FINAL ORAL PROGRAMME & POSTER PROGRAMME

MUCOVAD 2016

ADVISORY SCIENTIFIC PANEL

Conference Chairman: Richard Walker (PATH, Washington DC, USA)

John Clements (Tulane University, New Orleans, Louisiana, USA)
Jan Holmgren (Gothenburg University, Gothenburg, Sweden)
Edward Lavelle (Trinity College Dublin, Dublin, Ireland)
Eric Cox (University of Ghent, Ghent, Belgium)
Ali Harandi (Gothenburg University, Gothenburg, Sweden)
Dexiang Chen (PATH, Seattle, Washington, USA)
Rob Lambkin-Williams (hVIVO, London, UK)
Dennis Christensen (Statens Serum Institut, Copenhagen, Denmark)
Ted M. Ross (University of Georgia, Athens, Georgia, USA)
Anna-Karin Maltais (Eurocine Vaccines AB, Solna, Sweden)
Niranjan Sardesai (INOVIO Inc., Plymouth Meeting, Pennsylvania, USA)
**SESSION 1: OPENING PLENARY SESSION**

Moderator: Richard Walker (PATH, Washington DC, USA)

10.45-11.30

‘Keeping mucosal vaccines and adjuvants in perspective’
Ali Harandi (University of Gothenburg, Gothenburg, Sweden)

11.30-12.15

‘Distinct mechanisms regulate induction of mucosal versus systemic IgA responses’
Martin Bachmann (University of Berne, Berne, Switzerland/University of Oxford, Oxford, UK)

12.15-13.00

‘Parenteral or mucosal immunization against rotavirus and norovirus gastroenteritis?’
Timo Vesikari (University of Tampere, Tampere, Finland)

Lunch Break & Posters

**SESSION 2: PLENARY SESSION II**

Moderator: Ali Harandi (University of Gothenburg, Gothenburg, Sweden)

14.00-14.30

‘Oral mucosal immunization provides greater breadth of immunity than injected subunit vaccines’
Sean Tucker (VAXART Inc., South San Francisco, California, USA)

14.30-15.00

‘Challenges for achieving intestinal immunization of infants in developing countries’
Richard Walker (PATH, Washington DC, USA)

15.00-15.30

‘Mucosal adjuvants, intranasal delivery and respiratory vaccines. The way forward?’
Rob Lambkin-Williams (Hvivo Ltd, London, UK)

15.30-16.00

Tea Break & Posters

**SESSION 3: DEVELOPMENT**

Moderator: Martin Bachmann (University of Berne, Berne, Switzerland/University of Oxford, Oxford, UK)

16.00-16.30

‘Development of an inactivated nasal influenza vaccine’
Anna-Karin Maltais (Eurocine Vaccines AB, Stockholm, Sweden)

16.30-17.00

‘RSV prefusion F-type subunit vaccines’
Maarten van Roosmalen (Mucosis, Groningen, The Netherlands)

17.00-17.30

‘Mucosal delivery of inactivated polio vaccine’
Helen Kraan 1, Peter Soema 1, Ivo Ploemen 1, Jean-Pierre Amorij 1,2 and Gideon Kersten 1,2 (1 Intravacc Institute for Translational Vaccinology, Bilthoven, The Netherlands; 2 Leiden Academic Center for Drug Research, Leiden University, Leiden, The Netherlands; * Current address: Virtuvax BV, The Netherlands)

17.30-18.30

MUCOVAD 2016 Welcome Drinks & Poster Session

**POSTER SESSION**

**Poster 101**

‘Seminial plasma exposures strengthen vaccine responses in the female reproductive tract mucosa’
Romain Martin 1,2,3, Marie-Thérèse Nugeyre 1,2,3, Matteo Parenti 1, Nathalie Dereuddre-Bosquet 1, Françoise Barra-Sirois 1,2, Gabriella Scarlatti 1,2, Roger Le Grand 1,2,3 and Elisabeth Menu 1,2,3 (1 Université Paris Sud, Inserm U 114, Fontenay-Aux-Roses, France; 2 MSTIC Group, Institut Pasteur, Paris, France; 3 Vaccine Research Institute, Cétefel, France; 4 Institut Pasteur, Paris, France; 5 San Raffaele Scientific Institute, Milan, Italy)

Poster 102

Poster withdrawn

Poster 103

‘Mannosylated chitosan: A potentially universal mucosal vaccine delivery system?’
Anna Dibensky (Paulo Geetech, Oxford, UK)

