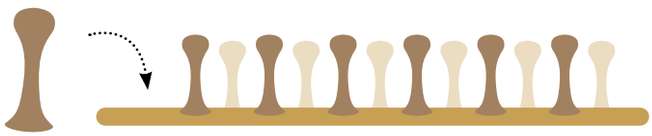
Testing for coronavirus

In a serological test, antibodies against the coronavirus are tracked down in four stages. This test is currently only used to find out whether the Dutch population is building up immunity to the virus.

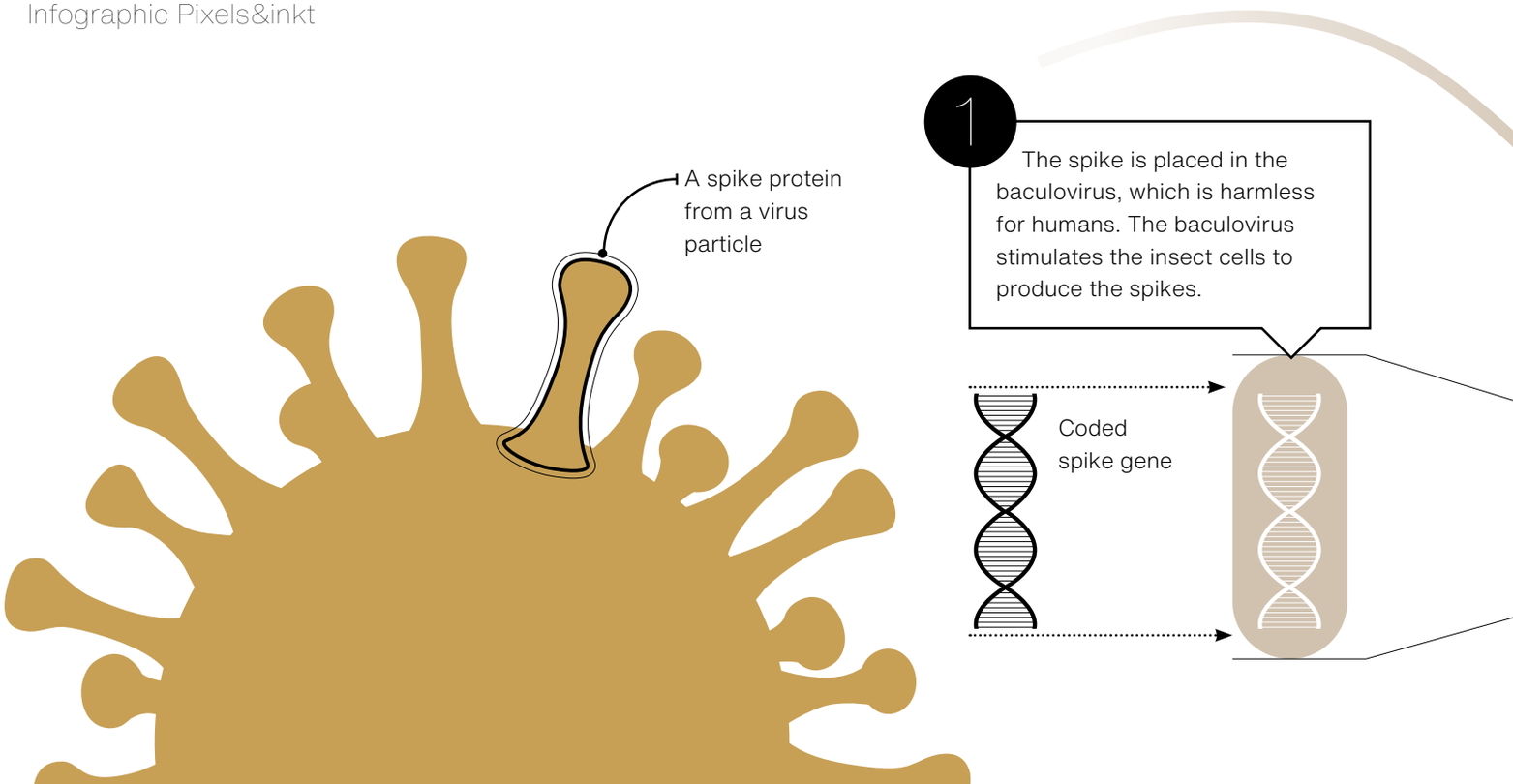


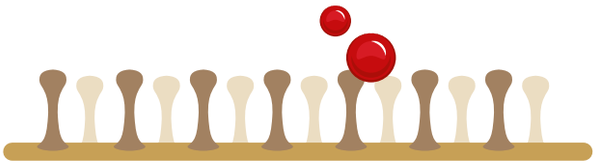
1 Spike proteins are attached to a base.

