



KNVM Virology News

Dear fellow virologist,

Next year, the Dutch Annual Virology Symposium (DAVS) is scheduled for *Thursday 26 March* in the OBA in Amsterdam. Nominations for the Beijerinck premium for talented young postdocs in virology are now [open](#). The premium will be awarded during the DAVS2020.

On Tuesday 26 November 2019 there will be a Mini Symposium on “Zoonotic disease emergence: lessons learned and future directions” at the Erasmus MC in Rotterdam. With talks by Peter Benenbarak, Bart Haagmans, Ron Fouchier, Bernard Faye, and Arjan Stegeman. You can register [here](#).

This edition of the newsletter contains short interviews with Corina Brussaard (professor of viral ecology at the University of Amsterdam) and Bert Niesters (professor of clinical virology at the UMC Groningen).

The board of the Virology division of the KNVM

(Emmanuel Wiertz, Jolanda Smit, Jeroen Kortekaas, Hélène Verheije, Bart Haagmans, Katja Wolthers, and Puck van Kasteren)

Upcoming events

Nov 18, 2019

Thesis defense Gabriela Tapia Calle ([more info](#))
Promotores: Huckriede/Daemen | Groningen University

Nov 26, 2019

Thesis defense Elmoubasher Abu Baker Abd Farag
Erasmus University Rotterdam

Nov 27, 2019

Thesis defense Irina Albulescu ([more info](#))
Promotor: Snijder | Leiden University

Dec 18, 2019

Thesis defense Uta Priegnitz
Wageningen University and Research

Jan 15, 2020

Thesis defense Bob Boogaard
Wageningen University and Research

Mar 31-Apr 1, 2020

[KNVM/NVMM meeting](#) | Papendal

May 10-14, 2020

[Nidovirus meeting](#) | Egmond aan Zee



Virology Double-Interview

Corina Brussaard
Professor

IBED and Dept. of Marine
Microbiology and Biogeochemistry
UvA and NIOZ

What is your main research focus?

My main research focus is marine viral ecology. We investigate the role of viruses in microbial host population dynamics and the impact this has on ecosystem functioning. Furthermore, we study the influence of global climate change on virus-host interactions and virus loss.

What is your favourite virus?

I do not have a specific preference, as many viruses have something astonishing (in form and function). I have a soft spot for the 11-segmented dsRNA virus infecting a unicellular algal species, because at the time (start of my scientific career) I tried to clean up a dsDNA algal virus isolate from contaminating bacteria and their phage but kept having these almost roundish viruses in the sample. Moving my efforts to isolate and identify those particles paid off nicely and with excitement I saw band after band appear on the PFGE gel. In general, I really do appreciate viruses that are easy to work with, i.e. high percentage infective progeny and slow loss of infectivity.

Why is your research important?

Over 70% of the living biomass in the seas and oceans is microbial. Consequently, viral pathogens infecting these microorganisms are numerically dominant (10^{31} in the global oceans). Their identity and function, however, is still largely understudied. Completely new viruses are isolated on a regular basis, including giant viruses and viroplasmids. Moreover, the lytic viruses have been shown to bring down (harmful) algal blooms or keep functionally relevant algal groups under control at intermediate abundances. Nevertheless, specific natural viral lysis rates are largely missing and the underlying mechanisms of variation poorly known. My research fills these gaps in knowledge and shows for example that virus-induced mortality of microorganisms is equally important to the traditional loss factor, i.e. predation. The resultant is that a significant portion of the organic matter and energy is not transferred to higher trophic levels (by predation) but instead shunted towards a regenerative mode (microbial food web). Potential climate change-induced shifts to viral lysis-dominated ecosystems may then result in a reduced ecosystem production.



Bert Niesters
Professor

Dept. of Medical Microbiology
Division of Clinical Virology
UMC Groningen

What is your main research focus?

One research line deals with enterovirus D68 and the relation with Acute Flaccid Myelitis. This is really a devastating polio-like disease and we are collaborating with centers both in Europe and the USA. Another focus deals with viruses, like herpesviruses and anelloviruses (TTV), and transplantation. Another focus is to optimize the molecular workflow in the laboratory by developing a MiddleWare solution, called FlowG(roningen).

Who inspires you in your scientific career?

I always wanted to work in a laboratory and in virology, but more closely to the day-to-day business. In the early days of my career, I have been more involved in basic research but felt that there is so much to do closer to the patient and daily practice. The involvement with quality control aspects, like QCMD or the Council of Accreditation, and the development and implementation of FlowG, are examples which clearly show that there is so much to do to support and show the importance of good diagnostic virology. There are a number of people who have had an impact on my career, like prof. Marian Horzinek, prof. Ben van der Zeijst, prof. Rob de Man, prof. Jim Strauss and prof. Ab Osterhaus. But in general, working with many colleagues in virology and the related disciplines has always been enjoyable.

Why is your research important?

There are viruses that still have to be discovered, like we have seen in the last 30 years. Viruses like MERS, SARS, HCV, hMPV and variants of known viruses like H7N7 are examples. Viruses are always around and they can be life-threatening. Trying to understand the impact of these viruses, but also the viruses we take for granted, is a challenge. The patient is the most important stakeholder in this field.

How do you engage with the lay public and/or patients?

I do not have direct patient contact, but there are occasions in which we provide interviews for newspapers or television. Making international collaborations successful always provides opportunities for interviews. Also providing information through social media is an option I use, like Twitter and LinkedIn.

Recent publications

Göertz GP, van Bree JWM, Hiralal A, Fernhout BM, Steffens C, Boeren S, Visser TM, Vogels CBF, Abbo SR, Fros JJ, Koenraadt CJM, van Oers MM, Pijlman GP. 2019. Subgenomic flavivirus RNA binds the mosquito DEAD/H-box helicase ME31B and determines Zika virus transmission by *Aedes aegypti*. *Proc Natl Acad Sci U S A*. 116(38):19136-19144. doi: [10.1073/pnas.1905617116](#).

Petrova VN, Sawatsky B, Han AX, Laksono BM, Walz L, Parker E, Pieper K, Anderson CA, de Vries RD, Lanzavecchia A, Kellam P, von Messling V, de Swart RL, Russell CA. 2019. Incomplete genetic reconstitution of B cell pools contributes to prolonged immunosuppression after measles. *Sci Immunol*. 4(41). pii: eaay6125. doi: [10.1126/sciimmunol.aay6125](#).

Cheng K, Frenken T, Brussaard CPD, Van de Waal DB. 2019. Cyanophage Propagation in the Freshwater Cyanobacterium *Phormidium* Is Constrained by Phosphorus Limitation and Enhanced by Elevated pCO₂. *Front Microbiol*. 10:617. doi: [10.3389/fmicb.2019.00617](#).

