

# INTERIM REPORT 1 JANUARY - 31 DECEMBER 2021

## Q4 2021

- ▶ The result for the quarter amounted to -6 450 kSEK (-3 448 kSEK)
- ▶ Cash flow for the quarter amounted to -7 291 kSEK (-5 941 kSEK)
- ▶ Cash and cash equivalents at the end of the quarter amounted to 12 273 kSEK (33 620 kSEK)

<b>Summary Financial Highlights kSEK</b>	<b>Oct-Dec 2021</b>	<b>Oct-Dec 2020</b>	<b>Jan-Dec 2021</b>	<b>Jan-Dec 2020</b>
Net revenue	0	0	0	0
Operating result	-6,474	-3,423	-21,117	-17,235
Result	-6,450	-3,448	-21,136	-17,289
Balance sheet total	39,591	39,640	39,591	39,640
Cash flow	7,291	-5,941	-21,347	31,556
Cash and cash equivalents	12,273	33,620	12,273	33,620
Equity ratio %	75%	92%	75%	92%

## **Data per share SEK**

Number of shares at the end of the period	11,006,056	9,606,200	11,006,056	9,606,200
Result per share before and after dilution*	-0.65	-0.36	-2.17	-2.06
Cash flow per share	-0.73	-0.62	-2.19	3.75
Equity per share	2.70	3.79	2.70	3.79

\* Dilution effects is not calculated when the result is negative

## Significant events during Q4 (Oct-Dec)

Ziccum announced on November 23 2021 that the company has made a further extension of the evaluation agreement that was originally initiated on October 3, 2019 with Janssen Vaccine & Prevention B.V., one of Janssen's pharmaceutical companies belonging to Johnson & Johnson. The purpose is to complete the analysis of Ziccum's air drying technology with Janssen's vaccine platforms.

On December 16, Ziccum announced that the company successfully had carried out tests which confirm that its air-drying technology could be used to produce thermostable dry powder vaccines across four major platforms – Protein Subunits (PS), Viral Vectors (VV), Inactivated Virus (IV) and Virus Like Particles (VLP). 70% of Covid-19 vaccines approved (Phase IV) and 67% in clinical studies use one of these four platforms. Ziccum is carrying out ongoing studies to produce corresponding data around the mRNA vaccine platform.

## **Directed share issue**

On December 16, Ziccum carried out a directed share issue of 1 333 314 units, of which one unit consists of three shares and two free warrants (series 2021/2022). Ziccum will thus receive a total of 44 mSEK (before issue costs), provided that the share issue is approved at an Extraordinary General Meeting. Ziccum can be added a further maximum of approximately 35 mSEK upon full exercise of all warrants.

The directed share issue consists of a total of 1 333 314 units, corresponding to 3 999 942 shares and 2 666 628 free warrants, and was decided by the Board of Directors of Ziccum. The issue of 399 952 units, corresponding to 1 199 856 shares and 799 904 warrants, has been made on the basis of existing authorization from the Annual General Meeting 2021. The issue of the remaining 933 362 units, corresponding to 2 800 086 shares and 1 866 724 warrants, was conditional of a change in the Articles of Association and the approval of an Extraordinary General Meeting.

On December 21, 1 199 856 new shares and 799 904 warrants were registered as a first part of the transaction.

## Significant events during Q1-Q3 (Jan-Sep)

Ziccum published its goals for 2021 on January 12. The major goals are to enter into the first licensing agreement for one or more dry-formulated vaccines, and to present a detailed plan for establishing a modular Fill and Finish production facility for filling and final packaging of dry, thermostable powder vaccines, including the necessary partnerships and financing plans. Ziccum's medium-term goal (2–3 years) is to establish the first Fill and Finish facility for dry-formulated vaccines in Sweden.

On January 25 Ziccum announced the extension of the evaluation agreement with Janssen Vaccine & Prevention B.V. (one of the Janssen Pharmaceutical Companies of Johnson & Johnson) that was entered into on October 3, 2019. The purpose is to finalize the analysis of Ziccum's air-drying capabilities on one of Janssen's vaccine platform technologies.

On March 17 Ziccum announced that the company has been accepted as a member of NIIMBL, the US National Institute for Innovation in Manufacturing Biopharmaceuticals. NIIMBL drives innovation and uptake of new technologies within biopharmaceutical manufacturing in the US. NIIMBL is among others funded by the US National Institute of Standards and Technology (NIST) and the U.S. Department of Commerce and is able to distribute federal grants.

At the General Meeting it was decided to adopt two long-term incentive programs: one for the Board of Directors, consisting of warrants (LTI 2021/2024), and another one for the employees consisting of employee stock options (LTI 2021:1).

