaff
Centers for Disease Control and Prevention
Atlanta, GA, United States ▲

12:00 pm – 12:15 pm A Systematic Review of Studies of Influenza-Associated Mortality **(Abstract #O-11)**
Li Li
The University of Hong Kong
Hong Kong, China ▲

12:15 pm – 12:30 pm How Effective Was the Real-Time Monitoring of Laboratory-Confirmed Deaths During the 2009 Pandemic? A Global Assessment **(Abstract #O-12)**
John Paget
Netherlands Institute for Health Services Research (NIVEL)
Utrecht, The Netherlands ▲

11:00 am – 12:30 pm Oral Abstract Session: Virology & Pathogenesis ●
Moderators: *Justin Bahl, PhD and Erhard Van der Vries, PhD*
Room Location: Chicago Ballroom 8 & 9, Level 4

11:00 am – 11:15 am Role of Neuraminidase in Influenza A(H7N9) Receptor Binding **(Abstract #O-13)**
Donald Benton
The Francis Crick Institute
London, United Kingdom ●

11:15 am – 11:30 am The Avian Influenza A Virus PB1 Gene in the 1968 Pandemic H3N2 Virus Has Evolved Codon Usage Over Time to Match Interferon-Altered Transfer RNA Pools in Human Cells **(Abstract #O-108)**
Robert Krug
University of Texas at Austin
Austin, TX, United States ●

11:30 am – 11:45 am The Dual Roles of the HA Segment-Specific Noncoding Nucleotides in the Extended Duplex Region of the Influenza A Virus RNA Promoter **(Abstract #O-18)**
Tao Deng
Institute of Pathogen Biology, Chinese Academy of Medical Sciences
Beijing, China ●

11:45 am – 12:00 pm Involvement of CLUH in the Subnuclear Transport of Influenza Progeny Ribonucleoprotein Complexes **(Abstract #O-15)**
Tomomi Ando
The Institute of Medical Science, The University of Tokyo
Tokyo, Japan ●

12:00 pm – 12:15 pm Transcriptional Hub-Bottleneck Nodes Regulate the Host Response to Influenza A Virus Infection **(Abstract #O-16)**
Amie Eissfeld
University of Wisconsin-Madison
Madison, WI, United States ●

12:15 pm – 12:30 pm Incorporation of The Influenza A Virus NA Segment Does Not Require Homologous Non-Coding Sequences **(Abstract #O-17)**
Sylvie van der Werf
Institut Pasteur
Paris, France ●

11:00 am – 12:30 pm Oral Abstract Session: Clinical Science ■
Moderators: *Jane Ryan, PhD and Norio Sugaya, MD, PhD*
Room Location: Chicago Ballroom 10, Level 4

11:00 am – 11:15 am Impact Of Outpatient Neuraminidase Inhibitor Treatment in Patients Infected with Influenza A(H1N1)pdm09 at High Risk of Hospitalisation: An IPD Analysis **(Abstract #O-1)**
Sudhir Venkatesan
University of Nottingham
Nottingham, United Kingdom ■

11:15 am – 11:30 am Clinical And Virological Outcomes Upon Emergence of Oseltamivir-Resistant Influenza A Viruses in Treated Individuals: The IRIS Study **(Abstract #O-2)**
Rueshandra Roosenhoff
Erasmus MC
Utrecht, The Netherlands ■

- 11:30 am – 11:45 am Oseltamivir Treatment to Reduce Influenza Illness Duration and Virus Shedding by Virus Type and Subtype: Dhaka, Bangladesh, May 2008 To December 2010 **(Abstract #O-3)**
Fiona Havers
Centers for Disease Control and Prevention
Atlanta, GA, United States ■
- 11:45 am – 12:00 pm IFITM3, TLR3 And CD55 Single-Nucleotide Polymorphisms (Snps) Predict Severe Outcomes in Chinese Patients with Influenza **(Abstract #O-4)**
Nelson Lee
The Chinese University of Hong Kong
Hong Kong, China ■
- 12:00 pm – 12:15 pm Influenza-Associated Hospitalizations Identified Through Surveillance for Severe Acute Respiratory Illness in Minnesota, 2013-2015 **(Abstract #O-5)**
Ashley Fowlkes
Epidemiology and Prevention Branch, Influenza Division, Centers for Disease Control and Prevention
Atlanta, GA, United States ■
- 12:15 pm – 12:30 pm Peramivir Susceptibility of Influenza A And B Neuraminidase Variants Selected Under Pressure with Neuraminidase Inhibitors **(Abstract #O-6)**
Guy Boivin
Laval University
Quebec, Canada ■
- 12:30 pm – 2:00 pm Sponsored Lunch Symposium: Dissecting the Influenza Challenge: Perspectives on Prevention and Management**
Sponsored by Seqirus
- Room Location: Sheraton Chicago Ballroom 4, 5, 6, 7, Level 4

2:00 pm – 4:00 pm Featured Symposia

2:00 pm – 4:00 pm Clinical Science Featured Symposia: Diagnostic and Monitoring Tools in the Clinical Setting ■

Moderators: *Rich Wunderink, MD and David Smith, MBBS, FRCPA*

Room Location: Chicago Ballroom 10, Level 4

- 2:00 pm – 2:30 pm Rapid Diagnosis for Influenza and Other Respiratory Viruses
Maria Zambon, BSc, PhD
Public Health England
London, United Kingdom ■
- 2:30 pm – 3:00 pm Role of Biomarkers (Differentiating Viral From Bacterial/Mixed Infections)
Ann Falsey, MD
University of Rochester School of Medicine
Rochester, NY, United States ■
- 3:00 pm – 3:30 pm Detection of Antiviral Resistance
Aeron Hurt, PhD
WHO Collaborating Centre for Reference and Research on Influenza, Melbourne
Melbourne, Victoria, Australia ■
- 3:30 pm – 4:00 pm Prognostic Indicators in Severe Influenza
William Jake Dunning, MRCP, PhD
Public Health England
London, United Kingdom ■

2:00 pm – 4:00 pm Public Health Featured Symposia: Pandemic Preparedness ▲

Moderators: *Dan Jernigan, MD, MPH and Peter Horby, MD, PhD*

Room Location: Sheraton Chicago Ballroom 4, 5, 6, 7, Level 4

- 2:00 pm – 2:30 pm Pandemic Planning – *Where are We?*
Wenqing Zhang, MD
World Health Organization ▲
Geneva, Switzerland
- 2:30 pm – 3:00 pm Effectiveness of Antivirals
Jonathan Nguyen-Van-Tam, DM, FRCPATH
University of Nottingham, School of Medicine
Nottingham, United Kingdom ▲



3:00 pm – 3:30 pm Pandemic and Pre-pandemic Vaccines, Where Are We Now?
Rick A. Bright, PhD HHS/OS/ASPR/BARDA
Washington DC, United States ▲

3:30 pm – 4:00 pm Implementation and Impact of Non-Pharmaceutical Interventions in the 20th Century Pandemics
Amra Uzicanin, MD, MPH
Centers for Disease Control and Prevention (CDC)
Atlanta, GA, United States ▲

2:00 pm – 4:00 pm Virology & Pathogenesis Featured Symposia: Virus Host-Cell Interactions ●

Moderators: *Stacey Schultz-Cherry, PhD and Wendy Barclay, MA, PhD*

Room Location: Chicago Ballroom 8 & 9, Level 4

2:00 pm – 2:30 pm Antiviral Innate Immune Responses to Influenza Viruses
Adolfo Garcia-Sastre, PhD
Icahn School of Medicine at Mount Sinai
New York, NY, United States ●

2:30 pm – 3:00 pm Influenza A Virus Uncoating Mechanisms
Yohei Yamauchi, MD PhD
University of Zurich
Zurich, Switzerland ●

3:00 pm – 3:30 pm IFITM3 Restriction of Viral Replication
Abraham Brass, MD PhD
University of Massachusetts Medical School
Newton, MA, United States ●

3:30 pm – 4:00 pm Influenza Virus Interference with Innate Immunity
Christina Ehrhardt, PhD
Westfaelische Wilhelms-University Muenster / Institute of Molecular Virology
Muenster, North Rhine-Westphalia, Germany ●

4:00 pm – 4:30 pm Coffee Break in the Exhibit Hall

Room Location: River Hall A & B, Level 1

4:30 pm – 6:00 pm Oral Abstract Sessions

4:30 pm – 6:00 pm Oral Abstract Session: Public Health I ▲

Moderators: *Rebecca Cox, PhD and Vernon Lee, MBBS, PhD*

Room Location: Sheraton Chicago Ballroom 4, 5, 6, 7, Level 4

4:30 pm – 4:45 pm Comparison of Epidemiological and Genomic Approaches for Determining Nosocomial Influenza Transmission Chains
(Abstract #O-19)
Ruth Blackburn
University College London
London, Great Britain ▲

4:45 pm – 5:00 pm Seasonal Forces and Influenza Virus Transmission Dynamics in Hong Kong **(Abstract #O-20)**
Sheikh T. Ali
The University of Hong Kong
Hong Kong, Hong Kong ▲

5:00 pm – 5:15 pm Inferring Influenza Epidemic Dynamics in the Presence of Stratified Immunity
(Abstract #O-21)
Hsiang-yu Yuan
Imperial College London
London, Great Britain ▲

5:15 pm – 5:30 pm Monitoring Influenza Infection: Serosurveillance Using an Annual, Nationally Representative Rolling Survey **(Abstract #O-22)**
Ellen Fragaszy
University College London, Farr Institute of Health Informatics Research
London, Great Britain ▲

5:30 pm – 5:45 pm Age Structure of Influenza A(H1N1) Pdm09 Virus Infections During the Years 2009 - 2016, Norway **(Abstract #O-23)**
Olav Hungnes
Norwegian Inst. of Public Health
Oslo, Norway ▲

5:45 pm – 6:00 pm The Consortium for the Standardization of Influenza Seroepidemiology (CONSIDE) **(Abstract #O-24)**
Maria Van Kerkhove
Institut Pasteur
Paris, France ▲

4:30 pm – 6:00 pm Oral Abstract Session: Public Health II ▲

Moderators: *John Watson, MD, FRCP and Hitoshi Oshitani, MD, PhD*

Room Location: Chicago Ballroom 10, Level 4

4:30 pm – 4:45 pm Incidence of Influenza and Influenza Re-infection in a Cohort of Nicaraguan Children
(Abstract #O-25)
Aubree Gordon
University of Michigan
Ann Arbor, United States ▲

4:45 pm – 5:00 pm Influenza Virus Infections and Immunity in a Cohort Of School-Age Children Over a 5-Year Period
(Abstract #O-26)
Benjamin Cowling
The University of Hong Kong
Pokfulam, Hong Kong ▲

5:00 pm – 5:15 pm Epidemiology and Immunology of Influenza B Lineage Infections in Households **(Abstract #O-27)**
Hoa Le
Oxford University Clinical Research Unit and Wellcome Trust Major Overseas Programme
Hanoi, Vietnam ▲

5:15 pm – 5:30 pm Individual and Population Trajectories of Influenza Antibody Titers Over Multiple Seasons in Tropical Singapore
(Abstract #O-28)
Xiahong Zhao
Saw Swee Hock School of Public Health, National University of Singapore
Singapore ▲

5:30 pm – 5:45 pm Influenza Virus in Respiratory Droplets from Humans with Community-Acquired Infection
(Abstract #O-29)
Donald Milton
University of Maryland
College Park, United States ▲

