

2nd International Meeting on Respiratory Pathogens 2018

PROGRAMME

| DAY 1 Wednesday 7 March | | |
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| 0800 - 0900 | <i>Registration & Poster Setup</i> | |
| 0900 - 0930 | Opening Ceremony | |
| | Introduction to Keynote Speaker | |
| 0930 - 1015 | <p>Keynote Address</p> <p><i>Evolution Will Outsmart Intelligent Design Every Time. Emerging Respiratory Pathogens: What Challenges Do We Face?</i></p> <p>Maria Zambon Public Health England, UK</p> | |
| 1015 - 1045 | Tea Break | |
| 1045 - 1115 | <p>Plenary I</p> <p><i>The Role of the Microbiome in Chronic Obstructive Pulmonary Disease</i></p> <p>Philip Hansbro University of Newcastle Australia</p> | |
| 1115 - 1145 | <p>Plenary II</p> <p><i>Respiratory Syncytial Virus</i></p> <p>Peter Openshaw Imperial College London</p> | |
| 1145 – 1345 <i>Talks begin at 1215</i> | <p>Lunch Break + lunch Session on AMR/Infection Control – The Importance of Infection Control to Battle Antimicrobial Resistance</p> <p>Sponsored by Mundipharma</p> | |
| | <p>The Antimicrobial Resistance Challenge and Importance of Hygiene Intervention</p> <p>Wing Hong SETO University of Hong Kong, Hong Kong SAR New Viruses, New Outbreaks , New Interventions</p> <p>Hoe Nam LEONG Mount Elizabeth Novena Hospital, Singapore Adopting European Norms on Standardised Testing of Antiseptics Including Povidone-Iodine Against Viruses</p> <p>Maren EGGERS Heidelberg University, Germany</p> <p>Open Discussion/ FAQ</p> | |
| 1345 - 1530 | <p>Parallel Session 1</p> <p>Burden and Epidemiology of Acute Respiratory Infections</p> | <p>Parallel Session 2</p> <p>Immunology of Respiratory Pathogens (including Disease Pathogenesis and Host Dynamics)</p> |
| | Chair: Jean-Michel Heraud | Chair: Peter Openshaw |
| | <p>Invited Talk 1 Cheryl Cohen</p> <p>Burden of Influenza and RSV in Africa</p> | <p>Invited Talk 1 Stephan Ludwig</p> <p>Cellular MEK inhibitors Act Antiviral Against Influenza Viruses by Preventing Binding of M1 to NP Leading to RNP Retention in the Nucleus</p> |
| Day 1 | <p>Invited Talk 2 Arnold Monto</p> <p>Correlates of vaccine protection against influenza in HIVE, a longitudinal cohort of households</p> | <p>Talk 2</p> <p>TBC</p> <p><i>Title pending</i></p> |

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| Wednesday 7 March cont'd | Talk 3 Danielle Rentz Hunt The Pregnancy and Influenza Multinational Epidemiologic (PRIME) Study: Design and Methods of a Multi-Country Cohort to Estimate Incidence and Impact of Influenza during Pregnancy in Low- or Middle-Income Countries (LMICs) | Talk 3 Jessica Belser Influenza Virus Tropism in Respiratory and Ocular Cells |
| | Talk 4 Vanessa Cozza Approach and Challenges to Estimating Global Estimates of Influenza-associated Respiratory Hospitalizations: The Influenza Burden, Global Project (IcEBErG), World Health Organization | Talk 4 Wenwei Tu Human Gammadelta-T cells Synergize CD4 Tfh Cells to Produce Influenza Virus-Specific Antibody |
| | Talk 5 Joelinotahiana Rabarison Burden and Epidemiology of Influenza- and Respiratory Syncytial Virus-Associated Severe Acute Respiratory Illness Hospitalization in Madagascar, 2011-2016. | Talk 5 <i>Title TBC</i> |
| 1530 - 1600 | Tea break | |
| 1600 - 1745 | Parallel Session 3 Advances in Respiratory Pathogen Vaccines | Parallel Session 4 AVG Session 1 Emerging Respiratory Virus Threats: New Insights |
| | Chair: Gavin Smith | Chair: Aeron Hurt |
| 1600 - 1625 | Invited Talk 1 Philippe Buchy The role of vaccines in preventing antimicrobial resistance | Invited Talk 1 Aeron Hurt Neuraminidase inhibitor resistance: detection and response |
| 1625 - 1650 | Invited Talk 2 Raffael Nachbagauer Catching a moving target: A universal influenza virus vaccine strategy based on the conserved stalk domain of the hemagglutinin | Invited Talk 2 Bin Cao Clinical features and management of avian influenza A(H7N9) virus infection: Chinese guidelines |
| | Talk 3 Min Levine Head to Head Comparison of A(H3N2) Antibody Responses Following High Dose, Adjuvanted and Standard Dose Influenza Vaccination Licensed for Elderly in the United States | Invited Talk 3 Timothy R Watkins Remdesivir (GS-5734) for the Treatment of Pathogenic Coronavirus and Other RNA virus Infections with High Outbreak Potential |
| | Talk 4 Lynda Coughlan Improving the immunogenicity of vaccine antigens delivered by non-replicating adenoviral vectored vaccines by exosome-display | Talk 4 Xiaohui Zou Dynamic variation and reversion in the signature amino acid of H7N9 virus during human infection |
| Day 1 Wednesday cont'd | Talk 5 Barnaby Young Improving Year-round Protection from Influenza Infection in Tropical Countries with Six-monthly Vaccination: Results of the TROPICS1 Randomised Controlled Trial. | Talk 5 <i>Awaiting confirmation of title</i> |

