

Germany to start first coronavirus vaccine trial

With more than 2.5 million people now infected worldwide in the COVID-19 pandemic, Germany has authorized the first clinical trial of a coronavirus vaccine. The first human tests will begin before the end of April.



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German Health Minister Jens Spahn has announced the first clinical trials of a coronavirus vaccine. The Paul Ehrlich Institute (PEI), the regulatory authority which helps develop and authorizes vaccines in Germany, has given the go-ahead for the first clinical trial of BNT162b1, a vaccine against the SARS-CoV-2 virus.

It was developed by cancer researcher and immunologist Ugur Sahin and his team at pharmaceutical company BioNTech, and is based on their prior research into cancer immunology. Sahin previously taught at the University of Mainz before becoming the CEO of BioNTech.

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In a joint conference call on Wednesday with researchers from the Paul Ehrlich

Institute, Sahin said BNT162b1 constitutes a so-called RNA vaccine. He explained that innocuous genetic information of the SARS-CoV-2 virus is transferred into human cells with the help of lipid nanoparticles, a non-viral gene delivery system. The cells then transform this genetic information into a protein, which should stimulate the body's immune reaction to the novel coronavirus.

Numerous vaccines in development

Aside from BNT162b1, which is now in the stage 1 testing phase, BioNTech — jointly with Pfizer — is working on three other similar mRNA vaccines. PEI head Klaus Cichutek, meanwhile, has said other pharmaceutical companies are also developing vaccines against SARS-CoV-2, based on a variety of vaccine platforms in Europe, China and the United States.

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The first medical tests of BNT162b1 will involve 200 healthy volunteers between the ages of 18 and 55. The aim is to determine the immune response and whether the vaccine causes any unwanted side effects.

“Trials of vaccine candidates in humans are an important milestone on the road to safe and efficacious vaccines against COVID-19 for the population in Germany and internationally,” the PEI said in a statement.

Stages of vaccine development

1 Virus analysis

What causes the body's immune response to the virus infection?



2 A vaccine is developed

Which components should go into the vaccine?



3 Animals trials

Focus on effectiveness and tolerance



4 Human trials

Vaccine is tested on volunteers over different stages



5 Approval

EMA* or FDA* give go-ahead for vaccine



6 Mass production

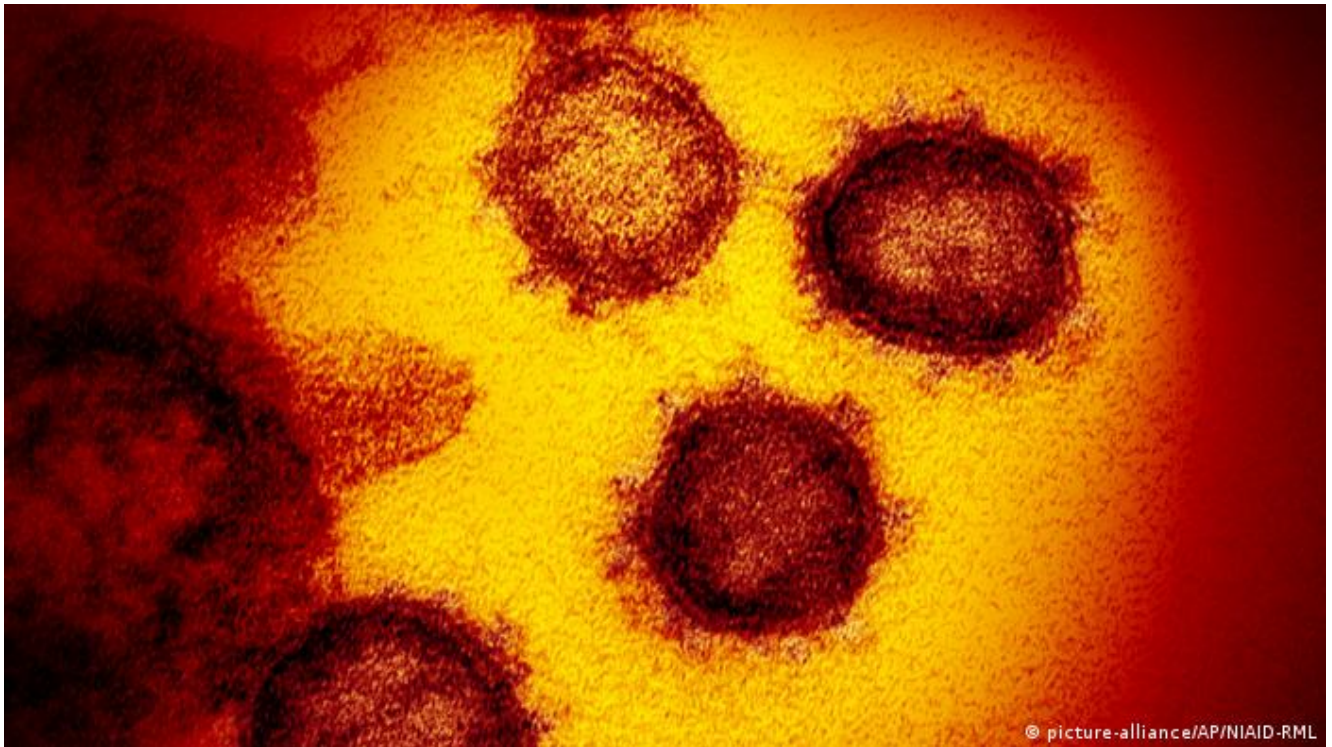
Vaccine is produced for general population



Source: vfa.de | *European Medicines Agency and US Food and Drug Administration

Cichutek said testing would be completed by June, at the earliest. After this stage is complete, the PEI will determine if the vaccine can progress to further trial stages. Cichutek warned, however, that an approved vaccine was unlikely to be ready for the general public in 2020.

More than 2.5 million people have been infected by the COVID-19 pandemic in the last four months, and at least 179,000 people have died.



An oral vaccination against coronavirus

Courage, curiosity or complete hubris? It's probably a mixture of all these things that causes many scientists to test their own inventions on themselves first. According to the Global Times, a Chinese doctor not only developed an oral vaccine against the SARS-CoV-2 but also tried it out himself. So far, he hasn't seen any side effects.

Source:

<https://www.dw.com/en/germany-to-start-first-coronavirus-vaccine-trial/a-5321137>

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