



## PRESS RELEASE

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# Ziccum generates proof of successful drying of lipid nanoparticles in mRNA project

**ZICCUM AB (publ) has generated proof of successful nebulization and drying of vaccine lipid nanoparticles (LNP) in its in-house mRNA project. This was carried out using LaminarPace™, the company's ambient drying technology. LNP is the preferred drug delivery component in today's mRNA Covid-19 vaccines.**

The study resulted in a defined knowledge-space, defining the best operating conditions, and key read-out parameters were encapsulation efficiency, yield and particle size. The trials were repeated for confirmation.

The study used an LNP model setup with an mRNA-like molecule encapsulated in lipid nanoparticles. The study's three key defined parameters are important quality attributes for assessing LNPs. Readouts demonstrate that LaminarPace™ nebulized and dried the LNPs with no important stress caused, and no significant modifications needing to be made to the LNPs that would change their properties. These results are giving a clear path forward for the continued development. In the next stage of internal work, studies will be carried out to verify the vaccine activity.

Ziccum CEO Ann Gidner: "This is an important step for us. These much-anticipated findings place our mRNA strategy centre-stage. The mRNA landscape is indeed high value, with intense innovation in indications from Covid-19 to personalized cancer treatment. The LNP delivery system has enabled the entire mRNA vaccination effort for covid-19 - yet, these sophisticated formulation solutions, enabling novel treatments, are very delicate and easily stressed by heat and processing. Hence these results, where LaminarPace may be the solution, are significant both for us and the wider biopharmaceutical industry. We look forward to continuing this work."

For more information about Ziccum, please contact:

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## About Ziccum

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Ziccum is developing new thermostable versions of vaccines and biologic materials for licensing to vaccine providers, developers and manufacturers in the global pharmaceutical industry. Ziccum's patented drying technology, LaminarPace, is unique. It can dry-formulate temperature-sensitive vaccine materials at room temperature with high yields and low waste. These robust, thermostable dry powders could be stored and transported worldwide with no need for cold chain refrigeration or freezing. Ziccum is listed on the Nasdaq First North Growth Market.

## Attachments

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[Ziccum generates proof of successful drying of lipid nanoparticles in mRNA project](#)