



KNVM Virology News

Dear fellow virologist,

We are happy to announce that out of the many excellent applications we have received, two new virology board members have been selected: **Ronald van Rij** (RadboudUMC) and **Martijn Langereis** (MSD Animal Health). We believe their expertise and affiliations will be a valuable and complementary addition to the division board and we look forward to working together towards our goals of promoting virology research in the Netherlands and stimulating interaction between virologists.

The board of the Virology division of the KNVM

(Emmanuel Wiertz, Jolanda Smit, Jeroen Kortekaas, Ronald van Rij, Bart Haagmans, Katja Wolthers, Martijn Langereis, and Puck van Kasteren)

Virology events

November 11, 2020
PhD defense: Linda Visser, UU ([info](#))

November 18, 2020
PhD defense: Sara van den Berg, UU ([info](#))

January 13, 2021
PhD defense: Lisa van Sluijs, WUR ([info](#))

June 6-10, 2021
[Nidomeeting](#)
Egmond aan Zee



Virology Double-Interview

Yasmine Abouleila
Postdoctoral Researcher
Leiden Academic Center
for Drug Research (LACDR)
Leiden University

What is your main research focus?

My research at Dr. Alireza Mashaghi lab at Leiden University is mainly focused on developing an in vitro human model for viral hemorrhagic fever caused by viruses such as Ebola virus. To do this, I use "organ-on-a-chip" technology to accurately model the disease's pathophysiology. This will empower the efforts for early disease detection and the development of effective and targeted treatment/vaccine. In parallel, we are developing novel methodology to further study the effects of these viruses in human tissues, at an unprecedented resolution down to single cells.

What is your favourite virus?

Our team is interested in viruses that perturb tissue mechanics. In particular, we study Ebola, Lassa and Dengue viruses, as they target junctional mechanics of endothelial cells. SARS-CoV-2 also affects junctional mechanics, and we hope that our studies lead to new knowledge and therapeutic strategies that can be generically applied and adapted to the treatment of various viruses.

Of which accomplishment are you most proud?

We succeeded in developing the first organ on chip model for Ebola and we [published our results](#) in iScience in early 2020. The chip can model the "bleeding syndrome" that is the hallmark of the Ebola virus disease. We also tested two new drug candidates (FX06 and melatonin) for the treatment of Ebola patients on our organ on chip model and the results were very promising.



Werner Ouwendijk
Scientist
Department of Viroscience
Erasmus MC

What is your main research focus?

My research is focused on the pathogenesis of the human herpesviruses herpes simplex virus (HSV) and varicella-zoster virus (VZV). Specifically, I investigate how HSV and VZV establish a lifelong latent infection in sensory neurons and how reactivation of latent virus – leading to recurrent disease later in life – is regulated. Additionally, I study the possible role of these neurotropic herpesviruses in the pathogenesis of Alzheimer's disease.

Why is your research important?

Most adults worldwide are latently infected with HSV and VZV, posing the risk of virus reactivation and complications thereof (ocular disease, encephalitis, chronic pain and possibly Alzheimer's disease). Current antiviral therapies and, in case of VZV, vaccines are not sufficient to prevent complications of HSV and VZV infection. Better insight into the mechanisms underlying viral latency and reactivation is needed to guide development of more effective therapies that target latent virus or prevent virus reactivation.

Of which accomplishment are you most proud?

Defining VZV latency. Although the discovery that latent VZV resides in sensory neurons was made over 35 years ago, the characteristics of viral latency remained poorly understood. My research first refuted long held dogmas about VZV latency and subsequently unraveled the VZV latency program by discovering the [VZV latency-associated transcript](#) (VLT). This finding facilitated subsequent mechanistic studies investigating the transition from latency to reactivation.

Recent publications

Edridge AWD, Kaczorowska J, Hoste ACR, Bakker M, Klein M, Loens K, Jebbink MF, Matser A, Kinsella CM, Rueda P, Ieven M, Goossens H, Prins M, Sastre P, Deijs M, van der Hoek L. 2020. Seasonal coronavirus protective immunity is short-lasting. Nat Med. doi: [10.1038/s41591-020-1083-1](#).

Giansanti P, Strating JRP, Defourny KAY, Cesonyte I, Bottino AMS, Post H, Viktorova EG, Ho VQT, Langereis MA, Belov GA, Nolte-'t Hoen ENM, Heck AJR, van Kuppeveld FJM. 2020. Dynamic remodelling of the human host cell proteome and phosphoproteome upon enterovirus infection. Nat Commun. doi: [10.1038/s41467-020-18168-3](#).

Yu X, Lakerveld AJ, Imholz S, Hendriks M, Ten Brink SCA, Mulder HL, de Haan K, Schepp RM, Luytjes W, de Jong MD, van Beek J, van Kasteren PB. 2020. Antibody and Local Cytokine Response to Respiratory Syncytial Virus Infection in Community-Dwelling Older Adults. mSphere. doi: [10.1128/mSphere.00577-20](#).

