

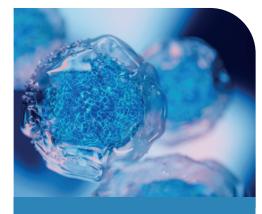
revolutionizing sample processing



AcouTrap 3 was launched at CYTO 2023 with improved design and performance and an updated and intuitive graphical user interface



AcouSort expands its reach to flow cytometry through a new collaboration with a leading Life Science company



Continued expansion in the cell therapy collaboration with a leading global life science company with an order of an evaluation setup



INTERIM REPORT JANUARY 1-JUNE 30, 2023 ACOUSORT AB (PUBL)

# Summary of the interim report

#### SIGNIFICANT EVENTS DURING THE SECOND QUARTER

- On April 3, AcouSort announces that the stem cell therapy project Blue4Therapy has been brought to a highly successful close.
- On April 14, AcouSort announces that the Company has leased an AcouWash system to a Czech research group investigating fish sperm refinement.
- On April 21, AcouSort announces that the Company for the third time has been selected by the EIC for participation in a leading medical exhibition.
- On April 26, AcouSort announces that the prestigious US
   National Institute of Health (NIH) has ordered an AcouWash 2
   system, thereby becoming a returning customer. In 2017, the
   NIH purchased the first AcouWash prototype for the cell wash
   process in a new monitoring method for cancer treatments.
- On May 15, AcouSort announces that the Company expands its reach through a new collaboration with a leading Life Science company developing flow cytometers.
- On May 22, AcouSort announces the launch of the next generation AcouTrap at CYTO 2023. The new AcouTrap 3 system comes with improved design and an updated and intuitive software graphical user interface. AcouSort also presents two new trapping units with improved performance.
- On June 7, AcouSort announces that the Company has delivered a modified AcouWash 2 system to Lund University, where it will be used to separate circulating tumor cells from white blood cells.
- On June 16, AcouSort announces the recruitment of Henrik Johansson as Director of Research and Technology.

#### SIGNIFICANT EVENTS AFTER THE END OF THE PERIOD

 On July 5, AcouSort announces that the cell therapy collaboration with a leading global life science company continues to expand. The partnering company has ordered an evaluation setup with the aim to in more detail explore the robustness and adaptability of AcouSort's AcouWash technology.

#### FINANCIAL SUMMARY

The "Company" or "AcouSort" refers to AcouSort AB (publ) with corporate registration number 556824–1037.

#### Second quarter 2023 for the Group

- Net sales amounted to SEK 1.816.000 (715.000)
- Result before tax amounted to SEK -3,193,000 (-4,055,000)
- Result per share\* was SEK -0.24 (-0.31)
- Equity ratio\*\* amounted to 58% (88%) on June 30, 2023

#### Second guarter 2023 for the Parent company

- Net sales amounted to SEK 1,816,000 (715,000)
- Result before tax amounted to SEK -2,406,000 (-4,030,000)
- Result per share\* was SEK -0.18 (-0.31)
- Equity ratio\*\* amounted to 63% (88%) on June 30, 2023
- Earnings/loss per share: Profit/loss for the period divided by 13,202,285 shares. In the year-earlier period, the company had 13,202,285 registered shares.

\*\* Equity ratio: Equity divided by total capital.

#### **NOTE TO THE READER**

Amounts in parentheses refer to corresponding period of the previous year.

This document is essentially a translation of the Swedish language version. In the event of any discrepancies between this translation and the original Swedish document, the latter shall be deemed correct.



# AcouSort at a glance

AcouSort is an innovative medical technology company developing critical components for instrumentation used in the diagnostics, analytics, and cell therapy processing markets. AcouSort's components allow for automated refinement of biological samples such as blood or cell preparations, providing instrumentation manufacturers with a state-of-the-art ability to integrate sample processing steps that traditionally have to be performed manually.

#### **OUR VISION & MISSION**

Our vision is to improve healthcare impact and save lives across the globe by enabling more and better healthcare, faster! Our mission is to lead and drive the development and implementation of a new gold standard for automated sample preparation in clinical research, diagnostics and therapeutics. By providing solutions that radically change the way healthcare is provided today, we remove the bottlenecks for tomorrow's standard of care.

#### To realize our vision, AcouSort's main goals are:

- Support biomarker discovery and diagnostic assay development for critically ill patients with high sense of urgency
- Enable significant growth of the point-of-care market across healthcare sectors
- Streamline and automate cell processing to allow cell therapeutics to become broadly accessible
- Stay in the forefront of the acoustofluidics technology by continuously engaging in R&D activities

By pursuing these goals, AcouSort aims to become the leading supplier of acoustofluidic sample preparation solutions for the healthcare market.

#### **OUR STRATEGY & BUSINESS CONCEPT**

AcouSort's strategy is to use our innovative technology to revolutionize today's healthcare by providing a solution to automate and integrate sample processing steps, allowing for a new generation of medical devices to be developed. Through collaborations with leading Life Science companies our integrated technology will eliminate manual handling steps while saving time, money, and ultimately – lives.

Our commercialization strategy builds on our validated OEM business model offering sample preparation modules and solutions to providers of Life Science research instrumentation, diagnostic equipment, and therapeutic systems. Through close collaborations we develop customized solutions tailored to our partner's needs. AcouSort holds an ISO13485 certificate for the design, development, and manufacturing of components for the Medical Device industry.

To simplify evaluation of the technology, we have integrated our OEM components into user-friendly benchtop systems serving as innovation platforms for our partners. The systems are also used for sample preparation within research and assay development.

#### **OUR TECHNOLOGY**

AcouSort's core technology is acoustofluidics – a combination of sound waves (acousto) and microfluidics. Microfluidics allow for precise control of liquids while acoustics gives us the ability to move particles of different biophysical properties. By combining the two technologies, we have the unique ability to move target cell types from one liquid to another. This allows us to fractionate the different components in a blood sample, isolate extracellular vesicles or wash cells to remove contaminants, without having any physical contact with the sample. As the technology is gentle and rapid, it provides a competitive alternative to conventional processing techniques such as centrifugation or filtration. By using acoustofluidics, AcouSort can streamline sample processing for a wide range of applications – from biomarker discovery in basic research, to preparation of clinical blood samples prior to analysis, or sample purification in cell therapy manufacturing.

