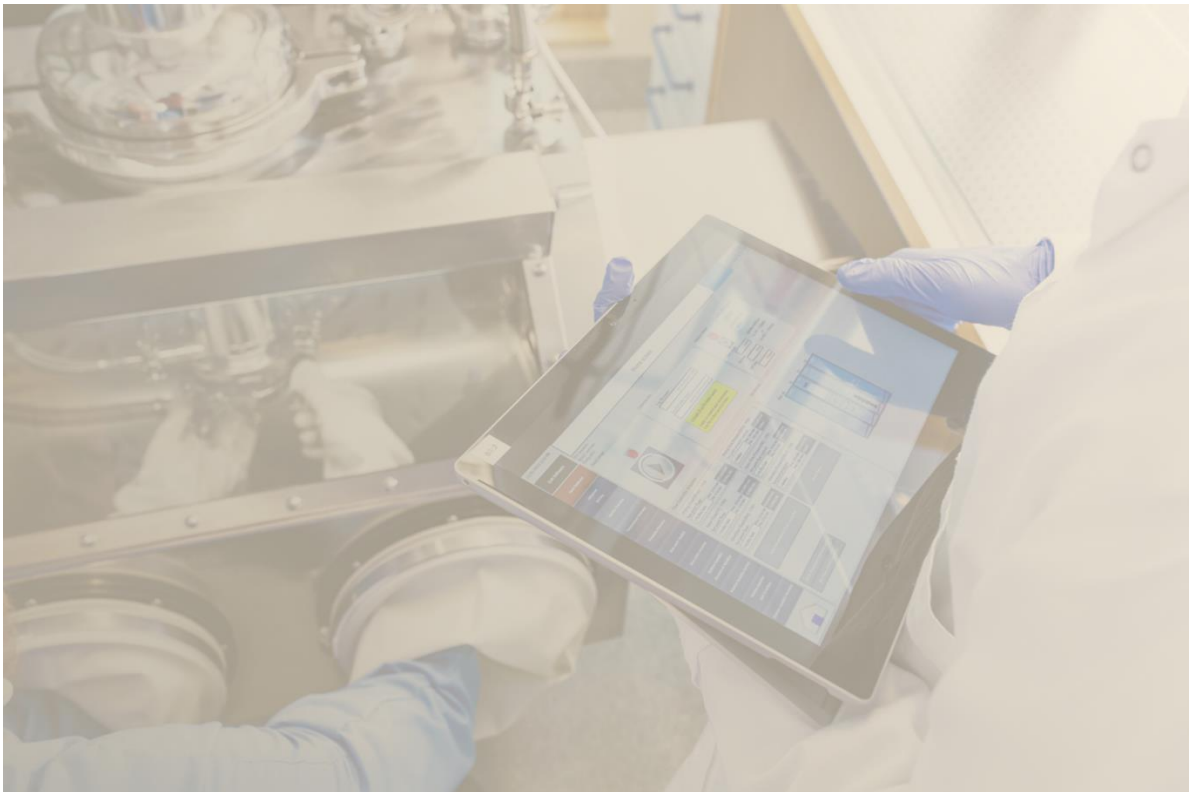


# Ziccum AB (publ)

## Interim report

1 January – 30 June 2024



***“Remarkable new technology advancement  
and keen international interest”***

**Ann Gidner, CEO**

# Financial highlights

## April – June Financial summary

- Operating income: kSEK 367 (1,776)
- Result for the quarter: kSEK -7,647 (-4,965)
- Earnings per share: SEK -0.50 (-0.36)
- Cash flow for the quarter: kSEK -4,967 (-4,440)
- Cash at the end of the reporting period: kSEK 4,092 (14,583)

## Financial summary

kSEK	Apr-Jun 2024	Apr-Jun 2023	Jan-Jun 2024	Jan-Jun 2023	Jan-Dec 2023
Operating income	367	1,776	3,615	2,414	6,318
Operating result	-7618	-5,060	-11,641	-9,995	-21,560
Result	-7,647	-4,965	-11,604	-9,837	-21,412
Balance sheet total	15,791	24,635	15,791	24,635	14,972
Cash flow	-4,967	-4,440	1,098	-8,368	-19,956
Cash and cash equivalents	4,092	14,583	4,092	14,583	2,994
Equity ratio %	52	80	52	80	57
<b>Per share data (SEK)</b>					
Number of shares	15,372,258	13,806,142	15,372,258	13,806,142	13,806,142
Result per share before and after dilution*	-0.50	-0.36	-0.75	-0.71	-1.55
Cash flow per share	-0.34	-0.32	0.08	-0.61	-1.45
Equity per share	0.53	1.43	0.53	1.43	0.62

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

### Significant events during Q2 2024

- **Ziccum strengthens and streamlines business and finance functions**  
On April 3, the company announced that it is reorganizing its administrative functions, due to the increased amount of business dialogues and to perform financial reporting in a more streamlined fashion. Two new roles of Business & Project Manager and a business-oriented, junior Financial Manager are introduced while the CFO role is eliminated.
- **Ziccum CEO to present at first annual event for Biopharma/Biotech Disruptors hosted by major US bank in New York City**  
On April 10, the company announced that on Tuesday May 14th, in New York City, Ziccum CEO Ann Gidner will present at the first event on high-value biotech and biopharma disruptor technologies to be hosted by CapitalOne, one of the US' largest bank corporations. She will present as part of an expert panel regarding mRNA and gene therapeutics.
- **Ziccum contracts RFR Solutions for GMP manufacturing in next phase of technology scale-out**  
On April 26, the company announced that in addition to its existing network of high expertise suppliers and consultants, Ziccum has signed a long-term agreement with the GMP equipment specialist RFR Solutions, for the next phase in the industrialization and scale-out of the LaminarPace™ equipment.
- **Ziccum AB strengthens patent portfolio with three solid data PCT applications according to expanded IP strategy**  
On April 30, the company announced that they have filed three PCT with ample and significant data covering years of equipment development and refinement, process parameter knowledge gained, plus key biopharmaceutical formulation expertise established. These various perspectives provide multi-layered protection to the company's unique drying technology LaminarPace™.
- **Ziccum partners with Dagens Industri for Investor Relations program**  
On May 28, the company announced that they partner with Dagens Industri, the largest Nordic business paper, to improve shareholders' access to

news updates and raise broader awareness of its continuous scientific and commercial progress.

- **Exercise of employee stock options of series LTI 2021:1 at Ziccum AB (publ)**  
On 27 April 2021, the Annual General Meeting of Ziccum AB (publ) ("Ziccum" or the "Company") resolved on a directed issue of no more than 46,000 employee stock options of series LTI 2021:1 (the "Stock Options") to certain employees and consultants in the Company. On June 3, Ziccum announced that 14,819 warrants of series 2021/2024 (the "Warrants"), in relation to LTI 2021:1, have been exercised for subscription of 23,709 new shares in the Company.
- **Ziccum reports on developments in the portfolio of industry partner projects**  
On June 11, the company announced that Ziccum is continuously engaged in business discussions with potential industrial partners. The status of Ziccum's project portfolio is presented quarterly in the company interim reports. There are currently further updates to report.
- **Ziccum signs Evaluation agreement with ReCode Therapeutics for LaminarPace mRNA study**  
On June 19, Ziccum AB signed an Evaluation Agreement with ReCode Therapeutics, Inc. (ReCode), a US clinical-stage genetic medicines company using tissue-specific delivery to power the next wave of mRNA and gene correction therapeutics, for evaluation of LaminarPace enabling dry powder forms of ReCode's proprietary therapeutic modalities.
- **Ziccum calls for a second investment tranche in accordance with its financing agreement with GCF**  
On June 25, the board of directors of Ziccum AB (publ) ("Ziccum" or the "Company") called for a second investment tranche in accordance with the previously communicated financing agreement between the Company and Global Corporate Finance ("GCF"), and in connection therewith resolved to carry out a directed share issue.

