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# This is IRRAS

IRRAS AB (NASDAQ: IRRAS) is a listed medical device company in commercial phase that is focused on the design, development and commercialization of innovative solutions for brain surgery. The company's leading product, *IRRAflow*<sup>™</sup>, is a fully integrated and self-contained medical technology system that is specially designed to prevent the complications that can result from current methods of treatment for intracranial bleeding. The system reduces the risk of blockage of the catheter and thus reduces the risk of infection, leading to shorter hospital stays and better treatment outcomes for the patient. The product can also be used for intelligent ICP monitoring.

IRRAS has a unique portfolio of products protected by essential patents and patent applications and is thus in a good position to establish itself as a leading player in the market for medical devices. IRRAS is headquartered in Stockholm, Sweden, with offices in Munich, Germany, and in San Diego, California. For more information, visit [www.iras.com](http://www.iras.com).

## Great interest in *IRRAflow*

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It has been a good year for IRRAS, with the most important event being the launch in Germany and Austria of the company's first product, the proprietary *IRRAflow*.

The product was very well received, with initial sales above expectations. Commercial expansion began during the year by appointing distributors for an additional 42 countries.

## New share issue and listing on Nasdaq First North Premier

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During the month of November, IRRAS carried out a new share issue totaling SEK 293 million before issue expenses. The proceeds will be used for the company's neurosurgery business, including marketing of *IRRAflow* in Europe, the United States and the rest of the world.

The proceeds will also finance the development of *IRRAflow* for other indications.

In connection with the issue, the IRRAS share became listed on Nasdaq First North Premier. The first day of trading was November 22, 2017.

## 2017 in brief

- Revenue totaled SEK 12.0 million (0.0)
- Operating profit totaled SEK -61.5 million (-30.8)
- Profit/loss after tax totaled SEK -60.9 million (-31.9)
- Earnings per share (before and after dilution) totaled SEK -3.40 (-2.12)
- The Board proposes that no dividend be paid

### IRRAflow relaunch

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The temporary halt in sales introduced in December 2017, was lifted in February when an improved version of IRRAflow was launched. The product is upgraded, both aesthetically and mechanically, and has also received a new battery configuration.



# Great interest for IRRAsflow

2017 was a significant and dramatic year in the history of IRRAS, highlighted by the commercial launch of IRRAsflow™ in Europe and a successful Initial Public Offering in Sweden. The health care sector and financial markets alike clearly confirmed both the need for and interest in our groundbreaking IRRAsflow device, which is used in the treatment of various brain pathologies. Late in the fourth quarter, we had a voluntary recall within six months following the IRRAsflow launch, which was certainly not welcome news but was the right thing to do as we always put patient safety above all. I am proud to say that we managed the battery issue swiftly and effectively by taking action that inspired transparency and trust. As a result we were able to quickly create an upgraded product with a new battery configuration by end of February.

## A successful product launch

The launch of IRRAsflow on the European market in May, with sales starting in Germany and Austria, undoubtedly marked the most important milestone in the history of IRRAS. The response was overwhelming, and sales exceeded our expectations. In the third quarter of 2017 – our first sales quarter – sales reached SEK 11.3 million. I view this initial market response as an indication of the great demand for our products.

IRRAflow claims a unique position in the market as the only medical device system that can enable both intelligent intracranial fluid management and pressure monitoring in real time. Simply put, the IRRAS solution integrates aspiration (drainage of fluid), targeted irrigation and pressure monitoring in the brain in one single rugged unit. We can thus offer a cutting-edge solution that is less invasive and produces better health outcomes for patients with stroke and hematoma. This system is regarded by many as a paradigm shift in neurosurgery that brings a clear benefit to patients, physicians and health care payers.

## IRRAS listed on the stock market

Marking another milestone, IRRAS became listed on the Nasdaq Stockholm First North Premier market in November 2017. In connection with the listing, we issued shares for SEK 293 million and were thus able to welcome approximately 600 new shareholders, including a large number of specialized European life-science funds. We will use the proceeds to finance our growth strategy and they will provide us with enough capital to bring the company into positive cash flow. We are moving ahead with our plans to move the listing from First North Premier to the main listing on Nasdaq Stockholm next year, with preparations taking place throughout 2018.