5:45 pm – 6:00 pm Linking Forecasts to Public Health Needs: Results from the Centers for Disease Control And Prevention Seasonal Influenza Forecasting Challenges, 2013-2016
(Abstract #O-30)
Matthew Biggerstaff
Centers for Disease Control and Prevention
Atlanta, GA, United States ▲

4:30 pm – 6:00 pm Oral Abstract Session: Virology & Pathogenesis ●

Moderators: *Julie McAuley, PhD and Ab Osterhaus*

Room Location: Chicago Ballroom 8 & 9, Level 4

4:30 pm – 4:45 pm The Unexpected Pro-Viral Role of 'Anti-Viral' Genes During Influenza Virus Infection **(Abstract #O-31)**
Andrew Mehle
University of Wisconsin Madison
Madison, WI, United States ●

4:45 pm – 5:00 pm Constitutively Expressed IFITM3 Protein in Human Endothelial Cells Poses an Early Infection Block to Human Influenza Viruses
(Abstract #O-32)
Xiangjie Sun
Influenza Division
Atlanta, GA, United States ●

5:00 pm – 5:15 pm Loss of Fitness in Mammalian Cells Imposed by the NS1 Protein from Bat Influenza-like Viruses
(Abstract #O-33)
Teresa A. Aydiello Gomez
Department of Microbiology; Global Health and Emerging Pathogens Institute; Icahn School of Medicine at Mount Sinai, NY
New York, NY, United States ●

5:15 pm – 5:30 pm Mechanisms of Lung Injury Caused by Severe Influenza A Virus Infection and Potential Therapeutic Effects of Mesenchymal Stem Cells
(Abstract #O-34)
Iok Teng Kuok
University of Hong Kong
Hong Kong, Hong Kong ●

5:30 pm – 5:45 pm Molecular Basis of Pathogenesis of 1918 PB1-F2: Uncoupling of Type 1 Interferon Response from Virus Infection by Hijacking its Mediator into Proteosomal Degradation
(Abstract #O-35)
Baik Seong
Yonsei University
Seoul, Korea ●

5:45 pm – 6:00 pm H7N9 Influenza A Viruses Exhibit Importin- α Mediated Replication in the Mammalian Respiratory Tract
(Abstract #O-36)
Stephanie Bertram
Heinrich Pette Institute
Hamburg, Germany ●



6:00 pm – 7:30 pm Poster Reception I with Presenters in Attendance

Room Location: River Exhibit Hall A & B, Level 1

See poster section for Poster Session 1

6:00 pm – 7:00 pm Rapid Oral Poster Session

Room Location: River Exhibit Hall A & B, Level 1

6:00 pm – 7:00 pm Rapid Oral Poster Session: Clinical Science ■

- 6:00 pm – 6:06 pm Virologic Response to Peramivir Treatment in Adults Hospitalized for Influenza-associated Lower Respiratory Tract Infections **(Abstract #P-1)**
Nelson Lee
The Chinese University of Hong Kong
Hong Kong, Hong Kong ■
- 6:06 pm – 6:12 pm Effect of low-to-moderate dose corticosteroids on mortality of hospitalized adolescents and adults with influenza A(H1N1)pdm09 viral pneumonia **(Abstract #P-2)**
Hui Li
Capital Medical University
China, China ■
- 6:12 pm – 6:18 pm Clinical Implications of Baseline Influenza A Mutations in Transplant Recipients **(Abstract #P-3)**
Victor Ferreira
University Health Network
Toronto, Canada ■
- 6:18 pm – 6:24 pm Genotypic and phenotypic analyses of Influenza A virus (IAV) populations in a Phase 2A Influenza A challenge human volunteer challenge study assessing the efficacy of MHAA4549A **(Abstract #P-4)**
Jacqueline McBride
Genentech Inc
South San Francisco, United States ■
- 6:24 pm – 6:30 pm Priming with seasonal influenza A(H3N2) virus impacts the age-related prevalence of serum cross-reactive hemagglutination-inhibition (HI) antibodies to swine-origin influenza A(H3N2) variants [A(H3N2)v]. **(Abstract #P-5)**
Xiuhua Lu
Centers for Disease Control and Prevention
Atlanta, GA, United States ■

- 6:30 pm – 6:36 pm Anti-Influenza virus neuraminidase (N9) monoclonal antibody with prophylactic and therapeutic activity in vivo **(Abstract #P-6)**
Jason Wilson
Influenza Division; NCIRD; Centers for Disease Control and Prevention
Atlanta, GA, United States ■
- 6:36 pm – 6:42 pm Mass Cytometry based profiling of host responses to A/California/2009 (H1N1) influenza infection in human volunteers **(Abstract #P-7)**
David McIlwain
Stanford University
Stanford, United States ■
- 6:42 pm – 6:48 pm A Phase 1, Randomized, Double-Blind, Placebo-Controlled, Single Ascending Dose Study to Investigate the Safety, Tolerability, and Pharmacokinetics of an Anti-Influenza B Monoclonal Antibody, MHAB5553A, in Healthy Volunteers **(Abstract #P-8)**
Jeremy Lim
Genentech
South San Francisco, United States ■
- 6:48 pm – 6:54 pm Use of residual nasal swab specimens from RIDT for RT-PCR in older patients **(Abstract #P-9)**
Jonathan Temte
University of Wisconsin School of Medicine and Public Health
Madison, WI, United States ■
- 6:54 pm – 7:00 pm Risk factors in patients hospitalized with influenza, Norway 2008-2014 **(Abstract #P-10)**
Siri Helene Hauge
Norwegian Institute of Public Health
Oslo, Norway ■
- 6:00 pm – 7:00 pm Rapid Oral Poster Session: Public Health ▲**
- 6:00 pm – 6:06 pm Can one define influenza transmission zones in Europe? The spatio-temporal characteristics of influenza A and B in the WHO Euro region **(Abstract #P-11)**
Saverio Caini
Netherlands Institute for Health Services Research (NIVEL)
Utrecht, Netherlands ▲
- 6:06 pm – 6:12 pm Monitoring the fitness of transmissible antiviral resistant influenza strains **(Abstract #P-12)**
Sze Man Kathy Leung
The University of Hong Kong
Pok Fu Lam, Hong Kong ▲

6:12 pm – 6:18 pm	Comparison of influenza vaccine effectiveness estimates from test-negative and ordinary case-control studies (Abstract #P-13) <i>Michael Haber</i> <i>Emory University</i> <i>Atlanta, United States</i> ▲	6:54 pm – 7:00 pm	Influenza neuraminidase inhibiting antibody titers and protection against influenza infection and illness (Abstract #P-20) <i>Annette Fox</i> <i>The University of Melbourne</i> <i>Parkville, Australia</i> ▲
6:18 pm – 6:24 pm	Estimations of Influenza-associated Deaths in the Americas during 2002-2008 (Abstract #P-14) <i>Rakhee Palekar</i> <i>PAHO/WHO</i> <i>Vienna, United States</i> ▲	6:00 pm – 7:00 pm	Rapid Oral Poster Session: Virology and Pathogenesis ●
6:24 pm – 6:30 pm	Applying machine learning approaches on influenza protein sequences predicts host tropism and zoonosis with high accuracy (Abstract #P-15) <i>Christine LP Eng</i> <i>Department of Biochemistry, Yong Loo Lin School of Medicine, National University of Singapore</i> <i>Singapore, Singapore</i> ▲	6:00 pm – 6:06 pm	Defining the antibody cross-reactome against the influenza virus surface glycoproteins hemagglutinin and neuraminidase in animal models and humans (Abstract #P-21) <i>affael Nachbagauer</i> <i>Icahn School of Medicine at Mount Sinai</i> <i>New York, United States</i> ●
6:30 pm – 6:36 pm	Heterologous two-dose vaccination regimen with simian adenovirus and poxvirus expressing conserved influenza A antigens elicits robust antigen-specific cellular immune responses in healthy volunteers (Abstract #P-16) <i>Lynda Coughlan</i> <i>University of Oxford</i> <i>Oxford, United Kingdom</i> ▲	6:06 pm – 6:12 pm	Influenza B CD8 T cell epitopes and universal immunity to influenza viruses (Abstract #P-22) <i>Marios Koutsakos</i> <i>Department of Microbiology and Immunology, University of Melbourne, at the Peter Doherty Institute for Infection and Immunity</i> <i>Melbourne, Australia</i> ●
6:36 pm – 6:42 pm	Association of influenza disease burden with antigenic variation of influenza A(H3N2) viruses (Abstract #P-17) <i>Lin Yang</i> <i>The Hong Kong Polytechnic University</i> <i>Hong Kong, Hong Kong</i> ▲	6:12 pm – 6:18 pm	Infection of ferrets and pigs with H1N2r, a reassortant swine influenza A virus containing genes from pandemic (H1N1) 2009 and swine subtype H1N2 viruses (Abstract #P-23)z <i>Helen Everett</i> <i>APHA</i> <i>Addlestone, United Kingdom</i> ●
6:42 pm – 6:48 pm	Emergence and Spread of Antigenic Variants for Human Seasonal H3N2 influenza A virus (Abstract #P-18) <i>Xiu-Feng (Henry) Wan</i> <i>Mississippi State University</i> <i>Mississippi State, United States</i> ▲	6:18 pm – 6:24 pm	Non-neutralizing monoclonal antibodies against the influenza hemagglutinin require alveolar macrophages to mediate virus clearance in vivo (Abstract #P-24) <i>Gene Tan</i> <i>Icahn School of Medicine at Mount Sinai</i> <i>New York, United States</i> ●
6:48 pm – 6:54 pm	Variable Effects of Repeat Vaccination against Influenza A(H3N2) Illness by Season: 2010-11 to 2014-15 (Abstract #P-19) <i>Catharine Chambers</i> <i>British Columbia Centre for Disease Control</i> <i>Vancouver, Canada</i> ▲	6:24 pm – 6:30 pm	Computationally engineered influenza neuraminidases provide broad immune protection (Abstract #P-25) <i>Thorsten U. Vogel</i> <i>Sanofi Pasteur, Research North America, Cambridge, Massachusetts, USA</i> <i>Cambridge, United States</i> ●



6:30 pm – 6:36 pm Extra-respiratory organs contribute to the cytokine storm induced by HPAI H5N1 virus infection
(Abstract #P-26)
Debby van Riel
Erasmus MC
Rotterdam, Netherlands ●

6:36 pm – 6:42 pm Establishing new cell culture models to study bat-borne emerging viruses
(Abstract #P-27)
Carles Martínez-Romero
Icahn School of Medicine at Mount Sinai
New York, United States ●

6:42 pm – 6:48 pm What lies beneath: Antibody dependent natural killer cell activation by antibodies to internal influenza virus proteins
(Abstract #P-28)
Hillary Vandervan
Department of Microbiology and Immunology, University of Melbourne at the Peter Doherty Institute for Infection and Immunity
Melbourne, Australia ●

6:48 pm – 6:54 pm Highly pathogenic avian influenza H5N1 virus delays apoptotic responses via activation of STAT3
(Abstract #P-29)
Kenrie PY Hui
Centre of Influenza Research and School of Public Health, LKS Faculty of Medicine
The University of Hong Kong
Hong Kong SAR, China ●

6:54 pm – 7:00 pm Study of cross-reactive anti-neuraminidase serum antibodies following past influenza infections or LAIV vaccination
(Abstract #P-30)
Iuliia Desheva
Institute of Experimental Medicine
Saint Peterburg, Russian Federation ●

7:30 pm - 8:30 pm ISIRV Epidemiology Panel: “Leveraging Influenza Surveillance Infrastructure for the Monitoring of Non-Influenza Respiratory Viruses”