AcouSort's core technology builds on more than 20 years of acoustofluidic research and development headed by Thomas Laurell, professor at Lund University at the Department of Biomedical Engineering and co-founder and board member of AcouSort.

#### AcouSort through the years

# **2010**• AcouSori

#### • AcouSort is founded

#### 2016

 Transformed from a project-based company to a fully functional organization

#### 2017

 Listed at Aktietorget (now Spotlight)

#### 201

- Distribution and license agreement with IL/ Werfen
- AcouSort Inc. founded
   AcouWash launched
- AcouTrap 2 launched

#### 201

 First systems placed in Japan and Korea

#### 2020

- Changed trading venue to Nasdaq First North Growth Market
- Received ISO13485
   certification

#### 2021

AcouWash 2 launched
 First OEM product
 AcouPlasmaOptical
 launched

#### 2022

 Increased commercial focus targeting the cell therapy market

#### 202

- EUR 12.5M in EU funding for the
   Assu Sama prais
- AcouSome project

   AcouTrap 3 launched

#### **CEO COMMENTS**

# Strengthened positions across the board

AcouSort's positive development continued in the second quarter of 2023 with strengthened positions in virtually all aspects of our business – diagnostics, cell therapy, and innovation. In the quarter we also saw the rise of potentially new areas of interest. Total income in the quarter amounted to SEK 3.36 (1.81) million. For the first six months of the year, total income amounted to SEK 7.21 (4.50) million, corresponding to a growth of 60%.

#### **DIAGNOSTICS - SUCCESSFUL COLLABORATIONS**

Successful collaboration with NIH. In the second quarter of 2023, the prestigious US National Institutes of Health (NIH) became a returning customer to AcouSort with an order for the new AcouWash 2 system. The NIH researchers are developing a novel monitoring method for cancer treatments where they successfully evaluated the AcouWash technology to replace the centrifugation steps required. To continue the work NIH has now purchased the AcouWash 2 system for further optimization of the new monitoring protocol. This sale generated revenues of USD 50,000.

Our successful collaboration with the American National Cancer Institute at NIH is extremely encouraging and marks an important step towards future integration of our technology in cancer treatment applications. It also validates our strategy to use benchtop systems as innovation platforms for customer projects.

Continued strategic collaboration with academia. In the quarter, we continued our successful collaboration with Lund University through an order for the development of a modified AcouWash 2 system, custom-designed for high performance separation of circulating tumor cells (CTC) from white blood cells. The project has generated revenues of SEK 500,000 in 2023. Partnering with academia is very important to AcouSort as collaborations with leading scientists pushes us to continuously expand the space of what our technology can achieve.

# CELL THERAPY – EXPANDING COLLABORATION WITH A LEADING GLOBAL LIFE SCIENCE COMPANY

In January, we reported that our collaboration with a global life science company active within cell therapy had been extended

with a second phase. The second phase of the collaboration has now been brought to a successful close and the partnering company has ordered an evaluation setup to internally assess the robustness of our technology. The new activity will generate additional revenues of EUR 50,000 in 2023.

The continued collaboration is an important step towards the development of OEM components to the partnering company's future cell therapy systems.

## INNOVATION – SUCCESSFUL PROJECT CLOSE AND STRENGTHENED CAPABILITIES

Successful close of the project Blue4Therapy. The stem cell therapy project Blue4Therapy was brought to a successful close in the quarter. Behind the project were the University of Southern Denmark, BlueCell Therapeutics, Novozymes and AcouSort. Our contribution to the project has been to develop a module for the purification of stem cells in a point-of-care environment (POC). The project has now been successfully finalized and the applications and hardware that AcouSort has developed within the Blue4Therapy framework have significantly strengthened the company's position within the cell therapy industry.

Strengthens its R&D capabilities. In the quarter, we strengthened our R&D capabilities through the recruitment of Henrik Johansson to the position as Director of Research and Technology. Henrik has significant experience from startup environment within the biotech space as well as from R&D management roles at Agilent and PerkinElmer. Going forward, he will play a key role in the further development of AcouSort's technology portfolio.



#### **EXPANDING THE ACOUSORT REACH**

Our current focus lies on the diagnostics and cell therapy markets, but our unique technology is finding its way into an increasing number of applications. One example of this is a new collaboration with a leading life science company developing flow cytometers, a technology that rapidly characterizes cells or particles, and which is used in immunological research and to help diagnose diseases. The joint project established in the second quarter will evaluate the AcouWash's ability to automate and improve sample preparation and sample clean-up prior to flow cytometry analysis. The new collaboration comprises the lease of an AcouWash system as well as an application support package. The flow cytometry project is very important for AcouSort as it has the potential to validate our technology in a new and important area for the company.

Another example of our expansion into new areas is our collaboration with a Czech research group that sees novel opportunities for AcouWash in fish sperm refinement. The Czech research group began using our AcouWash technology in 2021. In the second quarter of this year, the Czech group leased an AcouWash to finalize their work.

#### **INTENSE COMMERCIAL ACTIVITIES**

The second quarter was also intense from a commercial point of view with one product launch, participation in two congresses, and a marketing visit to Japan. All these activities generated a number of interesting leads that we currently are following up on.

Launch of the next generation AcouTrap. In May, we launched the next generation AcouTrap at CYTO 2023. CYTO is organized by the International Society for the Advancement of Cytometry and attended by leading researchers and instrumentation providers within flow cytometry.

The new AcouTrap 3 system comes with improved design and an updated and intuitive software graphical user interface (GUI), which simplifies user workflows.

