

# 8th European Meeting on Viral Zoonoses

22-25 October, 2017

Saint-Raphaël, France

## Sunday, October 22, 2017

16.00 – 18.15	Registration – PALAIS DES CONGRES
18.15 – 19.15	Welcome/Introduction – PALAIS DES CONGRES RICHARD ELLIOTT MEMORIAL LECTURE Amadou SALL, Dakar, Sénégal <i>Emerging zoonoses in Africa (O1)</i>
19.30 – 21.30	Welcome Reception Buffet Dinner : Restaurant La Bulle d'Or

## **Monday, October 23, 2017**

### **SESSION 1 : Ecology, Epidemiology and Evolution (1)**

**CHAIRS : Åke LUNDKVIST and Luiz Tadeu MORAES FIGUEIREDO**

**08.45 – 09.25**

**KEYNOTE TALK : Olli VAPALAHTI, Helsinki, Finland**

#### ***Zika virus and its variation from mother to fetal brain (O2)***

<b>Time</b>	<b>Speaker</b>	<b>Title</b>
9.25 – 9.45	Vaclav Honig Brno, Czech Republic (O3)	Changes in behaviour of <i>Ixodes ricinus</i> ticks upon infection by tick-borne encephalitis virus
9.45 – 10.05	Teemu Smura Helsinki, Finland (O4)	Fatal tick-borne encephalitis virus infections caused by Siberian and European subtypes emerging in Kuutsalo Island, Kotka archipelago, Finland
10.05 – 10.25	Marta Trevisan Padova, Italy (O5)	Comparative analysis of Zika virus, West Nile virus and Dengue virus infection in human neural cells
10.25 – 10.45	Goran Bucht Umeå, Sweden (O6)	Vertical transmission – a possible explanation for the prevalence of mosquito-borne Inko- and Sindbis virus in northern Sweden
10.45 – 11.15	<b>Coffee and Posters</b>	
11.15 – 11.35	Magnus Evander Umeå, Sweden (O7)	Association of Rift Valley fever virus infection with miscarriage in Sudanese women
11.35 – 11.55	Estela Escibano-Romero Ciudad Real, Spain (O8)	Magpies ( <i>pica pica</i> ) susceptibility to experimental West Nile virus infection
11.55 – 12.15	Wanda Markotter Pretoria, South Africa (O9)	Potential zoonotic viruses detected in insectivorous bat species and other non-volant mammals sharing the same ecosystem in South Africa
12.15 – 12.35	Marietjie Venter Pretoria, South Africa (10)	One health epidemiology and ecology of zoonotic arboviruses associated with neurological disease in South Africa (2008-2017).
12.35 – 14.15	<b>Lunch break</b>	

## **Monday, October 23, 2017**

### **SESSION 2 : Ecology, Epidemiology and Evolution (2)**

**CHAIRS : Xavier de LAMBALLERIE and Olli VAPALAHTI**

**14.15 – 14.55**

**KEYNOTE TALK : Xavier de LAMBALLERIE, Marseille, France**

#### ***Zika virus seroepidemiological studies (O11)***

<b>Time</b>	<b>Speaker</b>	<b>Title</b>
14.55 – 15.15	Meriadeg Le Gouil Paris, France (O12)	Macro & micro-evolution of coronaviruses in bats and emergence potentialities of a <i>betacoronavirus</i> in the western palearctic
15.15 – 15.35	Lorraine M McElhinney Weybridge, UK (O13)	Outbreak of haemorrhagic fever with renal syndrome in the United Kingdom
15.35 – 15.55	Jussi Hepojoki Helsinki, Finland (O14)	Characterization of HISV-1, the putative type species of a novel genus <i>Hartmanivirus</i> in the family <i>Arenaviridae</i>
15.55 – 16.30	<b>Tea and Posters</b>	
16.30 – 16.50	Tatiana Kuznetsova Tallinn, Estonia (O15)	Hepatitis E virus infection in different groups of estonian patients and people who inject drugs
16.50 – 17.10	Per Eriksson Uppsala, Sweden (O16)	The Pig as a "Mixing Vessel" for IAVs revisited; new data from virus attachment studies
17.10 – 17.30	Tove Hoffman Uppsala, Sweden (O17)	Evaluating the role of northward migratory birds in intercontinental transmission of tick-borne pathogens
17.30 – 17.50	Jonas Blomberg Uppsala, Sweden (O18)	Computerized multiplex antibody analysis diminishes problems with cross-reactivity for serological diagnosis of zoonotic virus infections
17.50 – 19.45	<b>POSTER and WINE session</b>	