Room Location: Michigan B, Level 2

26 AUGUST 2016 FRIDAY

8:00 am – 10:00 am Virology & Pathogenesis Plenary Session: Molecular Studies for Vaccines and Antivirals ●

Moderators: *Jackie Katz, PhD and Robert Lamb, PhD, ScD*

Room Location: Sheraton Chicago Ballroom 4, 5, 6, 7, Level 4

8:00 am – 8:40 am Structure, Mechanism and Drug Targeting of Influenza Polymerase
Stephen Cusack, PhD, FRS
European Molecular Biology Laboratory, Grenoble Outstation
Grenoble, France ●

8:40 am – 9:20 am Toward A Universal Influenza Virus Vaccine
Peter Palese
Icahn School of Medicine at Mount Sinai
New York, NY, United States ●

9:20 am – 10:00 am Influenza Countermeasures
Yoshihiro Kawaoka, DVM, PhD
University of Wisconsin-Madison/University of Tokyo
Madison, WI, United States ●

10:00 am – 10:45 am ISIRV General Meeting

Room Location: Sheraton Chicago Ballroom 4, 5, 6, 7, Level 4

10:45 am – 11:15 am Coffee Break in the Exhibit Hall

Room Location: River Hall A & B, Level 1

11:15 am – 12:30 pm Oral Abstract Sessions

11:15 am – 12:30 pm Oral Abstract Session: Public Health ▲

Moderators: *Arnold Monto, MD and Sheena Sullivan, MPH, PhD*

Room Location: Sheraton Chicago Ballroom 4, 5, 6, 7, Level 4

11:15 am – 11:30 am A Role for The INSIGHT Clinical Research Network in Rapid Assessment of Key Clinical And Epidemiological Characteristics of a Future Pandemic **(Abstract #O-42)**
Lone Simonsen
University of Copenhagen
Copenhagen, Denmark ▲

11:30 am – 11:45 am Direct and Indirect Protection with Paediatric Influenza Vaccination in Europe Estimated by a Dynamic Transmission Model
(Abstract #O-43)
Richard Lawson
AstraZeneca
Melbourn, Great Britain ▲

- 11:45 am – 12:00 pm Attitudes to Antivirals, Consultation Behaviour for Influenza-Like-Illness and Use of Antivirals in England During The 2009 Influenza Pandemic - Results from the Flu Watch Study **(Abstract #O-44)**
Ellen Fragaszy
University College London, Farr Institute of Health Informatics Research
London, Great Britain ▲
- 12:00 pm – 12:15 pm Seasonal and Pandemic Influenza Infection in Pregnancy and Fetal Death: A Norwegian Registry-Based Cohort Study **(Abstract #O-45)**
Nina Gunnes
Norwegian Institute of Public Health, Oslo, Norway ▲
- 12:15 pm – 12:30 pm Fetal Loss and Seasonal Influenza Vaccination During Pregnancy **(Abstract #O-46)**
Annette Regan
School of Pathology and Laboratory Medicine, University of Western Australia; Communicable Disease Control Directorate, Western Australia Department of Health, Perth Business Centre
Australia ▲
- 11:15 am – 12:30 pm Oral Abstract Session: Virology & Pathogenesis ●**
- Moderators:** Hassan Zaraket, BS Pharm, PhD and Andrew Pavia, MD
- Room Location: Chicago Ballroom 8 & 9, Level 4
- 11:15 am – 11:30 am Accurate Measurement of the Effects of All amino-Acid Mutations to Influenza Hemagglutinin **(Abstract #O-47)**
Michael Doud
University of Washington
Seattle, United States ●
- 11:30 am – 11:45 am Studies on Recently Emerged Human Influenza A(H3N2) Viruses in Clades 3C.3a and 3C.2a **(Abstract #O-48)**
Yipu Lin
The Francis Crick Institute
London, Great Britain ●
- 11:45 am – 12:00 pm Structural Characterization of Nanoparticles Displaying the Conserved Stem Epitope Region from Influenza Hemagglutinin **(Abstract #O-49)**
Audray Harris
NIH
Bethesda, United States ●
- 12:00 pm – 12:15 pm High-Throughput Functional Annotation of Influenza A Virus Genome at Single-Nucleotide Resolution **(Abstract #O-50)**
Yushen Du
Department of Molecular and Medical Pharmacology, University of California
Los Angeles, CA, United States ●
- 12:15 pm – 12:30 pm Investigating the Impact Of Influenza Neuraminidase Gene Substitution and Mutation on Viral Replication and Substrate Specific Enzymatic Activity **(Abstract #O-51)**
Robert Allen
University of Melbourne
Melbourne, Australia ●
- 11:15 am – 12:30 pm Oral Abstract Session: Clinical Science ■**
- Moderators:** Regina Dutkowiak and Ann Falsey, MD
- Room Location: Chicago Ballroom 10, Level 4
- 11:15 am – 11:30 am Surveillance of Influenza-Confirmed Cases Admitted to Intensive Care Units and Related Fatal Outcomes in Eleven EU Countries, 2010-2016 **(Abstract #O-37)**
Cornelia Adlhoch
European Centre for Disease Prevention and Control (ECDC)
Solna, Sweden ■
- 11:30 am – 11:45 am Comparison of Clinical and Virological Effects of Neuraminidase Inhibitors in Japanese Pediatric Patients Between 4 And 12 Years Old with Influenza A Virus Infection: An Open-Labeled, Randomized Study (Study 1) and Following Epidemiological Investigation of Secondary Infection in Household Settings (Study 2) **(Abstract #O-38)**
Nobuo Hirotsu
Hirotsu Clinic
Kawasaki, Japan ■
- 11:45 am – 12:00 pm Comparison of the Outcomes of Individuals with Medically Attended Influenza A And B Virus Infections Enrolled in Two International Cohort Studies (INSIGHT FLU002 and FLU003) Over a Six-Year Period: 2009-2015 **(Abstract #O-39)**
Dominic Dwyer
Westmead Hospital
Westmead, Australia ■



12:00 pm – 12:15 pm Correlation of Baseline Influenza A Viral Load with Patient Outcomes in Transplant Recipients
(Abstract #O-40)
Victor Ferreira
University Health Network
Toronto, Canada ■

12:15 pm – 12:30 pm Symptoms at Admission Predict Severe Outcomes among Children and Adults Hospitalized with Influenza, 2014-2015
(Abstract #O-41)
Shikha Garg
Centers for Disease Control and Prevention
Atlanta, United States ■

**12:30 pm – 2:00 pm Sponsored Symposium:
Influenza Vaccination in
Children—Costs and Benefits**
Sponsored by AstraZeneca

Room Location: Sheraton Chicago Ballroom 4, 5, 6, 7, Level 4

2:00 pm – 4:00 pm Featured Symposia

**2:00 pm – 4:00 pm Clinical Science Featured
Symposia: Management of
Influenza in Unique Populations** ■

Moderators: *Tim Uyeki, MD, MPH and Ann Falsey, MD*

Room Location: Chicago Ballroom 10, Level 4

2:00 pm – 2:30 pm Pediatrics
Norio Sugaya, MD PhD
Department of Pediatrics, Keiyu
Hospital
Nishi-ku, Yokohama, Kanagawa
Japan ■

2:30 pm – 3:00 pm Immunocompromised
Roy F. Chemaly, MD, MPH
University of Texas MD Anderson
Cancer Center
Houston, TX, United States ■

3:00 pm – 3:30 pm Critical Care
John C. Marshall, MD
University of Toronto/St. Michael's
Hospital
Toronto, ON, Canada ■

3:30 pm – 4:00 pm Elderly
Janet McElhaney, MD
Advanced Medical Research Institute
of Canada
Sudbury, ON, Canada ■

**2:00 pm – 4:00 pm Public Health Featured Symposia:
Influenza Vaccines** ▲

Moderators: *Kathy Neuzil, MD, MPH and Alain Moren, MD, PhD*

Room Location: Sheraton Chicago Ballroom 4, 5, 6, 7, Level 4

2:00 pm – 2:30 pm Contemporary Approaches to Estimation of Influenza Vaccine Effectiveness
Alain Michel Moren, MD, PhD
EpiConcept
Paris, France ▲

2:30 pm – 3:00 pm Vaccine Effectiveness and Repeated Vaccination: Too Much of a Good Thing?
Edward A. Belongia, MD
Marshfield Clinic Research
Foundation
Marshfield, WI, United States ▲

3:00 pm – 3:30 pm In-Season Waning of Vaccine Effectiveness: European Influenza Type/Subtype-Specific Vaccine Effectiveness Data From 6 Seasons
Esther Kissling, MSc, BSc hon
EpiConcept
Paris, France ▲

3:30 pm – 4:00 pm Implications of Timely Vaccine Effectiveness Estimates for Vaccine Strain Selection
Alicia Fry, MD, MPH
CDC
Atlanta, GA, United States ▲

**2:00 pm – 4:00 pm Virology & Pathogenesis Featured
Symposia: Pathogenesis** ●

Moderators: *Mark Tompkins, PhD and Yoshihiro Kawaoka, DVM, PhD*

Room Location: Chicago Ballroom 8 & 9, Level 4

2:00 pm – 2:30 pm Pathogenesis of HA structures
George Gao, DPhil
Immunology, Institute of
Microbiology, Chinese Academy of
Sciences
Beijing, People's Republic of China ●

2:30 pm – 3:00 pm HA Acid Stability in Pathogenesis and Host Adaptation
Charles John Russell, PhD
St. Jude Children's Research Hospital
Memphis, TN, United States ●

3:00 pm – 3:30 pm **Influenza A Virus Evolution:
Going Deep**
Jonathan Yewdell, MD, PhD
LVD, NIAID
Bethesda, MD, United States ●

3:30 pm – 4:00 pm Transmission of Influenza Virus
Malik Peiris, MD, DPhil
School of Public Health, The
University of Hong Kong
Pokfulam, Hong Kong ●

4:00 pm – 4:30 pm Coffee Break in the Exhibit Hall

Room Location: River Hall A & B, Level 1

4:30 pm – 6:00 pm Oral Abstract Sessions

4:30 pm – 6:00 pm Oral Abstract Session: Public Health ▲

Moderators: *Carrie Reed, DSc, MPH and Danuta Skowronski, MD, MHSc*

Room Location: Sheraton Chicago Ballroom 4, 5, 6, 7, Level 4

4:30 pm – 4:45 pm Improved Efficacy of Recombinant Hemagglutinin Influenza Vaccine in comparison to an Inactivated Influenza Vaccine Against Mismatched Flu Strains
(Abstract #O-52)
Manon Cox
Protein Sciences Corp
Meriden, United States ▲

4:45 pm – 5:00 pm Trivalent Inactivated Influenza Vaccine Efficacy among Young Children in Urban Bangladesh
(Abstract #O-53)
Melissa Rolfes
Centers for Disease Control and Prevention
Atlanta, United States ▲

5:00 pm – 5:15 pm How Can We Shift the Paradigm of Influenza Vaccine Development?
(Abstract #O-54)
Sarah Gilbert
University of Oxford
Oxford, Great Britain ▲

5:15 pm – 5:30 pm Antibody Levels in Pregnant Women After A(H1N1)Pdm09 Infection or Vaccination: Association with Clinical Disease, Self-Reported Symptoms and Time Since Exposure **(Abstract #O-55)**
Gro Tunheim
Domain for Infection Control and Environmental Health, Norwegian Institute of Public Health
Oslo, Norway ▲