Poster 104

‘High cellular immunogenicity in mice of a prototype multicomponent DNA vaccine based on HIV-1 clade A enzymes’
Lataneva Anastasia 1,2,3, Petrov Stefan 1, Athina Kipeljaniene 1, Juris Jansons 1, Olga Krotova 1, Ando Vilmane 1, Starnoduba Elizaveta 2,3,5 and Iaiguolants Maria 1,4,6 (1 NF Gamaleya Research Center of Epidemiology and Microbiology, Moscow, Russia; 2 Engelhardt Institute of Molecular Biology, Moscow, Russia; 3 Department of Microbiology, Tumor and Cell Biology, Karolinska Institutet, Stockholm, Sweden; 4 Riga Stradins University, Riga, Latvia; 5 MP Chumakov Institute of Poliomyelitis and Virus Encephalitides, Moscow, Russia)

Poster 105

‘Immunogenicity evaluation of HIV-1 gp160 formulations in DC-Chol liposomes or polymeric nanoparticles administered via the mucosal route to rhesus monkeys’
Dalencon François and Florence Boudet (Sanofi Pasteur, Marcy l’Etoile, France)

Poster 106

‘Immunological evaluation of poly[di(sodium carboxylatoethylphenoxy)phosphazene (PCEP) and avian beta defensin as adjuvants in experimental in ovo vaccine formulations against inclusion body hepatitis virus infection in chickens’
Mishal Sarfraz, Suresh K.Tikoo, Andy Potter, Volker Gerds, Colette Wheeler and Arshud Dar (Vaccine and Infectious Disease Organization - International Vaccine Centre, University of Saskatchewan, Saskatoon, Saskatchewan, Canada)

Poster 107

‘Flagellin is a strong vaginal adjuvant of a therapeutic vaccine for genital infection’
Shoo Eun Lee, Soo Hee Hong, Wiek Verma, Yoon Suk Lee, Tru My Nu Dang, Kwanjoong Jeong, Say Uhmman, Young Chul Sung, Jae-Tae Lee, H-Kyu Park, Jong-Joon Min and Joon Haeng Pee (Chonnam National University Medical School, Gwangju, Republic of Korea)

Poster 108

‘Eyedrop vaccines in mice and ferrets induce protective immunity against viral challenges’
Eun-Do Kim, Sangchul Yoon, Soon Jung Han and Kyoung Yu Seo (Yonsei University, Seoul, Republic of Korea)

Poster 109

‘CD11b+ dendritic cells in mandibular lymph nodes capture lymph borne ocular surface particulates to induce immune responses’
Eun-Do Kim 1, Soo Jung Han 1, Bora Lee 1, Hyunsuk Sim 1, Keunwook Lee 1, Kyung Joo Yu 1 and Kyoung Yu Seo 1 (1 Yonsei University College of Medicine, Seoul, Republic of Korea; 2 Kangwon National University, Chuncheon, Republic of Korea; 3 Holym University, Chuncheon, Republic of Korea; 4 Brain Korea 21 Project for Medical Science, Yonsei University, Seoul, Republic of Korea)

Poster 110

‘Evaluation of tmlT, a triple mutant of the enterotoxigenic E. coli (ETEC) heat-labile toxin, as adjuvant and antigen for intradermal delivery of a subunit vaccine against ETEC’
Milton Maciel, Jr. 1, Jacob Bitoun 2, Elizabeth Norton 2, Mark Smith 3, William Hulsey 1, Glomil Corbin 1 and Michael Prouty 1 (1 Naval Medical Research Center, Silver Spring, Maryland USA; 2 Tulane University, New Orleans, Louisiana, USA; 3 Walter Reed Army Institute of Research, USA)

Poster 111

‘Evaluating antigen-specific salivary IgA levels as an indicator of mucosal immunity following intradermal immunization with ETEC fimbrial tip adhesin CfaE plus adjuvant LT(R192G)’
Stefanie A. Trop, William R. Hulsey, Sakina Shahabudin, Chad K. Perter, Mark S. Riddle, Ramiro L. Gutierrez and Milton Maciel, Jr. (Naval Medical Research Center, Silver Spring, Maryland, USA)

Poster 112

‘Enhanced immunogenicity of a Campylobacter jejuni capsule conjugate vaccine utilizing army liposome formulation adjuvants’
Christina L. Hill 1, Nina M. Schumack 1, Lisa A. Applebee 1, Zollan Beck 1,2, Gary R. Matyas 1, Carl R. Alving 2, Patricia Guerry 1 and Renee M. Laird 1 (1 Naval Medical Research Center, 2 Naval Medical Research Center, and U.S. Military HIV Research Program, Walter Reed Army Institute of Research, 3 Henry M. Jackson Foundation for the Advancement of Military Medicine, Silver Spring, Maryland, USA)