**Tuesday, October 24, 2017**

**SESSION 3 : Virus / Host Interactions (1)**

**CHAIRS : Friedemann WEBER and Connie SCHMALJOHN**

**08.45 – 09.25**

**KEYNOTE TALK : Alain KOHL, Glasgow, UK**

***Zika virus - tropism and antiviral responses (O19)***

<b>Time</b>	<b>Speaker</b>	<b>Title</b>
09.25 – 09.45	Branka Horvat Lyon, France (O20)	Immunopathogenesis of Nipah virus infection
09.45 – 10.05	Jan Hellert Paris, France (O21)	Structural basis for orthobunyavirus neutralization
10.05 – 10.25	Vincent Legros Paris, France (O22)	Chikungunya virus induces apoptosis in infected chondrocytes and promotes cartilage damages
10.25 – 10.45	Marina García Buenos Aires, Argentina (O23)	Human B cells: newly described targets for hantavirus infection
10.45 – 11.15	<b>Coffee and Posters</b>	
11.15 – 11.35	Pierre-Yves Lozach Heidelberg, Germany (O24)	The non-structural protein NSs of rift valley fever virus: a novel model to study prion-like proteins?
11.35 – 11.55	Essia Belarbi Paris, France (O25)	Bioluminescent Ross River virus allows <i>in vivo</i> visualisation of acute and persistent alphaviral infection
11.55 – 12.15	Maria Günther Insel Riems, Germany (O26)	Interaction of matrix proteins with nuclear anp32b is conserved among Henipa-, Avula- and Respiroviruses
12.15 – 12.35	Mahmoud Naguib Riems, Germany (O27)	Reassortants between potentially zoonotic avian influenza viruses H5N1 and H9N2 from Egypt display different pathogenesis in chicken and ferret animal models
12.35 – 14.15	<b>Lunch break</b>	

## **Tuesday, October 24, 2017**

### **SESSION 4 : Virus-Host Interactions (2)**

**CHAIRS : Alain KOHL and Alexander PLYUSNIN**

**14.15 – 14.55**

**KEYNOTE TALK : Friedemann WEBER, (Germany)**

#### ***Induction and suppression of the interferon response by RNA viruses (O28)***

<b>Time</b>	<b>Speaker</b>	<b>Title</b>
14.55 – 15.15	Clément Jouselin Paris, France (O29)	Interaction of rabies virus polymerase with cellular factors and exploration of the functional consequences
15.15 – 15.35	Stéphanie Devignot Giessen, Germany (O30)	Complex interplay between CCHFV ovarian tumor (OTU) domain and the innate immune response
15.35 – 15.55	Stefan Pöhlmann Göttingen, Germany (O31)	A GXXXA motif in the transmembrane domain of the Ebola virus glycoprotein is required for Tetherin antagonism
15.55 – 16.30	<b>Tea and Posters</b>	
16.30 – 16.50	Markus Hoffmann Göttingen, Germany (O32)	Fruit bat Tetherin (BST-2, CD317) is a potent innate immune factor that inhibits spread of highly pathogenic viruses in bat cells
16.50 – 17.10	Justine Basset Paris, France (O33)	Ciliobrevin D, a cytoplasmic dynein antagonist, to investigate the role of dynein in Flavivirus infectious cycle
17.10 – 17.30	Pablo Guardado-Calvo Paris, France (O34)	The structure of RVFV fusion protein reveals a lipid binding pocket conserved in class-II fusion proteins
17.30 – 17.50	Ilona Rissanen Helsinki, Finland (O35)	The conserved and metastable architecture of the hantaviral glycoprotein envelope
17.50 – 18.10	Simone Lau Giessen, Germany (O36)	Rift Valley fever virus NSS virulence factor disrupts the nuclear pore complex
19.00	<b>Bus departure for Gala Dinner</b>	
19.45 – 23.00	<b>Gala Dinner</b>	