### Significant events after Q2 2024

- **Ziccum investigates significant increase in mRNA activity achieved with LaminarPace**  
On August 16, Ziccum AB (publ) announced important findings on an increase in mRNA drug activity after LaminarPace treatment and the investigations of the potential mechanisms behind this effect, including the development of a new, unique analytical method to generate further proof for this effect.

#### Significant events during Q1 2024

- **Successful outcomes of LaminarPace™ Feasibility study with Biotech partner**

On January 10, the company announced that, together with its Biotech Corporation collaboration partner, it has 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 confirmed consistent, positive readouts in the Study's major parameters.

- **Financing secured through directed share issue and rights issue**

On January 22, the company announced that it has carried out a directed share issue of 622,371 shares of approximately MSEK 4.2 to the American professional investor Global Corporate Finance (GCF).

The Directed New Share Issue is part of a long-term financing arrangement with GCF under which Ziccum has the unilateral right to call for additional investments from GCF, in exchange for newly issued shares, totalling approximately MSEK 28 over the next thirty months.

The Board of Directors of Ziccum has also, based on the existing authorisation from the Annual General Meeting, decided to carry out a Rights Issue of units of a maximum of MSEK 10.4.

Considering the Directed New Share Issue, and provided that the Rights Issue is fully subscribed, Ziccum will receive initial proceeds totalling approximately MSEK 13.5.

- **Ziccum has proven excellent mRNA activity in animal study with LaminarPace™ material**

On January 31, the company announced that it has performed an animal study, confirming excellent genetic activity of mRNA/LNP materials treated by LaminarPace™. The in-vivo data confirms the ability of Ziccum's LaminarPace™ technology to transform delicate mRNA/LNP liquid solution into stable dry powder form, now proving the preserved mRNA activity also in animal testing. Assessing the mRNA effect in animal trials is a significant step for Ziccum.

- **Ziccum's CEO Ann Gidner in Fireside Chat on mRNA development hosted by US Force Family Office**

On February 12, the company announced that based on the growing reputation that Ziccum is building in the international pharmaceutical industry, Ziccum CEO Ann Gidner has taken part in a recorded Fireside Chat reviewing the mRNA arena, its tremendous growth, and the shortcomings of the RNA/LNP technology which can be addressed by treatment with the Ziccum technology LaminarPace™.

- **Ziccum announces outcome in rights issue**

On February 16, the company announced the outcome of the rights issue of units, consisting of shares and warrants, which ended on 14 February 2024 (the "Rights Issue"). The Rights Issue has been subscribed to a total of approximately 61.5 percent, of which approximately 58.6 percent was subscribed with unit rights and approximately 2.9 percent was subscribed without unit rights. Through the Rights Issue, Ziccum thus receives approximately mSEK 6.4 before issuing costs.

- **Ziccum reports significant progress in 3D-modelling project with model completion**

On March 1, the company announced that Ziccum AB and project partner Zurich institute of Applied Sciences (ZHAW) have made a milestone review of the LaminarPace™ simulation (LaPaSim) project progress and findings. The complex, dynamic model digitally replicating the LaminarPace™ operation has been created and validated against comprehensive data sets created in physical trial runs and is now reaching a stage close to full completion. Ziccum can now perform trial runs in the 3D simulation environment, enabling the generation of vast amounts of data and in-depth understanding of optimal parameters and scale-out.

- **Ziccum inhalable mRNA/LNP project confirms excellent properties obtained by LaminarPace™**

On March 14, the company announced that it has generated very good findings in the first stages of its collaborative project to engineer inhalable mRNA/LNP together with the University of Copenhagen. The results demonstrate that LaminarPace™ successfully produces inhalable particles with special, desirable properties. The project will continue with in-vivo studies comparing inhalation versus injection.

# CEO statement

## ***Remarkable new technology advancement and keen international interest***

After fully confirming our mRNA capabilities in first quarter 2024, we are happy to build such keen interest for our technology, across the international industry. Now seeing the ability to *increase* the mRNA activity for certain formulations, applying LaminarPace at optimal conditions, is amazing. The potential value of LaminarPace to achieve better and completely new biopharmaceuticals has reached new levels. This could eliminate interest for any tentative competing solutions.

### ***Proving LaminarPace for mRNA/LNP – even increasing protein expression***

While the LaminarPace technology has been successfully applied for all kinds of fragile, demanding biopharmaceuticals - proteins, peptides, antibodies and more - the current focus of Ziccum is to address the booming field of mRNA in lipid nanoparticle formulation (mRNA/LNP). This is no small feat. The amount of data generated in a short timeframe 2023/24 is rewarding, especially as every data set is positive; in a completely new field one could expect various outcomes. The first animal study performed gave very clear, good preservation of mRNA activity for LaminarPace material.

In addition to partnered trials during spring, Ziccum spent important efforts generating further mRNA data, optimizing performance both in pilot scale trials and in the 3D-modelling performed in parallel. In this work, we have been intrigued to see not only well preserved but also *increased* mRNA activity, in terms of protein expression in live cells. This triggered more investigation, and we are delighted to announce both the confirmation of this effect, and the continued work to understand the mechanisms behind it. We are thrilled to investigate this further.

### ***Unique value creation for industry leading partners***

We now have repeated external validations from reputable industry players. Also, we have reached a stage where the world's largest pharmaceutical corporations are approaching Ziccum to learn more - a unique situation for a company our size. While it is very rewarding to see the industry interest, a lot of effort of course remains to get widespread industry recognition. Ziccum is not spending the marketing budgets of large corporations. But with hard work and using a significant industry network, we are already reaching out to key stakeholders and generating keen interest on a global scale.

While we have very good results in our partnered studies, with validation by world leading corporations, the current Big Pharma II partner has chosen not to proceed at the present time, having many competing priorities. This is well in line with the Ziccum strategy, where a pipeline of many collaborations will be needed considering the conservative approach in pharmaceutical industry – and as we have the great benefit of a technology platform. We are delighted to have signed with ReCode Therapeutics, especially as this is an mRNA pioneer, also working at the pharmaceutical forefront and open to new technology. We keep adding advanced dialogues to our portfolio. Obviously, having an even stronger potential value proposition, increasing mRNA activity in new therapies or vaccines, industry interest can be fuelled further.

### ***Progressing with more convincing data***

The Masterplan project work is intense. In addition to the studies in live cells, resulting in the new findings of higher mRNA activity, we are planning for further animal data. The inhalation studies with Copenhagen University are reconciled into a new format, to ensure timely delivery from our partner. We are excited to see the outcome. Old drying methods like lyophilization can rarely be applied to biologics at all, and could never give fine, tailor-made

particles applicable by inhalation. For LNP formulations, inhalation has been considered impossible by industry – until LaminarPace was applied.

