

# MODERN VACCINES ADJUVANTS & DELIVERY SYSTEMS

12-14 September 2017, Crowne Plaza Hotel, Porto, Portugal

## FINAL ORAL & POSTER PROGRAMME MVADS 2017

### ADVISORY SCIENTIFIC PANEL

Edmond J. Remarque (BPRC, Rijswijk, The Netherlands)  
 Dennis Christensen (Statens Serum Institut, Copenhagen, Denmark)  
 Erik Lindblad (Brenntag Biosector, Copenhagen, Denmark)  
 Manmohan Singh (Takeda Vaccines Inc., Cambridge, Massachusetts, USA)  
 Heather Davis (Seqirus, Maidenhead, Berkshire, UK)  
 Derek O'Hagan (GSK, Rockville, Maryland, USA)  
 Adriana Baz Morelli (CSL Ltd, Melbourne, Australia)  
 Nathalie Garcon (BIOASTER Technology Research Institute, Lyon, France)  
 Niranjana Sardesai (Inovio Pharmaceuticals, Blue Bell, Pennsylvania, USA)  
 Virgil Schijns (Wageningen University, The Netherlands)  
 Gary Ott (Dynavax Inc., San Diego, California, USA)  
 Burkhard Becher (University of Zurich, Zurich, Switzerland)

Maria Lazaro (SEPPIC, Paris, France)  
 Geert Vanden Bossche (UNIVAC LLC, Belgium)  
 Chris Fox (IDRI, Seattle, USA)  
 Martin Bachmann (Inselspital, Bern, Switzerland / University of Oxford, Oxford, UK)  
 Anna-Karin Maltais (Eurocine Vaccines AB, Solna, Sweden)  
 Stefan Jungbluth (EVI, Heidelberg, Germany)  
 Jeffrey A. Hubbell (University of Chicago, Chicago, Illinois, USA)  
 Behazine Combadiere (Cimi-Paris, Paris, France)  
 Ken Ishii (NIBIOHN/University of Osaka, Osaka, Japan)  
 Ofer Levy (Boston Children's Hospital/Harvard Medical School, Boston, Massachusetts, USA)  
 Jean Haensler (Sanofi Pasteur, Marcy L'Etoile, France)



08.00 Onwards

Registration

08.55-09.00

Welcome & Opening Remarks

## SESSION 1: OPENING PLENARY

Moderator: Chris Fox

(IDRI, Seattle, Washington, USA)

09.00-09.30

**'Adjuvants: Where are we now?'**

Derek O'Hagan

(GSK, Rockville, Maryland, USA)

09.30-10.00

**'Inducible adjuvant mediated by multiple, but specific pathways'**

Ken Ishii

(NIBIOHN/Osaka University, Osaka, Japan)

10.00-10.30

**'Making vaccines on demand: iVAX and Ancer'**

Brian Roberts

(EpiVax Inc., Providence, Rhode Island, USA)

10.30-11.00

Coffee Break & Poster Set-Up

## SESSION 2: PLENARY II

Moderator: Derek O'Hagan

(GSK, Rockville, Maryland, USA)

11.00-11.30

**'Predictive modification of adjuvant activity'**

Chris Fox

(IDRI, Seattle, Washington, USA)

11.30-12.00

**'Polyanhydride nanovaccines: A new platform technology for emerging infectious diseases'**

Adel M. Talaat

(University of Wisconsin, Madison, Wisconsin, USA)

12.00-12.30

**'A new generation of a versatile adjuvant A that is delivering, targeting and immune modulating'**

Bror Morein, Caroline Fossum and Saideh Berenjian

(Swedish University of Agricultural Sciences (SLU), Uppsala, Sweden)

12.30-12.50

**'TRANSVAC2 – European Vaccine Research and Development Infrastructure'**

Stefan Jungbluth and Odile Leroy

(European Vaccine Initiative, Heidelberg, Germany) and TRANSVAC2 consortium partners