## **Wednesday, October 25, 2017**

### **SESSION 5 : "Prevention and Control"**

**CHAIRS : Christina SPIROPOULOU and Noël TORDO**

**8.45 – 09.25**

**KEYNOTE TALK : Connie SCHMALJOHN, USA**

#### **DNA Vaccines for Hemorrhagic Fever with Renal Syndrome (O37)**

<b>Time</b>	<b>Speaker</b>	<b>Title</b>
09.25 – 9.45	Luiz.T.M. Figueiredo Ribeirao Preto, Brazil (O38)	Yellow fever in Brazil 2016-2017: epizootics in primates and human cases
09.45 – 10.05	Ana-Belén Blázquez Madrid, Spain (O39)	Zika virus infection confers protection against West Nile virus challenge in mice
10.05 – 10.25	Mathieu Matéo Lyon, France (O40)	A potential vaccine platform against arenaviruses based on a recombinant hyper-attenuated Mopeia virus expressing heterologous glycoproteins
10.25 – 10.45	Adeline Kerviel London, UK (O41)	Protective efficacy of Bluetongue Virus and African Horse Sickness Virus replication-deficient vaccine strains against virulent virus challenges in animal hosts
10.45 – 11.15	<b>Coffee and Posters</b>	
11.15 – 11.35	Dawid Nidzworski Gdańsk, Poland (O42)	Mucosal vaccination against influenza virus infection with recombinant spores of <i>Bacillus subtilis</i>
11.35 – 11.55	Verena te Kamp Insel Riems, Germany (O43)	Tropism of attenuated GFP-expressing RABV vaccine after oral administration in different reservoir species
11.55 – 12.15	Christina F.Spiropoulou Atlanta, USA (O44)	From basic science to promising antivirals for hemorrhagic fever viruses
12.15 – 12.35	Nicole Pavio Maisons Alfort, France (O45)	Effect of a ribavirin analogue on the replication of hepatitis E virus in vitro

