



**Fifth annual meeting
of the Belgian Society for Virology
Thursday, December 7, 2017**

The Royal Academies for Science and the Arts
Hertogsstraat/Rue Ducale 1, Brussels

- 8h30 Welcome -Prof. Dr. Hans Nauwynck
General assembly of the Belgian Society for Virology
Election of new Belvir Board members
- 9h00-9h45 Keynote lecture 1 –Prof. Dr. F.J.M. (Frank) van Kuppeveld (Utrecht University): “Picornaviruses hijack intracellular membrane machinery to build replication organelles”**
- 9h45-11h30 Selected presentations (15 min each)
Chairs: Prof. Zeger Debyser and Prof. Peter Delpitte
- 9h45-10h00 Selected talk 1
Stress-induced unfolded protein response contributes to Zika virus-associated microcephaly
Ivan Gladwyn-Ng, Lluís Cordon Barris, Christian Alfano, Catherine Creppe, Thérèse Couderc, Giovanni Morelli, Nicolas Thelen, Michelle America, Bettina Bessières, Férehté Encha-Razavi, Maryse Bonnière, Ikuo K. Suzuki, Marie Flamand, Pierre Vanderhaeghen, Marc Thiry, Marc Lecuit and Laurent Nguyen
- 10h00-10h15 Selected talk 2
A gammaherpesvirus provides protection against allergic asthma by inducing the replacement of resident alveolar macrophages with regulatory monocytes
Bénédicte Machiels, Mickael Dourcy, Xue Xiao, Justine Javaux, Claire Mesnil, Catherine Sabatel, Daniel Desmecht, François Lallemand, Philippe Martinive, Hamida Hammad, Martin Williams, Benjamin Dewals, Alain Vanderplasschen, Bart N Lambrecht, Fabrice Bureau & Laurent Gillet
- 10h15-10h45 *Coffee break (Marmer Room)*
- 10h45-11h00 Selected talk 3
Single virus imaging of HIV-1 entry with fluorescently labeled capsid
Irena Zurnic, Lieve Dirix, Veerle Lemmens, Susana Rocha, Johan Hofkens, Frauke Christ, Jelle Hendrix and Zeger Debyser
- 11h00-11h15 Selected talk 4
Epigenetic regulation of gga-miR-126 during lymphoproliferative disease in chicken
Gennart I, Parissi L, Pejakovic S, Rauw F and Muylkens

11h15-11h30 Selected talk 5
Role of chemokine CCL20 in angiogenesis in liver cancer caused by hepatitis C virus
Mohammed Benkheil, Sam Noppen, Matthias Van Haele, Tania Roskmas, Johan Neyts, Sandra Liekens

11h30-12h30 Selected short presentations (5 minutes each/without discussion)
Chair: Prof. Laurent Gillet

1. Full protection from fatal Zika virus infection by a novel chimeric live-attenuated Zika virus vaccine

Dieudonné Buh Kum, Niraj Mishra, Robbert Boudewijns, Michael A. Schmid, Suzanne Kaptein, Johan Neyts and Kai Dallmeier

2. Proteomic and functional analyses of the virion transmembrane proteome of cyprinid herpesvirus 3

Vancsok C., Peñaranda M.M.D., Raj V.S., Leroy B., Jazowiecka-Rakus J., Boutier M., Gao Y., Wilkie G.S., Suárez N.M., Wattiez R., Gillet L., Davison A.J., and Vanderplasschen A.F.C.

3. Contribution of lncRNAs in Establishment of HIV Latency in Central Memory CD4 T Cells

Wim Trypsteen, Cory White, Alberto Bosque, Celsa Spina, Steve Lefever, Pieter Mestdagh, Linos Vandekerckhove, Nadia Beliakova-Bethell

4. Towards the development of an effective vaccine against malignant catarrhal fever

Myster F., Javaux J., Van Campe W., Roels S., Mostin L., Kerkhofs P., Vanderplasschen A., Dewals B.G.