*BIO* 2023 in Boston. In June, we participated in BIO 2023 in Boston as part of the European Pavilion since we for a third time had been selected by the EU for full sponsorship. During the convention, we mainly focused on partnering and 1-on-1 meetings, discussing future OEM solutions within both point-of-care diagnostics and cell therapy applications.

Torsten Freltoft – CEO ACOUSORT AB

#### **STRATEGY**

# Growth through research and innovation collaborations



AcouSort's technology is perfectly placed to play a critical role in the healthcare of tomorrow. Cardiovascular diseases, infections, and cancer are the three deadliest diseases in the world. There is a great need for new and effective diagnostic and cell therapeutic solutions, but current sample processing and manufacturing workflows are facing significant challenges as they rely on a number of manual sample handling processes. Manual handling often entails a high risk of errors as well as bacterial contamination during the production process of cell therapeutics. This puts a high price tag on the therapy, thereby limiting the number of patients who can be offered a potentially life-saving treatment. It is clear that the industry is in great need of inventions in order to really take off.

# POTENTIAL FOR SIGNIFICANT IMPROVEMENTS IN CELL THERAPY AND DIAGNOSTICS

AcouSort's ambition is to address the challenges in cell therapy by introducing solutions that enables automated sample processing and integration to limit the need for manual handling in the manufacturing workflow. Our technology fits well in several steps in the process and has a fantastic potential to lower manufacturing cost.

Within diagnostics, our unique ability to automate and integrate sample processing steps will also allow for a new generation of medical devices. Patient samples can be analyzed directly at the point-of-care instead of at central laboratories, meaning that doctors and patients get the results immediately.

# Top three causes of deaths globally Cardiovascular diseases, 30% Infections, 23% Cancer, 16% Other causes, 31%

#### Source: WHO

#### **GROWTH THROUGH OUR RESEARCH-TO-OEM MODEL**

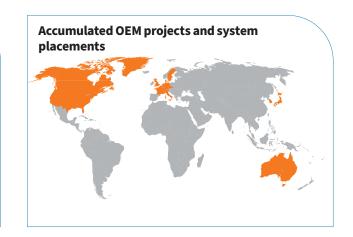
AcouSort's strategy focuses on our research-to-OEM model, which has the ambition to establish continuous revenues from sales of OEM modules to large Life Science companies. By establishing multiple partnerships in the cell and gene therapy and diagnostic markets, we aim to build a network of researchers and partners for joint developments to take us to a commercially matured technology. Recent, we substantially strengthened our commercial capacity, and we are currently targeting the North American market, the European market, and selected markets in Asia. Through collaborations with leading Life Science companies our technology will eliminate manual handling steps while saving time, money, and ultimately – lives.

# Cell & Gene Therapies Approved - World 25 Spood 44 15 10 0 2004 2006 2008 2010 2012 2014 2016 2018 2020 2022

Source: ASGCT\_Citeline Q4 2022 Report

#### **INNOVATION WITH GREAT POTENTIAL**

In 2022, AcouSort and a group of partners received a grant of SEK 26 million by the EIC to develop an acoustofluidic thin film actuated chip for exosome separation from blood. Exosomes are nanoparticles that enable human cells to communicate vital information with each other. Thereby, exosome separation has the potential to open a completely new field within diagnostics. Of the SEK 26 million, SEK 12.2 million go directly to AcouSort, and the remainder of the funding is distributed to AcouSort's partners Lund University, DTU, and DayOne. The project will run for 36 months and is fully funded by the EU.



# Advancement within point-of-care testing requires automation of sample preparation



To fight the deadliest diseases in the world – cardiovascular, infectious, and cancer diseases – while the world's population in many countries is either growing or aging, faster and more efficient diagnostics are needed. One of the most important steps towards achieving this is to move diagnostic testing closer to the patient, thus being able to act immediately on the result. For most diagnostics tests, this will require integrated and automated sample processing, and AcouSort's advanced sample preparation modules provide an optimal solution to achieve this.

Today, almost all blood tests taken in the health care system are shipped to a central hospital or other laboratory facility. There, the samples are processed, and diagnostic assays are performed. For about 75% of the blood samples processed, the sample must be centrifuged to separate the blood cells from the blood plasma that is required to perform the requested tests. To implement most of today's blood-based diagnostic tests as point-of-care tests, the required blood-plasma separation must be seamlessly integrated into the point-of-care device. Depending on the specific diagnostic assay in question, AcouSort's OEM separation modules – AcouWash, AcouPlasmaOptical and AcouTrap – are optimal solutions to this challenge.

#### **MARKET**

The current trend in diagnostic testing aims to decentralize testing enabling faster and more accurate diagnostics. To provide the use of more advanced diagnostics outside of clinical laboratories, the interest in solutions for automated sample preparation is increasing. The global point-of-care testing (POCT) market size was accounted at USD 40.6 billion in 2021 and it is expected to reach around USD 103.2 billion by 2030¹ corresponding to an average annual growth of about 11%.

#### **OFFERING**

AcouSort works with providers of point-of-care diagnostic systems to customize our OEM modules to their future or next generation systems. AcouSort's modules are designed for integration into consumable or semi-consumable cartridges that our partners design to be used in their instruments. In this way, each separation module is used only for one patient or for a limited number of patients with a thorough decontamination step in between, ensuring sample integrity. When more and more system providers integrate our separation modules into their clinical diagnostic systems, AcouSort business model is highly scalable and with a significant revenue potential.

#### **FOCUS 2023**

In 2023, AcouSort's main focus will be directed at reaching additional diagnostic customers by providing both the AcouPlasma-Optical and the AcouTrap units as evaluation test kits to simplify the evaluation process for potential customers. This expands the possibilities to reach more potential collaboration partners and speed up the initial evaluation phases. In addition to this, the 2023 plans involve addressing other diagnostic segments with the AcouPlasmaOptical module as well as to create additional marketing materials showing the value provided by AcouPlasmaOptical when it comes to speeding up measurements of plasma analytes directly in whole blood.

