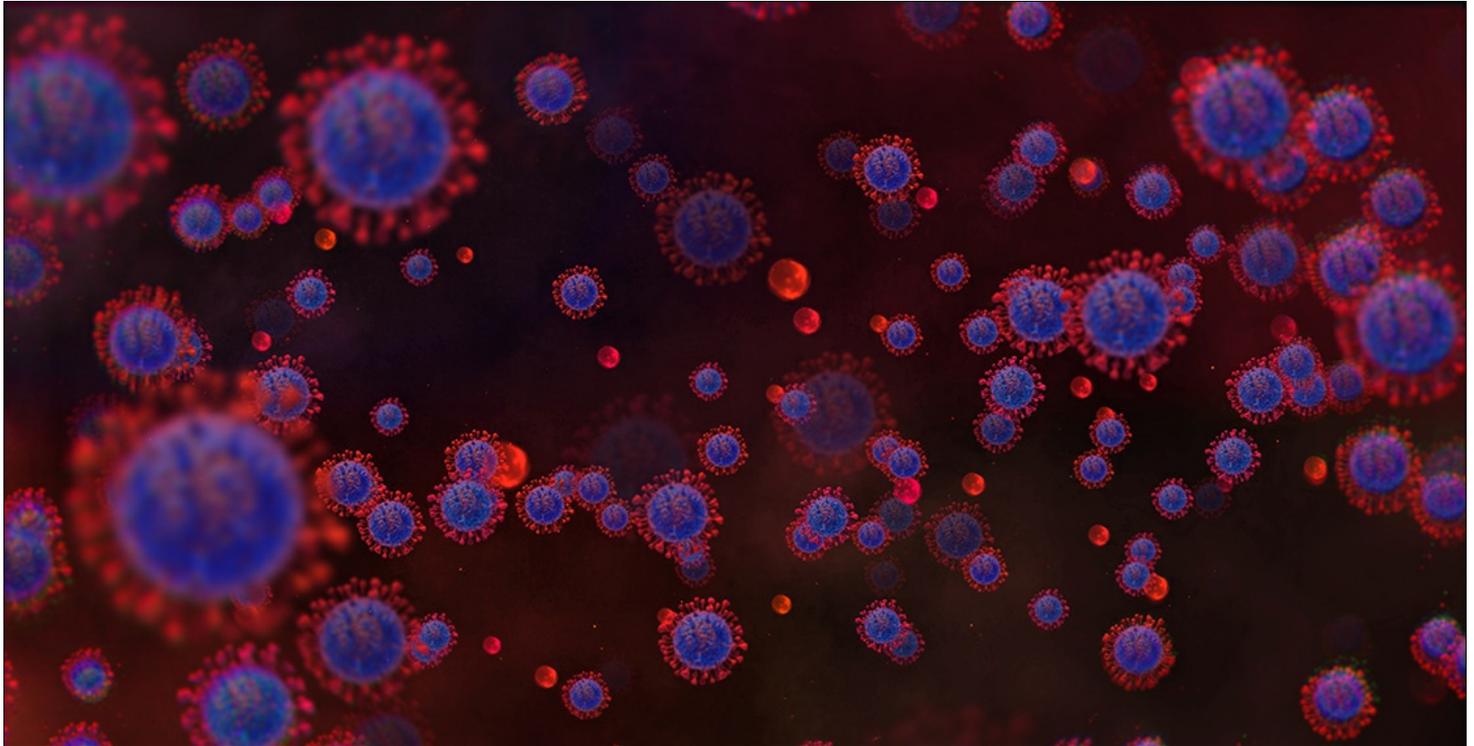


Flemish government stimulates ITM research

Three projects around COVID-19 have been selected by the Research Foundation of Flanders (FWO)

24-11-20



Dit is de omschrijving

Three projects around COVID-19 in which the Institute of Tropical Medicine (ITM) in Antwerp participates or takes the lead have been selected by the Research Foundation – Flanders (FWO) and are supported by the Flemish Minister of Innovation and Science Hilde Crevits. The research will help to make better epidemiological assessments, to better determine the course of the COVID-19 disease and to roll out targeted COVID-19 vaccination campaigns.

Professors Kevin Ariën and Koen Vercauteren of ITM will support two projects that will be led by the University of Antwerp. In the first project they investigate a new approach to detect recent or older SARS-CoV-2 infections. For this purpose, specific immune cells, so-called T-cells are used. These data can lead to a reassessment of epidemiological estimates such as herd immunity and infection rate. "At the moment, mainly antibodies are being investigated for this, but the problem is that these disappear from the blood over time, making it no longer possible to detect a historical SARS-CoV-2 infection. On the other hand, the antibodies sometimes cross-react with other mild coronaviruses, which can distort the picture," explains virologist Kevin Ariën.

There are indications that T-cells may offer an alternative approach, so the team will measure T-cell reactivity and T-cell receptors. The new data can then be used in mathematical simulation models, which predict and study the effectiveness of intervention strategies such as lockdowns and screenings. Our scientists will help collect and study the T-cell data in 1275 samples from individuals who have had COVID-19 and also the people they live with, healthcare personnel and randomly selected individuals.

Koen Vercauteren and Kevin Ariën are also assisting in a second COVID-19 study as part of FWO's project call. The aim is to better identify patients at risk of a serious disease course. In this way, the correct therapy can be chosen at the right time. "We want to recognise the factors that determine the course of COVID-19. This will hopefully enable us to assess at an earlier stage whether patients have a higher risk of developing a serious disease course or not," says Prof Ariën. "In the intensive care unit of Antwerp University Hospital they notice that of certain mucins or mucus-producing cells abnormally high amounts are produced". The role of those mucins and the microbiome, or the collection of microorganisms such as bacteria and viruses, will be mapped out in the respiratory tract. The drugs currently used to treat severe COVID-19 will also be tested for their ability to reduce mucin overproduction.

The third project is a [study](#) led by Prof Koen Peeters. Together with his team, he will investigate why people hesitate to be vaccinated against the coronavirus. The results of the study will guide the roll-out of targeted vaccination campaigns. "Before the vaccine is marketed, and also during the vaccination campaigns themselves, it is crucial to know the public's attitude towards the vaccine," explains Koen Peeters.