5. Interrogation of the CHIKV nsP-host interactome in human and mosquito cells.

Koen Bartholomeeusen, Chris Hoffmann, Terence Agombin, Lien De Caluwe, Sandra Coppens, Simon Daled, Maarten Dhaenens, Dieter Deforce, Kevin Ariën

6. Zika virus replication in testicles of mice and impact of viral replication inhibitors

Jacobs S., Kaptein S.J.F., Delang L., Neyts J.

7. Nanopore sequencing as a revolutionizing diagnostic tool for viral enteric disease complexes in pig health management

Sebastiaan Theuns, Quinten Bernaert, Bert Vanmechelen, Ward Deboutte, Piet Maes, Jelle Matthijnsens, Hans J. Nauwynck

8. Theiler's murine encephalomyelitis virus (TMEV) induces accumulation of autophagosomes by impairing autophagic flux

Eric C. Freundt, Lars K. Benner, Jaimie L. Miser, Maximilian P. Ganz

9. Viral suppressive capacity: assessing CD8 T cell responses in HIV-infected individuals under antiretroviral therapy

P.Pannus, P. Adams, E. Willems, Iserentant G., L. Heyndrickx, M. Van Frankenhuijsen, E. Florence, M. Kiselinova, S. Rutsaert, K. Vervisch, W.

Despiegelaere, C. Devaux, L. Vandekerckhove, G. Vanham

10. The role of macrophages in the enterovirus A71 (EV71) physiopathogenesis in mice

Carmen Mirabelli, Liang Sun, Aloys Tijmsa, Hendrik Jan Thibaut, Johan Neyts

11. Beneficial impact of early treatment on restriction factor expression profile

Clarissa Van Hecke, Magdalena Sips, Eva Malatinkova, Ward De Spiegelaere, Karen Vervisch, Chris Verhofstede, Margaret Johnson, Sabine Kinloch-de Loes, Wim Trypsteen, Linos Vandekerckhove

12. Mechanism of Porcine Circovirus Type 2 uptake in porcine peripheral blood monocytic cells

Ruifang Wei, Bo Yang, Wendy Baetens, Abubakar Garba, Jiexiong Xie, Hans J. Nauwynck

12h30-13h30 *Sandwich lunch*

13h30-14h15 Keynote lecture 2 –Prof. Dr. Xavier Saelens (VIB-UGent Center for Medical Biotechnology): “Prevention and treatment options for human Respiratory Syncytial Virus: very small things considered”

14h15-16h00 Selected presentations (15 min each)

Chairs: Prof. Guido Vanham and Prof. Alain Vanderplasschen

14h15-14h30 Selected talk 6

Macavirus latency-associated protein evades immune detection through regulation of protein synthesis *in cis* depending upon its glycin/glutamate-rich domain

Océane Sorel, Ting Chen, Françoise Myster, Justine Javaux, Alain Vanderplasschen, Benjamin G. Dewals

14h30-14h45 Selected talk 7

Access to a main alphaherpesvirus receptor, located basolaterally in the respiratory epithelium, is masked by intercellular junctions and revealed by pollen proteases

Jolien Van Cleemput, Katrien C.K. Poelaert, Kathlyn Laval, Roger Maes, Gisela S. Hussey, Wim Van den Broeck, Hans J. Nauwynck

14h45-15h15 *Coffee break*

15h15-15h30 Selected talk 8

Myxovirus resistance 1 (Mx1) in the myeloid cell compartment contributes to protection against Thogoto virus infection

J. Spitaels, L. Van Hoecke, K. Roose, X. Saelens

15h30-15h45 Selected talk 9

Role of PDGFR β and associated gangliosides in influenza virus entry

Pieter Vrijens, Els Vanstreels, Sam Noppen, Roberto Ronca, Evelien Vanderlinden, Annelies Stevaert, Manon Laporte, Marco Presta, Sandra Liekens, Lieve Naesens