#### **Activities 2023**

#### Quarter 1

- Started development of OEM evaluation test kit for AcouTrap
- Participated at the TriCon Molecular Medicine conference in San Diego to meet potential customers within the diagnostic and liquid biopsy segment

#### Quarter 2

- Participated at the BIO convention 2023 in Boston to meet strategic partners interested in automated sample preparation
- Business discussions with potential OEM partners following BIO and CYTO participation
- Continued activities to finalize the AcouTrap OEM evaluation kit

<sup>1</sup> https://www.precedenceresearch.com/point-of-care-testing-market

# Automated cell processing facilitates the cell therapy revolution



The world is facing a revolutionary increase in clinically approved cell therapies during the coming years. Unfortunately, the complex and expensive manufacturing process significantly limits the access to these treatments. All major Life Science instrumentation companies have active programs targeting automation of the cell therapy processing to manage cost and quality. AcouSort's automated cell separation and processing technology is well suited for providing the solution for this democratization of novel cell therapies.

The number of clinically approved cell and gene therapies is rapidly increasing, with even more in the pipeline. The majority of new cell therapies are CAR-T cell therapies, where the patient's own cells are isolated and "trained" (genetically manipulated) to recognize cancer cells. After training and expansion, the cells are readministered to the patient where they attack and destroy the cancer cells. So far, the approved cell therapies of this type are all targeting blood cancers, but treatments for tumor-forming cancers are in the pipeline.

The reason for the currently very high cost is a combination of the need for sterile labs and the extensive manual handling required to produce the therapeutic cells. Cell therapies can have price tags of up to USD 500,000 per treatment, a price level that is prohibitive for most health insurances or public health care plans.

#### **MARKET**

The global cell therapy market size was valued at USD 21.6 billion in 2022 and is expected to expand at a compound annual growth rate (CAGR) of 14.15% from 2023 to 2030¹, thus exceeding USD 60 billion in 2030. The market is constantly growing to include new cell types, which presents a significant opportunity for companies to strengthen their market positions. As a result, during the past few years, there has been a dramatic increase in the number of companies engaged in the development of cell therapies.

#### **OFFERING**

AcouSort has been approached by a handful of multinational Life Science companies seeking solutions to enclose and automate the cell therapeutics processing and eliminate the current manual processing. Our separation modules are well suited for this as they can automatically perform the cell wash, cell up-concentrations and separation of target cell types needed.

AcouSort's strategy is to develop and supply the automated cell processing modules as single use OEM components to our Life Science instrumentation partners. In this way, the AcouSort business model is both scalable and represents a significant revenue potential.

#### **FOCUS 2023**

In 2023, AcouSort will continue to develop and market our cell wash, cell separation and cell up-concentration applications for automation of cell therapy sample preparation. An important part is the technical development of high throughput units followed by the development of new marketing materials highlighting the benefits of these high throughput units. With more data and ready applications, we are aiming to intensify our market outreach during the second half of the year to interact with more potential partners active in the field of cell therapy development.

#### **Activities 2023**

#### Quarter 1

- Continued optimization of volume throughput of the acoustic separation modules together with one of the major players in the cell therapy field
- Finalized the development of the stem cell isolation system prototype adapted to fit into the workflow for stem cell isolation
- Continued the development of applications for cell wash of frozen stem cells

#### Quarter 2

- Finalized throughput optimization project together with major player in the cell therapy field
- Continued development of high throughput cell separation cartridge
- Finalized application development of cell wash for frozen stem cells
- Participated in the event on Acoustic Technology Applications in Cell Processing in Paris

<sup>1</sup> From https://www.grandviewresearch.com/industry-analysis/cell-therapy-market

**INNOVATION** 

# Driving the development and exploitation of automated sample processing



Through partnerships with leading universities and through our Research and Innovation platforms – AcouWash and Acou-Trap – AcouSort strives to continue driving the innovation of acoustofluidics for automated sample preparation and processing. Our innovation projects are to a large extent funded through public contributions from EIC/EU and from Vinnova.

AcouSort is constantly interacting with current and potential partners and customers through meetings and active participation in scientific conferences and tradeshows. The feedback from these interactions is used to direct our Research and Innovation activities.

# COMMERCIAL RESEARCH AND INNOVATION PLATFORMS

To enable the development of new or improved applications of our automated sample processing technology, we have developed two benchtop Research and Innovation platforms, the AcouWash and the AcouTrap. We provide these systems to researchers and key opinion leaders at universities and to our OEM collaboration partners in the Life Science industry. Through our academic research partners and their publications and presentations, we distribute information about our technology and its applications. And through the collaboration with the OEM partners, the systems enable access to the automated sample processing modules at a very early stage in their technical assay or system development process. The use of our Research and Innovation platforms by key opinion leaders contributes to broaden the application fields of the technology while promoting the use of our technology in general through their scientific publications.

#### THE ACOUSOME PROJECT

The AcouSome project is a fully funded EU transition project with two main commercial innovation goals. The most fundamental

goal is to replace the currently glass-based and bulk piezo activated separation modules with modules made in plastic. If successful, this innovation will significantly reduce the production price of our separation modules, paving the way for single use applications of these in point-of-care diagnostics. However, the project also has the goal of developing a robust and simple-to-use device for isolating extracellular vesicles from whole blood samples.

The AcouSome project is funded 100% by the European Innovation Council (EIC) with EUR 2.5 million over 36 months (2023-2025). Our partners in this project are the Technical University of Denmark, Lund University and DayOne.

#### **FOCUS 2023**

The AcouSome project officially started January 1, 2023, and during the first year the initial focus is to identify and mitigate the largest challenges in the project as well as to secure efficient and rapid prototyping of the new polymer-based components.

Focus for the AcouWash and AcouTrap Research and Innovation platforms in 2023 include completing and launching the new AcouTrap 3 system including both an enhanced standard trapping unit as well as a trapping unit featuring a 3-5 fold increase in cell capacity. Commercial activities related to the platforms will be intensified, especially in North America where we recently increased our presence by manning our US subsidiary, AcouSort, Inc.

