

# UNIVERSAL INFLUENZA VACCINES 2018

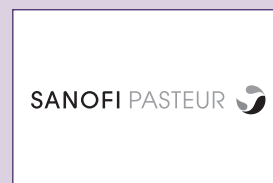
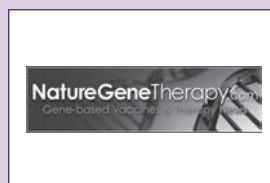
16-18 April 2018, CHUV, University of Lausanne, Lausanne, Switzerland

## FINAL ORAL & POSTER PROGRAMME

# UIV 2018

### SCIENTIFIC ADVISORY PANEL

- Sarah Gilbert (*Jenner Institute, University of Oxford, Oxford, UK*)  
Ted Ross (*University of Georgia, Athens, Georgia, USA*)  
Sean Tucker (*VAXART Inc., South San Francisco, California, USA*)  
John Oxford (*Queen Mary University of London, London, UK*)  
Rob Lambkin-Williams (*hVIVO Ltd, London, UK*)  
Christopher Chadwick (*World Health Organization, Geneva, Switzerland*)  
Erin Sparrow (*World Health Organization, Geneva, Switzerland*)  
Pamuk Bilsel (*FluGen Inc., Madison, Wisconsin, USA*)  
Othmar Engelhardt (*NIBSC, South Mimms, Potters Bar, UK*)  
Myra Widjoatmodjo (*Janssen Vaccines, Leiden, The Netherlands*)  
Tobias Kamphuis (*Janssen Vaccines, Leiden, The Netherlands*)  
Anke Huckriede (*University of Groningen, Groningen, The Netherlands*)  
Ron Babecoff (*BiondVax Pharmaceuticals Ltd, Ness Ziona, Israel*)  
Tamar Ben-Yedidia (*BiondVax Pharmaceuticals Ltd, Ness Ziona, Israel*)  
Harry Kleanthous (*Sanofi US, Cambridge, Massachusetts, USA*)  
Baozhong Wang (*Georgia State University, Atlanta, Georgia, USA*)  
Emanuele Montomoli (*VisMederi Srl, Siena, Italy*)  
Otfried Kistner (*VisMederi, Siena, Italy*)  
Joanna Waldoock (*NIBSC, South Mimms, Potters Bar, UK*)



10.00

**Arrival & Registration & Poster Set-Up**

10.40-10.45

**Welcome & Opening Remarks**

Professor John Oxford

(Queen Mary College, University of London, London, UK)

**SESSION 1:  
PLENARY SESSION I**

Moderator: John Oxford

(Queen Mary College, University of London, London, UK)

10.45-11.15

**'WHO perspective: Public health views on universal vaccines: What do we want them to achieve?'**

Martin Friede

(World Health Organization, Geneva, Switzerland)

11.15-11.45

**'What will a government be looking for in a universal influenza vaccine?'**

Jon Van Tam

(Deputy Chief Medical Officer, UK Department of Health, London, UK)

11.45-12.30

**'Progress in clinical development of novel influenza vaccines'**

Sarah Gilbert

(University of Oxford, Oxford, UK)

12.30-12.45

**Questions & Discussion**

12.45-14.00

**Lunch Break & Posters**

**SESSION 2:  
PLENARY SESSION II**

Moderator: Sarah Gilbert

(University of Oxford, Oxford, UK)

14.00-14.30

**'100 million deaths and 1 billion influenza illnesses direct us to a vaccine Manhattan 2 project'**

John Oxford

(Queen Mary College, University of London, London, UK)

14.30-15.00

**'Influenza vaccine uptake stagnation: A global health failure?'**

Bram Palache

(Independent Consultant, IFPMA, International Federation of Pharmaceutical Manufacturers & Associations, Geneva, Switzerland)

15.00-15.30

**'Universal influenza vaccines: What is missing?'**

Rob Lambkin-Williams

(hVIVO Ltd, London, UK)

