

BIOMARKERS OF VACCINE/ADJUVANT POTENCY & SAFETY

6-8 April 2016, Crowne Plaza Porto, Porto, Portugal

FINAL ORAL PROGRAMME & POSTER PROGRAMME

BVAPS 2016

ADVISORY SCIENTIFIC PANEL

Co-Chairs: Ali Harandi (*University of Gothenburg, Gothenburg, Sweden*)
and Nathalie Garcon (*BIOASTER, Lyon, France*)

Steven Reed (*IDRI, Seattle, Washington, USA*)

Bali Pulendran (*Emory University, Atlanta, Georgia, USA*)

Peter Andersen (*Statens Serum Institut, Copenhagen, Denmark*)

Arnaud Didierlaurent (*GlaxoSmithKline Vaccines, Rixensart, Belgium*)

Ken J. Ishii (*NIBIOHN, University of Osaka, Osaka, Japan*)

Donata Medaglini (*University of Siena, Siena, Italy*)

Ingeleif Jonsdottir (*University of Iceland, Reykjavik, Iceland*)

Quentin Sattentau (*University of Oxford, Oxford, UK*)

Behazine Combadiere (*Universite Pierre and Marie Curie/INSERM, Paris France*)

Tom H.M. Ottenhoff (*LUMC, University of Leiden, Leiden, The Netherlands*)

Ole Olesen (*European & Developing Countries Clinical Trial Partnership,
The Hague, The Netherlands*)

Daniel Zak (*The Center for Infectious Disease Research, Seattle, Washington, USA*)

Stefan H.E. Kaufmann (*MPIIB, Berlin, Germany*)



09.30 onwards

Arrival, Registration & Coffee

SESSION 1: OPENING PLENARY SESSION

Moderators: Nathalie Garcon (*BIOASTER, Lyon, France*)
and Ali Harandi (*University of Gothenburg, Gothenburg, Sweden*)

10.40-11.00

'BVAPS 2016 Introduction & Overview'

Ali Harandi (*University of Gothenburg, Gothenburg, Sweden*)

11.00-11.30

'Biomarkers in vaccines: From discovery to application. What does it take?'

Nathalie Garcon (*BIOASTER, Lyon, France*)

11.30-12.00

'Questing for early markers of safety: The Biovacsafe Approach'

Giuseppe Del Giudice (*GlaxoSmithKline, Siena, Italy*)

12.00-12.30

'VSV-EBOCVAC project'

Claire-Anne Siegrist (*University of Geneva, Geneva, Switzerland*)

12.30-14.00

Lunch Break & Poster Set-Up

SESSION 2: PLENARY SESSION

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

14.00-14.30

'Ink spots and signatures of vaccine induced responses'

Ali Harandi (*University of Gothenburg, Gothenburg, Sweden*)

14.30-15.00

'Mechanisms of TFH, TH1 and B cell responses to adjuvanted vaccination'

Mark T. Orr^{1,2}, Anthony L. Desbien¹, Natasha D. Cauwelaert¹,
Malcolm S. Duthie^{1,2} and Steven G. Reed^{1,2}

(*1 Infectious Disease Research Institute, Seattle, Washington, USA;*

2 University of Washington, Seattle, Washington, USA)

15.00-15.30

'Integrating innate and adaptive immune responses to vaccines'

Daniel Zak

(*The Center for Infectious Diseases Research, Seattle, Washington, USA*)

15.30-16.00

Tea Break & Posters

SESSION 3: PLENARY SESSION

Moderator: Giuseppe Del Giudice (*GlaxoSmithKline, Siena, Italy*)

16.00-16.30

'Diagnostic and prognostic biomarkers to accelerate vaccine trials: The case of tuberculosis'

Stefan Kaufmann (*Max Planck Institut für Infektionsbiologie, Berlin, Germany*)

16.30-17.00

'Role of inflammation in response to adjuvanted vaccines'

Arnaud Didierlaurent (*GlaxoSmithKline SA, Rixensart, Belgium*)