THE WAGENINGEN ROUTE TO A COVID-19VACCINE

In the quest for a vaccine against the coronavirus, scientists around the world are adopting different strategies. Wageningen has a unique approach of its own. 'We replicate the protein fragments found on the outside of the virus, the spikes,' says virologist Gorben Pijlman. That is done in insect cells, a Wageningen specialism. You can see how that works in this infographic.

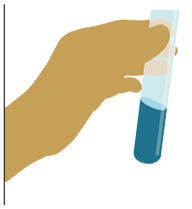
Infographic Pixels&inkt



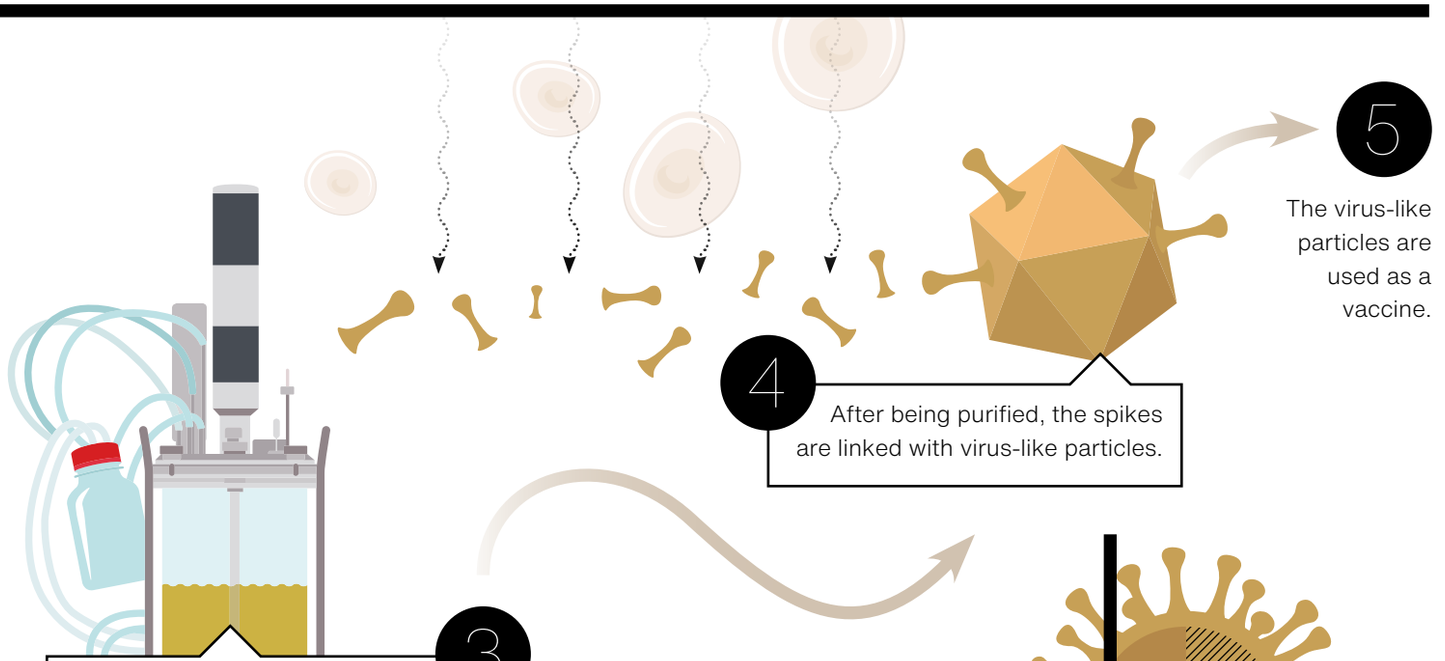


2 A drop of blood is added.

3 Antibodies against the coronavirus attach themselves to the spike proteins.



4 Colourant is used to make the antibodies visible.



