PROGRAMME DAY 2

Tuesday 27 September 2022

08:30 - 09:00  |  Main Auditorium
Plenary Session 2  
Specificity and Protective Function of T Cells in Influenza and COVID-19
Paul Thomas, St Jude Children’s Research Hospital, US
New Opportunities in Non-Pharmaceutical Interventions for Influenza
Linsey Marr, Virginia Tech, US
Peter Openshaw, Imperial College London, UK

09:00 - 09:30
Tea break  |  Hall 1

09:30 - 10:00
Influenza: Virus-host Cell Interactions

10:00 - 10:30
Influenza: Improved Seasonal Vaccines

10:30 - 12:00
Influenza: Virus-host Cell Interactions
Chair(s) TBC

10:35 - 11:00
Session Speaker: Xavier de Haan
Utrecht University, Netherlands

11:00 - 11:12
Binding of H7 influenza A virus to N-glycolylneuraminic acid and sialyl-Le(x) on Nglycans
Cindy Spruit, Utrecht University, Netherlands
Quadrivalent influenza self-amplifying mRNA bicistronic vaccines elicit potent HA and NA-specific antibody and cell-mediated immunity against seasonal influenza strains
Yingxia Wen, Seqirus, USA
Mobility and competition shape seasonal influenza epidemics in the United States
Simon De Jong, University of Amsterdam, Netherlands

11:12 - 11:24
Developing an assay for nucleic acid exposure to probe influenza membrane fusion
Ana Villamil, Upsala University, Sweden
Interim Analysis of a Phase 2 Randomized Clinical Trial on the Safety, Reactogenicity, and Immunogenicity of a Quadrivalent, mRNA-based Seasonal Influenza Vaccine (mRNA-1010) in Healthy Adults
Rafael Nachbagauer, Moderna, Inc., USA
Resurgence of H5N1 Influenza A virus (AV) on a university campus in Arizona, USA during the COVID-19 pandemic
Matthew Scotch, Arizona State University, USA

11:24 - 11:36
High-throughput droplet-based analysis of influenza A virus genetic reassortment by single-virus RNA sequencing
Catherine Isel, Institut Pasteur/INSEERM, France
Safety and Immunogenicity of COVID Influenza Combination Vaccine
Vivek Shinde, Novavax, Inc., USA
Within-host evolution of Influenza A virus during acute infection
Emily E. Bendall, University of Michigan, USA

11:36 - 11:48
Silencing pulmonary sensory neurons increases influenza disease severity
Nathalie AJ Veraze, University of Queensland, Australia
Monitoring antigenic drift in the neuraminidase of recent influenza A(H3N2) viruses
Larisa Gubareva, Center for Disease Control and Prevention, USA
Impact of antigenic drift on influenza A/H3N2 vaccine effectiveness in the United States
Amanda Perofsky, Fogarty International Center, USA

11:48 - 12:00
Aberant Cellular Glycosylation Modifies the Influenza Glycome Without Genomic Changes Allowing Virus Evasion of Host Immune Responses
Ian York, Centers for Disease Control and Prevention, USA
Learning Protein Sequences to Predict Antigenic Variation of Human Influenza Viruses
Lin Wang, University of Cambridge, UK

12:00 - 14:00
Lunch  |  Luncheontime Symposium sponsored by Seqirus  |  Hall 1

14:05 - 14:30
Influenza - Pathogenesis
Chair(s) TBC
Session Speaker: Debby van Riel
Erasmus MC, Netherlands

14:05 - 14:30
Influenza: Broadly Protective/Universal Influenza Virus Vaccines
Chair(s) TBC
Session Speaker: Masaru Kanekyo
VRC National Institutes of Health, USA

14:05 - 15:06
Modelling and Forecasting for Influenza
Chair(s) TBC
Session Speaker: Simon Cauchemez
Institut Pasteur, France

14:05 - 14:30
Autoantibodies against type I IFNs in patients with critical influenza pneumonia
Andrés Pizzorno, Centre International de Recherche en Infectiologie (CIRI), France
Universal mRNA vaccines for influenza elicit broadly protective antibodies against co-circulating and future drifted H3N2 and H1N1 variants
James Allen, University of Georgia, USA
Lessons learned for influenza forecasting from two-years of real-time forecasting for the COVID-19 pandemic
Matthew Biggerstaff, Centers for Disease Control and Prevention, USA

14:14 - 14:54
Exacerbated disease severity and perturbed immune responses directed towards influenza viruses following arbovirus co-infection
Isabelle Foo, The Peter Doherty Institute for Infection and Immunity, Australia
Cytomegalovirus vaccine vector-induced, unconventionally MHC-restricted effector memory T cells protect cynomolgus macaques from lethal aerosolized H5N1 challenge
Jonah Sacha, Oregon Health and Science University, USA
Modelling informing policy in a highly vaccinated Singapore during the Delta and Omicron wave
Yi Shen Chew, National University of Singapore, Singapore

14:54 - 15:06
Seasonal influenza vaccination protects macaques against lethal respiratory disease following inhalation of small particle aerosols containing H3N2 influenza
Douglas Read, University of Pittsburgh, USA
Forecasting of Influenza activity using multi-stream surveillance data in Hong Kong
Dong Wang, University of Hong Kong, Hong Kong