17.00

BVAPS 2016 Posters and BVAPS 2016 Drinks Reception

POSTERS

Poster 101

'Characteristics of Montanide™ ISA 51 VG adjuvant designed for therapeutic cancer vaccines'

Nicolas Versillé, Aude Puget and Stéphane Ascarateil (*SEPPIC, Puteaux, France*)

Poster 102

'Mechanism of action of Cholera toxin and related nontoxic mucosal adjuvants'

Maximilian Larena and Jan Holmgren (*University of Gothenburg, Gothenburg, Sweden*)

Poster 103

'A liposome-based influenza vaccine induces potent neonatal antibody responses'

Maria Vono¹, Beatris Mastelic Gavillet¹, Christiane S. Eberhardt¹, Floriane Auderset¹, Dennis Christensen², Else Marie Agger², Mirco Schmolke³, Peter Andersen², Paul-Henri Lambert¹ and Claire-Anne Siegrist¹ (*1 World Health Organization Collaborating Center for Vaccine Immunology, Departments of Pathology-Immunology, University of Geneva, Geneva, Switzerland; 2 Statens Serum Institut, Copenhagen, Denmark; 3 University of Geneva, Geneva, Switzerland*)

Poster 104

'Development of a custom pentaplex sandwich immunoassay using Protein-G coupled beads for the Luminex® xMAP® platform'

Omodele Ashiru², Jacqueline U. McDonald¹, Julia Ekeruche-Makinde¹, Mei M. Ho² and John S. Trengon¹ (*1 Imperial College London, London, United Kingdom; 2 MHRA-NIBSC, Potters Bar, United Kingdom*)

Poster 105

'Comparative Systems Biology Analysis Reveals Molecular Signatures of Clinically Tested Vaccine Adjuvants'

Thorunn A. Olafsdottir¹, Madelene Lindqvist¹, Intawat Nookaew^{2,3}, Peter L. Andersen⁴, Jeroen Maertzdorf⁵, Josefine Persson¹, Yuan Zhang¹, Jenna Anderson¹, Sakda Khoomrung², Partho Sen², Else Marie Agger⁴, Dennis Christensen⁴, Rhea Coler⁶, Darrick Carter⁶, Andreas Meinke⁷, Stefan H. E. Kaufmann⁵, Steven G. Reed⁶ and Ali M. Harandi¹ (*1 University of Gothenburg, Gothenburg, Sweden; 2 Chalmers, University of Technology, Gothenburg, Sweden; 3 Oak Ridge National Laboratory, Oak Ridge, Tennessee, USA; 4 Statens Serum Institut, Copenhagen, Denmark; 5 Max Planck Institute for Infection Biology, Berlin, Germany; 6 Infectious Disease Research Institute, Seattle, Washington, US; 7 Valneva Austria GmbH, Vienna, Austria*)

Poster 106

'Molecular signatures of a TLR-4 agonist-adjuvanted HIV vaccine candidate in humans'

Jenna Anderson¹, Thorunn Olafsdottir¹, Sven Kratochvil², Paul McKay², Robin J. Shattock² and Ali M. Harandi¹ (*1 University of Gothenburg, Gothenburg, Sweden; 2 Imperial College London, London, United Kingdom*)

Poster 107

'Regulatory T cell frequencies and characteristics in human blood following anti-viral vaccination'

Charlotte de Wolf^{1,3}, Susan van Aalst¹, Irene Ludwig¹, Willem van Eden¹, David Lewis², Christine Gispén-de Wied³, Ruurd van der Zee¹ and Femke Broere¹ (*1 Utrecht University, Utrecht, The Netherlands; 2 University of Surrey, Guildford, Surrey, United Kingdom; 3 Medicines Evaluation Board, The Netherlands*)

Poster 108

'Lead finding and optimization of novel adjuvants in non-rodent species'

Peter Paul Platenburg, Luuk Hilgers and Han van den Bosch (*LiteVax BV, Oss, The Netherlands*)