#### **Activities 2023**

#### Quarter 1

- Finalized the AcouPlast project showing the first proof of principle for acoustic separation of blood samples in polymer chips
- Initiated the AcouSome project
- Developed a medium-sized trapping unit with increased capacity to target more cell trapping applications
- Continued the development of new chip designs to enable high throughput separations

#### Quarter 2

- AcouWash system sold to prominent research group at NIH working with cancer diagnostics
- AcouWash system sold to Lund University for circulating tumor cell project
- Initiated collaboration project with flow cytometry company to evaluate AcouWash technology for sample purification
- Completed the first milestone in the AcouSome project

   benchmark testing of our current separation and
   trapping platforms
- Launch of new AcouTrap 3 system and mediumsized trapping unit with increased capacity for cell applications
- Recruited Henrik Johansson as Director for Research and Technology

# An overview of AcouSort's research collaborations

Sound is created when a vibration generates pressure waves that propagate through a medium. When the wave encounters a particle, the particle is moved by the acoustic forces generated by the wave. In acoustofluidics, the technology used by AcouSort, ultrasound is used to create standing acoustic waves in microfluidic channels. The standing wave typically focuses the particles

toward the pressure node, where the pressure variation is the lowest. The sound frequency is similar to diagnostic ultrasound and has been shown to be very gentle to biological samples, with no activation or decrease in viability. Acoustofluidics can be implemented in two different ways, acoustic separation, and acoustic trapping.

To stay at the forefront, AcouSort is continuously developing the acoustofluidic technology further together with universities and commercial partners.

Project	Sponsor	Goal	Partners	Duration	Status	AcouSort grant	Total project grant
AcouSome	European Innovation Council	Development of a miniaturized microfluidic module for exosome isolation directly from blood using ultrasound generated by thin films, to be used in research and diagnostics.	Lund University, DTU, DayOne	2023-2025	Ongoing	EUR 1,100,000	EUR 2,500,000
IndiCell	Vinnova	Development of a world leading innovation milieu for individualized induced pluripotent stem cell derived therapies, to lower the risks and overcome hurdles for the translation from basic science to innovations and further to clinical applications.	Lund University, Karolinska Institute, KTH, Lab-On-A-Bead AB, Skåne University Hospital, BioLamina AB, Karolinska University Hospital	2021-2026	Ongoing	EUR 110,000	EUR 3,520,000*
Blue4Therapy	Eureka, Vinnova, Innovation Fund Denmark	Development of a platform for specific stem cell isolation from autologous adipose tissue for effective regenerative therapy, together with universities and commercial partners.	Blue Cell Therapeutics, University of Southern Denmark, Novozymes A/S	2020-2023	Completed April 2023	EUR 300,000	EUR 800,000
AcouPlast	Eureka, Vinnova, Innovation Fund Denmark	Development of polymer chips to make acoustic separation even more cost efficient and easy to integrate into diagnostic and analytical systems.	DTU, Ortofon A/S, Lund University	2019-2023	Completed Mar 2023	EUR 400,000	EUR 1,000,000
BioWings	EU Horizon 2020	Development of thin films generating the ultrasound used for cell processing to make acoustofluidic chips more efficient and easier to manufacture.	Weizmann Institute of Science, EPFL, PIEMACS, DTU, Lund Univeristy	2018-2022	Completed Nov 2022	EUR 180,000	EUR 3,000,000

 $<sup>^{\</sup>star}$ Currency conversion from SEK, i.e. the total project grant in EUR is approximate.



# AcouSort's products

#### **OEM COMPONENTS**

AcouSort's main strategy is to develop and commercialize Original Equipment Manufacturer (OEM) components for sample preparation and processing. The OEM solutions enable integration of our technology into analytical, diagnostic, and therapeutic systems, providing automated sample preparation. The customer base for the OEM components are instrument manufacturers within the Life Science industry.

AcouSort intends to expand the portfolio of OEM components to cover a wide range of applications for clinical analysis and handling of biological samples. The Company expects the acoustic separation components to be critical components, essential for development of novel point-of-care testing devices where access to blood plasma or other fractions of blood is required. This also applies for biological sample processing systems in therapeutic settings for e.g., personalized medicine.

#### AcouPlasmaOptical

Integrated blood plasma separation. AcouPlasmaOptical is an OEM component designed for integration into diagnostic instruments as a semi-consumable. It enables automated and rapid access to plasma for optical measurements of blood analytes in point-of-care diagnostic devices. The technology uses gentle acoustic forces in combination with microfluidics to create a plasma window for optical access in whole blood samples without the need for prior centrifugation. Centrifugation often requires manual intervention that may have negative effects on sample quality, making AcouPlasmaOptical a competitive alternative.

Custom made solutions for interfacing of sample flow and electronic connection are available. Production of AcouPlasmaOptical is ISO13485 certified.

AcouSort offers evaluation kits to partners interested in exploring integration of the component into their systems.

#### RESEARCH AND INNOVATION SYSTEMS

AcouSort has developed two benchtop systems, the AcouTrap and the AcouWash, to offer the Company's core acoustofluidic techniques, i.e., trapping and separation techniques, in an easy-to-use format. The instruments serve as Research and Innovation platforms, providing easy access to the technology for instrument manufacturers interested in integrating acoustofluidic OEM components into their systems. With user-friendly hardware and software, the instruments enable automated handling of biological samples, supporting academic researchers and product development teams working with new biomarker identification and diagnostic assay development.