15.30-15.45

**Questions & Discussion**

15.45-16.00

**Tea Break & Posters**

**SESSION 3:  
PLENARY SESSION III**

Moderator: Rob Lambkin-Williams

(hVIVO Ltd, London, UK)

16.00-16.30

**'Getting closer to the market: M-001 universal flu vaccine starting pivotal Phase 3 Trial'**

Tammy Ben Yedidia

(BiondVax Pharmaceuticals Ltd, Ness Ziona, Israel)

16.30-17.00

**'Local production of influenza vaccines: Results from the global action plan for influenza vaccines technology transfer and sustainable production projects'**

Christopher Chadwick, Erin Grace Sparrow, Shoshanna Goldin and Claudia Nannei

(WHO, Geneva, Switzerland)

17.00-17.20

**'Cross-reactive responses to conserved influenza antigens'**

Teresa Lambe

(University of Oxford, Oxford, UK)

17.20-17.40

**'FLUCOP project (<http://www.flucop.eu/>), standardisation of assays to evaluate immune responses to influenza vaccines'**

Joanna Waldoock and Othmar G. Engelhardt

(NIBSC, South Mimms, Potters Bar, Hertfordshire, UK)

17.40-17.50

**Questions & Discussion**

**POSTER SESSION**

Poster 101

**'Hemagglutinin stalk based influenza DNA vaccine with Alum phosphate adjuvant elicit heterosubtypic influenza protection in mice'**

Mi-Seon Lee, Eun Young Jang, Jang-Hoon Choi, Junhyung Cho and Kisoon Kim (Center for Infectious Diseases Research, Korea National Institute of Health, Korea Centers for Disease Control and Prevention, Cheongju, Republic of Korea)

Poster 102

**'VaxArray seasonal influenza assessment of adjuvant-containing vaccine formulation'**

Chiara Centi<sup>1</sup>, Giulia Lapini<sup>1</sup>, Anna-Karin Maltais<sup>2</sup>, Christine Lohmann<sup>3</sup>, Laura Kuck<sup>4</sup> and Emanuele Montomoli<sup>1</sup> (<sup>1</sup> *VisMederi Srl, Siena, Italy*; <sup>2</sup> *Eurocine Vaccines AB, Karolinska Institutet Science Park, Solna, Sweden*; <sup>3</sup> *I&L Biosystems GmbH, Königswinter, Germany*; <sup>4</sup> *InDevR Inc., Boulder, Colorado, USA*)

Poster 103

**'The results of immunization monitoring and influenza incidences in recent years in Russia'**

N.I. Briko<sup>1</sup>, T.G. Suranova<sup>2</sup>, A.A. Pozdnyakov<sup>1</sup>, T.S. Saltykova<sup>1</sup>, B.A. Zhigarlovsky<sup>1</sup> and N.A. Polezhaev<sup>3</sup> (<sup>1</sup> *Sechenov First Moscow State Medical University, Moscow, Russia*; <sup>2</sup> *Centre for Disaster Medicine Zashchita of Health Ministry of Russia, Moscow, Russia*; <sup>3</sup> *G.N. Gabrichevsky Research Institute of Epidemiology and Microbiology, Moscow, Russia*)

Poster 104

**'Combination of M2e peptide with stalk HA epitopes of influenza A virus enhances protective properties of recombinant vaccine'**

L.M. Tsybalova<sup>1</sup>, L.A. Stepanova<sup>1</sup>, M.A. Shuklina<sup>1</sup>, E.A. Blokhina<sup>2</sup> and N.V. Ravin<sup>2</sup> (<sup>1</sup> *Department of Vaccinology, Research Institute of Influenza, St. Petersburg, Russia*; <sup>2</sup> *Institute of Bioengineering, Research Center of Biotechnology, Moscow, Russia*)

Poster 105

**'Development and characterization of a multiplexed bead-based assay for detection of broad spectrum influenza hemagglutinin binding antibodies'**

Teresa Weber, Xianghan Lu, Elizabeth Thoryk, Lan Zhang and Jessica Flynn (*Infectious Disease and Vaccines Discovery, Merck & Co., Inc., Kenilworth, New Jersey, USA*)