In addition to the animal studies proving mRNA activity, we are also progressing towards next level studies, to assess the immune response in animals.

### ***LaminarPace development continues***

The development of the LaminarPace rig continues with a keen focus having secured further partnerships with leading expertise. A main topic is the continuous product outtake, which will be key to high capacity. This work is strongly accelerated, using our 3D model to assess configurations quickly and easily.

During the quarter we secured significant intellectual property (IP) protection. We have progressed our patent applications to international PCT stage and added a high number of patent claims for all three fields, thanks to the high pace of internal trials. This is creating a strong, multilayered protection for Ziccum. Based on the investigations of LaminarPace giving higher mRNA activity, we may have the basis for further patent protection.

### ***Developing Ziccum and planning ahead***

To ensure the company's financials for its ambitious growth plans while balancing low expenditures, to serve shareholders' best interest, the company board of directors and management are assessing options for the company's capital needs ahead. Without increasing costs, we have been able to recruit two new, talented colleagues to the international Ziccum team, strengthening our analytical, financing and business capabilities: most happy to welcome Christo Vassilev and Ilkim Atmaca.

We have very interesting results ahead. Let me thank everyone involved for such valuable efforts, give a warm welcome to new board members and my appreciation to partners, owners and investors for continued support. Looking forward to next steps together!

*Lund, August 30<sup>th</sup>, 2024*

Ann Gidner



## mRNA Activity increase potential with LaminarPace™

In Ziccum's Master Plan work, several different lipid nanoparticle (LNP) formulations for mRNA have been tested for optimization during spring 2024. For certain lipid formulations a special effect has been observed, where the potency of the mRNA is not only preserved, but significantly increased after LaminarPace treatment. The effect is studied by measuring protein expression in living cells treated with the mRNA samples.

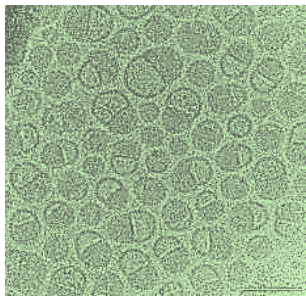
The studies so far suggest that material produced with the LaminarPace technology yields nanoparticles with certain structural properties that may be highly advantageous for mRNA uptake and translation. To understand the mechanism underlying the high potency of LaminarPace-produced material, Ziccum has developed a specific, proprietary analytical method to study nanoparticle (mRNA/LNP) trafficking from the cellular uptake to protein expression.

The next step is to apply this new analytical tool for continued investigation of the increase mechanism, with the aim of creating a clear explanation for the effect taking place.

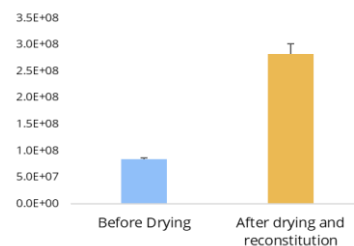
It should be noted that the current effect is noted directly after LaminarPace processing, while the long-term effects remain to be studied. Consequently, further stability testing is required.

The industrial value of increased mRNA activity as a consequence of LaminarPace processing can potentially be significant for several reasons.

- **Cost:** If this increase in effectiveness can be translated into lower mRNA drug and vaccine doses, the consumption of very expensive mRNA substances can be reduced.
- **Dose barrier:** The current LNP formulations which have enabled vaccines and therapies based on mRNA have a limitation regarding mRNA content. With increased activity through LaminarPace processing, it may be possible to break these barriers and create more efficient new treatments.



*Figure 1: Cryogenic TEM microscopy picture of LaminarPace-dried material*



*Figure 2: Protein expression by mRNA before and after LaminarPace treatment*

# Ziccum at a glance

## Ziccum is developing LaminarPace™, a unique formulation and drying technology 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, in combination with specific formulation knowledge, LaminarPace™ 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.

### Value creation by LaminarPace™

Conversion of delicate biopharmaceuticals from liquid to solid state creates robust and easy-to-handle powders with high-quality properties, accounting for significant value creation potential not only by limiting costs, but also by creating entirely new avenues for revenue generation.

#### • Thermostability

Fragile biopharmaceuticals that require cryogenic handling can instead be handled at room or refrigerator temperature, resulting in very significant cost savings. Facilitated shipping and storage prevents the spoilage of otherwise perfectly viable vaccines or biologics and eliminates the need for excessively large-scale manufacturing.

#### • Sustainability

Avoiding complicated and energy-intensive cryogenic handling drastically reduces the carbon footprint of pharmaceutical products or vaccine campaigns.

#### • Drug product cost

Robust dry powders where molecules do not disintegrate from light shaking or handling, will enable addressing

completely new patient indications where biopharmaceuticals previously were too costly.

#### • Novel drug administration

Well-defined, adequate powder characteristics and particle properties make new routes of administration such as inhalation possible.

#### • Product yield

A gentler manufacturing process reduces production losses and ensures higher yields already in the production.

#### • Operational expenses

LaminarPace™ also reduces production costs significantly compared to alternative drying methods; it uses less energy as well as reduces staffing needs.

### History

The LaminarPace™ technology was invented by Dr Per Gerde at Karolinska Institute, Stockholm. It was initially developed by Inhalation Sciences Sweden AB (publ) to generate small amounts of micronized material for inhalation purposes. However, the many additional high-potential areas the technology could be applied to soon became apparent, and for that reason, Inhalation Sciences carried out a spin-out of LaminarPace™ into a subsidiary, Ziccum AB, which since 2017 has been developing and commercializing the technology independently.

### Vision

Ziccum's vision is to enable new biological treatments for patient needs globally, by making drug formulation, biopharmaceutical processing, product transport and patient administration efficient and functional enough for successful treatments.

### Several patented technologies and concepts

Large values lie in the scientific knowledge, the developed process, know-how and the equipment built by Ziccum. The Company has a well-developed IP strategy that works broadly to protect this value and by protecting the Company's position in the market from competitors and competing technologies. The Company has filed 3 patent applications during 2023.

