PRESS RELEASE

January 10, 2024

Ziccum reports successful mRNA/LNP Feasibility Study with major Biotech Corporation

Ziccum and its Biotech Corporation collaboration partner have now reviewed the outcomes of the LaminarPace Feasibility study of mRNA/LNP materials, under the agreement signed on May 9th 2023. The study was very successful, and both parties confirm consistent, positive readouts in the Study's major parameters.

The joint assessment meeting reviewing the readouts took place on January 9, 2024. It concluded that the LaminarPace treatment performed very successfully in the Study's agreed-upon metrics:

mRNA activity: the assessment concluded that the resulting dry powder material demonstrated excellent mRNA activity, when reconstituted and tested in *in-vitro* cell studies. This is a must for the resulting mRNA treatment to have its effect, for vaccine immunisation or therapeutic effect.

Encapsulation efficiency: the assessment concluded that the LaminarPace treatment resulted in well-preserved mRNA content in LNP particles with adequate encapsulation efficiency. This is an important metric in the production economics of mRNA/LNP, preserving the very expensive mRNA materials.

Particle preservation and distribution: the assessment concluded that the treatment resulted in well preserved lipid nanoparticles with good particle size and preserved size distribution. This is important for having a final drug composition which can be administered to patients.

Product reconstitution: the partner assessment confirmed the consistent Ziccum findings that LaminarPace-treated material can be reconstituted (dissolved back into liquid) very quickly and smoothly, with no foaming, precipitation, or other practical issues.

The Ziccum evaluation and the Biotech Corporation partner's evaluation both delivered consistent results that matched very closely.

Based on these clear, satisfactory results, a continued dialogue on the potential next phase of collaboration in potential applications may be initiated.

Ziccum CEO Ann Gidner: “These results, from a world-leading player in the field, confirm LaminarPace’s ability to turn mRNA/LNP liquid biological material into a thermostable dry powder, with all its advantages, retaining excellent mRNA activity in cells. This is exciting and rewarding news. We are grateful for excellent partner interaction, and our partner concluding that the collaboration was a success. Let me express my appreciation to the Ziccum team for their great efforts delivering these results”.

Ziccum Chairman Fredrik Sjövall: “It is of utmost importance to Ziccum to have this validation of the applicability of LaminarPace technology also for mRNA/LNP treatments. We are keenly looking forward to the potential of applying LaminarPace in this field, with many potential applications and partners.”

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About Ziccum

Ziccum is developing LaminarPaceTM, a unique drying method for biopharmaceuticals and vaccines based on mass transfer, not heat transfer. The technology is offered by licensing to vaccine and biologics developers and manufacturers in the global pharmaceutical industry. By reducing drying stress to the active ingredient, LaminarPaceTM uniquely enables particle-engineered, thermostable dry powder biopharmaceuticals which can be easily handled and transported and are highly suitable for novel administration routes. The technology has been successfully applied to mRNA, peptides, proteins, antibodies, lipids and enzymes as well as excipients and adjuvants, and is well suited for industrial application. Ziccum is listed on the Nasdaq First North Growth Market.

About the mRNA field
The new mRNA technology, first implemented in the Covid mass vaccinations, has a become a game-changer in pharmaceutical development, generating multi-billion-dollar development efforts all over the global industry. Solving stability limitations and delivery challenges, as mRNA in LNP formulation is a very complex and delicate structure, would enable a cornerstone treatment across new indications, also targeting so called undruggable genes. A market forecast predicts the mRNA domain to grow to 59 BUSD by 2031 (1). However, existing methods for treatment, formulation or drying do not solve the limitations regarding stability nor fragility, and options for delivery are limited to injection currently. (1) Straits Research, June 08, 2023

This information is information that Ziccum is obliged to make public pursuant to the EU Market Abuse Regulation. The information was submitted for publication, through the agency of the contact persons set out above, at 2024-01-10 09:20 CET.

Attachments

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