12.50-14.00

Lunch Break & Posters

## SESSION 3: MUCOSAL

Moderator: Anna-Karin Maltais

(Eurocine Vaccines AB, Solna, Sweden)

14.00-14.20

**'Mucosal Vaccines & Adjuvants Overview'**

Ali Harandi

(University of Gothenburg, Gothenburg, Sweden)

14.20-14.40

**'Mucosal Immunity is what's missing, Dude!! Building the Right wall to protect against respiratory and sexually transmitted diseases'**

Ali Fattom, Vira Bitko and Doug Smith

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

14.40-15.00

**'The oral adjuvant  $\alpha$ -Galactosylceramide activates intestinal B cells via an IFN- $\gamma$  dependent mechanism'**

Stephanie Longet<sup>1</sup>, Christopher Davitt<sup>1</sup>, Joshua Tobias<sup>2</sup>, Jan Holmgren<sup>2</sup>

and Ed C. Lavelle<sup>1</sup>

(<sup>1</sup> Trinity College Dublin, Dublin, Ireland; <sup>2</sup> University of Gothenburg, Gothenburg, Sweden)

15.00-15.20

**'Oral immunization for the prevention of norovirus infection'**

Sean Tucker

(Vaxart Inc., South San Francisco, California, USA)

15.20-15.40

**'Adjuvants targeting STING and the NLRP3 inflammasome to enhance cellular immunity'**

Edward Lavelle

(Trinity College Dublin, Dublin, Ireland)

15.40-16.00

**'Clinical development of an inactivated nasal influenza vaccine'**

Anna-Karin Maltais

(Eurocine Vaccines AB, Solna, Sweden)

16.00-16.30

Tea Break & Posters

## SESSION 4: DESIGN & MODELS

Moderator: Heather Davis

(Seqiris, Maidenhead, Berkshire, UK)

16.30-17.00

**'Targeted delivery in rational vaccine design'**

Dennis Christensen

(Statens Serum Institut, Copenhagen, Denmark)

17.00-17.30

**'NHP models for vaccines, adjuvants and delivery systems'**

Edmond J. Remarque

(Biomedical Primate Research Centre, Rijswijk, The Netherlands)

17.30-18.00

**'Self-adjuvanted protein nanoparticles as a platform for vaccine design'**

Caroline Kulangara, Sara M. Paulillo, Senthil K. Raman and Peter Burkhard

(Alpha-O Peptides AG, Riehen, Switzerland)

18.00-19.00

MVADS 2017 Welcome Drinks Reception & Poster Session

**SESSION 5: SPECIAL SESSION  
'PRECISION VACCINES & ADJUVANTS'**

Moderators: Ofer Levy

*(Boston Children's Hospital/Harvard Medical School, Boston, Massachusetts, USA)*

Martin Bachmann

*(Inselspital, Bern, Switzerland / University of Oxford, Oxford, UK)*

Sponsored and organized in conjunction with *Precision Vaccines Program*, Boston Children's Hospital/Harvard Medical School, Boston, Massachusetts, USA

09.00-09.30

**'High throughput screening, human *in vitro* modeling, and systems biology to inform development of novel age-specific adjuvanted vaccines'**

Ofer Levy

*(Boston Children's Hospital/Harvard Medical School, Boston, Massachusetts, USA)*

09.30-10.00

**'Discovery and development of Small Molecule Immune Potentiators (SMIPs)'**

Derek O'Hagan

*(GSK, Rockville, Maryland, USA)*

10.00-10.30

**'An attempt to develop a universal technology for the development of precision cancer vaccines'**

Martin Bachmann

*(Inselspital, Bern, Switzerland / University of Oxford, Oxford, UK)*

10.30-11.00

Coffee Break & Posters

**SESSION 6:  
ADJUVANTS/MICRONEEDLES/VLPS/NANOPARTICLES**

Moderator: Martin Bachmann

*(Inselspital, Bern, Switzerland / University of Oxford, Oxford, UK)*

11.00-11.30

**'GM-CSF adjuvanted influenza vaccine delivery with dissolvable microneedle patches increases potency and breadth of immunity'**

