

**Salvogene SARS CoV-2  
Task Force: CureVac were our  
great hope. They reached for the  
stars – and came back down with  
a bump.**

**KEYNOTE**

Dear Premium Customers,

**Though the news was not entirely unexpected, we regret to report that the breakthrough vaccine promised by CureVac will now not be forthcoming. There are a number of reasons for this, but the main factor was the high demands that CureVac itself placed on the product. The aim was to develop a vaccine that was as natural as possible – ideally the most natural vaccine to date. In the end, it was the much-debated issue of vaccine-induced side-effects and long-term effects that thwarted their endeavor.**

CureVac planned to optimize the “cell packaging” required for transport; this was to avoid having to make chemical changes to the product, as has been the case with vaccines from other manufacturers, in order to increase its tolerability. To fulfill this requirement, CureVac developed a highly natural mRNA-based

vaccine. It was a risky strategy and one that ultimately failed, because the chemical-free packaging resulted in greater side-effects. This meant they had to limit the injection dose to 12 micrograms, which reduced the efficacy to just below 50%. By comparison, BioNTech sets its injection dose at 30 micrograms, while the Moderna is more than three times higher at 100.

CureVac also had the ambition to not only produce the most natural vaccine, but also to create one that would be effective against the mutations currently in circulation. With this objective in mind, the clinical phase 3 was delayed in order to include mutation events in the development stage of the product. In comparison to the three market leaders – Moderna, BioNTech and AstraZeneca – who tested only the original Wuhan wild type in their phase 3 trials, CureVac included all subsequent known mutations.

Unfortunately, this set the bar too high. CureVac even attempted to incorporate A.I. (artificial intelligence) into the prediction and detection of future mutations early on and to adapt their product to its findings. Essentially, the project failed because of the as yet insurmountable challenge of developing a natural vaccine that also covers current and even future mutations.

All in all, this is very disappointing news in the context of the pandemic, as governments and health bodies are counting on these next-generation vaccines to deal with future mutations by means of A.I. modeling. In this way, scientists would be able to get ahead of the game and anticipate viral mutations before they manifest themselves. As we have stated in previous Keynotes, we see technology as our only hope of bringing the pandemic under control.

There are other projects going down the same route as CureVac, for example the one at the University of Austin in Texas, but this announcement is still bad news for pandemic management.

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