## Voluntary recall

As a precautionary measure, we recalled IRRAsflow in December and temporarily halted sales. This action was taken after a battery in a single control unit overheated during charging. No treatment was scheduled at the time; it was instead an isolated incident that took place during a sales meeting. Because patient safety and the quality of our products is of paramount importance, we took the problem extremely seriously. Without delay, we began to investigate the cause of the battery problem and identify a solution.

In late January, we announced that we both identified the problem and provided a solution by switching to a different battery pack. In late February, we successfully introduced an upgraded version of IRRAsflow featuring both aesthetic and mechanical improvements. The new battery pack is well proven and has been used in tens of thousands of medical devices since 2012. In particular, I would like to highlight the hard work that our development team dedicated to implementing this upgrade so quickly. It is clear proof of our strong culture, with its deep passion to improve conditions and care for patients and medical staff. The upgraded product has been available on the market since mid-March 2018, and it thrills me to note that interest is great and IRRAsflow inspires continued confidence from the market.

### Marketing efforts in Europe and the United States

2017 was the first year IRRAS entered the commercial phase, laying a solid foundation upon which to build. In 2018, we will focus on increasing sales in Germany and elsewhere in Europe. We will also start looking at sales outside of Europe, beginning with countries that have shorter registration and licensing procedures. As of March 2018, we had selected distributors in a total of 41 countries within and outside the EU.

We expect to be able to market and sell IRRAS $\textit{flow}$  in the United States in 2018. We started the process of obtaining approval on the US market when we applied to the FDA for marketing clearance for IRRAS $\textit{flow}$  in June 2017. We submitted a 510(k) application, which states that our product is substantially equivalent to one or more already marketed devices. Since that time, we have had an ongoing dialogue with the FDA and responded to their questions. We will continue to provide them with requested answers and clarifications. This type of dialogue with the FDA is not unusual for complex, software-driven surgical equipment, and I am convinced that it brings us closer to an approval and launch of IRRAS $\textit{flow}$  in the United States in 2018.

To prepare ourselves for a US launch following approval, we have begun to build up the US sales and production organizations as well as the global quality assurance and compliance team.

### Pipeline for the future

We envision future opportunities to further develop applications for the IRRAS $\textit{flow}$  technology platform, such as for drainage of abdominal abscesses and targeted drug delivery. We have the expertise, the resources and the patents to achieve our goals.

### Future

IRRAS is growing fast and we are transitioning from a development stage company to a commercial stage company. In a relatively short time since IRRAS was founded, we have been able to provide patients, surgeons and payors with an elegant, intelligent and fully computerized solution, that improves both care and outcomes in the treatment of brain damage using neurosurgery. We will work relentlessly to make IRRAS $\textit{flow}$  a standard system in all such treatments, and we intend to develop more applications that will prove IRRAS $\textit{flow}$  as the superior treatment method.

IRRAS has 2018 received an updated ISO 13485:2016 certificate and new CE marks for our control unit and tube set. Both products are class II products. The ISO certificate and CE marks are valid until 2021. The CE mark for the catheter is expected in the near future. It is typical for a class III product, such as the IRRAS catheter, to require more time for auditing.

On behalf of the entire board and management team of IRRAS, I'd like to thank our employees, medical advisors and shareholders for their continued support. We look forward to welcoming a future with significantly improved patient safety and more cost-effective care.

Stockholm, May 2018

**Dr Kleantis G. Xanthopoulos**

President and CEO





**30%**  
of all subdural  
hematomas  
are chronic

# Five reasons to invest in IRRAS

## 1.

### Unique product that improves patient safety and lowers the health care costs for neurosurgical procedures of the brain

IRRAS's proprietary technology platform *IRRAflow* is a groundbreaking innovation in neurosurgery and the only medical device system that can enable both intelligent intracranial fluid management and pressure monitoring in real time.