Ioanna Skountzou

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

11.30-11.50

**'The use of new adjuvants and VLPs for the development of vaccines for emerging and infectious diseases'**

Gustavo Cabral de Miranda

*(University of Oxford, Oxford, UK)*

11.50-12.10

**'Versatile nanoparticle platform for multifunctional vectorization and epitope delivery'**

Pricillia Lagoutte, Adrien Lugari, Gustavo Stadthagen, Charlotte Mignon, Stephanie Donnat, Mourad Bekhouche, Natacha Mariano and Bettina Werle  
*(Bioaster, Lyon, France)*

12.10-12.30

**'Evaluation of self-assembling protein nanoparticles (SAPN) for multi-antigen display'**

Evelina Angov<sup>1</sup>, Elke S. Bergmann-Leitner<sup>1</sup>, Zoltan Beck<sup>2</sup>, Katherine L. Mallory<sup>1</sup>, Christopher Mann<sup>1</sup>, Neeraja Punde<sup>1</sup>, David E. Lanar<sup>1</sup>, Carl Alving<sup>2</sup>, Gary R. Matyas<sup>2</sup> and Peter Burkhard<sup>3</sup> (<sup>1</sup> *Military Malaria Research Program, Malaria Vaccine Branch, Walter Reed Army Institute of Research, Silver Spring Maryland, USA;* <sup>2</sup> *Military HIV Research Program, Laboratory of Adjuvant and Antigen Research, Walter Reed Army Institute of Research, Silver Spring, Maryland, USA;* <sup>3</sup> *Alpha-O Peptides AG, Riehen, Switzerland*)

12.30-12.50

**'Adjuvants differentially influence germinal center kinetics'**

Gabriel Pedersen, Peter Andersen and Dennis Christensen

*(Statens Serum Institut, Copenhagen, Denmark)*

12.50-14.00

Lunch Break & Posters

**SESSION 7:  
VACCINES/VACCINATION**

Moderator: Jeffrey A. Hubbell

*(University of Chicago, Chicago, Illinois, USA)*

14.00-14.30

**'Soluble glycopolymer conjugates as nanovaccines'**

Jeffrey A. Hubbell

*(University of Chicago, Chicago, Illinois, USA)*

14.30-15.00

**'Afluria quadrivalent influenza vaccine: A challenging history overcome'**

Heather Davis

*(Seqirus, Maidenhead, Berkshire, UK)*

15.00-15.20

**'MACIVIVA: Manufacturing of cold-chain independent virosome-based vaccine'**

Mario Amacker, Sylvain Fleury and Toon Stegmann

*(Mymetics SA, Epalinges, Switzerland)*

15.20-15.40

**'Novel antigen-carrier system for multi-epitope subunit vaccine candidate against tuberculosis'**

Kata Horvati<sup>1</sup>, Gergö Gyulai<sup>2</sup>, Éva Kiss<sup>2</sup>, Bernadett Pályi<sup>3</sup>, Zoltán Kis<sup>3</sup>, Sándor Dávid<sup>4</sup>, Nóra Szabó<sup>4</sup>, Kinga Fodor<sup>5</sup> and Szilvia Bösze<sup>1</sup>

*(<sup>1</sup> MTA-ELTE Research Group of Peptide Chemistry, Budapest, Hungary;*

*<sup>2</sup> Laboratory of Interfaces and Nanostructures, Eötvös L. University, Budapest, Hungary;*

*<sup>3</sup> National Biosafety Laboratory, National Center for Epidemiology, Budapest, Hungary;*

*<sup>4</sup> Laboratory of Bacteriology, Korányi National Institute for Tuberculosis, Budapest, Hungary;*

*<sup>5</sup> Department of Veterinary Forensics, Law and Economics, University of Veterinary Medicine, Budapest, Hungary)*

