

FIRST STEP TOWARDS DEVELOPING COVID-19 VACCINE

Wageningen virologists and process engineers are working on a vaccine against the coronavirus. The first step have been taken.

The Wageningen virologists Linda van Oosten and Gorben Pijlman have made the first adapted baculovirus with which they can simulate the spikes of the coronavirus in insect cells. This week Jort Altenburg and Dirk Martens at Bioprocess Engineering are going to culture the spikes in a small bioreactor. If that works, these proteins will then be refined by the Biochemistry chair group. The spikes of the coronavirus are very large, complex proteins with a lot of saccharides on them. 'The insect cells can simulate this protein,' says Pijlman, 'but we still have to see how many of them they can make.' Pijlman is also continuing to work on optimizing the function of the baculovirus in insect cells, to obtain stable proteins that don't change shape. That stability is important for a good immune response, Pijlman thinks.



The university is working at great speed to set up a production process for producing the protein. If it works, the process will go to a Danish company with which WUR collaborates. The company will make a trial version of the vaccine, with a bit of luck in the next month. 'The best thing would be if someone beats us to it,' says Dirk Martens. 'Then there will be a vaccine available sooner.' The introduction of a vaccine is expected to take another year, because it still has to be put through a lot of safety tests.