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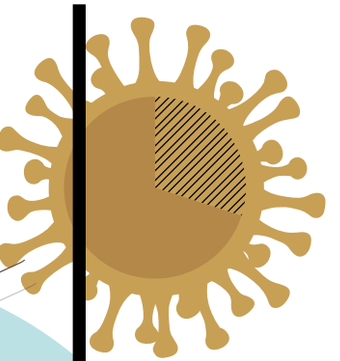
The virus-like particles are used as a vaccine.

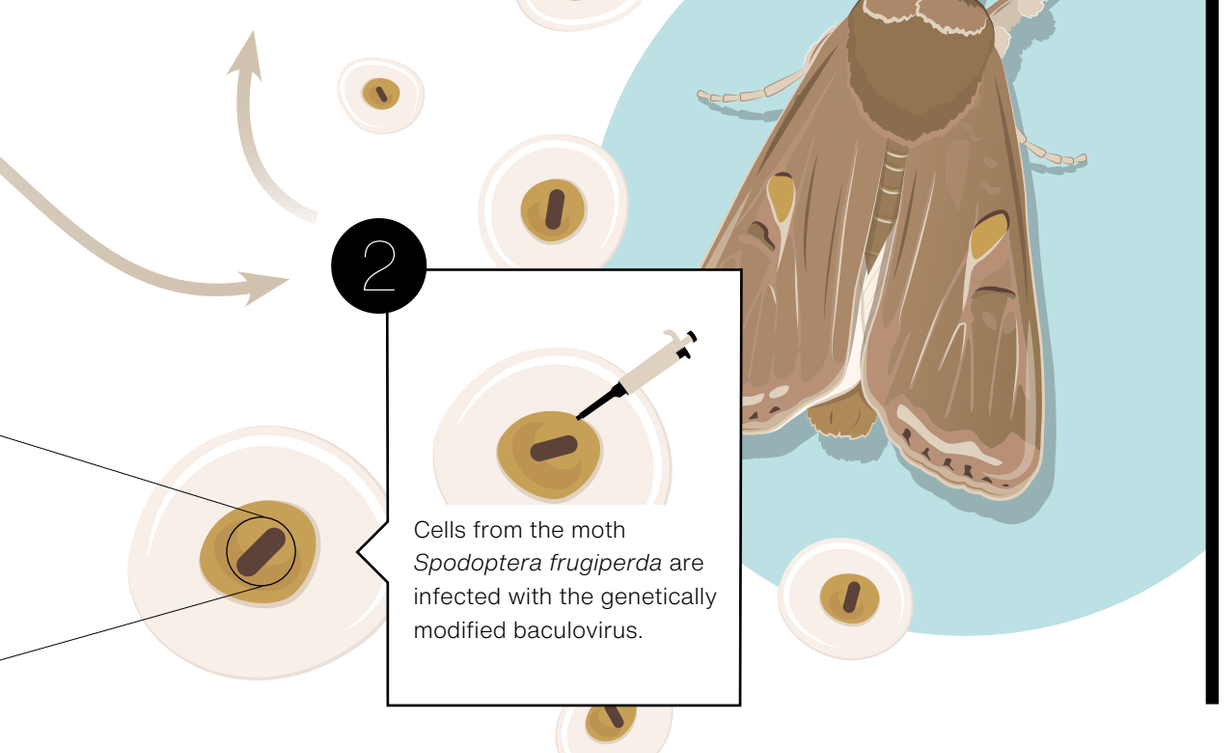
4

After being purified, the spikes are linked with virus-like particles.

3

The insect cells produce the spike protein in large quantities in a bioreactor.





2

Cells from the moth *Spodoptera frugiperda* are infected with the genetically modified baculovirus.

30

PER CENT

A cell can produce up to 30 per cent of its own dry weight in protein. This is how some familiar vaccines are produced, such as the vaccine against human papillomavirus (HPV), which causes diseases including cervical cancer.