15.40-16.00

Tea Break & Posters

**SESSION 7 – CONTINUED**

Moderator: Heather Davis

*(Seqirus, Maidenhead, Berkshire, UK)*

16.00-16.20

**'Vaccination in aging: Beyond the B lymphocyte lineage'**

Doron Melamed

*(Rappaport Faculty of Medicine, Technion/Israel Institute of Technology, Haifa, Israel)*

16.20-16.40

**'First in human clinical trial of a novel, chemokine fusion DNA cancer vaccine'**

Larry W. Kwak<sup>3</sup>, Soung-chul Cha<sup>1</sup>, D. Lynne Smith<sup>3</sup>, Sapna R. Parshottham<sup>2</sup>, Sheetal Rao<sup>2</sup>, Vincent Y. Lee<sup>1</sup>, Sattva S. Neelapu<sup>1</sup> and Sheeba K. Thomas<sup>1</sup>

*(<sup>1</sup> Department of Lymphoma/Myeloma, Division of Cancer Medicine, and <sup>2</sup>*

*Department of Stem Cell Transplantation and Cellular Therapy, The University of Texas MD Anderson Cancer Center, Houston, Texas, USA;*

*<sup>3</sup> Toni Stephenson Lymphoma Center, Department of Hematology and Hematopoietic Stem Cell Transplantation, Beckman Research Institute of City of Hope, Duarte, California, USA)*

16.40-17.00

**'NLR4-driven immunogenicity of a novel rMVA vaccine encoding flagellin and the induction of mucosal immune responses'**

Stephanie L. Sanos, Ronny Kassub, Marco Testori, Raphael Giessel, Marlene Geiger, Johanna Knallinger, Juliane Pätzold, Barbara Bathke,

Paul Chaplin, Hubertus Hochrein and Henning Lauterbach

*(Bavarian Nordic GmbH, Martinsried, Germany)*

**SESSION 8:  
ADJUVANTS ACTIVITY**

Moderator: Ken Ishii

(NIBIOHN/Osaka University, Osaka, Japan)

09.00-09.20

**'Characterization of the adjuvant activity of linear polyacrylates'**

Jean Haensler<sup>1</sup>, Marie Garinot<sup>1</sup>, Yuanqing Liu<sup>1</sup>, Fabienne Piras<sup>1</sup>, Virginie Courtois<sup>1</sup>, Premkumar Dinadayala<sup>1</sup>, Elodie Belnoue<sup>2</sup>, Floriane Auderset<sup>2</sup>, Beatris Mastelic-Gavillet<sup>2</sup> and Claire-Anne Siegrist<sup>2</sup>

(<sup>1</sup> Sanofi Pasteur, Marcy l'Etoile, France; <sup>2</sup> CMU- University of Geneva, Geneva, Switzerland)

09.20-09.40

**'Adjuvant properties of the novel toll-like receptor 7 and 8 agonist 3M-052'**

Mark Tomai

(3M Company, St Paul, Minnesota, USA)

09.40-10.00

**'Effect of QS21 and aluminum hydroxide gel on physical and adjuvant properties of Army liposome formulations'**

Zoltan Beck<sup>1,2</sup>, Gary Matyas<sup>2</sup>, Carl Alving<sup>2</sup> and Victoria Polonis<sup>3</sup>

(US Military HIV Research Program: <sup>1</sup> Henry M. Jackson Foundation for the Advancement of Military Medicine, Bethesda, Maryland, USA; <sup>2</sup> Laboratory of Adjuvant and Antigen Research; <sup>3</sup> Laboratory of Vaccine Immunology, Walter Reed Army Institute of Research, Silver Spring, Maryland, USA)

10.00-10.20

**'Selection of a novel MPLA and QS-21 containing liposomal adjuvant, ALFQ, for a circumsporozoite protein based malaria vaccine, FMP013'**

Sheetij Dutta<sup>1</sup>, Christopher J. Genito<sup>1</sup>, Zoltan Beck<sup>3</sup>, Alicia D. Cawfield<sup>2</sup>, Timothy W. Phares<sup>1</sup>, Norman C. Waters<sup>1</sup>, Gary R. Matyas<sup>3</sup>, David E. Lanar<sup>1</sup> and Carl R. Alving<sup>3</sup>