**End of the Meeting**

## POSTERS BY SESSIONS

### Ecology, Epidemiology and Evolution

N°	AUTHORS	TITLE
P1	<b>Mikaty, Guillain<sup>1</sup></b> ; Gaayeb, Lobna; Pérez-Ramírez, Elisa; Picard, Marie; Fernández Pinero, Jovita; Dente, Maria Grazia; Declich, Silvia; Robert, Vincent; Jiménez-Clavero, Miguel Ángel; Vicoir,	MediLabSecure: A virology and entomology laboratories network for a One Health approach of vector-borne and emerging viruses in the Mediterranean and Black Sea regions
P2	<b>Ceylan Polat</b> , Mustafa Sozen, Ferhat Matur, Ortac Cetintas, Muhsin Cogal, Faruk Colak, Mehmet Ali Oktem	Investigation of Hantavirus Existence in Mediterranean and Central Anatolia Regions of Turkey
P3	<b>Miriam A. Sas</b> , Ariel Vina-Rodriguez, Marc Mertens, Samuel Abah, Martin Eiden, Abdoukadi Souley, Martin H. Groschup	A one-step multiplex RT-qPCR for the universal detection of all CCHFV genotypes
P4	<b>Hussein Alburkat</b> , Teemu Smura, Barakat AM, Hasony HJ, Haider Al-Hello, Olli Vapalahti	The Presence and Seroprevalence of Lymphocytic choriomeningitis virus in Nasiriyah Governorate, Southern Iraq
P5	<b>Essia Belarbi</b> , Grit Schubert, Chantal Akoua-Koffi, Emmanuel Couacy-Hymann, Nicolas Meda, Jean-Jacques Muyembe-Tamfum, Jean-Marie Kayembe, Karen Keddy, Marietjie Venter, Tim Eckmanns, Matthias Borchert & Fabian Leendertz	The ANDEMIA project: African Network for Improved Diagnostics, Epidemiology and Management of Common Infectious Agents
P6	<b>Jenny C. Hesson<sup>a,b</sup></b> , Jan O. Lundströma, <sup>c</sup> Atalay Toka, Örjan Östmand, Åke Lundkvista, <sup>e</sup>	Temporal variation of antibodies against Sindbis virus in Swedish birds
P7	<b>J Lindahl</b> , B Bett, Å Lundkvist, U Magnusson and D Grace	Two examples of anthropogenic drivers of vector-borne diseases: Irrigation and urbanization
P8	<b>Jenny C. Hesson<sup>a,b</sup></b> , Marcus Blagrovea, Kenneth Sherlocka, Matthew Baylisa	Vector competence of northern European mosquitoes for West Nile and Usutu virus
P9	Ilkka Kivistö, Thomas Lilley, Eeva-Maria Kyheröinen, Anita Huovilainen, Olli Vapalahti & <b>Tarja Sironen</b>	Coronaviruses in Finnish bats
P10	Kerstin Fischer, <b>Cécile Troupin</b> , Juliet Jabaty, Alimou Camara, Sandra Diederich, Thomas Hoenen, Anne Balkema-Buschmann, Andreas Müller, Roland Suluku, Kristina M. Schmidt, Bashiru Koroma, Felixina Jonsyn-Ellis, Noël Tordo, Thomas C. Mettenleiter, Martin H. Groschup	Ebola Foresight: The Role of Livestock and Wildlife Species in the Biology of Filoviruses
P11	Mehmet Ali Oktem, <b>Ceylan Polat</b> , Ferhat Matur, Sercan Irmak, Ortac Cetintas, Muhsin Cogal, Mustafa Sozen	New Hantavirus Positivity in Different Microtus and Crocidura Species From Turkey
P12	<b>Anne J Jääskeläinen</b> , Hannimari Kallio-Kokko, Olli Vapalahti	Diagnosis of chikungunyavirus infections during years 2009-2017
P13	<b>Jiixin Ling</b> , Tanja Strand, Åke Lundkvist, Alexander Plyusnin, Tarja Sironen	Complete genome and phylogeny of Seoul hantavirus from brown rats ( <i>Rattus norvegicus</i> ) in the Netherlands
P14	<b>Kairi Värvi</b> , Jaanus Remm <sup>4</sup> , Julia Geller, Maria Vikentjeva, Åke Lundkvist, Irina Golovljova	Characterization of TBEV natural foci in Estonia
P15	<b>Jiří Černý</b> ; Jana Elsterová; Jana Müllerová; Johanka Hrnková; Libor Grubhoffer ; and Daniel Růžek	Cool viruses from cold climate areas – surveillance for animal viruses in polar areas
P16	<b>Lev Levanov</b> , Anu Jääskeläinen, Olli Vapalahti	Test based on subtype-specific $\mu$ -capture igm immunoassay can distinguish between infections of european and siberian subtypes of tick-borne encephalitis virus
P17	Sarah Lumley, Maria Del Mar Fernández de Marco, Luis, M. Hernández-Triana, Daniel . L. Horton, Roger Hewson Jolyon M. Medlock, Anthony R. Fooks and <b>Nicholas Johnson</b>	Ability of British Aedes detritus mosquitoes to transmit Rift Valley fever virus
P18	<b>Valentina Tagliapietra</b> , Niccolò Alfano, Daniele Arnoldi, Roberto Rosà, Chiara Rossi, Fausta Rosso, Heidi C. Hauffe & Annapaola Rizzoli	Emerging rodent-borne viral diseases in Italy: distribution and observed trends in the Province of Trento, Italy.
P19	<b>Aliona Špakovaa</b> , Indrė Kučinskaitė-Kodzėa, Rasa Petraitytė-Burneikienėa, Aurelija Žvirblienėa, Sabrina Schmidtb, Mathias Schlegelb, Erik Lattweinc , Bernd Koellnerd, Rainer G. Ulrichb	Establishment of monoclonal antibody-based competitive ELISA for the diagnostics of human hantavirus infections
P20	<b>Lauri Kareinen</b> , Jussi Hepojoki, Satu Hepojoki, Jonas Schmidt-Chanasit Klaus Hedman and Olli Vapalahti	Rapid serodiagnostic tool for Zika virus infection with low cross-reactivity