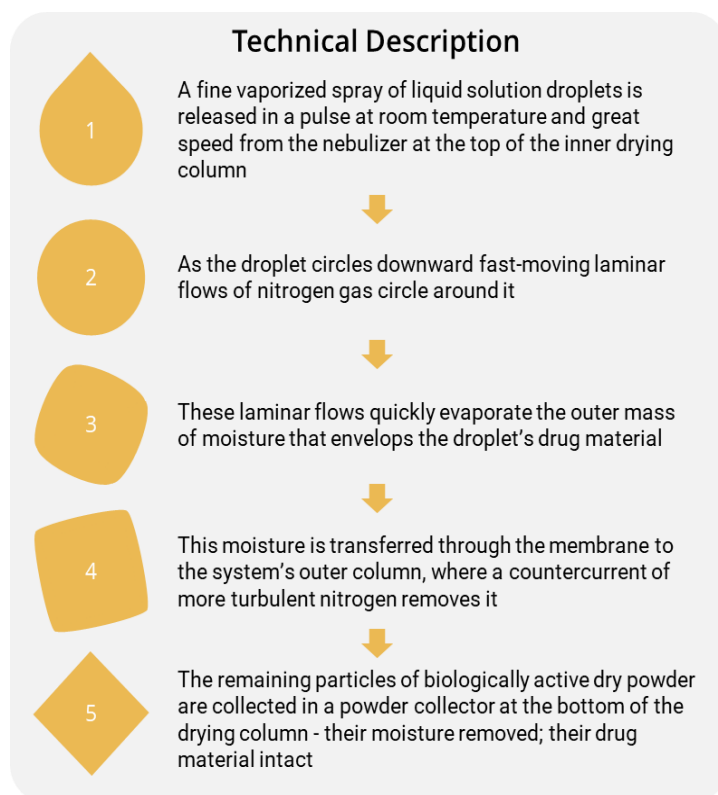


## Technical Description of LaminarPace™

Ziccum’s technology, LaminarPace™, creates an efficient drying process by generating mass transfer, rather than heat transfer. This happens directly after evaporation and removes the need for elevated temperatures. Mass transfer is a highly efficient drying method.

By reducing drying stress to the active ingredient, LaminarPace™ uniquely enables particle-engineered, thermostable dry powder biopharmaceuticals which can be easily handled and transported and are highly suitable for novel administration routes. Our optimization tests demonstrate that following drying less than 1% of absolute humidity is left in the product.

Ziccum has its own inhouse development and research ongoing within the area of thermostable, dry-formulated mRNA/LNPs. The company has made significant strategic investment in specialist mRNA/LNP systems and offers premium partnership and development opportunities based on the platform.



### Outlook

Ziccum’s project portfolio is based on the proprietary technology and methodology. The company’s overall objective is to enter into license agreements to industrialize and commercialize the technology in collaboration with pharmaceutical and biotechnology companies.

The path to licensing agreements goes through evaluation agreements, where LaminarPace™ functionality and capacity are evaluated together with a partner. If successful, the ambition is to continue to a negotiation regarding a license agreement. Primarily for a specific project or vaccine.

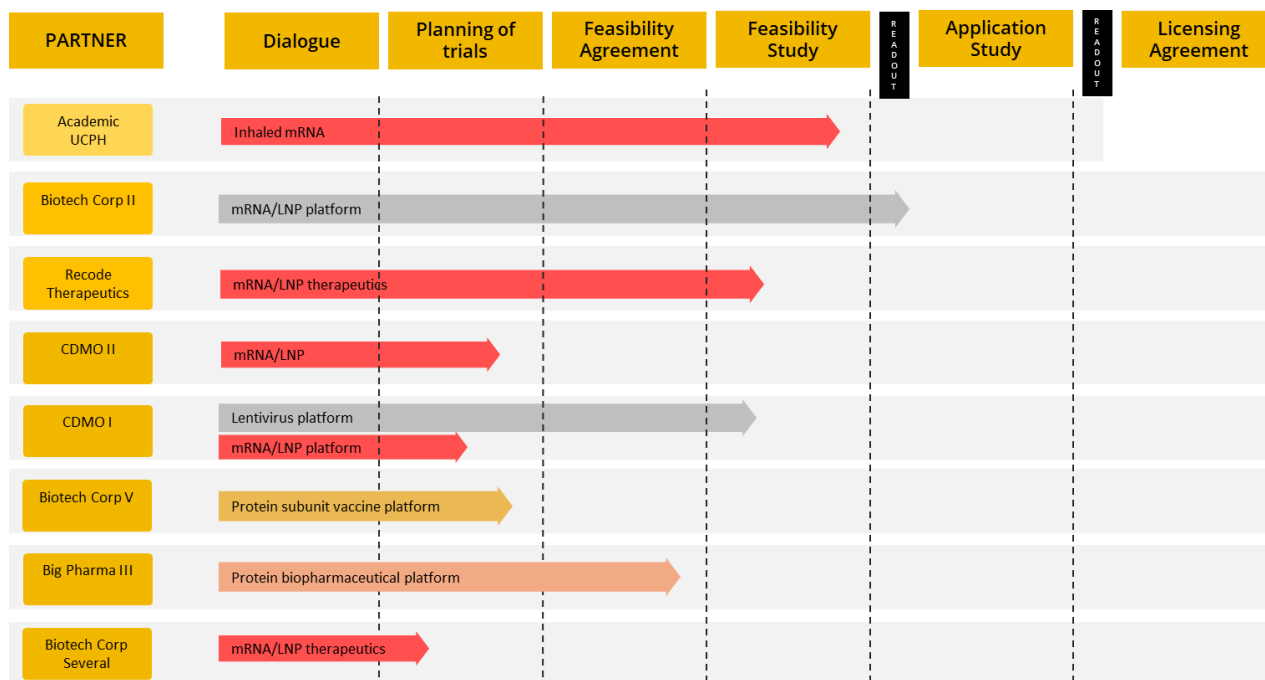
A prerequisite for being a relevant and attractive licensing partner is to be able to describe an industrial version of LaminarPace™ and make it probable that the technology is suitable for upscaling and GMP production. Therefore, Ziccum conducts its own development projects where important components in LaminarPace™ are developed and adapted to industrial requirements. Ziccum is carrying out intensive work on developing 3D modelling, and ultimately a Digital Twin, of LaminarPace™ in partnership with the ICP Institute of Computational Physics team at the Zurich University of Applied Science’s School of Engineering (ZHAW.) The 3D modelling is being used to optimize LaminarPace™

design, exploring optimal capacity loads and increasing the repeatability of outcomes. It will be a valuable enabler of tech transfer and integration into existing pharmaceutical production chains. Another priority area is applications for external and non-dilutive funding for further development of the technology. Ziccum actively monitors announcements that suit the Company’s area of operation and technical phase.

### Ziccum project portfolio overview

Project Portfolio overview The Ziccum pipeline of external projects is depicted in a portfolio overview. This gives a general representation of the key steps towards the desired commercialization by entering into license agreements, licensing the LaminarPace™ technology for specific applications, and the status of each project. The actual progress in a specific project may proceed via alternative or additional steps, and the timeline varies greatly depending on the resulting read-outs and the counterpart preferences.

Pharmaceutical development in general is subject to very strict confidentiality, and certain collaborations are given without partner name publication, until name disclosure is possible. The company also pursues earlier dialogues with other counterparts in on-going business development efforts, not displayed in the overview.



Project portfolio overview as of August 2024

\* The text in the arrow represents the technology platform.

**Business model**

Ziccum’s business model is based on partnering and co-development with biotech and pharmaceutical companies. LaminarPace™ is developed to be an integrated part of the commercial supply chain of biological pharmaceutical products, with a particular focus on vaccines and mRNA-based products.

The business model rests on the following focus areas:

- An active partnering agenda to create a substantial pipeline of industrial dialogues.
- Development responsibility for the LaminarPace™ unit and process development.
- Development and optimization of quality attributes and scale-out.
- Continuous regulatory assessment to prepare for industrialization.

