



KNVM Virology News

Dear fellow virologist,

Hopefully you have all enjoyed your summer breaks and are ready to return to your exciting virology studies.

This year, two Dutch virologists have been awarded prestigious ERC grants. First, Tessa Quax received an **ERC Starting Grant** for her research on archaeal virology ([ARCVIR](#)). More recently, Frank van Kuppeveld received an **ERC Advanced Grant** for his research on the replication of enteroviruses ([VIRLUMINOUS](#)). Interestingly, both Tessa and Frank have been awarded the **KNAW Beijerinck Premium**, in 2022 and 2004 respectively, for their outstanding work as young virologists.

The board of the Virology division of the KNVM (Emmanuel Wiertz, Jolanda Smit, Ronald van Rij, Bart Haagmans, Katja Wolthers, Martijn Langereis, and Puck van Kasteren)

Virology events

Sep 15, 2022

Thesis defense (Utrecht)
Josien Lanfermeijer

Sep 20, 2022

Thesis defense (Utrecht)
Koen van de Ven

Oct 7, 2022

NAVE workshop

May 4-7, 2023

ECV, Poland



Virology Double-Interview

Tessa Quax

Associate professor
Science and Engineering
University of Groningen

Frank van Kuppeveld

Professor
Veterinary Medicine
Utrecht University



What is your main research focus?

With my research group I study viruses of archaea. Archaea are ubiquitous microorganisms that form a separate domain of life. I am specifically interested in the interaction of viruses with the archaeal cell envelope, and thus the focus of my team is on entry and egress mechanisms of these viruses.

What is your favourite virus?

A hard choice, but I think that I go for Sulfolobus Rod-Shaped Virus 2 (SIRV2), which infects a thermophilic archaeon growing at 80 °C. I worked with this virus during my PhD project, and I am just amazed by how much the community learned by using this virus as a model: a novel lysis mechanism relying on pyramidal egress structures, that fact that archaeal viruses can carry their DNA genome in A-form, identification of one of the first archaeal viral receptors, and this virus also played an important role in studying the CRISPR/cas anti-viral defence system.

Why is your research important?

Microbial viruses are extremely abundant and in nature many microorganisms are infected. Still, we know very little of the molecular infection mechanisms of archaeal viruses. The study of these viruses is important to trace the evolutionary origin of viruses in general. In addition, the unconventional infection strategies of these viruses can be an inspiration for biotechnological applications.

What is your main research focus?

Within our Virology group in Utrecht, we study coronaviruses, picornaviruses, influenza and paramyxoviruses. My main research focus is on picornaviruses, in particular enteroviruses replication. Moreover, I study innate antiviral responses and how viruses evade these responses.

Why is your research important?

Studies on picornaviruses such as poliovirus and FMDV have laid important foundations for the field of Molecular Virology. Importantly, studies on these "relatively simple" viruses continue to provide important insights that are valuable for the entire Virology field. Moreover, the research is important to develop urgently needed antiviral drugs.

Of which accomplishment are you most proud?

There are several accomplishments of which I am proud. But what makes me most happy is when I interact with young students and especially when I see that I was able to transferring my enthusiasm for Virology.

Recent publications

Aguirre Sourrouille, Z., Schwarzer, S., Lequime, S., Oksanen, H. M., & Quax, T. (2022). The Viral Susceptibility of the Haloferax Species. *Viruses*, 14(6), 1344. <https://doi.org/10.3390/v14061344>

Ter Ellen, B. M., Niewold, J., Flikweert, A., Muller Kobold, A. C., Heeringa, P., van Meurs, M., Smit, J. M., van der Voort, P., Rodenhuis-Zybert, I. A., & Moser, J. (2022). Mediators of Obesity Do Not Influence SARS-CoV-2 Infection or Activation of Primary Human Lung Microvascular Endothelial Cells In Vitro. *Frontiers in immunology*, 13, 879033. <https://doi.org/10.3389/fimmu.2022.879033>

Ogando, N. S., Metscher, E., Moes, D., Arends, E. J., Tas, A., Cross, J., Snijder, E. J., Teng, Y., de Vries, A., & van Hemert, M. J. (2022). The Cyclophilin-Dependent Calcineurin Inhibitor Voclosporin Inhibits SARS-CoV-2 Replication in Cell Culture. *Transplant international : official journal of the European Society for Organ Transplantation*, 35, 10369. <https://doi.org/10.3389/ti.2022.10369>