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| 1745 - 1815 | Break before Plenary |
| 1815 - 1845 | Plenary III <i>The Great Influenza: A historical perspective of the 1918 pandemic</i> Geoffrey W. Rice University of Canterbury New Zealand |
| 1845 - 1945 | Poster Session I with Authors & Networking Drinks |
| 1945 - 2115 | Appreciation Dinner for Invited Speakers |

End of Day 1

DAY 2 Thursday 8 March

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| 0730 - 0830 | Registration (Foyer) & Poster Setup | |
| 0830 - 0900 | Plenary IV <i>Pneumococcal diseases in the post-vaccine era</i> Doo-Ryeon Chung Samsung Medical Center - Sungkyunkwan University Republic of Korea | |
| 0900 0930 - 1000 0930 | Plenary V <i>Etiology of pneumonia in children</i> David Murdoch University of Otago New Zealand | |
| 0930 - 1000 | Tea break | |
| 1000 - 1145 | Parallel Session 5 AVG Session 2 Advances in Respiratory Virus Therapeutics | Parallel Session 6 Special Track Updates on Respiratory Diseases for Policy Makers |
| | Chair: Fred Hayden | Chair: Paul Tambyah |
| | Invited Talk 1 Fred Hayden Influenza polymerase inhibitors | Invited Talk 1 Vernon Lee What policy makers need to know when crafting policy on surveillance, vaccination and public health responses to influenza and other emerging respiratory infections |
| | Invited Talk 2 John Beigel Influenza monoclonals and passive immunotherapy | Talk 2 Meredith McMorrow Framework to guide influenza vaccination policy in resource limited settings: a case study from South Africa |
| | Invited Talk 3 Jason Chien Lessons from RSV inhibitor studies | Talk 3 Alex Cook Public preferences for interventions to prevent emerging infectious disease threats: a discrete choice experiment |
| | Talk 4 Norio Sugaya Cap-dependent endonuclease inhibitor baloxavir marboxil for the treatment of influenza: Results from a Phase 3, open-label study in otherwise healthy pediatric patients with seasonal influenza | Talk 4 Peter White Assessment of the effectiveness of England's National Pandemic Flu Service, a patient assessment and antiviral distribution system used in the 2009 influenza A/H1N1 pandemic |

