Mini-Symposium on Influenza Surveillance and Vaccine selection

Hosted by the A*STAR Bioinformatics Institute (BII)

Seats are limited, please arrive early to avoid disappointment

Date: Monday, February 21st 2011
Venue: Biopolis, Matrix building, Level 7, BII seminar rooms Glycine and Cysteine

10:00 - 10:30 Ian Barr, WHO CC Melbourne
“How the WHO influenza vaccine formulation recommendation is made.”

10:30 - 10:45 Raymond Lin, NPHL/MOH Singapore
“MOH influenza surveillance”

10:45 - 11:00 Mark Chen, CDC/TTSH Singapore
“Epidemiological studies of influenza and their implications for understanding influenza immunology”

11:00 - 11:15 Sebastian Maurer-Stroh, BII/A*STAR Singapore
“The role of Bioinformatics in Molecular Influenza Surveillance”

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Ian Barr, WHO CC Melbourne
“How the WHO influenza vaccine formulation recommendation is made.”

Abstract:
Twice a year a group of influenza specialists are brought together under the WHO GISM (Global Influenza Surveillance Network) to make a recommendation of the most appropriate strains to be included in influenza vaccines for either the Northern or Southern Hemisphere. This program which has been running in some shape or form since 1947 is the longest (still running) program within WHO. This seminar will outline the process and data which is applied to this decision and how this effects the annual production of influenza vaccine.

Speaker’s biography:
Dr Ian Barr is currently the Deputy Director of the WHO Collaborating Centre for Reference and Research on Influenza based in Melbourne Australia (one of only 5 such Centre’s in the world). Dr Barr has had over 30 years experience in Research and Development both with academic and commercial groups including 10 years at the Collaborating Centre and has authored or co-authored over 100 publications including over 60 articles on various aspects of influenza.

Raymond Lin, NPHL/MOH Singapore
“MOH influenza surveillance”

Abstract:
Influenza surveillance in Singapore, is led by Surveillance and Response of MOH Communicable Diseases Division. Currently, specimens were collected from patients with influenza-like illness (ILI) from hospitals, 18 government polyclinics and private GP clinics for influenza testing under enhanced surveillance network. Besides the laboratory findings, other epidemiological data are also collected to monitor influenza activity in Singapore. National Public Health Laboratory, as National Influenza Centre under Global Influenza Surveillance Network, works closely MOH, WHO Collaborating Centre, clinical and research teams to provide useful information in a timely manner.

Speaker’s biography:
Dr Raymond Lin is Head and Senior Consultant with the National Public Health Laboratory, Ministry of Health. He obtained his basic medical degree from the National University of Singapore and specialized as a medical microbiologist, obtaining his Fellowship with the Royal Australasian College of Pathologists. His experience and publications cover diagnostic methods, molecular microbiology, antibiotic resistance, infection control and influenza.

Mark Chen, CDC/TTSH Singapore
“Epidemiological studies of influenza and their Implications for understanding influenza immunology”

Abstract:
After the appearance of the novel H1N1 strain in 2009 (pdmH1N1), we embarked on a series of sero-epidemiological studies of pandemic H1N1 and seasonal influenza in Singapore. We present a series of observations which we believe challenge us to refine our understanding of influenza immunology, namely:
- the role of infection and vaccination in eliciting strain-specific antibodies
- the rate of decline of antibodies following infection
- the role of alternative mechanisms in protecting elderly individuals from pdm H1N1
We also suggest some directions for future epidemiological studies for addressing the above issues.

Speaker’s biography:
Dr Mark Chen is a physician epidemiologist based at the Communicable Disease Centre in Tan Tock Seng Hospital. His research focuses on understanding the epidemiology of emerging infectious diseases. His recent work has focused on studying the burden of disease from influenza infections in Singapore.

Sebastian Maurer-Stroh, BII/A*STAR Singapore
“The role of Bioinformatics in Molecular Influenza Surveillance”

Abstract:
The recent swine flu pandemic and seasonally recurring influenza outbreaks are excellent examples how bioinformatics can play a crucial and cost-effective role not only in the early molecular characterization of a new virus but also to follow its ongoing evolution. By blending comparative genomics, phylogenetic and evolutionary conservation analysis, 3D structural modelling, protein structural interactions, geo-temporal occurrence and literature text mining with expert-derived curation, we aim to identify critical changes in the circulating strains regarding virulence, drug sensitivity and vaccine efficacy. We are an essential part of the regional molecular surveillance efforts by the National Public Health Laboratory of the Ministry of Health and also collaborate with other hospitals, research institutes and health authorities in Singapore, Mexico, Brazil and the WHO CC in Melbourne.

Speaker’s biography:
Dr Sebastian Maurer-Stroh studied theological biochemistry at the University of Vienna and wrote his master and PhD thesis at the renowned Institute of Molecular Pathology (IMP). Following the honor of a FEBs and a Marie Curie fellowship at the VIR-SWITCH lab in Brussels, he leads a group of 8 experts in protein sequence analysis as principal investigator in the A*STAR Bioinformatics Institute (BII) since November 2007.