Poster 106

**'Potential vaccine antigen based on conserved stalk domain of influenza virus hemagglutinin produced in yeast expression system'**

Karolina Uranowska, Edyta Kopera and Boguslaw Szewczyk (*University of Gdansk and Medical University of Gdansk, Gdansk, Poland*)

Poster 107

**'Identification of biomarkers that evaluate and screen new adjuvant candidates for safe and efficient influenza vaccines'**

Takuo Mizukami (*Laboratory of Blood and Vaccine Safety, National Institute of Infectious Diseases, Tokyo, Japan*)

**SESSION 4:  
PLENARY SESSION IV**

Moderator: Anke Huckriede  
(University of Groningen, Groningen, The Netherlands)

09.00-09.30

**'Broadly protective and universal influenza vaccines: Enhancing the standard of care'**

Harold Kleanthous  
(Research & Development, Sanofi US, Cambridge, Massachusetts, USA)

09.30-10.00

**'A universal influenza vaccine for the next pandemic: Not so fast'**

David Fedson  
(Independent Consultant, Sergy Haut, France)

10.00-10.30

**'Adjuvants as mediators for cross-protection by seasonal influenza vaccines'**

Dennis Christensen  
(Statens Serum Institut, Copenhagen, Denmark)

10.30-10.40

**Questions & Discussion**

10.40-11.20

Coffee Break & Posters

**SESSION 5:  
PLENARY SESSION V**

Moderator: Dennis Christensen  
(Statens Serum Institut, Copenhagen, Denmark)

11.20-11.50

**'A durable universal influenza vaccine disallowing viral mutational escape'**

Arthur Young  
(InvVax, Los Angeles, California, USA)

11.50-12.20

**'Broad protective polyvalent influenza DNA vaccine for pigs and humans'**

Anders Fomsgaard<sup>1</sup>, Kate Guilfoyle<sup>2</sup>, Diane Major<sup>2</sup>, Jim Williams<sup>3</sup>, Ola Blixt<sup>4</sup> and Charlotta Chanti Polacek<sup>1</sup>  
(<sup>1</sup> Statens Serum Institut (SSI), Copenhagen, Denmark; <sup>2</sup> National Institute for Biological Standards and Control (NIBSC), South Mimms, Hertfordshire, UK; <sup>3</sup> Nature Technology Corp., Lincoln, Nebraska, USA; <sup>4</sup> Dept. Chemistry, University of Copenhagen, Copenhagen, Denmark; Studies are partly funded by EU contribution FP7-HEALTH to www.UNISECconsortium.eu (Universal influenza vaccine secured))

12.20-12.40

**'Universal influenza A virus-like particle vaccine'**

Alex Ramirez  
(iQur Ltd., London, UK)

12.40-13.00

**'Universal influenza vaccines based on multi-component formulations: From bivalent recombinant vaccines to a polyvalent fusion protein'**

I.V. Dukhovlinov, E.G. Bogomolova, O.A. Dobrovolskaya, E.A. Fedorova, S.A. Ischuk, A.S. Simbirtsev and Y.M. Vasiliev  
(Research Institute of Ultrapure Biologicals, St. Petersburg, Russian Federation)

13.00-14.00

Lunch Break & Posters

**SESSION 6:  
CORRELATES OF PROTECTION**

Moderator: Tobias Kamphis  
(Janssen Vaccines, Lediën, The Netherlands)

14.00-14.30

**'Correlates of protection: Lessons from virus infection and vaccination'**

Anke Huckriede  
(University of Groningen, Groningen, The Netherlands)

14.30-15.00

**'Correlates of protection identified through human challenge studies: Case study comparing oral immunization to QIV for influenza efficacy'**

Sean Tucker  
(VAXART Inc., South San Francisco, California, USA)

15.00-15.30

**'New perspectives for correlates of protection'**

Otfried Kistner and Emanuele Montomoli  
(VisMederi Srl, Siena, Italy)