*Ziccum technology licensing business model*

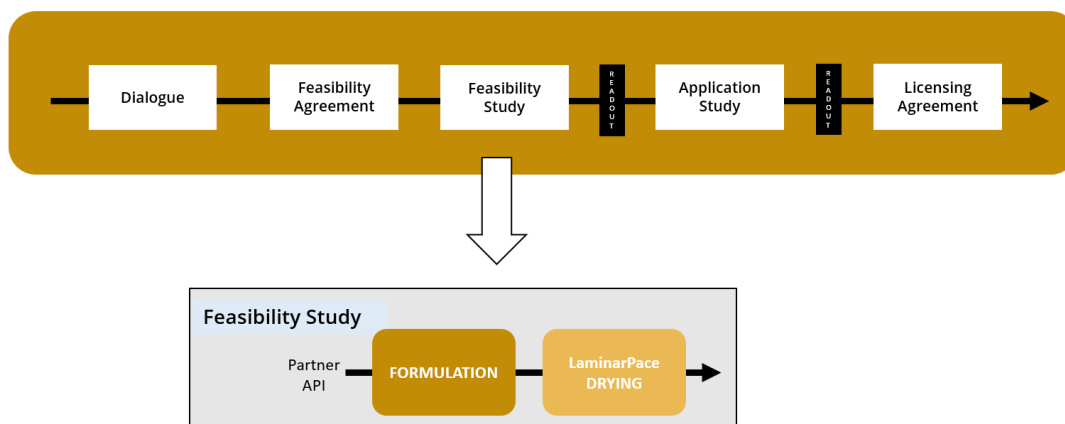
In the early project phases revenues are generated by paid feasibility studies, agreement signing fees, milestone payments for R&D activities and license fees for exclusive evaluation periods. At a mature

commercial stage, revenues will primarily be earned through royalty payments from licensees – a standard revenue model for pharmaceutical industry.

Ziccum’s business and revenue models are dependent on a strong IP position. The IP strategy rests on two pillars: Patents and Trade secrets.

The basic principles of LaminarPace™ are protected by an approved Patent family providing an important basis for customer interaction and R&D activities and a fundament for out-licensing. The patent portfolio is currently built to include several layers of patent protection, including general technical improvements and features as well as specific use areas and product classes, enabling a strong and long-term patent position supporting a long term out-licensing revenue stream.

Trade secrets are well defined pieces of operational knowledge, such as the optimal drying conditions for each specific product.



## Market and market targeting

The market for biologics and vaccine manufacturing is very significant and has a renewed emphasis with the covid-19 pandemic, having created keen awareness of the importance of vaccines not only within research organisations and from healthcare authorities, but in every segment of the industry and in the public, globally. The Covid-19 pandemic created an enormous focus on developing a vaccine urgently and highlighted the need for worldwide distribution.

Thanks to very intense efforts from large industry players, it was possible to develop the new mRNA in LNP formulation for Covid-19 vaccination in a short timeframe. However, as now commonly known, these new mRNA vaccines require cryogenic handling all throughout the distribution chain, meaning storage and handling at -80°C. This poses a number of logistical and handling issues. In this situation, the Ziccum offering to enable powder-form thermostable biologics and vaccines should be of great interest.

The freeze-drying technique for drugs, established and developed since many decades, still has only succeeded in very limited trials to generate dry mRNA/LNP – and the product still requires special handling. Another technique gaining ground in pharmaceutical processing is spray-drying by heating – but there, no known attempts have succeeded in generating dry material from mRNA/LNP. Hence, the LaminarPace™ ability to dry LNP formulations may be of great importance.

The LaminarPace™ technology lends itself to biopharmaceutical ingredients in general, but as of now the company has decided to focus on vaccines, and three specific vaccine platforms:

- mRNA/LNP vaccine platform
- Viral vector (adenovirus) platform
- Subunit vaccine (adjuvanted) platform



For the total vaccine Western world sales market value, estimates for the top vaccine indications are as follows; In 2023 predicted to \$63 billion, also after a slight decrease from record Covid-19 numbers; to be followed by \$58-72 billion per year in 2024-2027, then rising towards \$79 billion in 2028\*.

The corresponding annual market value for our three focus vaccine platforms are \$38-52 billion for the years 2024-28. With a licensing business model, estimates of the addressable market size for our three focus vaccine platforms, considering a 1% royalty on entire vaccine sales can be made. Based on this, the total drying technology licensing market size may be predicted to MUSD 380 – 520\*.

*\*Estimates based on **Global Data Intelligence** data from May 2023.*

# Financial overview

## Comprehensive result

Comprehensive result for the quarter was kSEK -7,647 (-4,965), which corresponds to a decrease of kSEK -2,558. Earnings per share, based on number of shares at end of the quarter, totalled SEK -0.26 (-0.36).

In the period, the comprehensive result was kSEK -11,604 (-9,837), which corresponds to a decrease of kSEK 1,645. Earnings per share, based on number of shares at end of the period, totalled SEK -0.50 (-0.36).

## Revenue & other income

Revenue from client projects consisting of paid Feasibility studies during the quarter amounted to kSEK 59 (1,138), and other income totalled kSEK 308 (638). Total revenue and other income thus amounted to kSEK 367 (1,776).

Revenue from client projects consisting of paid Feasibility studies during the period amounted to kSEK 2,947 (1,138), and other income totalled kSEK 638 (1,276). Total revenue and other income thus amounted to kSEK 3,615 (2,414).

## Expenses

Operating expenses for the quarter totalled kSEK 7,985 (6,836), an increase of kSEK 1,149. Other external costs increased by kSEK 570 and amounted to kSEK 3,942 (3,372). Personnel costs increased by kSEK 569 compared to the previous year and amounted to kSEK 3,729 (3,160).

Operating expenses for the period amounted to SEK 15,254 (12,409) thousand, an increase of kSEK 2,847. Other external costs amounted to kSEK 7,595 (5,865), an increase of kSEK 1,733. Personnel costs increased by kSEK 1,101 and amounted to kSEK 7,039 (5,938).

## Investments

The company's net capital expenditure during the quarter amounted to kSEK 350 (0).

## Cash flow

Total shareholders' equity at end of the quarter was kSEK 8,166 (19,683) after taking the result for the quarter into account. Equity per share (basic and diluted) based on the number of outstanding shares at the end of the quarter was SEK 0.53 (1.43). The company's equity ratio at the end of the quarter was 52 (80) percent.

Cash and cash equivalents at the end of the quarter amounted to kSEK 4,092 (14,583).

Cash flow for the quarter was kSEK -4,967 (-4,440). Cash flow from financing activities totalled kSEK 2,650 (0).

Cash flow for the period amounted to kSEK 1,098 (-8,368). Cash flow from financing activities during the period amounted to kSEK 10,960 (0).

## Organization

The number of employees at the end of the quarter was 10 (9).

## Share capital

Share capital at the end of the quarter was SEK 2,562,043 and the total number of shares was 15,372,258 with a par value of SEK 0.17.



# Other information

## Risks factors

A pharmaceutical development company such as Ziccum is exposed to significant operational and financial risk. Ziccum's significant risk and uncertainty factors include business-related risks as well as risks related to market and technology development, patents, competitors and future financing. The company's value is largely dependent on the success of the company's development projects and the ability to enter into partnerships, and that LaminarPace™ receives broad market acceptance. Many factors can have a negative impact on the probability of commercial success, including the risk entailed by the company's current development stage and risk of capital shortfall. During the quarter no significant changes with respect to these risks or uncertainty factors have arisen. Ziccum is in a commercialization phase and there is a risk that the company will not reach sufficient profitability. As the company is in growth stage and working to achieve a positive cash flow, the company needs access to capital before its cash flow becomes positive.