(<sup>1</sup> Malaria Vaccine Branch and <sup>2</sup> Department of Veterinary Medicine, Walter Reed Army Institute of Research, Silver Spring, Maryland, USA; <sup>3</sup> Laboratory of Adjuvant and Antigen Research, US Military HIV Research Program, Walter Reed Army Institute of Research, Silver Spring, Maryland, USA)

10.20-10.40

**'Key role of QS21 and NK/CD4 T cell interplay in AS01 mode of action'**

S. Goriely, M. Coccia, Sofia Buonocore and Arnaud Didierlaurent

(GSK Vaccines, Rixensart, Belgium)

10.40-11.00

**'Use of IFN- $\beta$ 2 as an intradermal adjuvant confers potent systemic and mucosal immune responses in the mouse model'**

Lisa Mills

(Emory University, Atlanta, Georgia, USA)

11.00-11.15

Coffee Break & Posters Breakdown

**SESSION 9:  
FORMULATION & DELIVERY**

Moderator: Manmohan Singh

(Takeda vaccines Inc., Cambridge, Massachusetts, USA)

11.15-11.35

**'Outer membrane vesicles as delivery system for *Bordetella pertussis* antigens'**

R. Raeven<sup>1</sup>, J. Brummelman<sup>2</sup>, J. Pennings<sup>2</sup>, E. van Riet<sup>1</sup>, C. van Els<sup>2</sup>, W. Han<sup>2</sup>, B. Metz<sup>1</sup> and G. Kersten<sup>1</sup>

(<sup>1</sup> Institute for Translational Vaccinology, Bilthoven, The Netherlands; <sup>2</sup> Institute for Public Health and the Environment, Bilthoven, The Netherlands)

11.35-11.55

**'Optimization of formulation and delivery systems for *in vivo* transfer of DNA-based immunoprophylactics'**

Trevor R.F. Smith<sup>1</sup>, Katherine Schultheis<sup>1</sup>, Stephanie Ramos<sup>1</sup>, Nina Schommer<sup>1</sup>, Jingjing Jiang<sup>1</sup>, Bryan Yung<sup>1</sup>, Jian Yan<sup>1</sup>, Ami Patel<sup>2</sup>, Sarah Elliot<sup>2</sup>, Kar Muthumani<sup>2</sup>, Megan Wise<sup>2</sup>, Kim A. Kraynyak<sup>2</sup>, Laurent Humeau<sup>1</sup>, David B. Weiner<sup>2</sup>, Niranjan Y. Sardesai<sup>1</sup> and Kate E. Broderick<sup>1</sup>

(<sup>1</sup> Inovio Pharmaceuticals, Inc., Plymouth Meeting, Pennsylvania, USA;

<sup>2</sup> The Wistar Institute of Anatomy & Biology, Philadelphia, Pennsylvania, USA)

11.55-12.15

**'Breaking the barrier of proprietary adjuvants and delivery systems'**

Kenneth Bertram

(US Army Medical Research and Materiel Command, Fort Detrick, Maryland, USA)

12.15-12.35

**'Increasing antigen presenting cells at the injection site improves SAM vaccine efficacy'**

Cristina Manara, Michela Brazzoli, Diego Piccioli, Marianna Taccone, Ugo D'Oro, Domenico Maione and Elisabetta Frigimelica

(GSK Vaccines s.r.l., Siena, Italy)

12.35-12.40

**Closing Remarks**

12.40

Lunch & Departure

\* 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.