Poster 109

'Self-adjuvanted RnActive® vaccine induces innate immune response at the site of injection that leads to a potent adaptive immunity in both mice and humans'

Fatma Doener, Aleksandra Kowalczyk, Regina Heidenreich, Edith Jasny, Birgit Scheel, Sven D. Koch and Mariola Fotin-Mleczek (*CureVac AG, Tübingen, Germany*)

Poster 110

'RNAdjuvant®, a novel, highly-potent RNA-based adjuvant, combines strong immunostimulatory capacities with a favorable safety profile'

Regina Heidenreich, Keyvan Tadjalli Mehr, Ingo Meyer, Janine Noth, Sven D. Koch, Henoch S. Hong, Karl Melber, Angelika Dähling, Tilmann Roos, Johannes Lutz, Aleksandra Kowalczyk, Fatma Doener, Patrick Baumhof, Birgit Scheel, Söhnke Voss, Karl-Josef Kallen, Mariola Fotin-Mleczek and Ulrike Gnad-Vogt (*CureVac AG, Tübingen, Germany*)

Poster 111

'Evaluation of serologic response to distinct Leishmania antigens by a cohort of vaccinated dogs'

Carla Lima¹, Nuno Santarém¹, Javier Nieto³, Eugenia Carrillo³, Javier Moreno³, Steven Reed⁴ and Anabela Cordeiro da Silva^{1,2} (*1 Universidade do Porto and IBMC – Instituto de Biologia Molecular e Celular, Universidade do Porto, Porto, Portugal; 2 University of Porto, Porto, Portugal; 3 WHO Collaborating Center for Leishmaniasis, Centro Nacional de Microbiologia, Instituto de Salud Carlos III, Spain; 4 Infectious Disease Research Institute, Seattle, WA, USA*)

Poster 112

'Addition of TLR4 agonist in a thermoreversible squalene emulsion adjuvant modulates APC activation promoting mixed Th1/Th2 from Th2-polarized responses'

Arun T. Kamath¹, Beatris Mastelic-Gavillet¹, Etsushi Kuroda², François Dalençon³, Marie Garinot³, Yuanqing Liu³, Nicolas Burdin³, Ken Ishii², Jean Haensler³ and Claire-Anne Siegrist¹ (*1 World Health Organization Collaborating Center for Vaccine Immunology, University of Geneva, Geneva, Switzerland; 2 Laboratory of Adjuvant Innovation, National Institute of Biomedical Innovation, Osaka University, Osaka, Japan; 3 Sanofi Pasteur, Marcy L'Etoile, France*)

**SESSION 4:
VACCINES**

Moderator: Arnaud Didierlaurent
(GlaxoSmithKline Vaccines, Rixensart, Belgium)

09.00-09.30

'Biomarkers of vaccine safety with respect to autoimmunity'

Willem van Eden
(University of Utrecht, Utrecht, The Netherlands)

09.30-10.00

'Approach and challenges for bridging NHP challenge data to human vaccine immune responses for Ebola vaccine development'

Jenny Hendriks
(Janssen Infectious Diseases and Vaccines, Leiden, The Netherlands)

10.00-10.30

'The effect of LTK-63 on B cell subpopulations, maturation and function in early life'

Stefania P. Bjarnarson and Ingileif Jonsdottir
(University of Iceland, Reykjavik, Iceland)

10.30-11.00

Coffee Break & Posters

**SESSION 5:
VACCINE ADJUVANTS I**

Moderator: Tom H.M. Ottenhoff
(LUMC, University of Leiden, Leiden, The Netherlands)

11.00-11.30

'Biomarkers for On- and Off-target effects of vaccine adjuvant'

Ken J. Ishii
(NIBIOHN, University of Osaka, Osaka, Japan)

11.30-12.00

'Exploring mechanisms of non-PAMP adjuvants'

Quentin Sattentau
(University of Oxford, Oxford, UK)

12.00-12.30

'Adjuvant studies in a prime-boost perspective'

Donata Medaglini
(University of Siena, Siena, Italy)