5:30 pm – 5:45 pm Estimating Vaccine Effectiveness Against Influenza-Associated Pediatric Deaths in the United States During Four Influenza Seasons, 2010-2011--2013-2014
(Abstract #O-56)

Sue Reynolds
Centers for Disease Control and Prevention; Battelle Memorial Institute
Atlanta, United States ▲

5:45 pm – 6:00 pm Risk Of Celiac Disease After Pandemic Influenza Vaccination and Influenza Infection: Preliminary Data from a Nationwide Cohort Study
(Abstract #O-57)

Karl Mårild
Norwegian Institute of Public Health
Oslo, Norway ▲

4:30 pm – 6:00 pm Oral Abstract Session: Virology & Pathogenesis I ●

Moderators: *Stephanie Bertram and Barbara Rath, MD, PhD*

Room Location: Chicago Ballroom 8 & 9, Level 4

4:30 pm – 4:45 pm Accurately Identifying How the Critical Combination of Bacterial Dose and Virus-Induced Alveolar Macrophage Depletion Leads to Pneumococcal Infections During Influenza Using a Mathematical Model **(Abstract #O-58)**
Amber Smith
St. Jude Children's Research Hospital
Memphis, United States ●

4:45 pm – 5:00 pm Tropism And Innate Host Responses Of a Novel Avian Influenza A/H5N6 Virus in Ex Vivo and In Vitro Models of The Human Respiratory Tract
(Abstract #O-59)
Kenrie PY Hui
Centre of Influenza Research and School of Public Health, LKS Faculty of Medicine, The University of Hong Kong
Hong Kong ●

5:00 pm – 5:15 pm Human CD8 T Cells Induce Bystander Damage of Epithelial Cells During in Influenza Virus Infection **(Abstract #O-60)**
Kirsty Short
University of Queensland
Brisbane, Australia ●



5:15 pm – 5:30 pm Hepatocyte Growth Factor Secreted Bby Umbilical Cord-Derived Mesenchymal Stem Cells Restore the Impaired Alveolar Fluid Clearance and Protein Permeability Induced by Influenza H5N1 Virus Infection

(Abstract #O-61)

Hayley Loy
The University of Hong Kong,
Southern District
Hong Kong ●

5:30 pm – 5:45 pm Influenza A Virus Replication Kinetics in Cells of the Central Nervous System **(Abstract #O-62)**

Jurre Siegers
Erasmus MC
Rotterdam, The Netherlands ●

5:45 pm – 6:00 pm Cholesterol Controls Efficiency of Influenza Infection by Altering Receptor-Binding Avidity and Viral Envelope Organization: A Mechanistic Antiviral Role for Statin Drugs. **(Abstract #O-63)**

Peter Kasson
University of Virginia
Charlottesville, United States ●

4:30 pm – 6:00 pm Oral Abstract Session: Virology & Pathogenesis II ●

Moderators: Erhard Van der Vries, PhD and Adolfo Garcia-Sastre, PhD

Room Location: Chicago Ballroom 10, Level 4

4:30 pm – 4:45 pm Molecular Mechanisms of Influenza Virus Membrane Scission

(Abstract #O-64)

Jeremy Rossman
University of Kent
Canterbury, Great Britain ●

4:45 pm – 5:00 pm Alternative Splicing of Influenza NS Mrna is Regulated by an Exonic Splicing Enhancer, SF2/ASF, and NS1

(Abstract #O-65)

Xiaofeng Huang
State Key Laboratory for Emerging Infectious Diseases, Department of Microbiology, the Research Cent
Hong Kong, Hong Kong ●

5:00 pm – 5:15 pm Characterization of the Role of the Nuclear Export Protein (NEP) of Influenza A Virus in M Gene Splicing

(Abstract #O-66)

Min Zheng
State Key Laboratory for Emerging Infectious Diseases, Department of Microbiology, HKU
Hong Kong ●

5:15 pm – 5:30 pm Molecular Characterization of the Hemagglutinin and Neuraminidase Proteins from Recent H5Nx Influenza Viruses **(Abstract #O-67)**

Hua Yang
CDC Influenza Division
Atlanta, United States ●

5:30 pm – 5:45 pm Investigating the Potential for Influenza A Virus Resistance to an Inhibitor of the Host Vacuolar ATP-Ase **(Abstract #O-68)**

Anika Singanayagam
Imperial College
London, Great Britain ●

5:45 pm – 6:00 pm Live Visualization of Hemagglutinin Dynamics During Infection by Using Biarsenically Labeled Replication Competent Influenza A Virus

(Abstract #O-69)

Shashank Tripathi
Icahn School of Medicine at Mount Sinai
New York, United States ●

6:00 pm – 7:30 pm Poster Reception II with Presenters in Attendance

Room Location: River Exhibit Hall A & B, Level 1

See poster section for Poster Session II

6:00 pm – 7:00 pm Rapid Oral Poster Session

Room Location: River Exhibit Hall A & B, Level 1

6:00 pm – 7:00 pm Rapid Oral Poster Session: Clinical Science ■

6:00 pm – 6:06 pm Use of synthetic absorptive matrix for the detection of nasal influenza-specific IgA responses following intranasal live attenuated influenza vaccine. **(Abstract #P-232)**

Thushan de Silva
Imperial College London
London, United Kingdom ■

6:06 pm – 6:12 pm Nanopore single molecule sequencing of influenza viruses from clinical specimens

(Abstract #P-233)

Bin Zhou
New York University
New York, United States ■

6:12 pm – 6:18 pm The development of point-of-care test to identify human influenza and respiratory syncytial virus using novel real-time direct RT-LAMP assay with micro-fluidic chip

(Abstract #P-234)

Ikuyo Takayama
National Institute of Infectious Diseases
Tokyo, Japan ■

6:18 pm – 6:24 pm	ViroSpot assay for direct phenotypic analysis of influenza virus in clinical specimens (Abstract #P-235) <i>Carel Van Baalen</i> <i>Viroclinics Biosciences</i> <i>Rotterdam, Netherlands</i> ■	6:54 pm – 7:00 pm	Point-of-care testing for respiratory viruses in adults presenting to hospital improves the detection rate of influenza, the use of neuraminidase inhibitors and may reduce unnecessary antibiotic use and duration of hospitalisation. (Abstract # LBP-1) <i>Tristan Clark</i> <i>University of Southampton</i> <i>Southampton, Great Britain</i> ■
6:24 pm – 6:30 pm	Clinical attack rates, comparison, and predictors of Influenza and RSV infection among adults 60 years or older enrolled in a RSV vaccine trial (Abstract #P-236) <i>Vivek Shinde</i> <i>Novavax</i> <i>Gaithersburg, United States</i> ■	6:00 pm – 7:06 pm	Rapid Oral Poster Session: Public Health ▲
6:30 pm – 6:36 pm	Silent but significant contribution of seasonal influenza on the worsening of chronic heart disease (Abstract #P-237) <i>Won Suk Choi</i> <i>Korea University College of Medicine (Korea University Ansan Hospital)</i> <i>Ansan-si, Republic of Korea</i> ■	6:00 pm – 6:06 pm	Hemagglutination inhibiting antibody titre decay following influenza infection (Abstract #P-244) <i>Annette Fox</i> <i>The University of Melbourne</i> <i>Parkville, Australia</i> ▲
6:36 pm – 6:42 pm	Neuraminidase targeted antibody response can modify the severity of influenza infection (Abstract #P-238) <i>Yaoqing Chen</i> <i>Department of Medicine, Section of Rheumatology, The University of Chicago</i> <i>Chicago, United States</i> ■	6:06 pm – 6:12 pm	The Attributable Fraction of Influenza Virus Infection among HIV-Infected and HIV-Uninfected South African Patients with Mild and Severe Respiratory Illness, 2012-2015 (Abstract #P-245) <i>Stefano Tempia</i> <i>CDC</i> <i>Johannesburg, South Africa</i> ▲
6:42 pm – 6:48 pm	Discovery cyclosporine A and its analogs as broad-spectrum anti-influenza drugs with a high in vitro genetic barrier of drug resistance (Abstract #P-239) <i>Jun Wang</i> <i>University of Arizona</i> <i>Tucson, United States</i> ■	6:12 pm – 6:18 pm	Admissions with influenza and other respiratory viruses, 2012 to 2015 seasons. Results from the Global Influenza Hospital Surveillance Network (GIHSN) (Abstract #P-246) <i>Joan Puigbarbera</i> <i>Fisabio</i> <i>Valencia, Spain</i> ▲
6:48 pm – 6:54 pm	Broadly cross-reactive antibodies against the influenza B virus neuraminidase are protective against lethal viral challenge in mice when administered prophylactically or therapeutically (Abstract #P-240) <i>Teddy John Wohlbold</i> <i>Icahn School of Medicine at Mount Sinai</i> <i>New York, United States</i> ■	6:18 pm – 6:24 pm	Influenza A Hemagglutinin (HA) Specific IgG in Young Children and Adults After Seasonal Live Attenuated Influenza Vaccination. (Abstract #P-247) <i>Shahinul Islam</i> <i>University of Bergen</i> <i>Bergen, Norway</i> ▲
		6:24 pm – 6:30 pm	Age and Sex impact the T cell response to Influenza A (Abstract #P-248) <i>Ellen Fragaszy</i> <i>University College London, Farr Institute of Health Informatics Research</i> <i>London, United Kingdom</i> ▲



6:30 pm – 6:36 pm	Influenza vaccines were effective in the United States during the Northern Hemisphere 2015-2016 influenza season (Abstract #P-241) <i>Michael L. Jackson</i> Group Health Research Institute Seattle, United States ▲	6:06 pm – 6:12 pm	The effects of interferon stimulated LY6E on influenza A virus replication (Abstract #P-256) <i>Aisling Vaughan</i> Imperial College London London, United Kingdom ●
6:36 pm – 6:42 pm	Putting it all together: Building an influenza burden pyramid from the Southern Hemisphere Influenza and Vaccine Effectiveness Research and Surveillance (SHIVERS) project, New Zealand (Abstract #P-242) <i>Sue Huang</i> Institute of Environmental Science and Research Upper Hutt, New Zealand ▲	6:12 pm – 6:18 pm	TSG101 is differentially post-translationally modified during Influenza A virus infection (Abstract #P-257) <i>Jingshu Zhang</i> HKU-Pasteur Research Pole, School of Public Health, Li Ka Shing Faculty of Medicine, The University of Hong Kong Hong Kong, Hong Kong ●
6:42 pm – 6:48 pm	Influenza Virus in Respiratory Droplets Produced by Naturally and Experimentally Infected Volunteers (Abstract #P-249) <i>Donald Milton</i> University of Maryland College Park, United States ▲	6:18 pm – 6:24 pm	Measuring the Mutagenic Effect of Favipiravir and the Search for Resistance Mutations (Abstract #P-258) <i>Daniel Goldhill</i> Public Health England London, United Kingdom ●
6:48 pm – 6:54 pm	Risk Factors for Influenza-Associated Severe Acute Respiratory Illness Hospitalization in a High HIV Prevalence Setting - South Africa, 2012-2015 (Abstract #P-250) <i>Stefano Tempia</i> CDC Johannesburg, South Africa ▲	6:24 pm – 6:30 pm	Characterization of pandemic 1918 H1 hemagglutinin on influenza virus-like particles for optimizing vaccine design (Abstract #P-259) <i>Dustin McCraw</i> National Institutes of Health Bethesda, United States ●
6:54 pm – 7:00 pm	The post-pandemic shift in age-specific susceptibility to A(H1N1) pdm09 in Managua, Nicaragua (Abstract #P-251) <i>Sophia Ng</i> Department of Epidemiology, School of Public Health, University of Michigan Ann Arbor, United States ▲	6:30 pm – 6:36 pm	The Germinal Center B Cell Response in the Airway Immune System After Influenza A Infection (Abstract #P-260) <i>Thomas Waldschmidt</i> The University of Iowa Carver College of Medicine Iowa City, United States ●
7:00 pm – 7:06 pm	Pregnancy and Neonatal Outcomes following Influenza-associated Illness in Western Kenya: Methods and preliminary findings, 2015-2016 (Abstract #P-243) <i>Nancy Otieno</i> Kemri-Cghr Kisumu, Kenya ▲	6:36 pm – 6:42 pm	Purinergic receptor P2X7 deficiency protects against influenza A virus infection (Abstract #P-261) <i>Victor Leyva-Grado</i> Icahn School of Medicine at Mount Sinai New York, United States ●
6:00 pm – 7:00 pm	Rapid Oral Poster Session: Virology and Pathogenesis ●	6:42 pm – 6:48 pm	The role of the cellular 5'-3' mRNA exonuclease, Xrn1, in influenza A virus replication (Abstract #P-252) <i>Yen-Chin Liu</i> State Key Laboratory for Emerging Infectious Diseases and Department of Microbiology Hong Kong, Hong Kong ●
6:00 pm – 6:06 pm	A novel Influenza A barcoded-library reveals NS1 adaptations to the host (Abstract #P-255) <i>Raquel Muñoz-Moreno</i> Icahn School of Medicine at Mount Sinai New York, United States ●		

6:48 pm – 6:54 pm A site of limited variability within the head of H1 haemagglutinin drives the antigenic evolution of H1N1 seasonal influenza.