Compared with conventional methods, treatment with *IRRAflow* results in fewer complications, reduced treatment time for patients, and lower costs for hospitals and health care providers.

## 2.

### A great clinical need means large market potential

*IRRAflow* is used initially for the treatment of patients suffering from hemorrhagic stroke and chronic subdural hematoma, both of which are life-threatening conditions with bleeding under the skull. In the EU and United States alone, close to 350,000 patients each year are treated surgically.

IRRAS estimates the annual market potential in the EU and United States for surgical treatment of hemorrhagic stroke and chronic subdural hematoma at EUR 900 million. There is additional potential in the related area of subdural hematoma caused by trauma, where IRRAS estimates the market in the EU and United States to be worth close to EUR 350 million.

## 3.

### A business model with built-in scalability and good margins

*IRRAflow* consists of a control unit (hardware) and consumables (catheters and tube sets), which generate continuous revenue streams.

Because of the payments received from government authorities and insurance companies, the product margins are very good.

## 4.

### Good market coverage

The products are sold through an in-house sales and marketing organization in key markets in Europe and, following expected approval from the Food and Drug Administration (FDA), in the United States. Internal sales channels in key markets are complemented by a network of worldwide distribution partners.

## 5.

### Several applications for *IRRAflow* in the pipeline

IRRAS plans to develop *IRRAflow* for several different therapies. These include the treatment of bodily diseases outside the central nervous system and using *IRRAflow* for drug delivery.

Our product portfolio is well protected by key patents and patent applications in key markets in Europe, the United States and the rest of the world.



Chronic subdural hematoma is expected to become one of the most common neurosurgical brain diseases by 2030, which in turn might mean that fluid drainage in chronic subdural hematoma can become the most common neurosurgery procedure in 2030.

# Financial targets

## The Board of IRRAS has adopted the following financial targets:

- **Sales**  
The long-term growth target is to achieve revenues in excess of SEK 250 million for the fiscal year 2020.
- **Gross margin**  
The gross margin target for fiscal year 2020 is a gross margin in excess of 70 percent.
- **Operating profit/loss**  
The company will be profitable on an operating profit level for the fourth quarter of 2019.

The Board's intention is not to propose any dividend to shareholders until the company generates long-term, sustainable profitability. The company intends to continue focusing on the further development and expansion of operations and sales. Therefore, available financial resources and income will be reinvested in operations in order to finance the company's long-term strategy.

Sales performance after the launch was very strong. During the third quarter of 2017, sales totaled SEK 11,3 million. The temporary suspension of sales in the fourth quarter resulted in fourth-quarter sales of only SEK 1 million. However, the company believes that the temporary suspension of sales will not affect its ability to achieve its financial targets.

