



Defeating the Corona Virus (2019-Cov) in less than Six Months

Münster, January 30, 2020. Since the outbreak of a new Corona virus late 2019 at the Huanan-Seafood-Market in Wuhan, China, the number of infected people and deaths worldwide increases daily. Specifics of the virus are still unknown. So far, in China almost 200 people died of the disease; almost 10,000 people were confirmed as infected; and several thousand other people are under observation. This outbreak underscores clearly the importance and necessity for effective protection. Das Biotech-Unternehmen Cilian AG mit Sitz in Münster based biotech company Cilian AG has developed a method using Ciliates in various Influenza strains, with the help of which vaccine proteins can be manufactured very fast and cost effective; and brought to the market – certainly against the Corona virus also.

Virus with worldwide implications

The virus is spreading outside of China: Cases of infection have, so far, been confirmed in 18 countries: for instance, in Germany, France, the USA, Japan and Australia. Corona is genetically closely related to the SARS virus (Severe Acute Respiratory Syndrome), that got noticed in 2003, showing symptoms such as fever, headaches, a sore throat and subsequently respiratory problems that resemble pneumonia; ultimately leading to lethal respiratory failure.

Despite the fact that 2019-nCov seems not to be as contagious as Influenza or Measels, its effects are nonetheless very visible worldwide. The German Federal Foreign Office issued a travel advisory for the Chinese province of Hubei; German air carrier Lufthansa suspended all commercial flights to and from China. Athletics world championships were postponed for one year and the start of the football (soccer)

season is delayed indefinitely; due to the outbreak. Large corporations have suspended operations in the area. Human and economic casualties caused by the virus are already quite considerable.

A Vaccine against the Corona virus?

Efforts are on the way to curtail the outbreak. No vaccine against the virus is currently available, even though the German Robert-Koch-Institute indicates that progress has been made to develop vaccines against Corona viruses; however, none of them have been tested for application.

Biopharmaceutical companies are trying in very early phase the development of a vaccine using complex and cumbersome processes. Such developments can take years – provided no problems occur in the process. Scientists in Hong Kong and at some US biotech companies claim to have developed a vaccine. Necessary development steps will, however, necessitate many more months.

Cilian AG offers innovative and cost effective solution

A clean, fully recombinant process should enable production of a marketable vaccine protein in a very short period of time. Münster based biotech company Cilian AG developed the ideal starting point for the fast production of various protein based vaccines against an array of specific viruses; using Ciliates as an expression organism. Just recently, the company published *in-vivo* data, evidencing full protection against A and B strains of Influenza of a vaccine produced with Ciliates.

Ciliates can also be used to produce an effective vaccine protein against the Corona virus. Utilizing Ciliates, a vaccine protein against Corona can be produced for *in-vivo* testing in less than six months. Large scale production in bio reactors require only a few days. „In our globally connected world it is becoming more important to be able to produce a vaccine on demand“, declares Dr. Marcus Hartmann, Cilian AG Chief Scientific Officer. „With antiquated and complex production methods and cycles we stand no chance to keep pace with the rapid spread of a virus“.

Cilian is already applying its technology at a large manufacturing scale of 7,500 liters. The process can be transferred without problem into any existing microbial

manufacturing facility anywhere in the world, thereby enabling local production of vaccine proteins in an energy efficient way, avoiding complicated supply chains and affording a very favorable carbon footprint.

This manufacturing method can produce a vaccine protein at costs that are significantly less than compared to currently used production methods. „Manufacturing larger batches with less effort and much lower costs must be the goal in the future“, explains Christian Scheiner, Cilian’s Chief Executive Officer, „with the objective to effectively protect millions if not billions of people“.

This way, Cilian AG offers a goal oriented, globally scalable solution to master the Corona virus before its outbreak.

Find more information at: www.cilian.com