## Auditor's review

This report has not been reviewed by the Company's auditor.

## Liquidity and financing

The company's cash and cash equivalents at the end of the quarter amounted to kSEK 4,092. The company has revenue generating evaluation agreements in place, which resulted in MSEK 2.9 in revenue during Q1 2024. The company has been granted a Eurostars grant in 2022 and expected payments during 2024 are equal to kSEK 872.

On 25 June 2024, the company announced that its Board of Directors has resolved on carrying out a directed share issue in the amount of approximately MSEK 2,7 and corresponding to 538,928 shares to GCF, a US-based professional investor, pursuant to a long-term financing agreement between Ziccum and GCF announced on the 22 January 2024. The execution of this second investment tranche as per the terms of the financing agreement secures Ziccum's near-term capital needs and leaves the company with additional MSEK 25 remaining at the company's disposal over the next twenty-two months. The remaining facility related to the financing agreement with GCF secures the company's capital needs through the end of 2024.

The company's board and management are continuously assessing Ziccum's capital needs and options to secure the company's financing and serve shareholders' best interests.

## Share count

The number of shares at the end of the quarter amounts to 15,372,258. All shares are of the same class and have the same voting right. In October 2018, the share was

listed on the Spotlight Stock Market, and on December 1, 2020, the company moved and was listed on Nasdaq First North Growth Market. The share is traded under the ticker symbol ZICC and ISIN code SE0011415595. First North is Nasdaq's European emerging market intended for small, growing businesses, with a less extensive rulebook than the main market.

## Legal disclaimer

This report contains forward-looking statements that constitute subjective estimates and forecasts about the future. Assessments about the future are only valid on the date they are made and are, by their nature, similar to research and development work in the biotechnology field, associated with risk and uncertainty. Considering this, actual outcomes may differ substantially from what is described in this report.

## Transactions with related parties

During the quarter fees charged by related parties were invoiced as follows: The Chairman of the Board, Fredrik Sjövall, has through Axelero AB, invoiced fees amounting to 3 kSEK for business development. Ziccum purchased analytical services from Viskär AB, a company owned by board member Per Gerde, totalling 31 kSEK. All related party transactions took place on market terms. Board fees have been paid in accordance with resolutions at the Annual General Meeting.

## Financial calendar

- Annual Report 2023: 15 April 2024
- Interim Report Q1 2024: 29 April 2024
- Annual General Meeting: 29 May 2024
- Interim Report Q2 2024: 30 August 2024
- Interim Report Q3 2024: 29 October 2024
- Year-end Report Q4 2024: 29 January 2025

Financial reports are available on Ziccum's website: <https://ziccum.com/investors/financial-reports/>

## Certified Adviser

Ziccum's Certified Adviser on First North is Carnegie Investment Bank AB (publ).  
Phone: +46 (0)73 856 42 65.  
E-mail: [certifiedadviser@carnegie.se](mailto:certifiedadviser@carnegie.se)

## For further information, please contact:

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**Certification by the Board of Directors and the Chief Executive Officer**

The Board of Directors and the Chief Executive Officer of Ziccum AB (publ) provide their assurance that this interim report provides a true and fair overview of the development of the Company's business activities, financial position and results of operations and describes significant risks and uncertainties facing the Company.

Lund, August 30, 2024

Jonas Ekblom  
*Chairman of the board*

Mikaela Bruhammar  
*Board member*

Andreas Pettersson Rohman  
*Board member*

Per Gerde  
*Board member*

Valentina Screpanti Sundquist  
*Board member*

Ann Gidner  
*CEO*

# Financial statements

## Income statement summary

	Apr-Jun	Apr-Jun	Jan-Jun	Jan-Jun	Jan-Dec
SEK (000)	2024	2023	2024	2023	2023
Net sales	59	1,138	2,947	1,138	3,747
Other income	308	638	668	1,276	2,571
<b>Operating income</b>	<b>367</b>	<b>1,776</b>	<b>3,615</b>	<b>2,414</b>	<b>6,318</b>
<b>Operating Expenses</b>					
Other external costs	-3,942	-3,372	-7,595	-5,865	-13,143
Personnel costs	-3,729	-3,160	-7,039	-5,938	-13,517
Depreciation of tangible and intangible assets	-314	-304	-620	-606	-1,218
<b>Operating result</b>	<b>-7,618</b>	<b>-5,060</b>	<b>-11,639</b>	<b>-9,995</b>	<b>-21,560</b>
<b>Result from financial items</b>					
Financial net	-29	95	35	158	148
<b>Result after financial items</b>	<b>-7,647</b>	<b>-4,965</b>	<b>-11,604</b>	<b>-9,837</b>	<b>-21,412</b>
<b>RESULT FOR THE PERIOD</b>	<b>-7,647</b>	<b>-4,965</b>	<b>-11,604</b>	<b>-9,837</b>	<b>-21,412</b>
Earnings per share before and after dilution (SEK)	-0.50	-0.36	-0.75	-0.71	-1.55



## Balance sheet

SEK (000)	Not	Jun 2024	Jun 2023	Dec 2023
<b>ASSETS</b>				
<i>Non-current assets</i>				
<i>Intangible assets</i>				
Patents, licenses, trademarks, and similar rights		241	497	369
<i>Tangible assets</i>				
Equipment & tools		7,277	7,823	7,420
<b>Total non-current assets</b>		<b>7,518</b>	<b>8,320</b>	<b>7,789</b>
<i>Current assets</i>				
<i>Short-term receivables</i>				
Other receivables		2,989	364	3,239
Prepaid expenses & accrued income		1,192	1,368	950
<b>Total short-term receivables</b>		<b>4,181</b>	<b>1,732</b>	<b>4,189</b>
Cash & cash equivalents		4,092	14,583	2,994
<b>Total current assets</b>		<b>8,273</b>	<b>16,315</b>	<b>7,183</b>
<b>TOTAL ASSETS</b>		<b>15,791</b>	<b>24,635</b>	<b>14,972</b>
<b>EQUITY AND LIABILITIES</b>				
<b>Equity</b>				
<i>Restricted equity</i>				
Share capital	3	2,562	2,301	2,301
Unregistered share capital		90	0	0
<b>Total restricted equity</b>		<b>2,652</b>	<b>2,301</b>	<b>2,301</b>
<i>Unrestricted equity</i>				
Share premium fund		116,009	105,400	105,400
Retained earnings		-98,891	-78,281	-77,705
Result of the period		-11,604	-9,837	-21,412
<b>Total unrestricted capital</b>		<b>5,514</b>	<b>17,382</b>	<b>6,283</b>
<b>Total equity</b>		<b>8,166</b>	<b>19,683</b>	<b>8,584</b>
<b>Liabilities</b>				
<i>Long-term liabilities</i>				
Loans		0	571	286
<i>Short-term liabilities</i>				
Account payables		2,341	1,262	853
Short-term loans		571	571	571
Other short-term debt		410	311	725
Accrued expenses and deferred income		4,303	2,237	3,953
<b>Total short-term debt</b>		<b>7,625</b>	<b>4,381</b>	<b>6,102</b>
<b>TOTAL EQUITY &amp; LIABILITIES</b>		<b>15,791</b>	<b>24,635</b>	<b>14,972</b>

