

Eighth annual meeting of the Belgian Society for Virology

Friday December 18, 2020
Online Symposium

8h45: welcome: **Prof. Dr. Herman Favoreel**

General Assembly of BELVIR -VZW/ASBL, with online approval of the annual accounts.

9h00-10h00: keynote lecture 1 –Prof. Dr. Ben Berkhout (University of Amsterdam, The Netherlands)

"CRISPR-Cas approaches against HIV and SARS-CoV-2"

10h00-11h30: selected presentations (15 min each)

10h00-10h15: selected talk 1

Role of DNA methylation and CpG sites in the viral telomerase RNA promoter during Gallid herpesvirus 2 pathogenesis

Srdan Pejaković, André Claude Mbouombouo Mfossa, Laëtitia Wiggers, Ahmed Kheimar, Damien Coupeau, Benedikt B. Kaufer, Benoît Muylkens

10h15-10h30: selected talk 2

A single-dose live-attenuated YF17D-vectored SARS-CoV-2 vaccine candidate

Lorena Sanchez-Felipe, Thomas Vercruyssen, Sapna Sharma, Ji Ma, Viktor Lemmens, Dominique Van Looveren, Mahadesh Prasad Arkalagud Javarappa, Robbert Boudewijns, Bert Malengier-Devlies, Laurens Liesenborghs, Suzanne F. Kaptein, Carolien De Keyzer, Lindsey Bervoets, Sarah Debaveye, Madina Rasulova, Laura Seldeslachts, Li-Hsin Li, Sander Jansen, Michael Bright Yakass, Babs E. Verstrepen, Kinga P. Böszörményi, Gwendoline Kiemenyi-Kayere, Nikki van Driel, Osbourne Quaye, Xin Zhang, Sebastiaan ter Horst, Niraj Mishra, Ward Deboutte, Jelle Matthijnsens, Lotte Coelmont, Corinne Vandermeulen, Elisabeth Heylen, Valentijn Vergote, Dominique Schols, Zhongde Wang, Willy Bogers, Thijs Kuiken, Ernst Verschoor, Christopher Cawthorne, Koen Van Laere, Ghislain Opdenakker, Greetje Vande Velde, Birgit Weynand, Dirk E. Teuwen, Patrick Matthys, Johan Neyts, Hendrik Jan Thibaut, Kai Dallmeier

10h30-11h00: *coffee break*

11h00-11h15: selected talk 3

Persistence of antibody responses to SARS-CoV-2: findings from a nation-wide prospective longitudinal cohort study among healthcare workers in Belgian hospitals

Kevin K. Ariën, Laure Mortgat, Leo Heyndrickx, Natalie Fischer, Johan Michiels, Veronik Hutse, Sandra Coppens, Anne Hauner, Cyril Barbezange, Isabelle Thomas, Bea Vuylsteke, Steven Van Gucht, Isabelle Desombere, Els Duysburgh

11h15-11h30: selected talk 4

Alphaherpesvirus infection leads to degradation of m6A containing transcripts and triggers modification and inhibition of the m6A methylation complex.

Robert J.J. Jansens, Anthony O. Olarerin-George, Aashiq Mirza, Samie R. Jaffrey, Herman W. Favoreel

11h30-12h30: pitch talks (5 minutes each/without discussion)

1. Identification of host factors essential for SARS-CoV-2 and common cold coronavirus replication via genome-wide CRISPR screening

Jim Baggen, Leentje Persoons, Sander Jansen, Maarten Jacquemyn, Els Vanstreels, Dirk Jochmans, Johan Neyts, Kai Dallmeier, Piet Maes, Dirk Daelemans

2. Infection of European eel by Anguillid herpesvirus 1: social interactions of yellow eels contribute to viral transmission through biting

Delrez Natacha, Haiyan Z., Nivelles O., Denoël M., Ovidio M., Lieffrig F., Suarez N., Davison A. and Vanderplasschen A.

3. Human norovirus replicates in the intestine of zebrafish larvae and increases intestinal motility

Arno Cuvry, Jasper Rymenants, Dufie Strubbe, Peter de Witte, Johan Neyts, Joana Rocha-Pereira

4. Temperature preference and activation of SARS-CoV-2 spike variants, and analogies to other human coronaviruses

Laporte Manon, Stevaert A., Raeymaekers V., Van Berwaer R., Pöhlmann S. & Naesens L.