(Abstract #P-253)

*Craig Thompson
University of Oxford
Oxford, United Kingdom ●*

6:54 pm – 7:00 pm Bayesian Inference of Within-host Viral Population Dynamics from Next Generation Sequencing Data

(Abstract #P-254)

*Marc Baguelin
Public Health England
London, United Kingdom ●*

27 AUGUST 2016 SATURDAY

8:30 am – 10:30 am Clinical Science Plenary Session: Newer Therapies for Influenza: Hurdles and Progress ■

Moderators: *Melissa Willis, PhD and Nelson Lee, MD, FRCP*

Room Location: Sheraton Chicago Ballroom 4, 5, 6, 7, Level 4

8:30 am – 9:10 am Clinical Development Challenges: Trial Designs and Endpoints

*Menno de Jong, MD, PhD
University of Amsterdam
Amsterdam, The Netherlands ■*

9:10 am – 9:50 am Novel Antiviral Agents in Advanced Development

*Frederick Hayden, MD
University of Virginia School of Medicine
Charlottesville, VA, United States ■*

9:50 am – 10:30 am Combination and Antibody-Based Therapies

*John Beigel, MD
Leidos/NIAID
Bethesda, MD, United States ■*

10:30 am – 11:00 am Coffee Break in the Exhibit Hall

Room Location: River Hall A & B, Level 1

11:00 am – 12:30 pm Oral Abstract Sessions

11:00 am – 12:30 pm Oral Abstract Session: Clinical Science ■

Moderators: *Larisa Gubareva, MD, PhD and Janet McElhaney, MD, FRCP, FACP*

Room Location: Chicago Ballroom 10, Level 4

11:00 am – 11:15 am IV Zanamivir (IVZ) Compared with Oral Oseltamivir (OS) to Treat Influenza in Hospitalized Adults and Adolescents: A Randomized, Double-Blind, Double-Dummy Phase III Trial (NA114373)

(Abstract #O-70)

*Francisco Marty
Brigham and Women's Hospital
Boston, United States ■*

11:15 am – 11:30 am Evaluation of Efficacy and Emergence of Resistance to VIS410, a Human Monoclonal Antibody, in a Human Challenge Model of Infection with a p2009 H1N1 Virus

(Abstract #O-71)

*Ellie Hershberger
Visterra Inc
Cambridge, United States ■*

11:30 am – 11:45 am The Association between Respiratory Viral Infection and Nasopharyngeal Carriage Density of Streptococcus Pneumoniae in Malawian Adults **(Abstract #O-72)**

*Antonia Ho
Institute of Infection and Global Health, University of Liverpool
Liverpool, Great Britain ■*

11:45 am – 12:00 pm Clinical Trials for Hospitalized Influenza Patients - Options to Improve Enrollment, Data Quality, and Define Endpoints

(Abstract #O-73)

*Kimberly Armstrong
Biomedical Advanced Research and Development Authority
Washington, United States ■*

12:00 pm – 12:15 pm Harmonizing Disease Severity Assessments in Infants and Children: The PEDSIDEA Consortium **(Abstract #O-74)**

*Barbara Rath
Vienna Vaccine Safety Initiative
Berlin, Germany ■*

12:15 pm – 12:30 pm Predictors of Influenza-Associated Mortality in Several Countries of the Eastern Mediterranean Region

(Abstract #O-75)

*Dalia Shash
Global Disease Detection Center
Cairo, Egypt ■*



11:00 am – 12:30 pm	Oral Abstract Session: Public Heath ▲
Moderators: Cecile Viboud, PhD and Tim Uyeki, MD, MPH	
Room Location: Sheraton Chicago Ballroom 4, 5, 6, 7, Level 4	
11:00 am – 11:15 am	Effectiveness of Maternal Influenza Vaccination in A Population-Based Cohort (Abstract #O-76) <i>Annette Regan</i> <i>University of Western Australia, Perth Business Centre</i> <i>Australia ▲</i>
11:15 am – 11:30 am	Variable Effects of Repeat Vaccination against Influenza B Illness by Season: 2010-11 to 2014-15 (Abstract #O-77) <i>Catharine Chambers</i> <i>British Columbia Centre for Disease Control</i> <i>Vancouver, Canada ▲</i>
11:30 am – 11:45 am	Intraseason Waning of Influenza Vaccine Effectiveness: Evidence from the US Influenza Vaccine Effectiveness Network, 2011-12 Through 2014-15 (Abstract #O-78) <i>Jill Ferdinands</i> <i>US Centers for Disease Control</i> <i>Atlanta, United States ▲</i>
11:45 am – 12:00 pm	Assessment of Virus Interference an a Test-Negative Study of Influenza Vaccine Effectiveness (Abstract #O-79) <i>Shuo Feng</i> <i>The University of Hong Kong</i> <i>Hong Kong Island, Hong Kong ▲</i>
12:00 pm – 12:15 pm	Healthcare Worker Antibody Response to Influenza Vaccination at an Australian Centre (Abstract #O-80) <i>Sheena Sullivan</i> <i>WHO Collaborating Centre for Reference and Research on Influenza</i> <i>Melbourne, Australia ▲</i>
12:15 pm – 12:30 pm	Vaccine Effectiveness Against Laboratory-Confirmed Influenza Hospitalizations among Community-Dwelling Older Adults During the 2010-11 to 2013-14 Influenza Seasons in Ontario, Canada (Abstract #O-81) <i>Jeff Kwong</i> <i>Institute for Clinical Evaluative Sciences</i> <i>Toronto, Canada ▲</i>

11:00 am – 12:30 pm	Oral Abstract Session: Virology & Pathogenesis ●
Moderators: Julie McAuley, PhD and Ruben Donis, PhD	
Room Location: Chicago Ballroom 8 & 9, Level 4	
11:00 am – 11:15 am	Prevention of Mixed Influenza and Bacterial Infections Using Combined Vaccine Based on Attenuated Influenza Virus and the Group B Streptococcus Proteins. (Abstract #O-82) <i>Iuliia Desheva</i> <i>Institute of Experimental Medicine</i> <i>Saint Peterburg, Russia ●</i>
11:15 am – 11:30 am	Priming with Intranasal Live Attenuated Influenza Vaccine Elicits a Highly Localized Influenza-Specific B Cell Response That is Rapidly Recalled with Parental Inactivated Vaccine Boost (Abstract #O-83) <i>Kanta Subbarao</i> <i>NIAID/NIH</i> <i>Bethesda, United States ●</i>
11:30 am – 11:45 am	Crosstalk Between the Classical and Alternative Pathways of Complement is Necessary for Providing Effective Protection Against the Pandemic Influenza A(H1N1) 2009 Virus Infection (Abstract #O-84) <i>Jayati Mullick</i> <i>National Institute of Virology</i> <i>Pune, India ●</i>
11:45 am – 12:00 pm	Influenza Infections Elicited Cross-Reactive CD8 T Cells Recognizing Viral Epitope Variants with Distinct Clonotypes of The T Cell Receptors (Abstract #O-85) <i>Susu Duan</i> <i>St. Jude Children's Research Hospital</i> <i>Memphis, United States ●</i>
12:00 pm – 12:15 pm	Hemagglutinin Stalk-Specific Antibodies Potently Induce Antibody-Dependent Cellular Phagocytosis of Immune Complexes And The Release of Extracellular Traps by Neutrophils (Abstract #O-86) <i>Caitlin Mullarkey</i> <i>Icahn School of Medicine at Mount Sinai</i> <i>New York, United States ●</i>

12:15 pm – 12:30 pm The Cell Surface Mucin MUC1 as a Dynamic Component of the Barrier to Influenza A Virus Infection
(Abstract #O-87)
Julie McAuley
Department of Microbiology and Immunology, University of Melbourne at the PDI Melbourne, Australia ●

12:30 pm – 2:00 pm Sponsored Symposium: Respiratory Syncytial Virus: An Underrecognized Health Burden in Older Adults
Sponsored by Novavax

Room Location: Sheraton Chicago Ballroom 4, 5, 6, 7, Level 4

2:00 pm – 4:00 pm Featured Symposia

2:00 pm – 4:00 pm Clinical Science Featured Symposia: Complications of Influenza ■

Moderators: *Roy Chemaly, MD, MPH and Menno de Jong, MD, PhD*

Room Location: Chicago Ballroom 10, Level 4

- 2:00 pm – 2:30 pm Bacterial Co-Infection
Richard Glenn Wunderink, MD
Northwestern University Feinberg School of Medicine
Chicago, IL, United States ■
- 2:30 pm – 3:00 pm Cardiovascular Complications
Charlotte Warren-Gash, MRCP, PhD
Institute of Health Informatics, University College London
London, United Kingdom ■
- 3:00 pm – 3:30 pm Neurological Complications
Masashi Mizuguchi, MD, PhD
Dept. of Developmental Medical Sciences, Graduate School of Medicine, The University of Tokyo
Tokyo, Japan ■
- 3:30 pm – 4:00 pm Exacerbation of Airway Diseases
Peter Openshaw, MD, PhD
Imperial College London
London, United Kingdom ■

2:00 pm – 4:00 pm Public Health Featured Symposia: Epidemiology of Influenza ▲

Moderators: *Jean-Michel Héraud, PhD, HDR and Carrie Reed, DSc, MPH*

Room Location: Sheraton Chicago Ballroom 4, 5, 6, 7, Level 4

- 2:00 pm – 2:30 pm Incidence of Infection, Illness and Burden of Disease
Cecile Viboud, PhD
Fogarty International Center, NIH, USA
Bethesda, MD, United States ▲
- 2:30 pm – 3:00 pm Comparative Epidemiology of Influenza A Subtypes
Arnold Monto, MD
School of Public Health, University of Michigan
MI, United States ▲
- 3:00 pm – 3:30 pm Comparative Epidemiology of Influenza B Lineages
Vijaykrishna Dhanasekaran, PhD
Duke-NUS Medical School
Singapore ▲
- 3:30 pm – 4:00 pm Population Impact of a Pediatric Vaccination Policy
Richard Pebody, MBChB, PhD
Public Health England
London, United Kingdom ▲