## Poster 101

### 'P97c recombinant protein modulates the innate immune system through Toll-like receptor 5 (TLR5) activation and cytokine production'

Denis Archambault, Jessica Dion, Geneviève Bertheau-Mailhot, Claude Marchand and Steve Bourgault

(University of Quebec at Montreal, Montreal, Quebec, Canada)

## Poster 102

### 'Synthesis and potent adjuvant activity of Lipid A mimics bearing an aromatic scaffold'

Jordan D. Lewicky<sup>1</sup>, Genevieve M. Weir<sup>2</sup>, Rajkannan Rajagopalan<sup>2</sup>, Marc Mansour<sup>2</sup>, Leeladhar Sammat<sup>2</sup>, Marianne M. Stanford<sup>2</sup> and Zi-Hua Jiang<sup>1</sup>

(<sup>1</sup> Department of Chemistry, Lakehead University, Thunder Bay, Ontario, Canada;

<sup>2</sup> Immunovaccine, Halifax, Nova Scotia, Canada)

## Poster 103

### 'Increased immunogenicity and protective efficacy of the *P. aeruginosa* vaccine in mice using an alum and de-O-acylated lipooligosaccharide adjuvant system'

Ji In Ryu<sup>1</sup>, Seo Ri Wui<sup>1</sup>, Ara Ko<sup>1</sup>, Hien Thi Thu Do<sup>1</sup>, Yeon Jeong Lee<sup>1</sup>, Hark Jun Kim<sup>1</sup>, Shin Ae Park<sup>2</sup>, Kwang Sung Kim<sup>2</sup>, Yang Je Cho<sup>2</sup> and Na Gyong Lee<sup>1</sup>

(<sup>1</sup> Department of Bioscience and Biotechnology, Sejong University, Seoul, Republic of Korea;

<sup>2</sup> R&D Center, EyeGene, Goyang, Republic of Korea)

## Poster 104

### 'Induction of fast and potent antibody responses in mice by MERS-CoV subunit vaccine adjuvanted with CIA06, a combination of alum and de-O-acylated lipooligosaccharide'

Yeon Jeong Lee, Seo Ri Wui, Ji In Ryu, Ara Ko, Hien Thi Thu Do, Hark Jun Kim and Na Gyong Lee

(Department of Bioscience and Biotechnology, Sejong University, Seoul, Republic of Korea)

## Poster 105

### 'Design and characterisation of a dissolving microneedle patch for transdermal vaccination with heat-inactivated bacteria: A proof of concept study'

A.M. Rodgers<sup>1</sup>, M.T.C. McCrudden<sup>2</sup>, A.V. Dubois<sup>1</sup>, E.M. Vicente-Perez<sup>2</sup>, R.J. Ingram<sup>1</sup>, R.F. Donnelly<sup>2</sup> and A. Kissenpfennig<sup>1</sup>

(<sup>1</sup> Centre for Experimental Medicine, Queen's University Belfast, UK; <sup>2</sup> School of Pharmacy, Queen's University Belfast, UK)

## Poster 106

### 'In ovo administration of innate immune stimulants/immuno-adjuvants and protection from early chick mortalities due to yolk sac infection'

Brenda Allan, Mishal Sarfraz, Wolfgang Köster, Colette Wheler and Arshud Dar

(Vaccine and Infectious Disease Organization-International Vaccine Centre, University Of Saskatchewan, Saskatoon, Canada)

## Poster 107

### 'Stabilising polio vaccines and their skin delivery using dissolvable microneedle patches'

Agnese Donadei<sup>1</sup>, Olga Ophorst<sup>2</sup>, Rimko Ten Have<sup>2</sup>, Heleen Kraan<sup>2</sup>, Olivia Flynn<sup>1</sup>, Ivo Ploemen<sup>2</sup> and Anne Moore<sup>1</sup>

(<sup>1</sup> School of Pharmacy, University College Cork, Cork, Ireland; <sup>2</sup> Institute of Translational Vaccinology (Intravacc), Bilthoven, Netherlands)

## Poster 108

### 'Investigating adjuvant potential of Astragaloside VII and its formulation with Astragalus polysaccharide for seasonal influenza vaccines'

Nilgün Yakubogulları<sup>1</sup>, Rükan Genç<sup>2</sup>, Serhan Cenk Özverel<sup>3</sup>, Fethiye Çöven<sup>4</sup>, Ay e Nalbantsoy<sup>3</sup> and Erdal Bedir<sup>1</sup>