#### AcouTrap

Handling of cells and extracellular vesicles. AcouTrap is a benchtop research instrument for automated enrichment, washing and staining of biological samples. AcouTrap provides a solution for gentle and rapid sample preparation of biological particles of various sizes. The AcouTrap system is excellent for sample preparation of precious cell samples, where traditional methods are ill-suited as they can dramatically decrease recovery and viability. The AcouTrap efficiently automate common sample preparation

steps such as up-concentration, high recovery washing and labelling of low cell number samples. The system also facilitates handling of nanoparticles, including bacteria, viruses, and extracellular vesicles. These particles are very small, often less than one micrometer in size, and are found in complex biological liquids such as blood plasma. The small size and the complexity of the liquid makes isolation through conventional techniques challenging. With AcouTrap, isolation is automated and manages samples with smaller volumes than the competing technologies. This enables research studies with biobank samples that often contain minute fluid volumes.

#### AcouWash

Automated cell separation. AcouWash is a benchtop research instrument for label-free separation of target cells from a variety of sample types. The system provides automated processing and is designed to perform sensitive separations and handle fragile cells without any impact on viability. The acoustic forces used in the AcouWash provides samples with very high quality and with minimal sample to sample variation.

With the AcouWash system, a variety of applications aimed at separation of blood cells can be automated. Common applications comprise gentle and highly efficient cell wash, label-free separation of mononuclear cells from whole blood, isolation of platelets, rare cell isolation (e.g., circulating tumor cell, CTC) as well as blood-plasma separation for diagnostic applications.

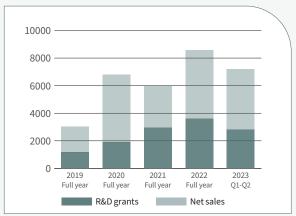
# Income statement – Group

	4/1/2023	4/1/2022	1/1/2023	1/1/2022	1/1/2022
(SEK thousand)	6/30/2023	6/30/2022	6/30/2023	6/30/2022	12/31/2022
Operating income					
Net sales	1,816	715	4,413	2,607	4,963
Other income	1,546	1,094	2,796	1,889	3,622
Total income	3,362	1,809	7,209	4,496	8,585
Operating expenses					
Raw materials	-181	-652	-1,116	-1,426	-2,052
Other external expenses	-2,457	-1,771	-3,854	-3,027	-6,512
Personnel costs	-4,447	-3,269	-8,903	-6,404	-13,449
Depreciations	-151	-171	-385	-332	-921
Other operation expenses	0	0	0	0	0
Total expenses	-7,236	-5,863	-14,258	-11,189	-22,934
OPERATING RESULT	-3,874	-4,054	-7,049	-6,693	-14,349
Result from financial items					
Financial income	681	0	818	0	584
Financial expenses	0	-1	-2	-14	-15
Result before taxes	-3,193	-4,055	-6,233	-6,707	-13,780
Tax on this year's result	0	0	0	0	0
Result for the period	-3,193	-4,055	-6,233	-6,707	-13,780
Result per share, SEK	-0.24	-0.31	-0.47	-0.51	-1.04

#### **Operating results**

For the second quarter of the year AcouSort Group reported net sales of SEK 1,816,000 (715,000) which consisted of product sales of SEK 1,060,000 (432,000) and customer projects of SEK 756,000 (283,000). Other operating income consists of grants amounting to SEK 1,546,000 (1,094,000). Raw materials amounted to SEK -181,000 (-652,000). Other external expenses amounted to SEK -2,457,000 (-1,771,000). Personnel costs amounted to SEK -4,447,000 (-3,269,000). Depreciation amounted to SEK -151,000 (-171,000). For the second quarter of the year AcouSort Group's operating result totalled SEK -3,874,000 (-4,054,000).

#### **Total income, SEK thousand**



AcouSort has been successful in applying for public R&D grants within Sweden and the EU. In total over the past four years, AcouSort has been awarded EUR 2.2 million corresponding to almost SEK 25 million in research and development grants. This, together with a positive sales trend, has limited the need to raise additional capital from the company's owners.

# Balance sheet - Group

ASSETS (SEK thousand)	6/30/2023	12/31/2022
Fixed assets		
Intangible assets	2,759	2,723
Tangible assets	557	668
Financial assets	24	0
Total fixed assets	3,340	3,391
Current assets		
Inventories	2,155	1,609
Account receivable	3,473	1,017
Other receivables	408	518
Prepaid expenses and accrued income	770	531
Cash and cash equivalents	11,889	34,426
Total current assets	18,695	38,100
TOTAL ASSETS	22,035	41,491

EQUITY AND LIABILITIES (SEK thousand)	6/30/2023	12/31/2022
Equity		
Share capital Share capital	1,320	1,320
Other contributed capital	77,370	77,370
Reserves	-100	-65
Retained earnings	-59,623	-45,895
Profit/loss for the period	-6,233	-13,780
Total equity	12,734	18,949
Current liabilities		
Account payables	1,090	1,046
Tax liabilities	46	42
Other liabilities	496	431
Accrued expenses and deferred income	7,669	21,022
Total current liabilities	9,301	22,542
TOTAL EQUITY AND LIABILITIES	22,035	41,491

#### **Financial Position**

On June 30, 2023, AcouSort Group's equity ratio was 58% (88). Equity amounted to SEK 12,734,000 (26,047,000). Cash and cash equivalents amounted to SEK 11,889,000 (24,238,000). Total assets for the Group amounted to SEK 22,035,000 (29,612,000).