## Change in equity

SEK (000)	Restricted equity		Unrestricted equity			Total equity
	Share capital	Unregistered Share Capital	Share premium fund	Retained earnings	Result of the period	
Opening balance 2023-01-01	2,301	0	105,400	-49,612	-28,788	29,301
Appropriations of net result				-28,788	28,788	0
Result of the period					-21,412	-21,412
<i>Transactions with shareholders</i>						
Share issue						0
Share issue costs						0
Share related remunerations				695		695
Closing balance 2023-12-31	2,301	0	105,400	-77,705	-21,412	8,584
<b>Opening balance 2024-01-01</b>	<b>2,301</b>	<b>0</b>	<b>105,400</b>	<b>-77,705</b>	<b>-21,412</b>	<b>8,584</b>
Appropriations of net result				-21,412	21,412	0
Result of the period					-11,604	-11,604
<b><i>Transactions with shareholders</i></b>						
Share issue	261		10,389			13,300
Ongoing new share issue		90**	2,560			
Share issue costs			-2,340*			-2,340
Share related remunerations				226		226
<b>Closing balance 2024-06-30</b>	<b>2,562</b>	<b>90</b>	<b>116,009</b>	<b>-98,891</b>	<b>-11,604</b>	<b>8,166</b>

\* The share issue costs include kSEK 1,243 in administration costs for issuing the shares and 1,097 kSEK corresponding to the value of the shares emitted as compensation for the facility commitment from GCF.

\*\* The shares were registered on 10 July 2024 and 538,928 new shares were issued.

## Cash flow statement

<b>SEK (000)</b>	<b>Apr-Jun 2024</b>	<b>Apr-Jun 2023</b>	<b>Jan-Jun 2024</b>	<b>Jan-Jun 2023</b>	<b>Full year 2023</b>
Operating result	-7,618	-5,060	-11,639	-9,995	-21,560
Interest received	22	90	54	180	302
Paid interest	-24	-26	-42	-52	-97
<b><i>Adjustments for items that is not included in the cash flow</i></b>					
Share related remunerations	44	100	226	219	695
Currency exchange	-27	31	24	30	-58
Depreciations & disposals	314	304	620	606	1,218
<b>Cash flow after operating activities before changes in working capital</b>	<b>-7,289</b>	<b>-4,561</b>	<b>-10,757</b>	<b>-9,012</b>	<b>-19,500</b>
<b><i>Cash flow from changes in working capital</i></b>					
Changes in operating receivables	-415	-408	8	-268	-2,725
Changes in operating debt	437	585	1,237	968	2,404
<b>Cash flow after operating activities</b>	<b>-7,267</b>	<b>-4,384</b>	<b>-9,512</b>	<b>-8,312</b>	<b>-19,821</b>
Investing activities	-350	-56	-350	-56	-136
<b>Cash flow after investing activities</b>	<b>-7,617</b>	<b>--56</b>	<b>-9,862</b>	<b>-56</b>	<b>-19,957</b>
<b><i>Financing activities</i></b>					
Share issue (LTI 2018/21)	0	0	0	0	0
Warrants (LTI 2021/24)	0	0	0	0	0
Share issue	2,650	0	13,300	0	0
Share issue costs	0	0	-2,340	0	0
<b>Cash flow from financing activities</b>	<b>2,650</b>	<b>0</b>	<b>10,960</b>	<b>0</b>	<b>0</b>
<b>Change in cash and cash equivalents</b>	<b>-4,967</b>	<b>-4,440</b>	<b>1,098</b>	<b>-8368</b>	<b>-19,957</b>
Cash and cash equivalents at the beginning of the period	9,059	19,023	2,994	22,951	22,951
<b>CASH &amp; CASH EQUIVALENTS AT THE END OF THE PERIOD</b>	<b>4,092</b>	<b>14,583</b>	<b>4,092</b>	<b>14,583</b>	<b>2,994</b>

## Notes

### Note | 1 Accounting standards

Ziccum AB (publ) reports in accordance with the Swedish Annual Accounts Act and the Swedish Accounting Standards Board's general advice BFAR 2012:1 (K3). The company's accounting principles are described in the company's annual report for 2022. Amounts are expressed in kSEK, which in this report refers to thousands of Swedish kronor. Amounts in parentheses refer to comparative figures from the previous year, if nothing else is stated.

Revenue is recognized based on the percentage of work/service completion of which indicates that revenue from performance obligations recognized over a period should be based on the percentage of completion. The method recognizes revenues in proportion to the completeness of the contracted project.

### Note | 2 Pledged assets and contingent liabilities

Pledged assets	March 2024	March 2023
Company mortgages	2,000	2,000

### Note | 3 Changes in equity

Date	Transaction	Number of series B	Share capital	Quota value	Subscription price	Total invested capital (SEK)
5 Apr 2017	Formation	500	50,000	1.00	1.00	50,000
29 May 2017	Share issue	500	50,000	1.00	1.00	50,000
31 Dec 2017	Conditional shareholder contribution*	-	-	-	-	1,996,622
25 Apr 2018	Bond issue	-	400,000	1.00	-	-
27 Apr 2018	Split	2,999,000	-	0.17	-	-
19 Oct 2018	Share issue	3,000,000	500,000	0.17	5.26	15,776,962
14 Jan 2020	Share issue	1,389,385	231,564	0.17	10.00	13,893,850
6 Jul 2020	Share issue	2,216,815	369,469	0.17	17.50	38,794,263
15 Jun 2021	Share issue (LTI 2018/21)	200,000	33,334	0.17	11.00	2,200,000
21 Dec 2021	Share issue	1,199,856	199,976	0.17	11.00	13,198,416
18 Jan 2022	Share issue	2,800,086	466,680	0.17	11.00	30,800,946
22 Jan 2024	Share issues	622,371	103,729	0.17	6.80	4,232,122
27 Feb 2024	Share issues	943,745	157,291	0.17	6.80	6,417,466
<b>Total</b>		<b>15,372,258</b>	<b>2,301,023</b>			<b>127,410,647</b>

In 2017, Inhalation Sciences AB provided a conditional shareholders contribution amounting to 1,996,622 SEK (cash 0.3MSEK and reverse loan arising in connection with the acquisition of intangible assets by the parent company to shareholders contribution amounting to 1.7MSEK)

### Note | 4 Long term incentive programs

On June 30, 2024, the company has four ongoing option programs.

- At the Annual General Meeting on April 27, 2021, it was decided to introduce a long-term incentive program by issuing warrants to the Board of Directors (LTI 2021/2024), as well as a long-term incentive program for the company's employees consisting of employee stock options (LTI 2021:1).
- At the Annual General Meeting on April 28, 2022, it was decided to implement a long-term incentive program for the company's Board of Directors (LTI 2022:1) and employees (LTI 2022:2) consisting of employee stock options.
- The Annual General Meeting held on May 24, 2023, adopted an incentive program (LTI2023:1) of 324,000 employee stock options for certain employees and consultants. The LTI2023:1 program will be awarded during 2023. The AGM furthermore resolved on an issue of not more than 425,801 warrants to ensure delivery of shares to the participants and to hedge costs connected to the program

None of the options entail the right to a dividend.