Poster 113

‘Steps towards the development of hepatitis E vaccine’
Lyshenko Anna, Chumakov Alexey, Sarkin Alexey, Kyuregyan Karen, Isavna Olga, Gorkoedych Ilya, Tukhvatullin Amir, Logunov Denis, Iaiguolants Maria and Mikhailov Mikhail (Chumakov Institute of Poliomyelitis and Viral Encephalitides, Moscow, Russia; Gamaleya Research Center of Epidemiology and Microbiology, Moscow, Russia)

Poster 114

To be confirmed

**FINAL CONFERENCE PROGRAMME · WEDNESDAY 14TH SEPTEMBER 2016**

09.30-10.30
Arrival, Registration, Coffee & Poster Set-Up

10.30-10.45
Welcome to Lausanne & Opening Remarks
Richard Walker (PATH, Washington DC, USA)
SESSION 4: VACCINES & ADJUVANTS

Moderator: Rob Lambkin-Williams
(hVIVO Ltd, London, UK)
09.00-09.30
‘Novel adjuvant systems for oral vaccination’
Ed Lavelle
(Trinity College Dublin, Dublin, Ireland)
09.30-10.00
‘New oral vaccines and adjuvants for immunization against cholera and ETEC diarrhea’
Jan Holmgren
(University of Gothenburg, Gothenburg, Sweden)
10.00-10.30
‘Intranasal immunization with influenza VLPs containing GPI-anchoring CCL28 induces strong responses conferring heterologous protection’
Baozhong Wang
(Georgia State University, Atlanta, Georgia, USA)
10.30-11.00
Coffee Break & Posters

SESSION 5: VACCINES

Moderator: Ed Lavelle
(Trinity College Dublin, Dublin, Ireland)
11.00-11.30
‘Comparative immunogenicity in mice of DNA encoding HIV enzymes and enzyme combinations: Step towards immune control of drug resistance in HIV infection’
Maria Issagouliantis
(Riga Stradins University, Riga, Latvia)
11.30-12.00
‘Pre-clinical development of an oral adenovirus-based RSV vaccine’
Anne Moore
(VAXART Inc., South San Francisco, California, USA)
12.00-12.30
‘Title to be confirmed’
Darrick Carter
(IDRI, Seattle, Washington, USA)
12.30-14.00
Lunch Break & Posters

SESSION 6: SHORT POSTER PRESENTATIONS (PART 1)

Moderator: To be confirmed
Poster 110
14.00-14.15
‘Evaluation of tmLT, a triple mutant of the enterotoxigenic E. coli (ETEC) heat-labile toxin, as adjuvant and antigen for intradermal delivery of a subunit vaccine against ETEC’
Milton Maciel, Jr. 1, Jacob Bitoun 2, Elizabeth Norton 2, Mark Smith 2, William Hulsey 1, Glomil Corbin 1 and Michael Prouty 1
(1 Naval Medical Research Center, Silver Spring, Maryland USA; 2 Tulane University, New Orleans, Louisiana, USA; 3 Walter Reed Army Institute of Research, USA)
Poster 103
14.15-14.30
‘Mannosylated chitosan: A potentially universal mucosal vaccine delivery system?’
Anna Oblensky
(Pacific Genetech, Oxford, UK)
Poster 111
14.30-14.45
‘Evaluating antigen-specific salivary IgA levels as an indicator of mucosal immunity following intradermal immunization with ETEC fimbrial tip adhesin CfaE plus adjuvant LT(R192G)’
Stefanie A. Trop, William R. Hulsey, Sakina Shahabudin, Chad K. Porter, Mark S. Riddle, Ramiro L. Gutierrez and Milton Maciel, Jr.
(Naval Medical Research Center, Silver Spring, Maryland, USA)
Poster 112
14.45-15.00
‘Enhanced immunogenicity of a Campylobacter jejuni capsule conjugate vaccine utilizing army liposome formulation adjuvants’
Christina L. Hill 1, Nina M. Schurnack 1, Lisa A. Applebee 1, Zoltan Beck 2,3, Gary R. Matyas 2, Carl R. Alving 2, Patricia Guerry 1 and Renee M. Laird 1
(Naval Medical Research Center 1, and U.S. Military HIV Research Program, Walter Reed Army Institute of Research 2, Henry M. Jackson Foundation for the Advancement of Military Medicine 3, Silver Spring, Maryland, USA)
15.00-15.30
Tea Break & Posters

