



CONSIDE workshop on influenza neuraminidase (NA) and discussion of an international study of the 'ELLA' NA inhibition assay

Friday, 19 September 2014

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A growing number of laboratories are using the enzyme-linked lectin assay (ELLA) to measure neuraminidase (NA) inhibiting antibody titers. An international study supported with funds from BARDA was conducted to evaluate the comparability of NI titers measured by ELLA in different laboratories.

CONSIDE laboratory members were invited to participate in the study in April 2014. A list of participants is provided below – this included 15 laboratories with prior experience with ELLA and 20 laboratories without prior experience with this assay. These latter labs were provided with guidance to establish the assay prior to running study samples. Inactivated H6N1 and H6N2 antigens were prepared and shipped to participants, together with a standard assay and study instructions. Data were submitted for statistical analysis in 2 phases: Phase I: preliminary analysis of data submitted by experienced labs; Phase II: final analysis of data from all laboratories.

This meeting to discuss the assay and interim study results was planned as a webinar that would include presentations from experts in the field of NA immunity. The presentations were given as a GoTo meeting on 19th September 2014. Slides from the meeting can be seen by clicking on the agenda item below.

7:30 am	Welcome and introduction of workshop attendees
7:45 am	Study goals and design (Maryna Eichelberger)
8:00 am	Interim study results (Yonghong Gao)
9:00 am	Discussion of assay protocol part 1: assay reagents and set up (all study participants)
10:00 am	Coffee break
10:30 am	Discussion of assay protocol part 2: assay acceptance criteria and problem solving (all study participants)
11:30 am	Role of NA in influenza pathogenesis and transmission (Seema Lakdawala)
12:00 pm	Lunch
1:00 pm	Antigenic drift of NA (Ron Fouchier)
1:45 pm	Heterologous protection afforded by NA-specific antibodies (Richard Webby)
2:30 pm	Strain-specific and conserved epitopes in H1N1 influenza NA (Hongquan Wan)
3:00 pm	Coffee break
3:15 pm	HAI and NAI as correlates of protection after influenza vaccination (Arnold Monto)

- 4:00 pm [The role of CONSISE in supporting influenza pandemic preparedness \(John Wood\)](#)
- 4:30 pm Closing remarks (John Wood)

Study Participants

Phase I: Laboratories with experience of performing ELLA

CBER, FDA, USA (Maryna Eichelberger, Laura Couzens)
CDC, USA (Min Levine)
NIH, USA (Kanta Subbarao, Celia Santos)
University of Michigan, USA (Arnold Monto/Suzanne Ohmit, Emileigh Johnson)
CDC, China (Tian Bai, Hejiang Wei)
Public Health England, UK (Catherine Thompson)
University of Hong Kong, Hong Kong (Malik Peiris, Mahen Perera)
St Jude Childrens' Research Hospital, USA (Richard Webby, Sook-San Wong)
Univ of Melbourne, Australia (Lorena Brown, Brad Gilbertson)
Erasmus Medical Center, The Netherlands (Ron Fouchier, Theo Besterbroer)
Focus Diagnostics, USA (Wayne Hogleve, Man Tran)
Baxter Biomedical Research, Austria (Keith Howard, Nicole Hetzelt)
Novavax, USA (Dewal Jani, Nnenna Nwokekeh)
Health Canada, Ottawa, Canada (Sean Li, Louise Larocque)
GSK, Germany (Elisabeth Neumeier, Christin Süß)

Phase II: Laboratories with no experience of performing ELLA

Paul Ehrlich Institute, Germany (Ralf Wagner, Nina Alex)
Institute Pasteur, Cambodia (Philippe Buchy, Rith Sareth)
Institute Superior di Sanita/ NIC Rome, Italy (Maria Castrucci, Isabella Donatelli)
University of Bergen (NIC), Norway (Rebecca Cox)
Institute Pasteur (NIC), Algeria (Fawzi Derrar)
NIBSC, UK (Othmar Engelhardt, Ruth Harvey)
US Naval Medical Center, USA (Jose Garcia, Daniel Ewing)
Naval Health Research Center, USA (Tony Hawksworth)
National Institute of Health (NIC), Portugal (Raquel Guiomar)
National Microbiology Lab, Public Health Agency, Canada (Yan Li, Laura Hart/Nathalie Bastien)
WHO Collaborating Center, Melbourne Australia (Karen Laurie)
NIC, Spain (Ivan Sanz Muñoz)
National Institute of Virology, India (Shailesh Pawar)
Baylor University, USA (Tony Piedra)
Mahidol University, Thailand (Pilaipan Puthavathana, Hatairat Lerdsamran)
University of Kent, UK (Nigel Temperton)
NIRDMI "Cantacuzino", Romania (Emilia Lupelescu)
Beijing Institute of Microbiology & Epidemiology, China (MaiJuan Ma)
Public Health Agency of Sweden, Sweden (Andreas Mörner)
BC Center for Disease Control, Canada (Patrick Tang)