

OPTIONS XII for the Control of Influenza

Mini-School of Influenza

29 September - 2 October 2024

University of Queensland, Brisbane, Australia



OPTIONS XII
for the Control of
INFLUENZA

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ABOUT MINI-SCHOOL OF INFLUENZA

The School is aimed at graduate students and young scientists who are starting, or in the early stages of a career in virology, public health, surveillance, research or product development. The scientific programme is an intensive day before the start of the Options meeting with presentations to provide participants with a comprehensive scientific grounding in many aspects of influenza, RSV and SARS-CoV-2 ranging from theoretical concepts to basic techniques used in research and surveillance. The course will end with a social buffet dinner.

PROGRAMME

08.00-08.30	Registration
08.30	Welcome to School - <u>Rebecca Cox</u> , <u>Mark Tompkins</u> , <u>Kirsty Short</u>

EPIDEMIOLOGY AND VIROLOGY: Chair Kirsty Short

08.35-09.15	Global impact of respiratory viruses - <u>Maria Zambon</u>
09.15-10.45	<u>This week in virology</u> podcast
10.45-11.10	Coffee

EPIDEMIOLOGY AND VIROLOGY: Chair Mark Tompkins

11.10-11.50	RSV and SARS-CoV-2 - <u>Kirsten Spann</u>
11.50-12.30	Influenza virus and one health - <u>Erik Karlsson</u>
12.30-13.30	Lunch

PREVENTION AND CONTROL: ANTIVIRALS: Chair Mike Ison

13.30-14.10	Antivirals - <u>Emi Takashita</u>
14.10-14.50	Antiviral resistance - <u>Cameron Wolfe</u>

PREVENTION AND CONTROL: IMMUNOLOGY AND VACCINES: Chair Jude Jayamaha

14.50-15.30	Immunity to respiratory viruses and correlates of protection <u>Chris Chiu</u>
15.30-16.00	Coffee
16.00-16.40	Influenza vaccines, effectiveness and study design - <u>Sheena Sullivan</u>

FUTURE PERSPECTIVES: Chair Rebecca Cox

16.40-17.15	Next generation "universal" vaccines and future perspectives on influenza and SARS CoV-2 - <u>Florian Krammer</u>
17:15	Close of School - <u>Rebecca Cox</u>
17:30	School dinner and social event

Venue: 03-206 - Steele Building, Learning Theatre
Food & Drinks: The Global Change Institute (Building 20), Atrium

CHAIRS

REBECCA JANE COX

Professor Rebecca Cox heads the Influenza Centre at the University of Bergen, Norway, and has over three decades of experience in influenza research. She completed her PhD at the University of London and has since focused on developing and evaluating influenza vaccines, with a particular interest in human immune responses to infection and vaccination. Prof. Cox advises global health bodies, including the WHO and the European Medicines Agency, and has authored over 150 peer-reviewed publications. She is deputy chair of isirv and a senior editor of the society's journal.



MICHAEL G. ISON

Dr. Michael Ison is the Respiratory Disease Branch Chief within the Division of Microbiology and Infectious Diseases at NIAID/NIH. He earned his medical degree from the University of South Florida College of Medicine, followed by training in Internal Medicine at Oregon Health Sciences University and Infectious Diseases at the University of Virginia. He further specialized in Transplant Infectious Diseases at Massachusetts General Hospital/Harvard Medical School. After 17 years as a Professor in the Divisions of Infectious Diseases and Organ Transplantation at Northwestern University Feinberg School of Medicine, Dr. Ison transitioned to his current role at NIAID/NIH. He also serves as the Editor-in-Chief of Transplant Infectious Disease and chairs the ISIRIV Antiviral Group.



CHAIRS

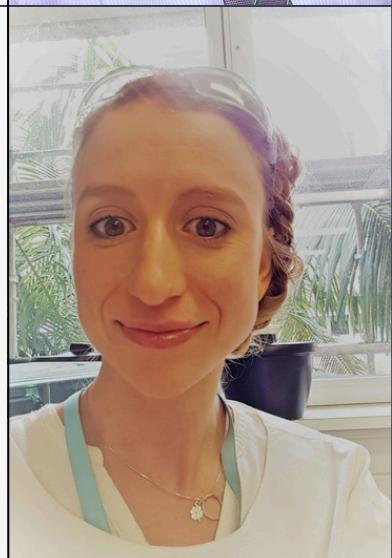
JUDE JAYAMAH

Dr. Jayamaha is a Board Certified Specialist in Medical Virology in Sri Lanka. He is attached to the Medical Research Institute, Colombo, where he leads the National Influenza Centre. He earned his MBBS with honors, and MD in Medical Virology from the University of Colombo. He received advanced training in Clinical Virology in Sydney, and WHO Collaborating Centre in Melbourne, Australia. Since 2012, he is the national focal point for influenza virological surveillance in Sri Lanka and is a WHO expert in laboratory aspects of respiratory viruses and influenza surveillance. His research is centered on pandemic preparedness for respiratory viruses, the role of children in the transmission of viruses. He is a trainer and an examiner in postgraduate training degrees at the Postgraduate Institute of Medicine, University of Colombo for the past decade.



KIRSTY SHORT

A/Professor Kirsty Short is a virologist at the University of Queensland, Australia, where her research is centered on pandemic preparedness for respiratory viruses, including influenza and SARS-CoV-2. Her work encompasses studies on avian influenza, the role of children in the transmission of viruses, and the application of AI in viral diagnostics and pan-viral therapeutics.