(<sup>1</sup> Izmir Institute of Technology, Biotechnology and Bioengineering Department, Bioengineering Department, Gülbahçe, Urla, Izmir, Turkey; <sup>2</sup> Mersin University, Faculty of Engineering, Chemical Engineering Department, Mersin, Turkey; <sup>3</sup> Ege University, Faculty of Engineering, Bioengineering Department, Bornova, Izmir, Turkey; <sup>4</sup> Bornova Veterinary Control and Research Institute, Bornova, Izmir, Turkey)

## Poster 109

### 'Characterization of a modified coronaviral-like particle'

A. Naskalska, A. Dabrowska, A. Milewska, A. Wong, J. Kozie and K. Pyr

(Malopolskie Centrum Biotechnologii, Uniwersytet Jagiellonski, Krakow, Poland)

## Poster 110

### 'Novel RNA-based adjuvants with strong immunostimulatory activities improve the efficacy of VLP-based cancer vaccines'

Mahjoub Bih<sup>1</sup>, Thorsten Klamp<sup>1</sup>, Mustafa Diken<sup>2,3</sup>, Sebastian Kreiter<sup>2,3</sup> and Ugur Sahin<sup>1,2,3</sup>

(<sup>1</sup> BioNTech Protein Therapeutics GmbH; <sup>2</sup> Translational Oncology at the University Medical Center of the Johannes Gutenberg University Mainz (Tron); <sup>3</sup> BioNTech RNA Pharmaceuticals GmbH, Mainz, Germany)

## Poster 111

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

Maria Lazaro, Aude Puget and Stephane Ascarateil

(SEPPIC, Paris La Defense, Puteaux, France)

## Poster 112

### 'Layer-by-layer coating of whole inactivated influenza virus (WIV): A single-shot vaccine approach?'

C. Lemoine<sup>1,2</sup>, M. Marti Favre<sup>1</sup>, V. Jakob<sup>1</sup>, W. Jiskoot<sup>3</sup>, N. Collin<sup>1</sup>, G. Borchard<sup>2</sup> and C. Barnier-Quer<sup>1</sup>

(<sup>1</sup> Vaccine Formulation Laboratory, University of Lausanne, Epalinges, Switzerland; <sup>2</sup> School of Pharmaceutical Sciences, University of Geneva, Geneva, Switzerland; <sup>3</sup> Division of Drug Delivery Technology, Leiden Academic Centre for Drug Research, Leiden, The Netherlands)

## Poster 113

### 'Training in adjuvants and vaccine formulation'

M. Lawrenz<sup>1</sup>, C. Barnier-Quer<sup>2</sup>, L. Brunner<sup>2</sup>, P. Dubois<sup>1</sup>, G. Frank<sup>2</sup>, V. Jakob<sup>2</sup>, C. Lebas<sup>2</sup>, C. Lemoine<sup>2</sup>, M. Marti Favre<sup>2</sup>, R. Ventura<sup>2</sup> and N. Collin<sup>2</sup>

(<sup>1</sup> Vaccine Formulation Institute, Godalming, Surrey, UK; <sup>2</sup> Vaccine Formulation Laboratory, University of Lausanne, Epalinges, Switzerland)

## Poster 114

### 'Design and validation of self-assembled peptide nanostructures as a novel vaccination platform'

Steve Bourgault<sup>1,2</sup>, Margaryta Babych<sup>1,2,3</sup>, Ximena Zottig<sup>1,2</sup>, Geneviève Bertheau-Mailhot<sup>3</sup>, Jessica Dion<sup>3</sup> and Denis Archambault<sup>3</sup>

(<sup>1</sup> Department of Chemistry, Université du Québec à Montréal, Montréal, Quebec, Canada; <sup>2</sup> Quebec Network for Research on Protein Function, Engineering and Applications, PROTEO, Quebec, Canada; <sup>3</sup> Department of Biological Sciences, Université du Québec à Montréal, Montréal, Quebec, Canada)