

# CEO statement

Vaccination is and has always been one of the best ways to prevent pandemics and epidemics. The need has never been greater than it is today. Not least due to the Covid-19 pandemic, which has proven the enormous benefits vaccines have on society as a whole. Increasing global travel, population growth, climate change, urbanization and overcrowding are all potential risks for starting new epidemics and pandemics. And it is children who are exposed most; one out of five still don't have adequate vaccine coverage. About 1.5 million children die every year of vaccine-preventable diseases. Adults too have been hit hard by the Covid-19 pandemic, and many countries have realized the value of having their own vaccine production facilities.

Ziccum has a unique and patented technology – LaminarPace – that makes it possible to create vaccines in powder form. With today's conventional vaccine technologies, it is not possible, practically or economically, to generate powder vaccines. Yet the benefits are many. The stability and lifespan of the vaccine are improved, it facilitates the logistics from the manufacturer to the patient and makes it possible to distribute vaccines to new places where the cold chain is a huge challenge. Ultimately it means getting more vaccines to more people at a lower cost.

Ziccum's focus is on three main areas: development of thermostable formulations of vaccines, preparations for production on a commercial scale and establishing external collaborations with industrial partners that develop vaccines, and, importantly for the industry, Non-Governmental Organizations.

Driven by the ongoing pandemic, our work to develop thermostable vaccines has been more and more focused on Covid-19 vaccines. For instance, we are now working on air-drying vaccines built around mRNA technology. Positive results should broaden our offering to the vaccine industry significantly. In parallel with this we are continuing to develop a system for vaccine manufacturing according to plan, and we are optimistic about eventually being able to offer the vaccine industry a robust and efficient manufacturing solution. Our cooperation with Janssen is continuing according to plan.

Ziccum has two main goals for 2021: to make concrete plans to establish a demonstration facility for Fill and Finish based on the LaminarPace technology, and to continue the work around out-licensing the technology. A licensing deal should validate Laminar Pace and be tangible proof of the commercial value of Ziccum's offer.

We see many new initiatives from a range of regions around the globe to dramatically increase their manufacturing capacity for vaccines. This entails that our customer base, i.e. global vaccine companies, will need to extend with new parties, primarily in low-income countries. In these countries our solution for thermostable vaccines has strong advantages, since many Covid-19 vaccines currently have to be transported and stored at -80°C. To transport and store vaccines at -80°C with undeveloped infrastructure and unreliable electricity supply is a huge challenge.

In conclusion, Ziccum is well-positioned for an exciting future within an industry that will be firmly in the spotlight for a long time ahead.

Lund 25<sup>th</sup> of August 2021

Göran Conradson

CEO

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