2:00 pm – 4:00 pm Virology & Pathogenesis Featured Symposia: Replication of Influenza ●

Moderators: *Guy Boivin, MD and Aeron Hurt, PhD*

Room Location: Chicago Ballroom 8 & 9, Level 4

- 2:00 pm – 2:30 pm Influenza Virus Reassortment
Anice Lowen, PhD
Emory University
Atlanta, GA, United States ●
- 2:30 pm – 3:00 pm The Biology of Influenza Virus non-coding RNAs
Benjamin tenOver, PhD
Icahn School of Medicine
NY, United States ●
- 3:00 pm – 3:30 pm Transcription and Replication of the Influenza Virus RNA Genome
Ervin Fodor, DPhil
University of Oxford
Oxford, United Kingdom ●
- 3:30 pm – 4:00 pm Constraints on the Evolution of Influenza
Jesse Bloom, PhD
Fred Hutchinson Cancer Research Center
Seattle, WA, United States ●



4:00 pm – 4:30 pm Coffee Break in the Exhibit Hall

Room Location: River Hall A & B, Level 1

4:30 pm – 6:00 pm Oral Abstract Session

4:30 pm – 6:00 pm Oral Abstract Session: Virology & Pathogenesis ●

Moderators: Alan Hay, PhD and Barbara Rath, MD, PhD

Room Location: Chicago Ballroom 8 & 9, Level 4

4:30 pm – 4:45 pm Infection Dynamics of Novel Influenza A Viruses Isolated in Australian Pigs Using Ferret and Pig Models Of Disease
(Abstract #O-88)

Joanne Taylor
CSIRO Australian Animal Health Laboratory and University of Queensland School of Veterinary Science
East Geelong, Australia ●

4:45 pm – 5:00 pm Influenza H1N1pdm09 Virus at the Human/Turkey Interface
(Abstract #O-89)

Karoline Bragstad
Norwegian Institute of Public Health Oslo, Norway ●

5:00 pm – 5:15 pm HPAI H5N1 Airborne-Transmission Substitutions: Low Pathogenicity in Ferrets and Clade-Dependent Phenotypes **(Abstract #O-90)**

Sander Herfst
Erasmus Medical Center Rotterdam, The Netherlands ●

5:15 pm – 5:30 pm Risk Factors for Influenza Type A Virus Infection in Poultry in the Mekong River Delta of Viet Nam, Between 2008 and 2010
(Abstract #O-91)

Long Nguyen
Department of Animal Health Dong Da, Vietnam ●

5:30 pm – 5:45 pm Particle Size Distribution and Viability of Airborne Influenza Viruses Affecting Swine and Poultry
(Abstract #O-92)

Montserrat Torremorell
University of Minnesota St. Paul, United States ●

5:45 pm – 6:00 pm Attenuation of Highly Pathogenic Avian Influenza A(H5N1) Viruses in Indonesia Following Acquisition Of PB2, PB1 and NS Genes from Low Pathogenicity Avian Influenza A Virus Progenitors **(Abstract #O-93)**
Sharmi Thor
Centers for Disease Control and Prevention
Atlanta, United States ●

4:30 pm – 6:00 pm Public Health & Clinical Science Featured Symposia: Pregnancy in Influenza ▲■

Moderators: Nelson Lee, MD, FRCP and Jonathan Nguyen-Van-Tam, DM, FRCPATH

Room Location: Sheraton Chicago Ballroom 4, 5, 6, 7, Level 4

4:30 pm – 4:50 pm Epidemiology of Influenza in the Pregnant Female
Brad Gessner, MD, MPH
Agence de Medecin Preventive Paris, France ▲■

4:50 pm – 5:10 pm Maternal Influenza and Birth Outcomes
Deshayne Fell, MSc
Children's Hospital of Eastern Ontario Research Institute ON, Canada ▲■

5:10 pm – 5:30 pm Safety and Efficacy of Influenza Vaccine in Pregnant Women and the Newborn Child
Janet Englund, MD
University of Washington Seattle, WA, United States ▲■

5:30 pm – 5:50 pm Antiviral Therapy in Pregnancy
TBD

5:50 pm – 6:00 pm Q&A Panel

6:00 pm – 7:30 pm Poster Reception III with Presenters in Attendance

Room Location: River Exhibit Hall A & B, Level 1
See poster section for Poster Session III

7:45 pm – 11:30 pm Offsite Event:* Mystic Blue Boat Cruise

*Separate Registration Fee to Attend

Mystic Blue Boat Cruise
600 E Grand Avenue
Chicago, IL 60611

28 AUGUST 2016 SUNDAY

8:00 am – 8:30 am Late Breaking Oral Abstract Session

Moderators: *Michael Ison, MD, MS and Lance Jennings, PhD*

Room Location: Sheraton Chicago Ballroom 4, 5, 6, 7, Level 4

- 8:00 am – 8:10 am The Evaluation of Virologic Endpoints for Efficacy Studies of Anti-influenza agent
(Abstract #LBO-6)
John Beigel
Leidos in support of NIH/NIAID
Bethesda, United States ■
- 8:10 am – 8:20 am Endothelial cell tropism is a determinant of H5N1 pathogenesis in mammalian species
(Abstract #LBO-7)
Balaji Manicassamy
University of Chicago
Chicago, United States ●
- 8:20 am – 8:30 am Incidence prediction in seasonal H3N2 influenza: incorporating evolution into population dynamics
(Abstract #LBO-8)
Xiangjun Du
University of Chicago
Chicago, United States ▲

8:30 am – 10:30 am Featured Symposia

8:30 am – 10:30 am Clinical Science Featured Symposia: Addressing Therapeutic Challenges ■

Moderators: *Natasha Halasa, MD, MPH and Bin Cao, MD*

Room Location: Chicago Ballroom 10, Level 4

- 8:30 am – 9:00 am Managing Avian Influenza (H7N9, H5N1)
Zhancheng Gao, MD, PhD
Peking University People's Hospital,
Beijing, China
Beijing, China ■
- 9:00 am – 9:30 am Adjuvant and Immune-Modulatory Therapies
David Shu-Cheong Hui, MD
Chinese University of Hong Kong
Shatin
New Territories, Hong Kong ■
- 9:30 am – 10:00 am Resistance Emergence During Therapy
Erhard Van der Vries, PhD
TiHo - Research Center for Emerging
Infections and Zoonoses Hannover
Hannover
Lower Sachsony, Germany ■

- 10:00 am – 10:30 am Rapid Access to Antivirals and Cost-Effectiveness
Martin Meltzer
Center for Disease Control and
Prevention (CDC)
Atlanta, GA, United States ■

8:30 am – 10:30 am Public Health Featured Symposia: Practical Issues in the Control of Influenza ▲

Moderators: *Terho Heikkinen, MD, PhD and Ruth Lynfield, MD*

Room Location: Sheraton Chicago Ballroom 4, 5, 6, 7, Level 4

- 8:30 am – 9:00 am Outbreak Control in Residential Care Homes
Marianne A.B. van der Sande, MD PhD
Centre for Infectious Disease
Control, National Institute for Public
Health and the Environment, The
Netherlands
Bilthoven
Utrecht, The Netherlands ▲
- 9:00 am – 9:30 am Early Use of Antiviral Drugs
Allison McGeer, MD, FRCPC
Mount Sinai Hospital, University of
Toronto
Toronto, ON, Canada ▲
- 9:30 am – 10:00 am Mandatory Vaccination of Health Care Workers
Helena Maltezou, MD, PhD
Hellenic Center for Disease Control
and Prevention
Athens, Greece ▲
- 10:00 am – 10:30 am Improving Vaccine Uptake in Target Groups
Darina O'Flanagan, M.B., MPH
Health Protection Surveillance
Centre Ireland
Castleknock, Ireland ▲
- 8:30 am – 10:30 am Virology & Pathogenesis Featured Symposia: Immunology ●
- Moderators:** *Leo Poon, DPhil and Patrick Reading, PhD*
- Room Location: Chicago Ballroom 8 & 9, Level 4
- 8:30 am – 9:00 am Cross-talk Between an Epithelial Integrin and Alveolar Macrophages Regulates the Lung Response to Influenza Infection
Stacey Lynne Schultz-Cherry, PhD
St Jude Children's Research Hospital
Memphis, TN, United States ●
- 9:00 am – 9:30 am Genetic and Structural Basis for Antibody-Mediated Neutralization of Influenza
James Crowe, MD
Vanderbilt University
Nashville, TN, United States ●



9:30 am – 10:00 am ³CD8⁺ T cells and recovery from severe H7N9 disease²
Katherine Kedzierska, PhD
University of Melbourne; Peter Doherty Institute
Melbourne, Vic, Australia ●

10:00 am – 10:30 am Evasion of Human Influenza A Viruses from Recognition by T Cells
Guus Rimmelzwaan, MSc, PhD
Erasmus Medical Center
Rotterdam, The Netherlands ●

10:30 am – 11:00 am Coffee Break

Room Location: Chicago Promenade

11:00 am – 12:30 pm Oral Abstract Sessions

11:00 am – 12:30 pm **Oral Abstract Session: Clinical Science** ■

Moderators: *Fred Aoki, MD and Angela Campbell, MD, MPH*

Room Location: Chicago Ballroom 10, Level 4

11:00 am – 11:15 am Factors Associated with Delay in NAI Therapy in Hospitalized Patients: A 5 Year Retrospective Review **(Abstract #O-94)**
Jeremy Katzen
University of Pennsylvania, Philadelphia, United States ■

11:15 am – 11:30 am Preliminary Findings from a Randomized Controlled Trial of the Effect of Fever Suppression by Antipyretics on Medically Attended Influenza Virus Infections **(Abstract #O-95)**
Dennis Ip
University of Hong Kong Pokfulam, Hong Kong ■

11:30 am – 11:45 am A Systems Biology-Based Approach to Identify Anti-Influenza Compounds that Impair Pathogenicity by Targeting Host Factors **(Abstract #O-96)**
Shufang Fan
University of Wisconsin-Madison, Madison, United States ■

11:45 am – 12:00 pm Preclinical Antiviral Activity and ADME Characteristics of the Novel Influenza Endonuclease Inhibitor AL-794 **(Abstract #O-97)**
Andreas Jekle
Alios Biopharma
South San Francisco, United States ■

12:00 pm – 12:15 pm S-033188, a Small Molecule Inhibitor of Cap-dependent Endonuclease of Influenza A and B Virus, Leads to Rapid and Profound Viral Load Reduction **(Abstract #LBO-1)**
Takeki Uehara
Shionogi and Co., Ltd.
Osaka, Japan ■

12:15 pm – 12:30 pm AL-794, A Novel Influenza Endonuclease Inhibitor, Demonstrates Antiviral Activity in an Influenza Human Challenge Study **(Abstract #LBO-2)**
Jeysen Yogaratnam
Alios BioPharma
South San Francisco, United States ■

11:00 am – 12:30 pm **Oral Abstract Session: Public Health** ▲

Moderators: *Lone Simonsen, PhD and Kimberly Armstrong, PhD*

Room Location: Sheraton Chicago Ballroom 4, 5, 6, 7, Level 4

11:00 am – 11:15 am Isolation of H5N6, H7N9, and H9N2 Avian Influenza Virus in the Air at Live Poultry Markets **(Abstract #O-98)**
Jie Zhou
CIR, SPH, HKU
Hong Kong, Hong Kong ▲