15:06 - 15:18
Levels of virus-binding and virus-neutralizing antibodies to historic strains of influenza virus are birthyear-dependent and evolve with different dynamics
Anke Huckriede, University Medical Center Groningen, Netherlands
Neutralization Landscape of influenza hemagglutinin stem to characterize antibody behavior and decompose antibody mixtures
Adrian Creaonga, VRC, National Institutes of Health, USA
Using long short-term memory (LSTM) a recurrent neural network model forecasting influenza activity with climate data for four geographic regions of Vietnam
Hai Tuan Nguyen, National Institute of Hygiene and Epidemiology, Vietnam
The use of telemetry and whole-body plethysmography for acquiring real-time physiological data for improved host response analysis during an influenza virus infection in ferrets [AOX0102]

Lisa Kercher, St. Jude Children’s Research Hospital, USA

Modified live attenuated influenza B virus vaccines and sex differences on humoral immune responses in the DBA/1J mouse model [AOX0392]

Daniel Perez, University of Georgia, USA

Impact of broadly-protective vaccines on seasonal dynamics and variant escape of human influenza A [AOX0337]

Qi Yang, Princeton University, USA

15:18 - 15:30

15:30 - 16:00

**Tea break | Hall 1**

**SARS-CoV-2 - Pathogenesis & Transmission**

- 16:00 - 16:05
  - Chair(s) tbc
  - Session Speaker: Ian Wilson
    - Scripps Research Institute, USA

- 16:05 - 16:30
  - Defining cellular correlates of protection to influenza across human cohorts [AOX0118]
    - Robert C. Meltzman, St. Jude Children’s Research Hospital, USA
  - Session Speaker: Jenna Guthmiller
    - University of Colorado, USA
  - Chair(s) tbc
  - Implementing seasonal influenza vaccination in the era of COVID-19, in South Africa (2021-2022) [AOX0337]
    - Wayne Ramkrishna, National Department of Health, South Africa

- 16:30 - 16:42
  - Viral emissions into the air and environment after SARS-CoV-2 human challenge [AOX0124]
    - Ankika Singanayagam, Imperial College London, UK
  - Defining cellular correlates of protection to influenza across human cohorts [AOX0118]
    - Robert C. Meltzman, St. Jude Children’s Research Hospital, USA
  - Chair(s) tbc
  - Next generation T cell activating vaccination increases influenza virus mutation prevalence [AOX0146]
    - Mairied Bridget Bull, University of Oxford, UK

- 16:42 - 16:54
  - Mutations in SARS-CoV-2 variants of concern link to increased spike cleavage and virus transmission [AOX0132]
    - Alba Escalera, Icahn School of Medicine at Mount Sinai, USA
  - Influenza vaccine responses among young children first exposed to influenza antigens via infection versus vaccination [AOX0137]
    - Annette Fox, WHO Collaborating Centre for Reference and Research on Influenza, Australia
  - Chair(s) tbc
  - Implementing seasonal influenza vaccination in the era of COVID-19, in South Africa (2021-2022) [AOX0337]
    - Wayne Ramkrishna, National Department of Health, South Africa

- 16:54 - 17:06
  - SARS-CoV-2 ORF6 protein targets TRIM25 mediated ubiquitination of RIG I to mitigate Type I Interferon Signalling [AOX0126]
    - Oyahida Khatun, Indian Institute of Science, India
  - Next generation T cell activating vaccination increases influenza virus mutation prevalence [AOX0146]
    - Mairied Bridget Bull, University of Oxford, UK
  - Chair(s) tbc
  - Development of universal influenza vaccines: understanding the industry perspective [AOX0186]
    - Isa Ahmad, Imperial College London, UK

- 17:06 - 17:18
  - SARS-CoV-2 in white-tailed deer indicates establishment of the species as a wildlife reservoir in North America [AOX0146]
    - Andrew Bowman, The Ohio State University, USA
  - Seasonal influenza vaccination expanded antibody breadth and induced cross-reactive antibodies to future A/H3N2 viruses [AOX0145]
    - Nina Urke Ertesvåg, University of Bergen, Norway
  - Chair(s) tbc
  - The Influence of Rapid Influenza Diagnostic Testing on Clinician Decision-making for Patients with Acute Respiratory Infection in Urgent Care [AOX0107]
    - Jonathan Tennie, State of Wisconsin's Department of Employee Trust Funds Office of Strategic Health Policy, USA

- 17:18 - 17:30
  - Diminished capability of SARS-CoV-2 Omicron variant to replicate at febrile temperature [AOX0145]
    - Li Wang, Centers for Disease Control and Prevention, USA
  - A universal influenza mRNA vaccine candidate boosts T-cell responses and reduces zoomatic influenza virus disease in ferrets [AOX0150]
    - Jorgen de Jonge, National Institute of Public Health and the Environment (RIVM), Netherlands
  - Chair(s) tbc
  - Introduction of influenza vaccination in children aged 2-6 years in Denmark in times of COVID-19, 2021-2022 [AOX0108]
    - Frederikke Lomholt, Statens Serum Institut, Denmark

17:30 - 19:00

**Refreshments + Poster Session 2 + sponsored symposium | Hall 1**