12.30-14.00

Lunch Break & Posters

**SESSION 6:
GENERAL SESSION**

Moderator: Donata Medaglini
(University of Siena, Siena, Italy)

14.00-14.30

'New developments in biomarkers in tuberculosis'

Tom H.M. Ottenhoff
(LUMC, University of Leiden, Leiden, The Netherlands)

14.30-15.00

'Adjuvant determines influx-profile, micro milieu and *in vivo*-antigen-loading of antigen presenting cells (APC) at injection site'

Susan van Aalst, Irene Ludwig, Ruurd van der Zee, Willem van Eden and Femke Broere
(Utrecht University, Utrecht, The Netherlands)

15.00-15.30

'Corn-derived alpha-D-glucan nanoparticles are safe and effective vaccine adjuvants'

Harm HogenEsch
(Purdue University, West Lafayette, Indiana, USA)

15.30-16.00

Tea Break & Posters

**SESSION 7:
GENERAL SESSION**

Moderator: Quentin Sattentau
(University of Oxford, Oxford, UK)

16.00-16.20

'A human DC-based system to evaluate responses towards vaccines'

Gabriela Tapia and Anke Huckriede
(University Medical Center Groningen, Groningen, The Netherlands)

16.20-16.40

'Profiling the proteome of immune cells using robust next-generation mass spectrometry technologies'

Etienne Caron and Ruedi Aebersold
(Institute of Molecular Systems Biology, ETH Zurich, Zurich, Switzerland)

16.40-17.00

'Regulatory T cell frequencies and characteristics in human blood following anti-viral vaccination'

Charlotte de Wolf^{1,3}, Susan van Aalst¹, Irene Ludwig¹, Willem van Eden¹, David Lewis², Christine Gispens-de Wied³, Ruurd van der Zee¹ and Femke Broere¹
(1 Utrecht University, Utrecht, The Netherlands; 2 University of Surrey, Guildford, Surrey, United Kingdom; 3 Medicines Evaluation Board, The Netherlands)

SESSION 8: VACCINE ADJUVANTS II

Moderator: Ken J. Ishii
(NIBIOHN, University of Osaka, Osaka, Japan)

09.00-09.30

'Characterization of the transient innate immune response induced by an AS01_B -adjuvanted vaccine in humans'

Kinga K. Smolen¹, Caroline Hervé², Margreet Brouwer¹, Martin Taton¹, Philippe Auquier², Laurence Fissette², Arnaud Marchant¹, Pascale Van Belle², Wivine Burny², Fabienne Willems¹ and Arnaud Didierlaurent^{1,2}
(1 Institute for Medical Immunology, Gosselies, Belgium; 2 GSK, Rixensart, Belgium)

09.30-10.00

'Adjuvant modulation of the primary CD4+ T cell response to chimeric mycobacterial antigen H56'

Annalisa Ciabattini, Dennis Christensen, Peter Andersen, Gianni Pozzi and Donata Medaglini
(University of Siena, Siena, Italy)

10.00-10.20

'Mechanism of action of Cholera toxin and related nontoxic mucosal adjuvants'

Maximilian Larena and Jan Holmgren
(University of Gothenburg, Gothenburg, Sweden)

10.20-11.00

Coffee Break & Posters

SESSION 9: IMMUNE RESPONSES I

Moderator: Donata Medaglini
(University of Siena, Siena, Italy)

11.00-11.30

'Profiling host cell immune responses induced by alum adjuvants: A systems vaccinology approach'

Sietske Kooijman, Jolanda Brummelman, Fabio Marino, Geert P.M. Mommen, Bernard Metz, Gideon F.A. Kersten Albert J.R. Heck and Hugo D. Meiring
(Intravacc, Bilthoven, The Netherlands)

11.30-11.50

'A liposome-based influenza vaccine induces potent neonatal antibody responses'