11:15 am – 11:30 am Bioaerosol Sampling an Effective Approach to Studying Influenza A Virus in Chinese Swine Farms **(Abstract #O-99)**
Benjamin Anderson
Duke University
Durham, United States ▲

11:30 am – 11:45 am Detection and Isolation of Influenza A Virus in Swine Environments **(Abstract #O-100)**
Montserrat Torremorell
University of Minnesota
St. Paul, United States ▲

11:45 am – 12:00 pm Limiting Influenza A Virus Spread in Pigs at Agricultural Fairs to Protect Public Health **(Abstract #O-101)**
Andrew Bowman
The Ohio State University
Columbus, United States ▲

12:00 pm – 12:15 pm Comparative epidemiology of four waves of human infections with avian influenza A(H7N9) in mainland China, 2013-2016 **(Abstract #O-102)**
Peng Wu
School of Public Health, Li Ka Shing Faculty of Medicine, University of Hong Kong
Hong Kong ▲

12:15 pm – 12:30 pm Incidence and correlates of avian influenza virus RNA detection among a cohort of live bird market poultry workers, Bangladesh : 2012-2015 **(Abstract #O-103)**
Md. Zakiul Hassan
International Centre for Diarrhoeal Diseases Research, Bangladesh (icddr,b)
Dhaka, Bangladesh ▲

11:00 am – 12:30 pm Oral Abstract Session: Virology & Pathogenesis ●

Moderators: David Wentworth, MS, PhD and David Jackson, BSc, PhD

Room Location: Chicago Ballroom 8 & 9, Level 4

11:00 am – 11:15 am HA Acid Stability and the Emergence of H1N1 Pandemic Influenza From Swine **(Abstract #O-104)**
Marion Russier
St Jude Children's Research Hospital
Memphis, United States ●

11:15 am – 11:30 am Genome Wide CRISPR/Cas9 Screen Identifies Host Factors Imperative for Influenza Virus Replication **(Abstract #O-105)**
Julianna Han
University of Chicago
Chicago, United States ●

11:30 am – 11:45 am Characterization of Highly Pathogenic Avian Influenza H5N6 Viruses of Clade 2.3.4.4. **(Abstract #O-106)**
Mathilde Richard
ErasmusMC
Rotterdam, The Netherlands ●

11:45 am – 12:00 pm The Role of the Host Range Determinant 627-Domain of the PB2 Subunit of the Influenza A Virus Polymerase in Transcription and Replication **(Abstract #O-107)**
Benjamin Nilsson
University of Oxford
Oxford, Great Britain ●

12:00 pm – 12:15 pm Species Difference in ANP32A Underlies Influenza A Virus Polymerase Host Restriction **(Abstract #O-14)**
Wendy Barclay
Imperial College London
London, Great Britain ●

12:15 pm – 12:30 pm Stalking Influenza by Vaccination with Pre-Fusion Headless HA Mini-Stem for Broadly Reactive Antibodies **(Abstract #O-109)**
Leo Poon
The University of Hong Kong
Pokfulam, Hong Kong ●

12:30 pm – 1:00 pm Lunch

Room Location: Chicago Promenade

1:00 pm – 3:00 pm Closing Plenary Session: The Future Threats from Influenza

3 Speakers (3 40 min speakers)

Moderators: Michael Ison, MD, MS and Lance Jennings, PhD

Room Location: Sheraton Chicago Ballroom 4, 5, 6, 7, Level 4

1:00 pm – 1:40 pm Influenza at the Animal-Human Interface
David Swayne, DVM, PhD
National Poultry Research Center – USDA
Athens, GA, United States

1:40 pm – 2:20 pm Forecasting the Future of Flu
Trevor Bedford, PhD
Fred Hutchinson Cancer Research Center
Seattle, WA, United States

2:20 pm – 3:00 pm Improving on Influenza Vaccines: Managing the Challenges of Vaccine Mismatch
Dan Jernigan, MD, MPH
US Centers for Disease Control and Prevention
Atlanta, GA, United States

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Sponsors:

SEQIRUS **Platinum Partner**

Booth: 411

Address: 1020 First Avenue

City: King of Prussia

Zip Code: 19406

Country: USA

Phone Number: +1-610-290-7400

Website: www.seqirus.com

Seqirus is the new global company created in July 2015 from the combined strength and expertise of bioCSL Inc. and the influenza vaccines business formerly owned by Novartis AG. As the second largest influenza vaccine provider in the world, Seqirus is a transcontinental partner in pandemic preparedness and a major contributor to the prevention and control of influenza globally, with extensive research and production expertise and manufacturing plants in the US, Europe and Australia and a commercial presence in 20 countries.

ASTRAZENECA/MEDIMMUNE **Silver Partner**

Address: 1 Francis Crick Ave

City: Cambridge

Zip Code: CB2 0RE

Country: United Kingdom

Phone Number: +44 (0)20 7604 8000

Website: www.astrazeneca.com

AstraZeneca is a global, innovation-driven biopharmaceutical business that focuses on the discovery, development and commercialization of prescription medicines, primarily for the treatment of cardiovascular, metabolic, respiratory, inflammation, autoimmune, oncology, infection and neuroscience diseases. AstraZeneca operates in over 100 countries and its innovative medicines are used by millions of patients worldwide.

NOVAVAX **Silver Partner**

Address: 20 Firstfield Road

City: Gaithersburg

Zip Code: 20878

Country: USA

Phone Number: (240) 268-2000

Website: www.novavax.com

Novavax, Inc. (Nasdaq:NVAX) is a clinical-stage vaccine company committed to delivering novel products to prevent a broad range of infectious diseases. Its recombinant nanoparticles and Matrix-MTM adjuvant technology are the foundation for groundbreaking innovation that improves global health through safe and effective vaccines. Please refer to websites www.novavax.com and DiscoverRSV.com

JANSSEN PHARMACEUTICALS **Bronze Partner**

Address: 700 US Route 202 South

City: Raritan

Zip Code: 08869

Country: USA

Phone Number: +1 (908) 722-5393

Website: www.janssen.com

At Janssen, we have ambitious goals. We strive to discover and develop novel therapeutics and vaccines to prevent, treat and cure serious infectious diseases worldwide, improving treatment outcomes and patients' lives. Learn more at www.janssen.com. Follow us @JanssenGlobal.

ROMARK LC **Bronze Partner**

Address: 3000 Bayport Drive, Suite 200

City: Tampa

Zip Code: 33607

Country: USA

Phone Number: (813) 282-8544

Website: www.romark.com

Romark is a pharmaceutical company committed to the discovery, development and commercialization of innovative small molecules for treating infectious diseases and respiratory infections. During its twenty-year history, Romark has grown from a small research and development organization to become a vertically integrated pharmaceutical company with its own drug discovery, development, manufacturing and commercial capabilities. We continue to take on new challenges in the field of medicine and public health with the same spirit that has characterized our company and its employees from the beginning – expanding our footprint with a vision toward positively impacting the lives of people worldwide.

QUIDEL CORPORATION **Bronze Partner**

Booth: 410

Address: 12544 High Bluff Drive, Suite 200

City: San Diego

Zip Code: 92130

Country: USA

Phone Number: (858)-552-1100

Website: www.quidel.com

Quidel® Corporation is committed to enhancing health and well-being through innovative diagnostic solutions. Quidel assays use lateral-flow, direct fluorescent antibody, molecular and other technologies to improve patient outcomes and give economic benefits to healthcare providers. With leading brands - QuickVue®, AmpliVue®, Lyra™, MicroVue™, D3 Direct Detection™, Thyretain®, Sofia®, and Solana™, Quidel aids in the detection and diagnosis of critical diseases and conditions. www.quidel.com



Exhibitors:

ACCELOVANCE, INC.

Booth # 520
Address: 2275 Research Boulevard, Suite 700
City: Rockville
Zip Code: 20850
Country: USA
Phone Number: 240-238-4900
Website: www.accelovance.com

Accelovance is an award-winning Contract Research Organization focused on vaccine, oncology, and general medicine clinical development. As a clinical services provider to pharma and biotech companies, Accelovance offers comprehensive services for Phase I-IV clinical trials and also operates a Clinical Call Center specializing in recruitment, retention, and post-marketing surveillance.

ALLERGAN

Booth # 421
Address: Morris Corporate Center III, 400 Interpace Parkway
City: Parsippany
Zip Code: 07054
Country: USA
Phone Number: (862)-261-7000
Website: www.allergan.com

Allergan (NYSE: AGN) is a unique, global pharmaceutical company focused on developing, manufacturing and commercializing high quality generic and innovative branded pharmaceutical products for patients around the world. The Company has approximately 30,000 employees worldwide and maintains global headquarters in Dublin, Ireland. For more information, visit www.Allergan.com.

AVIOQ, INC.

Booth: 425
Address: 1047 West Alexander Drive
City: Research Triangle Park
State: NC
Zip: 27709
Phone Number: (919) 314-5535
Website: www.avioq.com

Avioq, Inc., founded in 2007 and incorporated in North Carolina, has headquarters in Research Triangle Park, NC. We are introducing the qFLU Dx Test, a homogeneous biochemiluminescence based Flu A/B diagnostic test, and the qFLU Combo Test, a rapid influenza virus drug resistance test.

CEPHEID

Booth # 323
Address: 904 Caribbean Dr.
City: Sunnyvale
Zip Code: 94089
Country: USA
Phone Number: +1-408-541-4191
Website: www.cephheid.com

Cepheid is the leading innovator in the field of molecular diagnostics. The Company is dedicated to improving healthcare by developing, manufacturing, and marketing accurate yet easy-to-use systems and tests. By automating highly complex procedures, the company's solutions deliver a better way for institutions of any size to perform sophisticated molecular testing that can dramatically enhance the management of infectious diseases and cancer.

CTL ANALYZERS

Booth # 325
Address: 20521 Chagrin Blvd
City: Shaker Heights
Zip Code: 44122
Country: USA
Phone Number: (216)-325-7245
Website: www.immunospot.com

CTL Analyzers leads the field by providing a comprehensive platform of high-throughput regulated instrumentation for viral titre and neutralization assays.

- Focus-forming Assays (FFA)
- Microneutralization Assays
- PRNT – plaque reduction neutralization tests
- ELISPOT/FluoroSpot
- Single-, Double-, Triple-, and 4-Color T cell and B cell KITS

DENKA SEIKEN CO., LTD

Booth #416
Address: 2-H, Nihonbashi Murona
City: Tokyo
Zip Code: 103-8338
Country: Japan
Phone Number: +81-3-6214-3236
Website: www.denka-seiken.jp

For more than half century, Denka Seiken Co., Ltd. has been developing and producing vaccines and bacteriology and virology, immunochemistry, clinical chemistry and food-related diagnostic reagents based on one fundamental idea: the significance of safeguarding a single human life surpasses all else, "Life is precious."

FUSION GENOMICS**Booth # 313****Address: 8999 Nelson Way, SFU Discovery Park****City: Burnaby****Zip Code: V5A 4W9****Country: Canada****Phone Number: +1.604.428.7701****Website: www.fusiongenomics.com**

Fusion Genomics develops diagnostic modalities that simultaneously permit the diagnosis, monitoring and tracking of globally important infectious diseases. Our influenza assays, for example, simultaneously permit diagnosis and monitoring of human and avian influenza in clinical specimens and wetland sediments, through the capturing and sequencing the HA, NA, and matrix genes.