The warrant program LTI 2018/2021 has also closed, and all warrants were exercised. The warrant program was assigned to the Board of Directors and consisted of 200 000 warrants, with a vesting period during 26 April – 26 May 2021. To finance the share subscription, the warrant holders have sold 120 000 warrants to a long-term investor, who has also exercised the warrants. The exercise price was 11 SEK per share, hence 2.2 mSEK was added to Ziccum through the share subscriptions. The exercised warrants increased the number of shares and votes with 200 000 and the total amount of shares is hereby 9 806 200.

On the 1st of September Anna Lönn started as Development director

## Significant events after the reporting period

At the Extraordinary General Meeting held on January 18, in addition to approving the Board's proposal, it was decided to increase the limit on the number of shares and the size of the share capital in the Articles of Association, to enable the issue of the remaining 933 362 units in the private placement.

On January 18, an additional 2 800 086 shares and 1 866 724 warrants were registered, and all shares and warrants in the private placement are thus registered.

The payments from the directed share issue were received by the company in January and February 2022, a total of 40 mSEK was added to the company after deduction of issue costs.

Ziccum announced on February 7 that it has become a member of the United Nations Global Compact, the world's largest corporate sustainability initiative.

## CEO statement

Vaccinations are and have long been one of the best ways to prevent pandemics and epidemics. Right now the need has never been greater. Not least due to the Covid-19 pandemic, which has proven the enormous benefits vaccines have on society as whole. New travelling habits, population growth, climate change and overcrowding all potentially increase the risk of epidemics and pandemics, and children are the most vulnerable; one child in five still does not receive adequate vaccination protection. Approximately 1.5 million children die each year from diseases for which vaccines are already available. With the Covid-19 pandemic, many countries have come to realize the importance of taking responsibility for vaccine production.

Ziccum has a unique and patented technology – LaminarPace™ – which enables us to produce vaccines in dry powder form, which is not practically or economically possible with conventional technologies. The benefits are many. It increases the stability and so the lifespan of the vaccine, it facilitates the entire transport chain from factory to patient and it enables the distribution of vaccines to new places where, for example, cold- and freezer storage is a major challenge. The result is greater vaccination coverage at a lower cost.

Ziccum's key strategic priorities focus on three major areas: Developing thermostable formulations of vaccines, preparing for production on a commercial scale and building external collaborations with industrial actors who develop vaccines and, importantly for the industry, Non-Governmental Organizations (NGOs) and International Governmental Organizations (IGO). Several IGOs, including the WHO, are very clear that vaccine production must be increased in developing countries in so-called regional hubs, so that an equitable vaccine supply can be achieved.

Driven by the ongoing pandemic, our work on developing thermostable formulations of vaccines is focused increasingly on Covid-19 vaccines. For example, we taken on work evaluating whether LaminarPace can dry vaccines built on mRNA technology. Good results in this would broaden our offer to the vaccine industry significantly. It should also be mentioned that Covid-19 vaccines are mainly based on 4-5 different technology platforms - we feel comfortable that our technology can be used effectively on a number of these.

In parallel, we are continuing our work developing a system for large-scale industrial production of dry thermostable vaccines. This is a top priority that will speed up our discussions with external collaborators and make our offering more attractive to partners.

Our collaboration, for instance with Janssen continues as planned. At the same time, we continue discussions with new partners about new collaborations.

We are gratified to see the large number of new initiatives being taken worldwide to greatly increase the regional production capacity of vaccines. This means that the traditional customer base for our technology, ie large global vaccine companies, is being expanded with several new players, especially in developing countries. Our solution for thermostable vaccines provides a very strong competitive advantages, as many Covid-19 vaccines still have to be transported and stored at temperatures all the way down to -80 ° C. Yet storing and transporting vaccines at -80 ° C in large parts of the world with undeveloped infrastructure and insecure access to stable electricity networks is an enormous challenge.

We are also seeing completely new trends among national procurement in Western countries who are now beginning to make demands on traditional vaccine manufacturers to deliver products that are better adapted to meet the climate change. In the current situation, work is being done to change the packaging so that it takes up less space in the cold chain. At the same time, we believe that this can only partially address climate change because the cold chain is still needed.

In summary, we are well positioned for a very exciting future in an industry that will remain a key priority area globally for a long time to come. Furthermore, we are dependent on our partners' decisions, which we can not control when they are made. Therefore, we try to build Ziccum to become more independent, by being able to take projects further up the value chain. Thus becoming a more competent partner to facilitate the industrialization of LaminarPace.