<b>P21</b>	<b>B. Albinsson</b> , Å. Lundkvist, S. Vene, J. Blomberg, B. Rönnberg	Serological profile of TBE-infected patients in a vaccinated community – can you tell the difference?
<b>P22</b>	<b>Giorgio Palù</b>	Virus and antibody dynamics in travelers with acute Zika virus infection
<b>P23</b>	<b>Ellen G. Murphy</b> , Nicola J. Williams, Malcolm Bennett, Julian Chantrey, Daisy Jennings and Lorraine M. McElhinney	Diversity of Rodent borne viral zoonoses in the United Kingdom
<b>P24</b>	<b>Essi M. Korhonen</b> , Moses Masika, Christine Lorna Culverwell, Anne Jääskeläinen, Ruut Uusitalo, Dufton Mwaengo, Omu Anzala, Olli Vapalahti, Eili Huhtamo	Mosquito-borne viruses in Southern and Coastal Kenya

### **Virus-Host and Interactions**

<b>P25</b>	Anne Gleize, Patrick Masson, Edouard De Castro, Ioannis Xenarios & <b>Philippe Le Mercier</b>	Clinical metagenomics; On the importance of databases.
<b>P26</b>	<b>Claire Dumont*</b> , François Enchéry, Quentin Bardin, Denis Gerlier and Branka Horvat	Nucleocytoplasmic trafficking of NiV W and its ability to regulate the NF-κB pathway
<b>P27</b>	<b>Yegor Korzyukov</b> , Rommel Iheozor-Ejiofor, Anja Kipar, Udo Hetzel, Olli Vapalahti, Luis Martinez-Sobrido, Juan Carlos de la Torre, Jussi Hepojoki	Generation of replication-defective, GFP-expressing, recombinant vesicular stomatitis virus pseudotypes expressing reptarenavirus glycoproteins
<b>P28</b>	<b>Jennifer Deborah Wuerth</b> , Matthias Habjan, Andreas Pichlmair, Giulio Superti-Furga & Friedemann Weber	Sandfly fever Sicilian virus NSs Inhibits type I Interferon Induction.
<b>P29</b>	<b>Julien Fouret</b> , Noémie Aurine, François Enchéry, Marie Guinier, Magali Roche, Marc Bailly-Bechet, Branka Horvat, Catherine Legras-Lachuer	Towards understanding of anti-viral response in bats: comparative positive selection analysis combined with functional network
<b>P30</b>	<b>François Enchéry</b> , Claire Dumont, Noémie Aurine, Quentin Bardin, Louis-Marie Bloyet, Cyrille Mathieu, Denis Gerlier, Chloé Journo and Branka Horvat	Modulation of the NF-κB signaling pathway by Nipah virus W nonstructural protein
<b>P31</b>	<b>Marie Moroso</b> , Pauline Verlhac, Olivier Ferraris, Christophe N. Peyrefitte, Hubert P. Endtz, Mathias Faure, Juliet E. Bryant, Glaucia Paranhos-Baccalà	Induction of an autophagy response in human hepatocytes infected by Crimean-Congo hemorrhagic fever virus
<b>P32</b>	<b>M. Alejandra Tortorici</b> , Alexandra C. Walls, Xiaoli Xiong, Brandon Frenz, Joost Snijder, Wentao Li, Craig Yoshioka, Andrew T. McGuire, Peter Rottier, Frank DiMaio, Berend-Jan Bosch, David Velesler & Félix A. Rey	Structural studies of coronavirus spike proteins.
<b>P33</b>	<b>Janne Tynell</b> & Jonas Klingström	Functional characterization of the hantavirus S segment untranslated region
<b>P34</b>	<b>Debbie Ferguson</b> , Jo Hall, Claire Ham, Adrian Jenkins, Elaine Giles, Sarah Kempster, Neil Berry, Neil Almond	Long Term Tissue Presence of Zika Virus in Old World and New World Non Human Primates.
<b>P35</b>	<b>Kirill Nemirov</b> , Alexander Plyusnin, Åke Lundkvist and Noël Tordo.	Development of minireplicon systems for dobrava and tula hantaviruses
<b>P36</b>	Ilona Rissanen, Antra Zeltina, Asim Ahmed, Kristopher Azarm, Patrick Hong, Shannon Beaty, Sham Nambulli, W. Paul Duprex, Benhur Lee, and <b>Thomas A. Bowden</b>	Structural determinants for the glycoprotein-mediated spillover of emerging henipaviruses
<b>P37</b>	Patrick Masson, Chantal Hulo, Edouard De Castro, Lydie Bougueleret, Ioannis Xenarios & <b>Philippe Le Mercier</b>	ViralZone: recent updates to the virus knowledge resource
<b>P38</b>	<b>A. Schoen</b> , F. Weber	Toward a characterization of the type I interferon system of bat cells
<b>P39</b>	<b>Rommel Iheozor-Ejiofor</b> , Lev Levanov, Jussi Hepojoki, Tomas Strandin, Åke Lundkvist, Alexander Plyusnin, and Olli Vapalahti	Vaccinia virus-free rescue of Fluorescent replication-defective Vesicular Stomatitis virus and pseudotyping with Puumala virus glycoprotein for use in neutralization tests
<b>P40</b>	<b>A. von Brunn</b> , M. A. Müller, B. von Brunn, J. Lei, C. Drosten, R. Hilgenfeld, Y. Ma-Lauer	SARS-CoV replication is down-regulated by p53 via interaction of the SARS-Unique Domain and PLpro with E3 ubiquitin ligase RCHY1