15h45-16h00 Selected talk 10

Understanding flavivirus pathogenesis: host factor hijacking by non-coding viral RNA

Sander Jansen, Johan Neyts and Kai Dallmeier

16h00-17h00 Selected short presentations (5 minutes each/without discussion)

Chair: Prof. Thomas Michiels

1. Removal of the N-glycosylation sequon at position N116 located at p27 of the respiratory syncytial virus fusion protein elicits enhanced antibody responses after DNA immunization

Annelies Leemans, Marlies Boeren, Winke Van der Gucht, Isabel Pintelon, Kenny Roose, Bert Schepens, Xavier Saelens, Dalan Bailey, Guy Caljon, Louis Maes, Paul Cos, Peter Delpitte

2. A Gammaherpesvirus Infection Protects from Pneumovirus-Induced Immunopathologies

Mickael Dourcy, Gautier Gilliaux, Justine Javaux, Daniel Desmecht, Alain Vanderplasschen, Benjamin Dewals, Bénédicte Machiels & Laurent Gillet

3. Protection by neuraminidase-specific antibodies against influenza A

E.R. Job, M. Schotsaert, L.I. Ibañez, A. Smet, T. Ysenbaert, K. Roose, M. Dai, C.A.M. de Haan, H. Kleanthous, T. U. Vogel, X. Saelens

4. Conserved fever pathways across vertebrates: a herpesvirus delays fish behavioral fever through expression of a decoy Tnf-alpha receptor

Krzysztof R., Ronsmans M., Forlenza M., Boutier M., Piazzon M. C., Jazowiecka-Rakus J., Gatherer D., Athanasiadis A., Farnir F., Davison J. A., Boudinot P., Michiels T., Wiegertjes G. F., Vanderplasschen A.

5. Cyprinid herpesvirus 3 invades the central nervous system of carp using the olfactory system

Fourrier M., Nguyen L., Boutier M. and Vanderplasschen A.

6. Helminth-induced IL-4 expands virtual memory CD8⁺ T cells for early control of gammaherpesvirus infection

Marion Rolot[¶], Annette M. Dougall[¶], Alisha Chetty, Ting Chen, Bénédicte Machiels, Murray Selkirk, Xue Xiao, Cornelis Hokke, Justine Javaux, Olivier Denis, Frank Brombacher, Alain Vanderplasschen, Laurent Gillet, William G. Horsnell, Benjamin G. Dewals

7. Limited cross-neutralization between the mumps vaccine and a recent outbreak strain in sera from different age cohorts of the Belgian population

Tessa Vermeire, Aurélie Francart, Assia Hamouda, Amber Litzroth, Veronik Hutse, Lennart Martens, Elien Vandermarliere, Steven Van Gucht

8. Characterization of a murine model of replicative adenovirus based oral vaccination

Emeline Goffin, Justine Javaux, Michel Bisteau, Eric Destexhe, Laurent Gillet

9. A systematic siRNA study of the hemagglutinin cleavage profiles of influenza A and B virus with relevance for the design of airway protease inhibitors

Manon Laporte, Mohammed Benkheil, Lieve Naesens

10. Identification of an essential virulence gene of cyprinid herpesvirus 3
Boutier M., Gao Y., Vancsok C., Suarez M. N., Davison A., Vanderplasschen A.

11. New strategies for intradermal delivery of the yellow fever vaccine launched from a plasmid
Sapna Sharma, Michael A. Schmid, Niraj Mishra, Johan Neyts, and Kai Dallmeier

12. Impact of M2e-specific monoclonal antibodies on influenza A virus spread *in vitro* and in a mouse transmission model
Annasaheb Kolpe, Maria Arista Romero, Liang Ye, Bert Schepens, Lorenzo Albertazzi, Peter Stäheli, Xavier Saelens

17h00 Reception