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| Day 2 Thursday contd | Talk 5 Angie Lackenby Experimental Evolution of Resistance to Favipiravir in Influenza | Talk 5 Yirong Chen The effect of school closure on hand, foot and mouth disease transmission in Singapore: a modelling study |
| 1145 - 1345 <i>Talks begin at 1215</i> | LUNCH BREAK Plus lunch session on Influenza Vaccination Throughout Life Sponsored by GSK See AGENDA below During this symposium, a panel of influenza experts and experienced clinicians will discuss the rationale for vaccination as well as the epidemiological and clinical characteristics of influenza disease in high-risk groups of people Gavin Smith (Chair) SPEAKERS: Lance Jennings <i>University of Otago, New Zealand</i> Anne Goh <i>KK Women's and Children's Hospital, Singapore</i> Philippe Buchy <i>GSK Vaccines</i> Leong Hoe Nam <i>Mt Elizabeth Novena Hospital, Singapore</i> Jing Chen <i>GSK Vaccines</i> Paul Tambyah <i>National University Hospital, Singapore</i> Michael Nissen <i>GSK Vaccines</i> | |
| 1345 - 1530 | Parallel Session 7 Surveillance Systems and Public Health Prevention Strategies | Parallel Session 8 Evolution and Molecular Epidemiology of Respiratory Pathogens |
| | Chair: Dan Jernigan | Chair: Sebastian Maurer-Stroh |
| | Invited Talk 1 Dan Jernigan 50 Years and going strong: addressing the vaccine challenges of H3N2 | Invited Talk 1 Richard Neher Real-time analysis and forecasting of influenza virus evolution |
| | Talk 2 Nancy Leung Detection of Respiratory Viruses and Efficacy of Face Masks in Reducing Viral Release in Human Exhaled Breath | Invited Talk 2: Jemma Geoghegan Reconstructing the antigenic evolution of influenza A/H3 viruses in multiple hosts |
| | Talk 3 Kristen Coleman Bioaerosol Sampling for Respiratory Viruses in the Singapore Mass Rapid Transit Network | Talk 3 Martin Linster Genetic diversity of Rhinoviruses and Enteroviruses in adults in Singapore 2007 to 2013 |
| | Talk 4 Mahbubur Rahman Potential for aerosolization and transmission of Avian Influenza A from animal to human at the human-animal interface of live bird markets in Bangladesh | Talk 4 Keisuke Yoshihara Evolutionary Dynamics of Globally Spreading RSV Subgroup-A ON1 Genotype |
| | Talk 5 Chris Chadwick & Claudia Nannei Local production of influenza Vaccines: results from the Global Action Plan for influenza vaccines technology transfer and sustainable production projects | Talk 5 <i>Awaiting confirmation of title</i> |
| 1530 - 1600 | Tea break | |
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| Day 2 Thursday contd 1600 - 1630 | Plenary VI <i>One-Health Approach to EID: from outbreak investigation to vaccine development</i> Linfa Wang Duke-NUS Medical School, Singapore | | |
| | 1630 – 1830 Bioinformatics and Database Demonstrations GISAID/NextFlu/Fluserver Naomi Komadina, Richard Neher, Sebastian Maurer-Stroh & Influenza Research Database Yun Zhang | 1630 – 1830 Poster Session II With authors and networking drinks | 1630 – 2030 Expert Dialogue on Infection Control with Mundipharma (By invitation) |
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| End of Day 2 | | | |
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| Day 3 Friday 9 March | | | |
| 0800 - 0900 | Registration (Foyer) | | |
| 0900 - 0930 | Plenary VII <i>Population Based Interventions to Prevent Respiratory Infections</i> Ben Cowling The University of Hong Kong, Hong Kong SAR | | |
| 0930 - 1000 | Tea break | | |
| 1000 - 1145 | Parallel Session 9 New Advances in Diagnostics (to include host responses for diagnostics and prognostication) | Parallel Session 10 Modelling the Spread of Respiratory Pathogens | |
| | Chair: Lance Jennings | Chair: Ben Cowling | |
| | Invited Talk 1 Sandy Tze-Minn Mak Culture clash – public health surveillance in the era of molecular diagnostics | Invited Talk 1 Alex Cook Modelling the effectiveness of pandemic preparedness strategies in the general community and in semi-closed populations | |
| | Talk 2 Martin Chi-Wai Chan Use of metagenomic next-generation sequencing in diagnosis of respiratory viruses in a cohort of patients admitted to intensive care unit | Talk 2 Matthew Biggerstaff Results from five years of seasonal influenza forecasting challenges in the United States, 2013 to 2018 | |
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| Day 3 Friday contd | Talk 3 Tristan Clark Clinical benefits of molecular point-of-care testing for viruses are dependent on a rapid turnaround time: results of a large pragmatic RCT | Talk 3 Bo Xu Mechanisms for multiple waves in an influenza season |
| | Talk 4 Marc Hovestaedt FluType - development of a peptide based fine typing platform for influenza A viruses | Talk 4 Bo Dickens Global mapping of intervention cost-effectiveness and disease control priorities for respiratory illnesses: a systematic review and spatial meta-analysis. |
| | Talk 5 Hong Kai Lee The social network of respiratory viruses in Singapore | Talk 5 Aaron Prussin II Interplay of environmental conditions and survival of influenza aerosols |
| 1145 - 1300 | LUNCH | |
| 1300 - 1445 | Parallel Session 11 Respiratory Syncytial Virus | Parallel Session 12 Respiratory Pathogen Co-infections |
| | Chair: Menno de Jong | Chair: Phil Hansbro |
| | Invited Talk 1 Larry Kauvar RSV Pathology and treatment | Invited Talk 1 Erik Karlsson Etiology, outcome and co-factors of SARI in Cambodian children from 2014 to 2017 |
| | Talk 2 Andrej Egorov A novel XC221 compound for treatment of RSV infection | Talk 2 Zhou Fei Risk factors for nosocomial infection among hospitalised severe influenza A(H1N1)pdm09 patients |
| | Talk 3 Clarence Tam Burden and cost of hospitalisation due to respiratory syncytial virus in children under 30 months in Singapore | Talk 3 Kosalaraksa Pope Inactivated quadrivalent influenza vaccine protects against disease and reduces healthcare and antibiotic use in children aged 6 to 35 months: a randomized controlled efficacy trial during 2011 to 2014 |
| | Talk 4 Cynthia Mathew Inhibition of XPO1-mediated transport by Verdinexor and Curcumin results in reduced Respiratory Syncytial Virus (RSV) Replication in Cell Culture | Talk 4 Mahesh Moorthy Epidemiology and risk of mortality due to viral ALRI among children under 2 years at a tertiary hospital in Vellore, India. |
| | Talk 5 Rodica Gilca Impact of new palivizumab recommendations in healthy term infants in a circumpolar region of Quebec, Canada: first year results | <i>Title TBC</i> |
| 1445 - 1515 | Plenary VIII <i>The Future of Combating Pandemics</i> Nahoko Shindo World Health Organisation | |