15.30-15.50

Tea Break & Posters

**SESSION 7:  
PLENARY SESSION VI**

Moderator: Sean Tucker  
(Vaxart Inc., San Francisco, California, USA)

15.50-16.20

**'Preclinical characterization of full length and stem only hemagglutinin based influenza vaccines'**

Joan van der Lubbe  
(Janssen Vaccines, Leiden, The Netherlands)

16.20-16.50

**'Broadly cross-reactive immune responses against A(H3N2) viruses: Data from recently completed Phase 1/2 trial of a novel recombinant saponin-adjuvanted trivalent seasonal nanoparticle influenza vaccine (tNIV)'**

Vivek Shinde  
(Novavax Inc., Gaithersburg, Maryland, USA)

16.50-17.20

**'Multivalent M2SR provides cross-protection against influenza A and B'**

Pamuk Bilsel  
(FluGen Inc., Madison, Wisconsin, USA)

17.20-17.50

**'Evaluating novel influenza vaccines: The past and lessons for the future: What is an effective vaccine?'**

Anthony Gilbert and Rob Lambkin-Williams  
(hVIVO Ltd, London, UK)

**SESSION 8:  
CHALLENGE/IMMUNE RESPONSE/PROTECTION**

Moderator: Anders Formsgaard

*(Statens Serum Institut, Copenhagen, Denmark)*

09.00-09.30

**'M2SR elicits broad-spectrum, long-lasting immune responses'**

Joseph Eiden

*(FluGen Inc., Madison, Wisconsin, USA)*

09.30-10.00

**'Ferrets challenged with heterologous influenza strains: Protection using the seasonal flu vaccine combined with different adjuvants'**

Dennis Christensen

*(Statens Serum Institut, Copenhagen, Denmark)*

10.00-10.20

**'Mucosal immunity may be the missing link to improve the poor and variable efficacy of flu vaccines: Protection by intranasal vaccination with Nanostat®-Pandemic flu (rH5) in ferrets'**

Ali Fattom, Doug Smith and Vira Bitko

*(NanoBio Corp., Ann Arbor, Michigan, USA)*

10.20-10.40

**'Live recombinant measles-M2 vaccine induces broad-spectrum protective immunity against influenza viruses'**

Ho Hong Hai Vo, Jérémy Brunet, Claude Ruffié, Valérie Lorin, Frédéric Tangy and Nicolas Escriou

*(Unité de Génomique Virale et Vaccination, CNRS UMR-3569, Institut Pasteur, Paris, France)*

10.40-11.00

**'Progress towards the development of broadly protective live attenuated influenza vaccines'**

Irina Isakova-Sivak<sup>1</sup>, Daniil Korenkov<sup>1</sup>, Tatiana Smolonogina<sup>1</sup>, Tatiana Kotomina<sup>1</sup>, Svetlana Donina<sup>1</sup>, Victoria Matyushenko<sup>1</sup>, Florian Krammer<sup>2</sup> and Larisa Rudenko<sup>1</sup>

*(<sup>1</sup> Department of Virology, Institute of Experimental Medicine, St Petersburg, Russia; <sup>2</sup> Department of Microbiology, Icahn School of Medicine at Mount Sinai, New York, New York, USA)*

11.00-11.30

Coffee Break & Posters

**SESSION 9:  
LATEBREAKER SESSION I**

Moderator: Pumuk Bilsel

*(FluGen Inc., Madison, Wisconsin, USA)*

11.30-11.50

**'Combination of HA stalk and M2e antigens into layered protein nanoparticles induces broad cross protection against divergent influenza A viruses'**

Baozhong Wang

*(Georgia State University, Atlanta, Georgia, USA)*

11.50-12.10

**'Application of a panel of universal antibodies against all and subtype influenza viral neuraminidases to the analyses of influenza viruses and commercial vaccines'**