# Statement of changes in equity – Group

(SEK thousand)	Share capital	Other contributed capital	Reserves	Loss for the period	Total
Opening balance January 1, 2022	1,320	77,370	-3	-45,896	32,791
Conversion difference and other adjustments	0	0	-62	0	-62
Loss for the period	0	0	0	-13,780	-13,780
Equity December 31, 2022	1,320	77,370	-65	-59,676	18,949
Opening balance January 1, 2023	1,320	77,370	-65	-59,676	18,949
Conversion difference	0	0	-35	-138	-173
Warrants	0	0	0	191	191
Loss for the period	0	0	0	-6,233	-6,233
Equity June 30, 2023	1,320	77,370	-100	-65,856	12,734

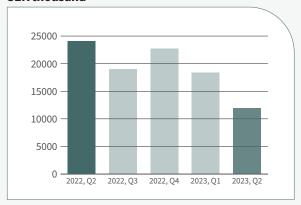
# Cash flow statement – Group

	1/1/2023	1/1/2022	1/1/2023	1/1/2022	1/1/2022
(SEK thousand)	3/31/2023	3/31/2022	6/30/2023	6/30/2022	12/31/2022
Operating activities					
Operating result	-3,874	-4,054	-7,049	-6,693	-14,349
Depreciations	151	172	385	332	921
Financial income	681	0	818	0	584
Financial expenses	0	-1	-2	-14	-15
Cash flow from operating activities before changes					
in working capital	-3,042	-3,883	-5,848	-6,375	-12,859
Change in working capital					
Increase/decrease inventories	-198	-169	-547	-269	-987
Increase/decrease in receivables	-2,418	-534	-2,585	-410	-1,192
Increase/decrease in current liabilities	-565	358	-13,241	24	19,003
Changes in working capital	-3,181	-345	-16,373	-655	16,824
Cash flow from operating activities	-6,223	-4,228	-22,221	-7,030	3,965
Investing activities					
Increase/decrease of tangible assets	-214	-31	-214	-229	-382
Increase/decrease of intangible assets	-77	0	-96	0	-629
Increase/decrease of financial assets	0	0	-24	0	0
Cash flow from investing activities	-291	-31	-334	-229	-1,011
Financing activities					
Rights issue	0	0	0	0	C
Warrants	191	0	191	0	C
Increase/decrease of long-term liabilities	0	0	0	0	C
Cash flow from financing activities	191	0	191	0	0
Change in cash and cash equivalents	-6,323	-4,259	-22,364	-7,259	2,954
Cash and cash equivalents at the beginning of the period	18,377	28,551	34,426	31,533	31,533
Conversion difference and other adjustments	-165	-54	-173	-36	-61
Cash and cash equivalents at the end of the period	11,889	24,238	11,889	24,238	34,426

#### **Cash flow and investments**

AcouSort Group's cash flow for the second quarter of the year was SEK -6,323,000 (-4,259,000). Investments amounted to SEK -291,000 (-31,000), of which SEK -77,000 (0) pertained to intangible assets and SEK -214,000 (-31,000) to tangible assets.

# Cash and cash equivalents last five quarters, SEK thousand



At the end of the second quarter, AcouSort Group had cash and cash equivalents amounting to SEK 11,889,000, a reasonably solid cash position that allows us to fulfill our current plans.

# Income statement – Parent company

	4/1/2023	4/1/2022	1/1/2023	1/1/2022	1/1/2022
(SEK thousand)	6/30/2023	6/30/2022	6/30/2023	6/30/2022	12/31/2022
Operating income					
Net sales	1,816	715	4,376	2,607	4,963
Other income	1,546	1,094	2,796	1,889	3,622
Totalincome	3,362	1,809	7,172	4,496	8,585
Operating expenses					
Raw materials	-181	-652	-1,088	-1,426	-2,052
Other external expenses	-2,180	-1,746	-3,349	-2,963	-6,345
Personnel costs	-3,937	-3,269	-7,857	-6,404	-12,744
Depreciations	-151	-171	-385	-332	-921
Other operation expenses	0	0	0	0	0
Total expenses	-6,449	-5,838	-12,679	-11,125	-22,062
OPERATING RESULT	-3,087	-4,029	-5,507	-6,629	-13,477
Result from financial items					
Financial income	681	0	818	0	584
Financial expenses	0	-1	-2	-14	-15
Result before taxes	-2,406	-4,030	-4,691	-6,643	-12,908
Tax on this year's result	0	0			0
Result for the period	-2,406	-4,030	-4,691	-6,643	-12,908
Result per share, SEK	-0.18	-0.31	-0.36		

#### **Operating results**

For the second quarter of the year, the parent company reported net sales of SEK 1,816,000 (715,000) which consisted of product sales of SEK 1,060,000 (432,000) and customer projects of SEK 756,000 (283,000). Other operating income consists of grants amounting to SEK 1,546,000 (1,094,000). Raw materials for the period amounted to SEK -181,000 (-652,000). Other external expenses for the period amounted to SEK -2,180,000 (-1,746,000). Personnel costs for the period amounted to SEK -3,937,000 (-3,269,000). Depreciation for the period amounted to SEK -151,000 (-171,000). The second quarter's operating result for the parent company

totalled SEK -3,087,000 (-4,029,000).

# Balance sheet - Parent company

ASSETS (SEK thousand)	6/30/2023	12/31/2022
Fixed assets		
Intangible assets	2,759	2,723
Tangible assets	557	668
Financial assets	33	9
Total fixed assets	3,349	3,400
Current assets		
Inventories	2,155	1,609
Account receivables	3,473	1,017
Receivables from subsidiaries	2,998	1,646
Other receivables	408	480
Prepaid expenses and accrued income	770	531
Cash and cash equivalents	11,705	33,974
Total current assets	21,509	39,256
TOTAL ASSETS	24,858	42,656

EQUITY AND LIABILITIES (SEK thousand)	6/30/2023	12/31/2022
Equity		
Share capital	1,320	1,320
Development expense fund	2,759	2,723
Share premium	77,370	77,370
Retained earnings	-61,144	-48,391
Profit/loss for the period	-4,691	-12,908
Total equity	15,614	20,114
Current liabilities		
Account payables	1,090	1,046
Tax liabilities	46	42
Other liabilities	439	431
Accrued expenses and deferred income	7,669	21,022
Total current liabilities	9,244	22,542
TOTAL EQUITY AND LIABILITIES	24,858	42,656

#### **Financial Position**

On June 30, 2023, the parent company's equity ratio was 63% (88). Equity amounted to SEK 15,614,000 (26,378,000). Cash and cash equivalents amounted to SEK 11,705,000 (24,090,000). Total assets amounted to SEK 24,858,000 (29,940,000).