Maria Vono¹, Beatris Mastelic Gavillet¹, Christiane S. Eberhardt¹, Floriane Auderset¹, Dennis Christensen², Else Marie Agger², Mirco Schmolke³, Peter Andersen², Paul-Henri Lambert¹ and Claire-Anne Siegrist¹
(1 World Health Organization Collaborating Center for Vaccine Immunology, Departments of Pathology-Immunology, University of Geneva, Geneva, Switzerland; 2 Statens Serum Institut, DK-2300 Copenhagen S, Denmark; 3 Faculty of Medicine, Department of Microbiology and Molecular Medicine, University of Geneva, Geneva, Switzerland)

11.50-12.10

'Unraveling the genetic basis of the immune response to pertussis vaccination'

Yung-Yi C. Mosley, Josiah Radder, Annerose Berndt and Harm HogenEsch
(Purdue University, West Lafayette, Indiana, USA)

12.10-13.30

Lunch Break & Posters Breakdown

SESSION 10: IMMUNE RESPONSES II & LATEBREAKERS

Moderator: Daniel Zak
(The Center for Infectious Diseases Research, Seattle, Washington, USA)

13.00-14.00

'Comprehensive characterization of the reactogenicity in healthy, Hepatitis B virus naive adults vaccinated with the Hepatitis B surface antigen in combination with Adjuvant System AS01_B or with aluminium hydroxide'

Wivine Burny¹, Lien Gheyle², Laurence Fissette¹, Arnaud Marchant³, Fabienne Willems³, Arnaud Didierlaurent¹, Pascale Van Belle¹
(1 GSK, Rixensart, Belgium; 2 SGS, Antwerpen, Belgium; 3 Institute for Medical Immunology, Gosselies, Belgium)

14.00-14.20

'Formulation of the respiratory syncytial virus fusion protein with a novel combination adjuvant promotes innate immune responses in the upper and lower respiratory tract of BALB/c mice'

Indranil Sarkar, Ravendra Garg and Sylvia van Drunen Littel-van den Hurk
(VIDO-InterVac, University of Saskatchewan, Saskatoon Canada)

14.20-14.40

'Development of a custom pentaplex sandwich immunoassay using Protein-G coupled beads for the Lumindex[®] xMAP[®] platform'

Omodele Ashiru², Jacqueline U. McDonald¹, Julia Ekeruche-Makinde¹, Mei M. Ho² and John S. Tregoning¹
(1 Mucosal Infection & Immunity Group, Section of Virology, Imperial College London, St Mary's Campus, London, W2 1PG, United Kingdom; 2 Bacteriology Division, MHRA-NIBSC, Blanche Lane, South Mimms, Potters Bar, Hertfordshire, EN6 3QG, United Kingdom)

14.40-15.00

'Comparative Systems Biology Analysis Reveals Molecular Signatures of Clinically Tested Vaccine Adjuvants'

Thorunn A. Olafsdottir¹, Madelene Lindqvist¹, Intawat Nookaew^{2,3}, Peter L. Andersen⁴, Jeroen Maertzdorf⁵, Josefine Persson¹, Yuan Zhang¹, Jenna Anderson¹, Sakda Khoomrung², Partho Sen², Else Marie Agger⁴, Dennis Christensen⁴, Rhea Coler⁶, Darrick Carter⁶, Andreas Meinke⁷, Stefan H.E. Kaufmann⁵, Steven G. Reed⁶ and Ali M. Harandi¹
(1 Department of Microbiology and Immunology, Institute of Biomedicine, Sahlgrenska Academy, University of Gothenburg, Gothenburg, Sweden; 2 Department of Chemical and Biological Engineering, Chalmers, University of Technology, Gothenburg, Sweden; 3 Comparative Genomics Group, Biosciences Division, Oak Ridge National Laboratory, Oak Ridge, Tennessee, USA; 4 Department of Infectious Disease Immunology, Statens Serum Institut, Copenhagen, Denmark; 5 Department of Immunology, Max Planck Institute for Infection Biology, Berlin, Germany; 6 Infectious Disease Research Institute, Seattle, Washington, USA; 7 Valneva Austria GmbH, Vienna, Austria)

15.00

Overview & Closing Remarks

Departure

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