SESSION 7: MUCOSAL VACCINES

Moderator: Darrick Carter
(IDRI, Seattle, Washington, USA)
15.30-16.00
‘β-glucan microparticles targeted to epithelial APN as oral antigen delivery system’
Kim Baert, Bruno G. de Geest, Riet de Rycke, André B. da Fonseca Antunes, Henri de Greve, Bert Devriendt and Eric Cox
(Ghent University, Merelbeke, Belgium)
16.00-16.30
‘Thermostable subunit vaccines for pulmonary delivery: How close are we?’
Camilla Foged
(University of Copenhagen, Copenhagen, Denmark)
16.30-17.00
‘Immunization with live nonpathogenic H5N3 duck influenza virus vaccine protects chicken against highly pathogenic H5N1 viruses’
A.S. Gambaryan 1, E.Y. Boravleva 1, N.F. Lomakina 1, E.A. Kropotkina 1, I.V. Gordeychuk 1, I.A. Chvala 2, V.V.Drygin 2, H.-D. Klenk 3 and M.N. Matrosovich 3
(1 Chumakov Institute of Poliomyelitis and Viral Encephalitides, Moscow, Russia; 2 Federal Center for Animal Health, Vladimir, Russia; 3 Institute of Virology, Philipps University, Marburg, Germany)
SESSION 8: ADJUVANTS

Moderator: Ed Lavelle
(Trinity College Dublin, Dublin, Ireland)

09.00-09.30
‘Polymer and microemulsion adjuvants enhance the immune response conferred by mucosal vaccines in mice and chicken’
Heloise Imbault, Juliette Ben Arous, Nicolas Versilé, Sébastien Deville and Laurent Dupuis
(SEPPIC, Paris La Défense Puteaux, France)

09.30-10.00
‘A novel adjuvanted capsule based strategy for oral vaccination against enteric bacterial pathogens’
Stephanie Longet1, Christopher Davitt1, Edel McNeela1, Vincenzo Aversa2, Joshua Tobias2, Michael Lebers2, Monica Rosa2, Jan Holmgren2, Ivan Coutler3 and Ed C. Lavelle1
(1 Trinity College Dublin, Dublin, Ireland; 2 University of Gothenburg, Gothenburg, Sweden; 3 Sigmod Pharma Ltd, Invent Centre, Dublin City University, Dublin, Ireland)

10.00-10.20
‘Flagellin is a strong vaginal adjuvant of a therapeutic vaccine for genital cancer’
Shee Eun Lee, Seol Hee Hong, Vivek Verma, Youn Suhk Lee, Tra-My Nu Duong, Kwangjoon Jeong, Sajii Uthaman, Young Chul Sung, Jae-Tae Lee, In-Kyu Park, Jung-Joon Min and Joon Haeng Rhee
(Chonnam National University Medical School, Gwangju, Republic of Korea)

10.20-10.50
Coffee Break & Posters

SESSION 9: IMMUNOGENICITY

Moderator: Eric Cox
(Ghent University, Merelbeke, Belgium)

10.50-11.20
‘High immunogenicity of reverse transcriptases of HIV-1 clade A and B in intradermally gene-immunized mice’
E. Starodubova1,2,3, S. Petkov4, J. Jansons4,5, A. Latanova3,6, A. Kipelainen3, M. Krawiec1, A. Vilmane4, S. Sasinovich7, D. Skrastina3,5, A. Vilkuna5,5, A. Vilmane4,5, Starodubova Elizaveta2,3,5,6, Isaguliants Maria1,3,4,5,6
(1 NF Gamaleya Research Center of Epidemiology and Microbiology, Moscow, Russia; 2 WA Engelhardt Institute of Molecular Biology, Moscow, Russia; 3 Department of Microbiology, Tumor and Cell Biology, Karolinska Institutet, Stockholm, Sweden; 4 Biomedical Research and Study Center, Riga, Latvia; 5 Riga Stradins University, Riga, Latvia; 6 Gamaleya Research Center of Epidemiology and Microbiology, Moscow, Russia; 7 The Republican Research and Practical Centre for Epidemiology and Microbiology, Minsk, Belarus; 8 Science for Life Laboratory, Stockholm University, Stockholm, Sweden)

11.20-11.50
‘Microbiota-regulated, natural IgA confers protection against oral enterotoxin challenge’
Craig McEntee, Rachel M. McLoughlin and Ed C. Lavelle
(Trinity College Dublin, Dublin, Ireland)

