

**4th Meeting on Influenza Vaccines that Induce Broad Spectrum and
Long-lasting Immune Responses**
Contributors: Wellcome Trust and World Health Organization

Wellcome Trust, Euston Road, London, UK, 9-10 Nov (Monday-Tuesday)

Agenda

Chair: Albert Osterhaus, Erasmus Medical Centre, Rotterdam, The Netherlands

Rapporteur: Iain Stephenson, Leicester Royal Infirmary, Leicester, UK

Monday 9 November 2009

8.45 – 9.00 Registration, coffee/tea

9:00 -9:20 Opening remarks - Marie-Paule Kieny and Fred Hayden

Special review session

Moderator: Fred Hayden, Wellcome Trust

09:20- 09:45	Update on development of H1N1 pandemic vaccines	Marie-Paule Kieny, IVR WHO
09:45 -10:10	Changing antigenicity of HA and NA: opportunities for improved vaccines	Derek Smith, University of Cambridge, UK
10:10-10:40	Coffee break	
10:40-11:05	Role of adjuvants in induction of cross-reactive and long-lasting immune responses	Martin Friede, IVR WHO
11:05-11:30	Conserved and alternative vaccine targets	Rick Bright, PATH, USA
11:30-11:50	General discussion	

Immunological mechanisms providing cross-protection. Correlates of protection.

Moderator – Guus Rimmelzwaan, Erasmus Medical Centre, The Netherlands

11:50-12:10	Immunological correlates of protection	Guus Rimmelzwaan, Erasmus Medical Centre, The Netherlands
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12:10-12:30	Role of CMI in protection against influenza in humans	Janet McElhaney, St. Paul's Hospital, Canada
12:30-13:30	Lunch break	
13:30-13:50	T cell responses in human influenza virus infection	Andrew McMichael, Weatherall Institute of Molecular Medicine, UK
13:50-14:10	Correlates of efficacy of LAIV	Kanta Subbarao, NIAID, USA
14:10-14:30	Discussion	

Live attenuated vaccines

Moderator: Larisa Rudenko, Institute of Experimental Medicine, St Petersburg

14:30-14:50	M2 cytoplasmic tail mutants as pandemic vaccine candidates	Pamuk Bilsel, FluGen Inc., USA
14:50-15:20	Tea break	
15:20-15:40	Influenza B NS-1 truncated mutants as candidate vaccines	Julia Romanova, Green Hills Biotechnology, Austria
15:40-16:00	Protease activation mutants of influenza A and B viruses as candidates for attenuated live vaccines against pandemic and seasonal influenza	Juergen Stech, Friedrich-Loeffler Institute, Germany
16:00-16:20	Direct and indirect protection against new variants of influenza A and B with the live attenuated influenza vaccine, 2007-2008	William Paul Glezen, Baylor College of Medicine, USA
16:20-16:40	Protection against circulating and drifted variants of influenza virus with the LAIV	Irina Kiseleva, Russian Academy of Medical Science, Russia
16:40-17:00	Discussion	

New strategies for Influenza vaccination

Moderator: Marie-Paule Kieny, IVR, WHO

17:00-17:20	AS03-adjuvanted seasonal vaccines in the elderly	Dirk Poelaert, GSK Biologicals
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17:20- 17:40	MF59-adjuvanted influenza vaccines: update on seasonal and pre-pandemic vaccines and potential for a tetravalent formulation	Giuseppe Del Giudice, Novartis, Italy
17:40-18:20	Discussion	
18:20	Drinks Reception	
18.50	Dinner	

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Tuesday 10 November 2009

New technologies for the production or delivery of novel influenza vaccines

Moderator: Albert Osterhaus, Erasmus University

8.45 tea and coffee

VLPs

09:00-09:15	Enhancing the breadth of immunity to influenza VLPs	Dick Compans, Emory University, USA
09:15-09:25	Continuous production and purification of a Virus-Like Particle Influenza vaccine from mammalian cell culture	Boro Dropulic, Lentigen, USA
09:25-09:35	VLPs made in insect cells and presentation of new clinical data and i.n. route	Kevin Bryett, Novavax
09:35-09:45	Insect cell-produced influenza-pseudotyped virus like particles: Evidence for enhanced immunity and breadth of protection	Joel Haynes, LigoCyte Pharmaceuticals, USA
09:45-10:05	Discussion	

LIVE-VECTORS

10:05-10:20	Overview on safety of live-vectored vaccines	Ralph LeBlanc, CBER, USA
10:20-10:30	Live-vector approaches including their MVA vector studies	Liyanage Perera, Centre for Cancer Research, NCI, USA
10:30-10:40	MVA vector studies in monkeys	Albert Osterhaus, Erasmus University, The Netherlands
10:40-11:10	Coffee break	
11:10-11:20	Rationale and Design of a Phase 1 Clinical Trial of PaxVax Live, Oral Ad4-Vectored H5N1 Vaccine	Kenneth Kelley, PaxVax, USA
11:20-11:30	Non-replicating adenovirus vector as a carrier for the development of rapid-response influenza vaccines	De-chu Tang, Vaxin Inc., USA
11:30-12:00	Discussion	
12:00-13:00	Lunch break	

NOVEL PRODUCTION METHODS

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13:00-13:10	VLP production in plants	Louis Vézina, Medicago Inc., Canada
13:10-13:20	Vaccines derived from transient gene expression in tobacco plants	Vidadi Yusibov, Fraunhofer USA Inc., USA
13:20-13:30	A fungal platform for vaccine production	Debbie Higgins, NeuGenesis Corporation, USA
13:30-13:45	Discussion	

M2e VACCINES

13:45-13:55	A novel universal influenza vaccine containing M2e and NP with a TLR9 agonist	Tyler Martin, Dynavax, USA
13:55-14:05	Flagellin fused M2e vaccines	Alan Shaw, VaxInnate Corporation, USA
14:05-14:15	Combined vaccination with split vaccine plus M2e protein	Fan Wu, Tsinghua University, China
14:15-14:30	Discussion	
14:30-14:50	Tea and coffee	

NOVEL DELIVERY APPROACHES:

14:50-15:10	DNA Vaccines: setback, advances and next steps	John Beadle, EggPharm LLP, UK
15:10-15:20	Improvement of flu vaccine with adjuvants and patch delivery	Alexander Von Gabain, Intercell AG, Austria
15:20-15:30	Nanoemulsion adjuvanted nasal vaccine, a novel means to enhance immunogenicity and broaden cross-protection against influenza	Tarek Hamouda, NanoBio Corporation, USA
15:30-15:40	Discussion	
15:40-16:10	General discussion and future developments	
16:10-16:20	Conclusion	Albert Osterhaus, Erasmus University, The Netherlands
16:20	Close of meeting	