Sean (Xuguang) Li

*(Centre for Vaccine Evaluation, Biologics and Genetic Therapies Directorate, HPFD, Health Canada; WHO Collaboration Centre for Biologicals Standardization and Evaluation, Ottawa, Canada; University of Ottawa, Ottawa, Canada)*

12.10-12.30

**'A PBMC-based system to assess human T cell responses to universal influenza vaccine candidates *in vitro*'**

Gabriela Tapia-Calle<sup>1</sup>, Philip A. Born<sup>2</sup>, Martin Gonzalez<sup>1</sup>, Wouter L.J. Hinrichs<sup>2</sup> and Anke Huckriede<sup>1</sup>

*(<sup>1</sup> Department of Medical Microbiology, University Medical Center Groningen;*

*<sup>2</sup> Department of Pharmaceutical Technology and Biopharmacy, University Medical Center Groningen, Groningen, The Netherlands)*

12.30-13.30

Lunch Break & Posters Breakdown

**SESSION 10:  
LATEBREAKER SESSION II**

Moderator: John Oxford

*(Queen Mary College, University of London, London, UK)*

13.30-13.50

**'Exceptionally high influenza morbidity in 2017 Israel summer season: Implications for influenza vaccine efficiency in the 2017-18 winter season'**

Rakefet Pando<sup>1</sup>, Sivan Sharabi<sup>1,2</sup>, Yaron Drori<sup>1,2</sup>, Nehemya Friedman<sup>1,2</sup>,

Musa Hindiyeh<sup>1,2</sup>, Ella Mendelson<sup>1,2</sup> and Michal Mandelboim<sup>1,2</sup>

*(<sup>1</sup> Central Virology Laboratory, Ministry of Health, Chaim Sheba Medical Center, Ramat-Gan, Israel; <sup>2</sup> Department of Epidemiology and Preventive Medicine, School of Public Health, Sackler Faculty of Medicine, Tel-Aviv University, Tel-Aviv, Israel)*

13.50-14.10

**'Novel combination of lipidic nanoparticles and protein-based adjuvant to induce broad protection against influenza virus infection'**

Valentina Bernasconi

*(Institute of Biomedicine at Sahlgrenska, Göteborg, Sweden)*

14.10-14.30

**'OVX836, a multimerized nucleoprotein (NP) induces cellular responses against NP in various animal models'**

Judith Del Campo<sup>1</sup>, Marion Chevandier<sup>1</sup>, Marjorie Haller<sup>1</sup>, Julien Bouley<sup>1</sup>,

Thomas Julien<sup>2</sup>, Andrés Pizzorno<sup>2</sup>, Manuel Rosa-Calatrava<sup>2</sup> and Fergal Hill<sup>1</sup>

*(<sup>1</sup> Osivax, Lyon, France; <sup>2</sup> Virologie et Pathologie Humaine – VirPath Team, Centre International de Recherche en Infectiologie (CIRI), INSERM U1111, CNRS UMR5308, ENS Lyon, Université Claude Bernard Lyon, Université de Lyon, Lyon, France)*

14.30-14.50

**'Associated vaccine based on attenuated influenza virus and chimeric pneumococcal polypeptide against mono- and mixed infections of influenza and *S. Pneumoniae*'**

Yulia A. Desheva<sup>1,2</sup>, Galina F. Leontieva<sup>1</sup>, Tatiana A. Kramskaya<sup>1</sup>, Ivan A. Sychev<sup>1</sup>, Kornelia B. Grabovskaya<sup>1</sup>, Larisa G. Rudenko<sup>1</sup> and Alexander N. Suvorov<sup>1,2</sup>

*(<sup>1</sup> Federal State Budgetary Scientific Institution, Institute of Experimental Medicine, Saint Petersburg, Russian Federation; <sup>2</sup> Saint Petersburg State University, Saint Petersburg, Russian Federation)*

14.50-15.00

**Summary & Closing Remarks**

John Oxford

*(Queen Mary College, University of London, London, UK)*

*\* This final programme is correct at the time of publication. However the organizers reserve the right to make any alterations that may be required in the interests and integrity of the conference programme.*