5. Cardiovirus L proteins-mediated FG-nucleoporins phosphorylation

Belén Lizcano Perret, Fanny Wavreil, Didier Vertommen, Laurent Gatto and Thomas Michiels

6. A non-canonical mode of trans-synaptic measles virus transmission from neurons to astrocytes

Katrien C.K. Poelaert, Riley M. Williams, Christine M. Matullo, and Glenn F. Rall

7. Betulonic Acid Derivatives Interfering with Coronavirus Replication via the Nsp15 Endoribonuclease

Stevaert, Annelies, Krasniqi, B., Van Loy, B., Nguyen, T.T., Vandeput, J., Jochmans, D, Thomas, J., Voet, A., Dehaen, W. & Naesens, L.

8. Identification of attachment factor candidates involved in Chikungunya virus entry in mosquito cells

Lien De Caluwé, Sandra Coppens, Katleen Vereecken, Simon Daled, Maarten Dhaenens, Dieter Deforce, Kevin Ariën, Koen Bartholomeeusen

9. Efficient control of Japanese encephalitis virus in the central nervous system of infected pigs occurs in the absence of a pronounced inflammatory immune response

Redant, Valérie, Favoreel H.W., Dallmeier, K., Van Campe, W. De Regge, N.

10. Study of the importance of tegument proteins, and in particular of pORF63, in the biology of gammaherpesvirus infection.

Gillard Lucie, Maquet C., Myster F., Lemmens I., Tavernier J., Machiels B. and Gillet L.

11. The N-terminal region of Cyprinid herpesvirus 3 ORF104 inhibits the formation of stress granules induced by various stress stimuli

Yunlong Hu, Mamadou Diallo, Alain Vanderplasschen

12. Evaluating SARS-CoV-2 spike and nucleocapsid proteins as targets for IgG, IgA and IgM antibody detection in recent and old COVID-19 cases using a Luminex bead-based assay

Joachim Mariën, Ann Ceulemans, Johan Michiels, Leo Heyndrickx, Kevin K. Ariën

12h30-13h30: *lunch*

13h30-14h15: keynote lecture 2 – Prof. Dr. Steven Van Gucht (Sciensano, Belgium)

"COVID-19 pandemic: a tale of a bat virus from China that changed Belgian history"

14h15-16h00: selected presentations (15 min each)

14h15-14h30: selected talk 5

Tackling diagnostic challenges during the first wave of COVID-19.

De Clercq J, Malfait T, Malfait S, Boelens J, Coorevits L, Padalko E, Vandendriessche S, Verhasselt B, Morbée L, Bauters F, Hertegonne K, Stevens D, Vande Weygaerde Y, Vermaelen K, Van Biesen W, Vanommeslaeghe F, Verbeke F, Piers R, Van Den Noortgate N, Desmet T, Vermassen F, Vandekerckhove L, Van Braeckel E

14h30-14h45: selected talk 6

Mx interacting proteins and how to find them

George D. Moschonas, Delphine De Sutter, Xavier Saelens, Sven Eyckerman

14h45-15h00: selected talk 7

Pseudorabies virus (PRV) light particles inhibit PRV- triggered interferon production by primary porcine plasmacytoid dendritic cells

Jonas L. Delva, Cliff Van Waesberghe and Herman W. Favoreel

15h00-15h30: *coffee break*

15h30-15h45: selected talk 8

Branched DNA (bdNA)-FISH imaging corroborates LEDGIN-induced block-and-lock of HIV-1 latency

Julie Janssens, Flore De Wit, Nagma Parveen and Zeger Debyser

15h45-16h00: selected talk 9

Ly6C^{hi} monocytes are key immunoregulators of gammaherpesvirus infection

Maquet C., Loos P., Javaux J., Mack M., Gillet L. and Machiels B.

16h00-17h00: 12 pitch talks (5 minutes each/without discussion)

Chair:

13. Monitoring of human coronaviruses in Belgian ambulatories and hospitals in

2015-20: a surveillance study

Fischer Natalie, Dauby N., Bossuyt N., Reynders M., Gérard M., Lacor P., Daelemans S., Lissoir B., Holemans X., Magerman K., Jouck D., Bourgeois M., Delaere B., Quoilin S., Van Gucht S., Thomas I., Barbezange C., Subissi L.