End of Day 3

Saturday 10 MARCH at the Four Points Sheraton at Singapore,
(next to the Grand Copthorne Waterfront Hotel)

Additional Event: MASTERCLASS – Vaccination and Healthy Aging

(separate registration required)

| Time | Module & Summary of Content | Speaker(s) & Affiliation |
|-------------|---|---|
| 12:00-13:20 | Lunch | |
| 13:20-13:30 | Welcome and introduction | Gavin SMITH • Professor, Programme in Emerging Infectious Disease, Duke-NUS Medical School, Singapore |
| 13:30-14:10 | What is immunosenescence? | |
| | A healthy immune system (short summary: how immune system controls infections, innate immune response, adaptive immune response) | OOI Eng Eong • Professor & Deputy Director, Emerging Infectious Disease Programme, Duke-NUS Medical School, Singapore |
| | Biological age: an immunologist perspective (definition of immunosenescence, chronological age vs biological age), | Lisa Fong Poh NG • Sr. Principal Investigator, Laboratory of Microbial Immunity, A*STAR, Singapore • Adjunct Assoc. Prof. NUS and Duke-NUS Medical School, Singapore |
| | Changes in the immune system associated with age (effects of age on the various compartments of the immune system) | |
| | Q&A | All speakers |
| 14:10-15:25 | Impact of immunosenescence on vaccination | |
| | Why vaccinate older adults (vaccines recommended in older age groups, rationale of vaccines usually recommended) | Jenny LOW Guek Hong • Sr. Consultant, Dept. Infectious Diseases, SGH, Singapore • Assoc. Prof. Emerging Infectious Diseases Programme, Duke-NUS Medical School, Singapore |
| | Immune response to vaccination in older adults (normal immune response to vaccination vs reduced immune response to vaccines in elderly) | |
| | Immunosenescence and the experience with Hepatitis A and Hepatitis B vaccines (disease burden, clinical particularities, immunogenicity and efficacy of vaccines in older adults) | Woo-Yun SOHN South East Asia Cluster Medical Lead, GSK Vaccines |
| | Immunosenescence and experience with influenza vaccines (disease burden, clinical particularities, immunogenicity and efficacy of vaccines in older adults) | Philippe BUCHY Director, Scientific Affairs & Public Health, GSK Vaccines |