S. MARK TOMPKINS

Professor Mark Tompkins is the Director and Principal Investigator of the Center for Influenza Disease and Emergence Research at the University of Georgia. Holding a doctorate in Immunology from Emory University, he has a background in studying immune responses to influenza and other emerging respiratory pathogens. His research also investigates vaccine-induced immunity and pathogen interactions. He has received several accolades, including a Senior Fulbright Scholar Award and the Georgia Athletic Association Distinguished Professorship in Virology and Immunology.



SPEAKERS



CHRISTOPHER CHIU

Professor Chris Chiu is an Infectious Diseases physician and Immunologist at Imperial College London. He specializes in the pathogenesis and immune response to respiratory viral infections, including RSV, influenza, and SARS-CoV-2. Prof. Chiu is renowned for his work using controlled human infection models to study respiratory viruses, which provides unique insights into disease mechanisms and vaccine efficacy. He leads several international research consortia, including the CEPI-HERA MusICC betacoronavirus initiative, aimed at accelerating vaccine development through innovative experimental medicine techniques.

FLORIAN KRAMMER

Professor Florian Krammer, PhD, is the endowed Mount Sinai Professor of Vaccinology at the Icahn School of Medicine at Mount Sinai, New York. After earning his PhD from the University of Natural Resources and Life Sciences, Vienna, he completed postdoctoral training at Mount Sinai, focusing on universal influenza vaccines. His research now spans various viruses, including coronaviruses and flaviviruses, with an emphasis on antibody interactions and vaccine development. Dr. Krammer has published over 400 scientific papers and leads major initiatives such as the Sinai-Emory Collaborative Influenza Vaccine Innovation Center.



ERIK KARLSSON

Dr. Erik Karlsson is Deputy Head of the Virology Unit at Institut Pasteur du Cambodge and Director of the National Influenza Center in Phnom Penh. He earned his Ph.D. from the University of North Carolina, exploring immune responses to influenza in diet-induced obesity. At St. Jude Children's Research Hospital, he focused on viral pathogenesis and surveillance. Dr. Karlsson oversees respiratory virus activities in Southeast Asia, contributing to global influenza and COVID-19 responses. He founded CANARIES, enhancing surveillance of infectious diseases at animal markets, and consults frequently for FAO and WHO.

KIRSTEN SPANN

Professor Kirsten Spann is the Director of the Centre for Immunology and Infection Control at Queensland University of Technology, where she also leads the Respiratory Virus Research Group. She holds a Ph.D. from the University of Queensland and has an extensive research background, including work on respiratory syncytial virus vaccine candidates and studies on virus transmission dynamics. Her research explores the interplay between viruses and the immune system, with implications for controlling respiratory viral infections.



SHEENA SULLIVAN

A/Professor Sheena Sullivan is an infectious diseases epidemiologist with a focus on the accurate estimation of vaccine effectiveness and the immunological factors that affect it. She collaborates on several large-scale seroepidemiological studies, investigating how repeated influenza vaccinations influence antibody diversity and immune responses, aiming to optimize vaccination strategies.

EMI TAKASHITA

Dr. Emi Takashita is a Senior Research Scientist at Japan's National Institute of Infectious Diseases. Her research focuses on the antiviral susceptibilities of influenza viruses and SARS-CoV-2, contributing to the global understanding of resistance patterns and informing treatment strategies against these pathogens.



CAMERON WOLFE

Professor Cameron Wolfe is an Infectious Disease Physician at Duke University Medical Center, North Carolina, specializing in the care of immunocompromised patients, including those with HIV and transplant recipients. His dual appointment at the Duke Human Vaccine Institute involves investigating vaccine responses and clinical outcomes to respiratory viruses. Additionally, he leads efforts at Duke in managing emerging pathogens such as Ebola, COVID-19, and novel influenza strains.

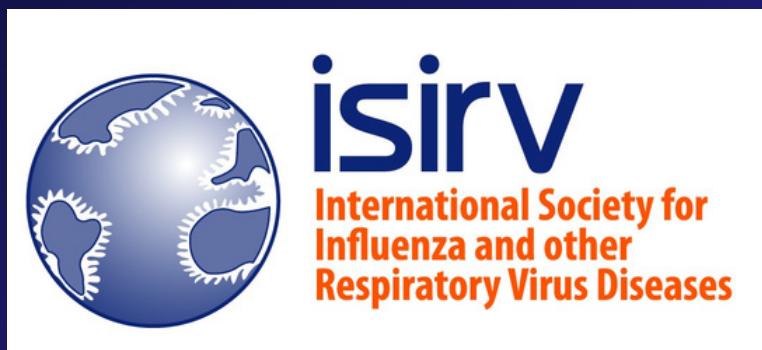
MARIA ZAMBON

Professor Maria Zambon is the Head of Respiratory Viruses and Director of the National Influenza Centre at the UKHSA's National Reference Laboratory in London. She has 40 years of experience as an influenza virologist, with a focus on antivirals and therapeutics, grounded in her medical training and a PhD on amantadine's mechanism of action. At UKHSA, she has been instrumental in the surveillance and response to seasonal and emerging respiratory viruses, including pivotal work on avian influenza vaccines and managing global pandemic responses like SARS, MERS, and SARS-CoV-2.

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We are grateful to our main sponsor
Flulab for generous educational
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