## Prevention and Control

<b>P41</b>	Sabrina Kali , Corinne Jallet, Yu Wu, Valérie Pons, Jean-Christophe Cintrat, Julien Barbier, Daniel Gillet, <b>Noël Tordo</b> .	Innovative antiviral strategies targeting different steps of rabies virus infection
<b>P42</b>	<b>Suvi Kuivanen</b> , Maxim M. Bepalov, Jatin Nandania, Aleksandr Ianevski, Vidya Velagapudi, Jef K. De Brabander, Denis E. Kainov, Olli Vapalahti	Obatoclax, saliphenylhalamide and gemcitabine inhibit Zika virus infection in vitro and differentially affect cellular signaling, transcription and metabolism
<b>P43</b>	<b>Paul Wichgers Schreur</b> , Sandra van de Water, Michiel Harmsen, Marga van Setten, Erick Bermúdez Méndez, Dubravka Drabek, Jeroen Kortekaas	Development of Rift Valley fever virus neutralizing nanobody complexes using bacterial superglues.
<b>P44</b>	Hadas Cohen-Dvashi, Ron Amon, Vered Padler-Karavani, and <b>Ron Diskin</b>	Targeting zoonotic Tfr1-tropic arenaviruses at their Achilles heel: structure-based rational design of universal immunotherapy
<b>P45</b>	<b>Guy Mong Ky Tran</b> & Adrien Caprani	Highly pathogenic Influenza virus A H5N1 Indonesia & Vietnam Hemagglutinin (HA1) contains an urokinase-plasminogen activator explaining the fibrinolysis.
<b>P46</b>	<b>Guy Mong Ky Tran</b> & Adrien Caprani	Avian Influenza virus A H5N1 polymerases PA, PB1 and hemagglutinin contain a platelet integrin ITGB3 inducing auto-immune anti-platelet antibodies and thrombocytopenia.
<b>P47</b>	<b>Guy Mong Ky Tran</b> & Adrien Caprani	Highly pathogenic Influenza virus A H5N1 (Vietnam, Hong Kong) polymerase PB2 contains a snake disintegrin homologous to platelet integrin ITGA2b (gpIIb), which blocks the formation of platelet clot.
<b>P48</b>	<b>Dario Akaberi</b> , Åke Lundkvist, Navaneethan Palanisamy and Johan Lennerstrand	In-silico identification of potential Zika Virus NS2B-NS3 protease inhibitors