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| | Immunosenescence and response to inactivated and live-attenuated zoster vaccines (disease burden, clinical particularities, immunogenicity and efficacy of vaccines in older adults) | Michael NISSEN Director, Scientific Affairs & Public Policy, GSK Vaccines |
| | Q&A | All speakers |
| 15:25-15:50 | Tea break | |
| 15:50-16:45 | How to improve the efficacy of vaccination in older adults? | |
| | Contribution of herd immunity to protection of older adults (principles, example of influenza vaccination of young children to provide herd immunity for older adults) | Sanjoy DATTA Vice President, Clinical R&D & Medical Affairs, GSK Vaccines |
| | Higher vaccine doses (influenza, zoster) | Philippe BUCHY Director, Scientific Affairs & Public Health, GSK Vaccines |
| | Alternative delivery routes | Beatrice LAUPEZE |
| | Adjuvants (mechanisms of action, aluminium, MF59, GSK adjuvant systems, etc.) | Sr. Mgr., Global Medical Affairs, GSK Vaccines |
| | Q&A | All speakers |
| 16:45-18:10 | Case studies – Clinical expert’s opinion (list of indicative topics that could be covered by clinicians) | |
| | Challenges in preventing pneumococcal disease in older adults | Doo-Ryeong CHUNG Professor & Chief, Division of Infectious Diseases, Sungkyunkwan University School of Medicine, Samsung Medical Centre, South Korea |
| | Shingles – clinical case report | LEO Yee Sin <ul style="list-style-type: none"> • Professor & Director of Institute of Infectious Disease and Epidemiology, TTSH, Singapore • Clinical Director of Communicable Disease Centre, TTSH, Singapore |
| | Tetanus, diphtheria and pertussis in older adults: what are the risks? | LEONG Hoe Nam <ul style="list-style-type: none"> • Medical Director & Consultant Infectious Disease Physician, Rophi Clinic, Singapore • Adjunct Assoc. Prof. Duke-NUS Medical School, Singapore |
| | Influenza – Impact of influenza disease on older adults with and without particular underlying diseases | Reshma A MERCHANT <ul style="list-style-type: none"> • Assoc. Prof. & Head of Division of Geriatric Medicine, NUS, Singapore • Geriatric Education Director, Yong Loo Lin School of Medicine, NUS, Singapore |
| | How to improve vaccination uptake in older adults? A clinician perspective | Hanley HO Jian An Consultant of Dept. Clinical Epidemiology, TTSH, Singapore |
| | Q&A | All speakers |
| 18:10-18:15 | Closure | Gavin SMITH |

AGENDA - GSK LUNCH SYMPOSIUM

Thursday 8 March 2018

Title: Influenza Vaccination Throughout Life

Grand Ballroom, Level 4 Grand Copthorne Waterfront Hotel,

| Time | Title | Speaker(s) |
|-------------|--|--|
| 11:45-12:15 | Lunch | |
| 12:15-12:20 | Welcome | Chair: Gavin SMITH Professor, Programme in Emerging Infectious Disease, Duke-NUS Medical School, Singapore |
| | | Moderator: Philippe BUCHY Director, Scientific Affairs & Public Health, GSK Vaccines |
| 12:20-12:40 | Why vaccinate children? | Lance JENNINGS Clinical Assoc. Prof. Pathology Department, University of Otago, New Zealand Anne GOH Senior Consultant, Respiratory Medicine Service, Department of Paediatrics KK Women's and Children's Hospital, Singapore Adjunct Associate Professor of the Yong Loo Lin School of Medicine and the Duke-NUS Graduate Medical School Philippe BUCHY Director, Scientific Affairs & Public Health, GSK Vaccines |
| 12:40-13:00 | Maternal immunization with influenza vaccines: benefits for the mother, the fetus and the newborn | Lance JENNINGS Clinical Assoc. Prof. Pathology Department, University of Otago, New Zealand LEONG Hoe Nam Consultant Infectious Disease Physician, Rophi Clinic, Singapore Jing Chen Sr. Regional Epidemiology Manager, AP, VxR&D, GSK Vaccines |
| 13:00-13:20 | Influenza vaccination in high-risk adults (asthma, COPD, diabetes, cardiovascular diseases, etc) | Lance JENNINGS Clinical Assoc. Prof. Pathology Department, University of Otago, New Zealand Paul Anantharajah Tambyah Professor, Dept. of Medicine, NUS Singapore Sr. Consultant, Division of Infectious Diseases, NUH Singapore Michael NISSEN Director, Scientific Affairs & Public Policy, GSK Vaccines |
| 13:20-13:40 | Q&A | Moderator: Gavin SMITH Professor, Programme in Emerging Infectious Disease, Duke-NUS Medical School, Singapore |
| 13:40-13:45 | Closing | Philippe BUCHY Director, Scientific Affairs & Public Health, GSK Vaccines |

Event description

Influenza causes considerable morbidity and mortality worldwide. Each individual acquires a number of influenza infections throughout life. The first encounter with the viruses usually occurs in infants during their first or second influenza season. Vaccination is the most effective way to prevent infection and severe outcomes caused by influenza viruses. The World Health Organization recommends the vaccination of: children aged 6-59 months, pregnant women, elderly, individuals with specific chronic medical conditions and healthcare workers. For children under six months of age, WHO recommends vaccination of mothers during pregnancy and vaccination of close contacts to limit transmission of influenza viruses to the young infant. During this symposium, a panel of influenza Experts and experienced Clinicians will discuss the rationale for vaccination as well as the epidemiological and clinical characteristics of influenza disease in these high-risk groups.