Lund, February 17, 2022 Göran Conradson, CEO

## Expected future development

The company's long term goals are to:

- ▶ Enter into a first licensing agreement regarding one or more vaccine
- ▶ Present a detailed plan for establishing a modular Fill and Finish production facility for filling and final packaging of dry, thermostable powder vaccines, including the necessary partnerships and financing plans
- ▶ Expand international collaborations
- ▶ Continue to set a high pace in Research and Development activities, with the aim of generating new data that can form the basis for further patent applications
- ▶ Expand process development for the formulation process and adapt it for industrial production
- ▶ Apply for grants
- ▶ Continue to hire, to strengthen the opportunity to deliver on the company goals

## Licensing agreements

Based on the collaboration agreements and the ongoing positive dialogues with established parties on the market, it's Ziccum's goal, to generate at least one license agreement based on commercial terms.

## Process development

Ziccum puts a lot of effort into developing the process of producing thermostable vaccines and adapting the technology for industrial production. This work is done with the aim of furthering effective, ongoing and upcoming discussions with industrial partners. The project includes upscaling of production capacity, automatization, and adaption to regulatory standards.

## Production economy

During 2020 Ziccum have accomplished a conceptual design of a manufacturing facility together with KeyPlants AB based on their modular system. This study pointed out many advantages compared to traditional lyophilization (freeze-drying):

80% less electricity

65% less Operational costs (OPEX)

50% less Investment cost (CAPEX)

The conceptual design has been well received by the industry and different stakeholders within the vaccine field. By showing large production gains in a fill and finish plant, Ziccum's offer to industrial actors and end customers of vaccines can be clarified and the value significantly increase.

## International cooperation

A key to success is to make sure that stakeholders within the vaccine market know and understand that Ziccum's technology can develop new vaccine formulations that are less dependent on the cold chain. In that way, those stakeholders can demand and influence established vaccine producers to make a change towards thermostable vaccines.

## Patent

It is the company's ambition to continue setting a high pace on its own Research and Development activities with the aim of generating new data that can form the basis for new patent applications, primarily regarding more types of vaccines.

## Grant applications

The vaccine market offers several different opportunities to receive various forms of grants. Ziccum will apply for such grants that the company deems to be in Ziccum's interest and opportunity to receive.

## Organizational development

We will continue to have a great need to employ competent and experienced staff to further strengthen the company's ability to deliver on its set goals.

## Result - Q4 (Oct-Dec) 2021

Operating income from goods and services amounted to 0 kSEK (0).

Operating expenses amounted to 6 474 kSEK (3 426), of which personnel costs amounted to 2 488 kSEK (1 301).

Other external costs amounted to 3 700 kSEK (2 016).

Operating result amounted to -6 474 kSEK (-3 423) and result after financial items amounted to -6 450 kSEK (-3 448).

Result for the period amounted to -6 450 kSEK (-3 448).

Earnings per share before and after dilution amounted to -0.65 SEK (-0.36).

Cash flow during the period amounted to -7 291 kSEK (-5 941). The cash flow included a share issue of 0 kSEK (0). Cash flow per share amounted to -0.73 SEK (-0.62).

## Result and financial position - reporting period (Jan-Dec) 2021

Operating income relating to goods and services amounted to 0 kSEK (0).

Operating expenses amounted to 21 121 kSEK (17 240), of which personnel costs amounted to 9 151 kSEK (3 428).

Other external costs amounted to 11 128 kSEK (13 421).

Operating result amounted to -21 116 kSEK (-17 235) and result after financial items amounted to -21 136 kSEK (-17 289).

Result for the period amounted to -21 136 kSEK (-17 289).

Earnings per share before and after dilution amounted to -2.17 SEK (-2.06).

Cash flow during the period amounted to -21 347 kSEK (31 556). Cash flow included share issues of 2 358 kSEK (50 398) and raising of loans of 0 kSEK (2 000). Cash flow per share amounted to -2.19 SEK (3.75). Cash flow per share excluding new issues amounted to -2.43 SEK (-2.24).

Cash and cash equivalents as of Dec 31 2021 amounted to 12 273 kSEK, compared with 33 620 kSEK on December 31 2020.

The company's equity as of Dec 31 2021 amounted to 29 731 kSEK, compared with 36 381 kSEK on December 31 2020.

Equity per share as of Dec 31 2021 amounted to 2.70 SEK, compared with 3.79 SEK on December 31 2020.

The company's equity ratio as of Dec 31 2021 was 75% compared to 92% on December 31 2020.

The result follows budget expectations regarding the costs of the ongoing commercialization of LaminarPace technology. The increase of external costs is mainly driven by consulting fees and extended premises. Personnel costs have increased compared with the previous year due to increased workforce and the fact that the CEO is now employed by the company.

The investments made during the year is mainly related to development of the LaminarPace technology in order to adapt and automate the technology for industrial production by increasing production capacity and prepare for GMP production.