14. Genomic analysis of several new Anguillid-herpesvirus-1 isolates reveals the first insights into the evolution of this virus and suggests that known *Cyprinivirus* species have much lower core gene diversity compared to *Herpesviridae* species Donohoe Owen, Delrez N., Zhang H., Davison A., and Vanderplasschen A.

15. Risk Factors Associated with Severe RSV Infection in Infants: what is the Role of Viral Coinfections?

Kim Stobbelaar, Thomas C. Mangodt, Winke Van der Gucht, Lise Delhaise, Jasmine Andries, Valérie Gille, Cyril Barbezange, Annemieke Smet, Benedicte Y. De Winter, Jozef J. De Dooy, Tom Schepens, Els L.I.M. Duval, Philippe G. Jorens, Stijn Verhulst, Peter L. Delputte.

16. Detection of mosquito microbiota in saliva: role in arbovirus infection?

Lanjiao Wang, Lana Langendries, Joyce van Bree, Laure Remue, Leen Delang

17. An oncolytic herpesvirus to counteract Glioblastoma Stem Cells function

D'Arrigo Paolo, Sánchez-Gil, Judit, Lebrun Marielle, Rogister Bernard & Sadzot-Delvaux Catherine.

18. STAT2 signaling restricts viral dissemination but drives severe pneumonia in SARS-CoV-2 infected hamsters

Robbert Boudewijns, H. J. Thibaut, S. J. F. Kaptein, R. Li, V. Vergote, L. Seldeslachts, J. Van Weyenbergh, C. De Keyzer, L. Bervoets, S. Sharma, L. Liesenborghs, J. Ma, S. Jansen, D. Van Looveren, T. Vercruyse, X. Wang, D. Jochmans, E. Martens, K. Roose, D. De Vlioger, B. Schepens, T. Van Buyten, S. Jacobs, Y. Liu, J. Martí-Carreras, B. Vanmechelen, T. Wawina-Bokalanga, L. Delang, J. Rocha-Pereira, L. Coelmont, W. Chiu, P. Leyssen, E. Heylen, D. Schols, L. Wang, L. Close, J. Matthijnsens, M. Van Ranst, V. Compernelle, G. Schramm, K. Van Laere, X. Saelens, N. Callewaert, G. Opdenakker, P. Maes, B. Weynand, C. Cawthorne, G. Vande Velde, Z. Wang, J. Neyts, K. Dallmeier

19. FECV Escapes from Local Immunity in the Intestinal Tract of Persistent Shedders

Stroobants, Veerle J.E., Nauwynck, H.J.

20. Functional upregulation of the APOBEC3B cytidine deaminase by human adenoviruses

Noémie Lejeune, Florian Poulain, Kévin Willemart, Nicolas A. Gillet

21. Novel Strategies to develop flavivirus inhibitors by targeting the viral RNA promoters

Li-Hsin Li, Kai Dallmeier, and Johan Neyts

22. Setup of a SARS-CoV-2 Antiviral Screening Pipeline

Winston Chiu, Steven De Jonghe, Laura Vangeel, Birgit Voeten, Caroline Collard, Caroline Foo, Dagmar Buyst, Jana Van Dycke, Jasper Rymenants, Joost Schepers, Kayvan Abassi, Kim, Donckers, Niels Cremers, Rana Abdelnabi, Thibault Francken, Thuc Do, Tina Van Buyten, Xin Zhang, Xinyu Wang, Dorothée Bardiot, Hugo Klaassen,

Matthias Versele, Arnaud Marchand, Patrick Chaltin, Pieter Leyssen, Johan Neyts, Dirk Jochmans

23. Epigenetic silencing of a host microRNA plays a role in the proliferation of a lymphoblastoid cell line infected with Marek's Disease Virus

Gennart Isabelle, Petit Astrid, Wiggers Laetitia, Srdan Pejakovic, Laurent Sylvie, Coupeau Damien & Benoît Muylkens

24. Investigation of the role A10 gene in latently-infected CD8 T lymphocytes during bovine malignant catarrhal fever

Gong Meijiao, Myster Françoise, Javaux Justine, Van Campe Willem, Roels Stefan, Mostin L., Kerkhofs P., Vanderplasschen A., Dewals B.G.

17h00: closing of the meeting.

For the medical doctors and pharmacist-biologists participating to the meeting:

Accreditation of this meeting has been approved by RIZIV-INAMI for Clinical Biology (6 credits).

Please contact Nathalie.Vanderheijden@UGent.be before the meeting to obtain the mandatory registration document and information about the procedure to be followed.