11.50-12.20
‘Near infra-red fluorescent protein iRFP670 as an in vivo imaging reporter for delivery and immunogenic performance of naked DNA vaccines’
Juris Janssons2, S. Petkov1,2, J. Jansons4,5, D. Skrastina3, M. Abakumov4, I. Gordeychuk1, A. Latanova1,6, A. Dobrenko1, A. Strods3, M. Kalis2, Y. Morizumi2, P. Bankovsky4, V. Verkhusha3 and M. Isaguliants1,2
(1 Karolinska Institutet, Stockholm, Sweden; 2 Engelhardt Institute of Molecular Biology, Moscow, Russia; 3 Department of Microbiology, Tumor and Cell Biology, Karolinska Institutet, Stockholm, Sweden; 4 Riga Stradins University, Riga, Latvia; 5 MP Chumakov Institute of Poliomyelitis and Viral Encephalitides, Moscow, Russia; 6 Gamaleya Research Center of Epidemiology and Microbiology, Moscow, Russia; 7 BEX Co., Ltd, Tokyo, Japan; 8 Bioscience Media, Riga, Latvia; 9 Department of Anatomy and Structural Biology, Albert Einstein College of Medicine, Bronx, New York, USA)

12.20-13.30
Lunch Break & Posters Breakdown

SESSION 10: SHORT POSTER PRESENTATIONS (PART 2)

Moderator: Richard Walker (PATH, Washington, USA)

Poster 101
13.30-13.45
‘Semenal plasma exposures strengthen vaccine responses in the female reproductive tract mucosa’
Romain Marin1,2,3, Marie-Thérèse Nugeyre1,2,3, Matteo Parenti1, Nathalie Dereudre-Bosquet1, Françoise Barré-Sinoussi4,5, Gabriella Scarlatti1,2, Roger Le Grand1,3 and Elisabeth Menu1,2,3
(1 Université Paris Sud, Inserm U1184, Fontenay-Aux-Roses, France; 2 MISTIC Group, Institut Pasteur, Paris, France; 3 Vaccine Research Institute, Créteil, France; 4 Institut Pasteur, Paris, France; 5 San Raffaele Scientific Institute, Milan, Italy)

Poster 102
13.45-14.00
‘Advax, a mucosal adjuvant for whole inactivated influenza virus vaccine’
Jasmine Tornar1, H.P. Patil2, W.F. Tonnis3, R. Vanbever4, N. Petrovsky3, A. Huckriede5, H.W. Frijlink1 and W.L.J. Hinrichs1
(1 NF Gamaleya Research Center of Epidemiology and Microbiology, Moscow, Russia; 2 Engelhardt Institute of Molecular Biology, Moscow, Russia; 3 Department of Microbiology, Tumor and Cell Biology, Karolinska Institutet, Stockholm, Sweden; 4 Riga Stradins University, Riga, Latvia; 5 MP Chumakov Institute of Poliomyelitis and Viral Encephalitides, Moscow, Russia)

Poster 103
14.00-14.15
‘High cellular immunogenicity in mice of a prototype multicomponent DNA vaccine based on HIV-1 clade A enzymes’
Latanova Anastasia1,2,3, Petkov Stefan4, Kiptilänä5, Juris Janssons4,5, Olga Krotova1, Anda Vilmane4, Starodubova Elizaveta2,3,5 and Isaguliants Maria1,3,4,5
(1 NF Gamaleya Research Center of Epidemiology and Microbiology, Moscow, Russia; 2 Engelhardt Institute of Molecular Biology, Moscow, Russia; 3 Department of Microbiology, Tumor and Cell Biology, Karolinska Institutet, Stockholm, Sweden; 4 Riga Stradins University, Riga, Latvia; 5 MP Chumakov Institute of Poliomyelitis and Viral Encephalitides, Moscow, Russia)

Poster 104
14.15-14.30
‘Immunological evaluation of poly(d-sodium carboxylatoethylphenoxy) phosphazene (PCEP) and avian beta defensin as adjuvants in experimental in ovo vaccine formulations against inclusion body hepatitis virus infection in chickens’
Mishal Sarfraz, Suresh K.Tikoo, Andy Potter, Volker Gerds, Colette Wheler and Arshud Dar
(Vaccine and Infectious Disease Organization – International Vaccine Centre, University of Saskatchewan, Saskatoon, Saskatchewan, Canada)

14.30-14.40
Closing Remarks & Departure
Richard Walker
(PATH, Washington DC, USA)

* 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.