Based on the existing number of shares and options that is registered in the company as of December 31, 2023, the dilution due to the incentive programs, assuming that all warrants are exercised for new subscription of shares, is approximately 3% of the number of shares and votes.

#### LTI 2021/24

The exercise price per share for LTI 2021/2024 amounts to SEK 28.8 and subscription can take place during the period from 1 May 2024 to 31 May 2024. A total of 46,000 warrants were issued.

#### LTI 2021:1

LTI 2021:1 runs for three years and means that participants are granted employee stock options free of charge that give the right to acquire shares in Ziccum at a subscription price corresponding to the share's quota value. Each employee stock option gives the right to subscribe for a new share in Ziccum, alternatively up to 40% of the number in synthetic options that give the right to cash compensation instead of shares. Each synthetic option entitles the participant to receive a cash payment corresponding to the value of a share at the time of payment.

The options will be expensed as personnel costs over a period of three years, without affecting the company's cash flow. If employee stock options are exercised, LTI 2021:1 will also entail costs in the form of social security contributions.

Social security contributions will be expensed in the income statement during a period of three years. The company intends to hedge the entire cost of social security contributions through an issue of warrants, which may be exercised by a financial intermediary in connection with the exercise of the employee stock options. If the company chooses to implement such hedging measures, the social security contributions will not affect the company's cash flow.

	<b>Number of employee stock options</b>
Opening balance 1 Jan 2023	19,364
Reversed	-4,545
Ending balance 31 Dec 2023	14,819
Opening balance 1 Jan 2024	14,819
<b>Ending balance 30 June 2024</b>	<b>14,819</b>

\*The execution of LTIP 2021:1, initiated after the respective options vested in May 2024 and finalized during the third quarter of 2024 after registration of the newly issued shares with Bolagsverket, accounts for the positive employee stock options balance associated with LTIP 2021:1 in the present quarterly report.

The execution of LTIP 2021:1 has resulted in a quarterly revenue effect of 180 kSEK. The size of the respective revenue effect is attributable primarily to the beneficiaries' decision not to seek cash compensation but to opt for acquiring shares in Ziccum, thus reaffirming confidence in and commitment to Ziccum's future. The rest of the revenue effect is attributable to unrealized social costs in the amount of 32 kSEK in relation to LTIP 2021:1.

#### LTI 2022:1 & LTI 2022:2

LTI 2022:1 (for the Board of directors) and LTI 2022:2 (for the employees) runs for three years and means that participants are granted employee stock options free of charge that give the right to acquire shares in Ziccum at a subscription price corresponding to the share's quota value. Each employee stock option gives the right to subscribe for a new share in Ziccum, alternatively up to 40% of the number in synthetic options that give the right to cash compensation instead of shares. Each synthetic option entitles the participant to receive a cash payment corresponding to the value of a share at the time of payment. The options will be expensed as personnel costs over a period of three years, without affecting the company's cash flow. If employee stock options are exercised, LTI 2022:1 and LTI 2022:2 will also entail costs in the form of social security contributions. Social security contributions will be expensed in the income statement during a period of three years. The company intends to

hedge the entire cost of social security contributions through an issue of warrants, which may be exercised by a financial intermediary in connection with the exercise of the employee stock options. If the company chooses to implement such hedging measures, the social security contributions will not affect the company's cash flow.

<b>Number of employee stock options</b>	<b>2022:1</b>	<b>2022:2</b>	<b>Total</b>
Opening balance 1 Jan 2023	165,000	226,000	391,000
Reversed	-66,000	-15,000	-81,000
Ending balance 31 Dec 2022	99,000	211,000	310,000
Opening balance 1 Jan 2024	99,000	211,000	310,000
Reversed		-33,000	-33,000
<b>Ending balance 30 Jun 2024</b>	<b>99,000</b>	<b>178,000</b>	<b>277,000</b>

\*During 2024, LTI 2022:1 and LTI 2022:2 have affected result with totally 81 kSEK in costs, of which -29 kSEK relates to social security contributions.

#### **LTI 2023:1**

LTI 2023:1 runs for three years and means that participants are granted employee stock options free of charge that give the right to acquire shares in Ziccum at a subscription price corresponding to the share's quota value. Each employee stock option gives the right to subscribe for a new share in Ziccum, alternatively up to 40% of the number in synthetic options that give the right to cash compensation instead of shares. Each synthetic option entitles the participant to receive a cash payment corresponding to the value of a share at the time of payment. The options will be expensed as personnel costs over a period of three years, without affecting the company's cash flow. If employee stock options are exercised, LTI 2023:1 will also entail costs in the form of social security contributions. Social security contributions will be expensed in the income statement during a period of three years. The company intends to hedge the entire cost of social security contributions through an issue of warrants, which may be exercised by a financial intermediary in connection with the exercise of the employee stock options. If the company chooses to implement such hedging measures, the social security contributions will not affect the company's cash flow.

	<b>Number of employee stock options</b>
Opening balance 1 Jan 2023	0
Issued stock options	276,000
<b>Ending balance 31 Dec 2023</b>	<b>276,000</b>
Opening balance 1 Jan 2024	276,000
<b>Ending balance 31 Mar 2024</b>	<b>276,000</b>

\*During 2024, LTI 2023:1 have affected the reporting period result with totally 315 kSEK in costs, of which costs of 57 kSEK relates to social security contributions.

## Note | 5 Definitions of key figures

	Apr-Jun 2024	Apr-Jun 2023	Jan-Jun 2024	Jan-Jun 2023	Full year 2023
<b>Cash flow per share</b>					
Cash flow from the period, KSEK	-4,967	-4,440	1,098	-8,368	-19,957
Average number of shares	14,589,200	13,806,142	14,589,200	13,806,142	13,806,142
<b>Cash flow per share (SEK)</b>	<b>-0.34</b>	<b>-0.32</b>	<b>0.08</b>	<b>-0.61</b>	<b>-1.45</b>

*Cash flow per share is the amount of net cash flows allocated to each share outstanding and is a metric that measures the amount of cash flow generated by a company on a per-share basis.*

<b>Equity per share</b>					
Equity, KSEK	8,166	19,683	8,166	19,683	8,584
Number of shares at the end of the period	15,372,258	13,806,142	15,372,258	13,806,142	13,806,142
<b>Equity per share (SEK)</b>	<b>0.53</b>	<b>1.43</b>	<b>0.53</b>	<b>1.43</b>	<b>0.62</b>

*Equity Per Share is the Company's shareholders equity per common share outstanding Equity per share and represents the net-asset value backing up each share of the company's stock.*

<b>Equity ratio</b>					
Equity, KSEK	8,166	19,683	8,166	19,683	8,584
Total equity & debt, KSEK	15,791	24,635	15,791	24,635	14,972
<b>Equity ratio %</b>	<b>52</b>	<b>80</b>	<b>52</b>	<b>80</b>	<b>57</b>

*\*Equity Ratio is the ratio of Equity to Total Assets.*



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