# Statement of changes in equity – Parent company

(SEK thousand)	Share capital	Development expenses	Share premium	Retained earnings	Loss for the period	Total
Opening balance January 1, 2022	1,320	2,125	77,370	-35,593	-12,200	33,022
Prior year 's result	0	0	0	-12,200	12,200	0
Development expenses fund	0	598	0	-598	0	0
Loss for the period	0	0	0	0	-12,908	-12,908
Equity December 31, 2022	1,320	2,723	77,370	-48,391	-12,908	20,114
Opening balance January 1, 2023	1,320	2,723	77,370	-48,391	-12,908	20,114
Prior year 's result	0	0	0	-12,908	12,908	0
Development expenses fund	0	36	0	-36	0	0
Warrants	0	0	0	191	0	191
Loss for the period	0	0	0	0	-4,691	-4,691
Equity June 30, 2023	1,320	2,759	77,370	-61,144	-4,691	15,614

# Cash flow statement – Parent company

	1/1/2023	1/1/2022	1/1/2023	1/1/2022	1/1/2022
(SEK thousand)	3/31/2023	3/31/2022	6/30/2023	6/30/2022	12/31/2022
Operating activities					
Operating result	-3,087	-4,030	-5,507	-6,630	-13,477
Depreciations	151	171	385	332	921
Financial income	681	0	818	0	584
Financial expenses	0	-1	-2	-14	-15
Cash flow from operating activities before changes					
in working capital	-2,255	-3,860	-4,306	-6,312	-11,987
Change in working capital					
Increase/decrease inventories	-197	-169	-547	-269	-987
Increase/decrease in receivables	-3,012	-746	-3,975	-644	-2,568
Increase/decrease in current liabilities	-622	359	-13,298	25	19,005
Changes in working capital	-3,831	-557	-17,820	-889	15,451
Cash flow from operating activities	-6,086	-4,417	-22,126	-7,201	3,464
Investing activities					
Increase/decrease of tangible assets	-214	-30	-214	-229	-382
Increase/decrease of intangible assets	-77	0	-96	0	-629
Increase/decrease of financial assets	0	0	-24	0	0
Cash flow from investing activities	-291	-30	-334	-229	-1,011
Financing activities					
Rights issue	0	0	0	0	0
Warrants	191	0	191	0	0
Increase/decrease of long-term liabilities	0	0	0	0	0
Cash flow from financing activities	191	0	191	0	0
Change in cash and cash equivalents	-6,186	-4,447	-22,269	-7,430	2,452
Cash and cash equivalents at the beginning of the period	17,892	28,538	33,974	31,521	31,521
Cash and cash equivalents at the end of the period	11,705	24,091	11,705	24,091	33,974

#### **Cash flow and investments**

The parent company's cash flow for the second quarter was SEK -6,186,000 (-4,447,000). Investments amounted to SEK -291,000 (-30,000), of which SEK -77,000 (0) pertained to intangible assets and SEK -214,000 (-30,000) to tangible assets.

### **Other information**

#### **THE SHARE**

AcouSort's share was listed on Spotlight Stock Market January 9th, 2017. In December 2020 the share changed list to Nasdaq First North Growth Market, with December 14th as the first trading day. The ticker symbol of the share is "ACOU", and the ISIN-code is SE0009189608. First North Growth Market is an alternative marketplace run by NASDAQ OMX GROUP. Companies traded on First North Growth Market do not have to be compliant to the same rules as companies traded on a regulated market. Instead, the companies follow under less strict rules applied for growth companies. The risk of investing in a company traded on First North Growth Market may thus be greater than investing in a company traded on a regulated market. All companies with shares traded on First North Growth Market have a Certified Adviser that supervises the compliance of the rules. The stock exchange examines applications to be listed on the exchange. AcouSort's Certified Adviser on Nasdag First North Growth Market is Erik Penser Bank AB, +46 8 463 80 00. As of June 30, 2023, the number of shares in AcouSort AB was 13,202,285. The Company has one class of shares. Each share carries one (1) vote per share and carries equal rights to share in the Company's assets and earnings.

#### THE SUBSIDIARY ACOUSORT INC

AcouSort AB has a wholly owned subsidiary in the USA, AcouSort Inc. The Company's task is to carry out marketing and sales on the North American market.

#### **BUSINESS-RELATED RISKS AND UNCERTAINTIES**

In summary, the risks and uncertainties that AcouSort's operations are exposed to are related to, among other things, competition, technology development, market conditions, capital needs, currencies and interest rates. No significant changes in risk or uncertainty factors occurred during the current period. For more detailed reporting of risks and uncertainties, please refer to the Annual Report.

#### **UPCOMING FINANCIAL REPORTS**

O3 2023: November 22, 2023

#### **REVIEW BY AUDITORS**

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

#### Jan - Jun 2023 Jan - Jun 2022 Jan - Dec 2022 Number of shares before dilution 13,202,285 13,202,285 13,202,285 Number of shares after dilution 13.202.285 13.830.965 13.202.285 Result per share before and after dilution -0.98 -0.18 -0.50 Average number of shares before dilution 13.202.285 13.202.285 13.202.285 Average number och shares after dilution 13,202,285 13,830,965 13.202.285

## PRINCIPLES FOR THE INTERIM REPORT'S ESTABLISHMENT

The interim report has been prepared in accordance with the Swedish Accounting Standards Board's General Council 2012:1 Annual Report and Consolidated Accounts (K3) and the Annual Accounts Act.

# Declaration by the Board of Directors and the CEO







**Thomas Laurell** 



**Stefan Scheding** 

The Board of Directors and the Chief Executive Officer certify that the interim report provides a true and fair view of the company's business, financial position, performance and describes material risks and uncertainties, to which the company is exposed.

The interim report has not been reviewed by the company's auditors.

Lund August 24, 2023



**Katherine Flagg** 



**Torsten Freltoft** 

**Martin Olin Thomas Laurell** Chairman Board member

**Stefan Scheding Katherine Flagg** Board member Board member

#### **Torsten Freltoft**

CEO

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