GISAID**Booth # 422****Address: Lipowskystrasse 10****City: Munich****Zip Code: 81373****Country: Germany****Phone Number: (+) 44-208-816-2141****Website: www.gisaid.org**

GISAID promotes the open sharing of all influenza data by protecting the interests of data submitters. Hosted by the German Government, its publicly accessible EpiFlu™ database offers the largest collection of current/unpublished influenza sequence data, critical to the biannual vaccine virus recommendations of WHO's Global Influenza Surveillance and Response System.

HVIVO**Booth # 423****Address: 42 New Road****City: London****Zip Code: E1 2AX****Country: United Kingdom****Phone Number: +44 (0)20 7756 1300****Website: www.hvivo.com**

hVIVO plc ("hVIVO") is a life sciences company pioneering a technology platform of human disease models to accelerate drug discovery and development in respiratory and infectious diseases. Based in the UK, hVIVO has commercialised conducted over 40 clinical studies, involving more than 2,000 volunteers for a range of leading industry, governmental and academic clients.

IIT RESEARCH INSTITUTE (IITRI)**Booth # 319****Address: 10 West 35th Street****City: Chicago****Zip Code: 60616****Country: USA****Phone Number: (312)-567-4924****Website: www.iitri.org**

IIT Research Institute (IITRI) is a preclinical CRO offering high quality and collaborative drug discovery and GLP safety testing services. Areas of focus include extensive infectious disease capabilities from efficacy testing through Phase II clinical trial support, complete GLP IND/NDA programs, inhalation toxicology and oncology drug discovery and development.

INDEV, INC.**Booth # 317****Address: 2100 Central Ave, Suite 106****City: Boulder****Zip Code: 80301****Country: USA****Phone Number: (303)-402-9100****Website: www.indevr.com**

InDevR, Inc., is a leader in providing progressive analytical technologies that enhance and accelerate vaccine characterization and production. The company is also committed to developing next-generation diagnostic products that will enable unprecedented tracking of seasonal and emerging influenza viruses around the globe.

J CRAIG VENTER INSTITUTE**Booth #522****Address: 4120 Capricorn Lane****City: La Jolla****Zip Code: 92037****Country: USA****Phone Number: (858) 200-1800****Website: www.jcvi.org**

Influenza Research Database (IRD, www.fludb.org) is a freely available, NIH/NIAID sponsored Viral Bioinformatics Resource Center. IRD supports influenza virus data mining and hypothesis generation by providing a wide array of different data types, a suite of comparative genomics analysis and visualization tools, and personal workbenches for data saving and sharing.



SANOFI PASTEUR

Booth #418

Address: 1 Discovery Drive

City: Swiftwater

Zip Code: 18370

Phone Number: (570) 839-7187

Website: www.sanofipasteur.us

Sanofi Pasteur Inc. provides pediatric, adult, and travel vaccines for diseases such as diphtheria, tetanus, pertussis, polio, Haemophilus influenzae type b, influenza, rabies, typhoid fever, yellow fever, and meningococcal disease. To learn more about our products, visit our exhibit booth.

SANOFI PASTEUR MEDICAL INFORMATION

Booth #420

Address: 1 Discovery Drive

City: Swiftwater

Zip Code: 18370

Phone Number: (570) 839-7187

Website: www.sanofipasteur.us

Sanofi Pasteur Inc. provides pediatric, adult, and travel vaccines for diseases such as diphtheria, tetanus, pertussis, polio, Haemophilus influenzae type b, influenza, rabies, typhoid fever, yellow fever, and meningococcal disease. To learn more about our products, visit our exhibit booth.

SGS

Booth #311

Address: 20411 Seneca Meadows Parkway

City: Gaithersburg

Zip Code: 20411

Country: USA

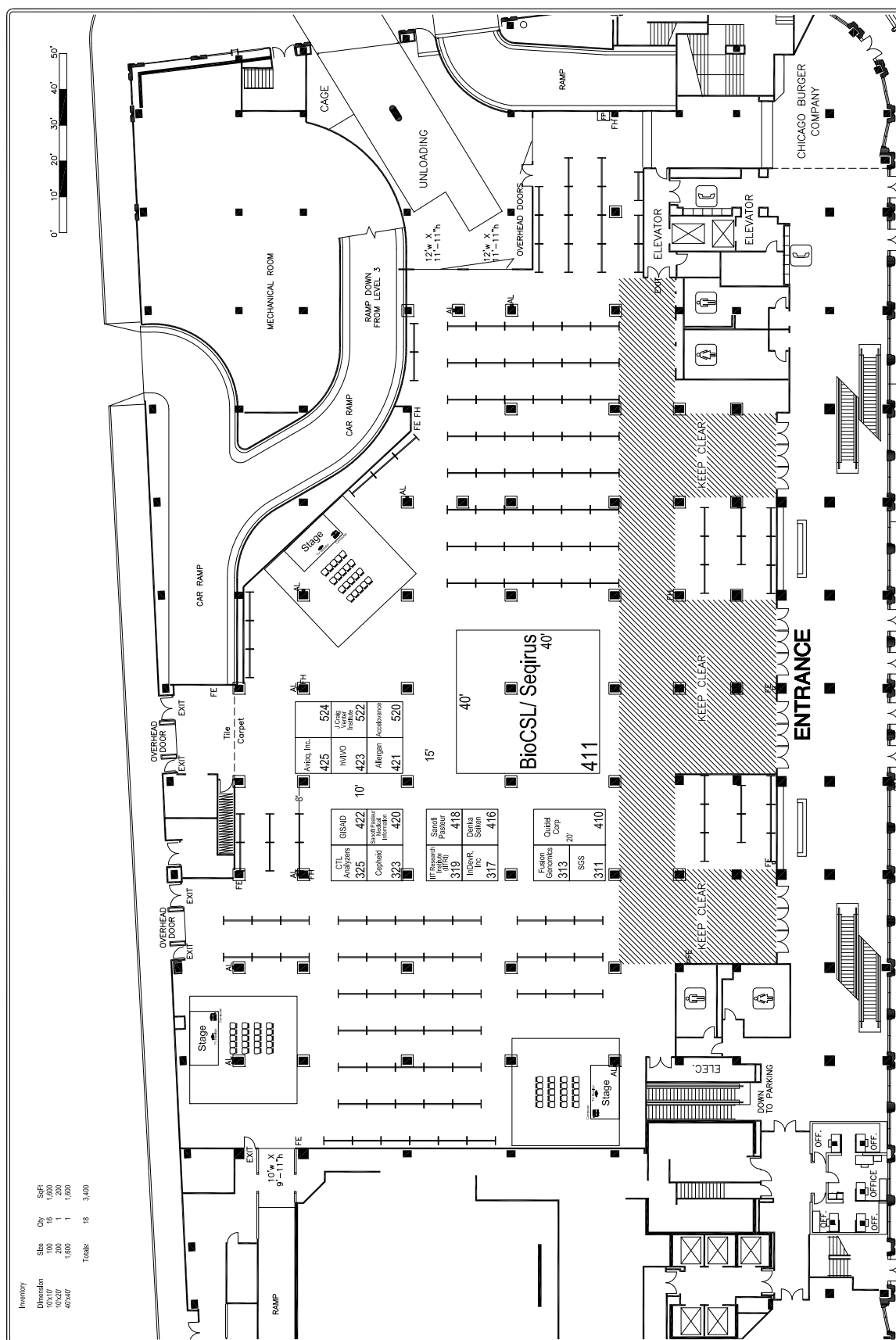
Phone Number: +1 301-556-0863

Website: www.sgs.com/CRO

SGS is a leading life science contract service organization providing clinical research and bioanalytical development services. Delivering solutions for pharmaceutical companies, SGS offers Phase I-IV clinical trial management services encompassing clinical project management and monitoring, data management, biostatistics, PK/PD Modeling & simulation and regulatory consultancy.



EXHIBIT HALL FLOOR PLAN



CSL established by Australian Government

1916

Spanish flu response

1918

Insulin

1923

Snake antivenoms

1930

Influenza virus vaccine

1942

Penicillin

1944

CSL becomes a WHO flu reference lab

1951

Blood plasma therapies

1952

Polio vaccine

1956

Asian flu pandemic response

1957

Hong Kong flu pandemic response

1968

Influenza strain reassorting begins

1973

Q fever vaccine

1989

HPV vaccine collaboration

1991

CSL becomes a WHO Flu collaborating centre

1992

CSL privatized and listed on the ASX

1994

Plasma therapies for global markets

2000

Seasonal flu vaccine for global markets

2002

CSL Behring created for plasma therapies

2004

H1N1 (Swine) flu pandemic response

2009

Novartis flu vaccine business acquired

2015

Seqirus created for influenza products

2015

Adjuvanted seasonal flu vaccine

2015

Cell-based seasonal QIV

2016

100 YEARS

and just getting started

A century ago, we made a promise to protect the health of a nation. Today that promise is stronger than ever.

Set up by the Australian Government as the Commonwealth Serum Laboratories, our first major task was to combat the deadly Spanish flu pandemic. Working with the smartest minds, we have continued the fight against influenza ever since.

Recently, we acquired the Novartis influenza vaccine business and combined it with our own to create Seqirus, a new global force in influenza.

We're now better placed than ever to protect against influenza today, prepare for the pandemic threats of tomorrow and develop innovative solutions for the future.

We are Seqirus and we're just getting started.



CELEBRATING

100

CSL™

RESPIRATORY INFECTIONS NEED YOUR ATTENTION

Respiratory syncytial virus {RSV}

Globally, each season, 3.4 million children (<5 years old) are hospitalized due to RSV – that's one every five seconds.¹ Yet it's not just a problem for the very young, as this common seasonal virus affects the lungs and airways of around 64 million people.² With no vaccine or guideline-recommended antiviral treatments available, RSV can turn deadly.

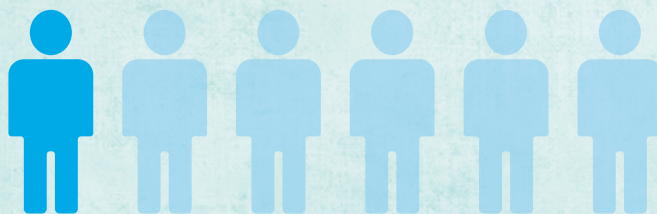
160,000 deaths each year globally²



Influenza {flu}

Influenza, more commonly known as flu, remains one of the world's most serious public health challenges. Although not always seen as a high risk infection, up to 5 million people will develop a severe case of influenza globally, each year, which has the potential to have serious consequences.^{3,4}

1 in 6 people are infected with influenza every year³



Janssen in respiratory infections

Through intensive research and development, Janssen aims to focus on the prevention, diagnosis and treatment of two of the most life-threatening viral respiratory infections: RSV and influenza.

We aspire to help people fight against the burden due to RSV and influenza.

For more information, visit www.janssen.com.

References

1. Nair H et al. Global Burden of Acute Lower Respiratory Infections due to Respiratory Syncytial Virus in Young Children: A Systematic Review and Meta-Analysis. *Lancet* 2010; 375(9725):1545-1555
2. World Health Organization. Initiative for Vaccine Research: Acute Respiratory Infections [online]. http://apps.who.int/vaccine_research/diseases/ari/en/index2.html. Last accessed June 2016.
3. World Health Organization. Influenza (seasonal) [online]. <http://www.who.int/mediacentre/factsheets/fs211/en/> Last accessed June 2016.
4. World Health Organization. Immunization, vaccines and biologicals: influenza [online] <http://www.who.int/immunization/topics/influenza/en/> Last accessed June 2016.