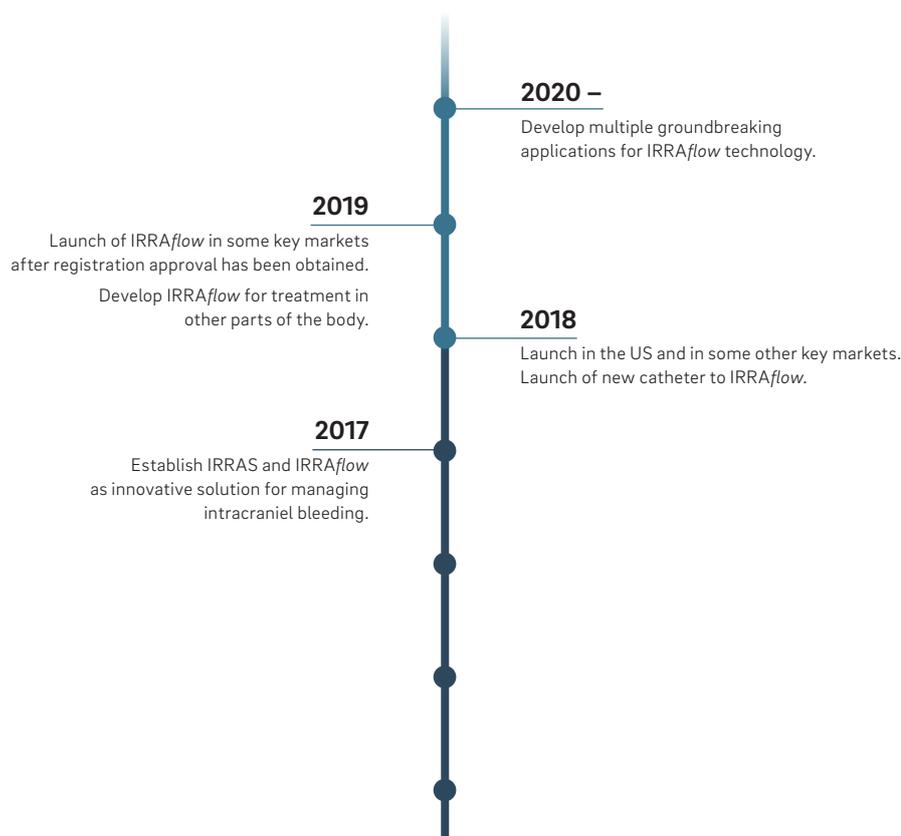


# Vision and strategy

**IRRAS' vision is to become a leading med-tech company focused on the design, development and commercialization of innovative solutions for brain surgery. IRRAflow will continue to revolutionize health care through the development of new applications, and to be the established standard of care in all therapies where the technology can be used. This future holds promise; significantly improved patient outcomes, with less time in intensive care and other types of care, as well as health-economic benefits for hospitals and other health care providers.**

As our initial focus, we will commercialize IRRAflow for hemorrhagic stroke and chronic subdural hematoma while developing other applications in parallel. The following goals are central to IRRAS's growth strategy:

- Expand sales in existing European markets**  
 Sales are driven across a combination of sales channels. In Germany IRRAS operates through its own sales organization, and through selected distributors in other EU countries.
- Expand to the United States and new markets**  
 IRRAS is currently building its own sales and marketing organization in the United States prior to expected FDA approval in 2018. We also have agreements with selected distributors in order to quickly gain access to key markets in other parts of the world as approval is obtained.
- Develop new products**  
 We aim to leverage the full potential of our proprietary platform IRRAflow. This is why our research portfolio contains several options for extended use, in other applications for intracranial treatment as well as in other parts of the body.



# First year as a commercial company

**2017 proved to be an eventful year, with the first commercial launch of IRRAflow, the creation of our own sales organization in Europe and the FDA submission for marketing approval. It was also the year when IRRAS became a publicly listed company and the year when an overheated battery led IRRAS to temporarily halt sales and recall the product as a safety measure.**

**IRRAS's product IRRAflow is sold through a combination of an in-house sales force on the main markets and selected distributors worldwide. Research and development are carried out in-house, while production takes place externally. Our business model is flexible, scalable and cost effective.**

## **Combination of in-house sales force and distributors**

IRRAS considers the EU and United States to be main markets because of their high demand for medical technology solutions, their potential for rapid growth and their comprehensive reimbursement models. Germany has its own sales organization, while in other European countries sales take place through distributors. IRRAS is transitioning to commence sales in some additional countries through its internal sales organization. Our aim is to establish IRRAflow as the standard in care by demonstrating its clinical and health-economic benefits and by working with leading opinion leaders and scientists to drive awareness and increase demand.

## **Europe – the first commercial launch**

The month of May saw the first commercial launch and sales start for IRRAflow in Germany and Austria. It was very well received by the market, and sales took off in the third quarter.

In the rest of the EU, IRRAS is focusing on establishing a network of qualified distributors and working together with leading opinion leaders and researchers at major European hospitals to drive awareness and increase demand and interest in IRRAflow.

In December 2017, IRRAS had agreements with 7 selected distributors with market coverage in 13 countries in the EU. Moreover, we reached agreements with an additional 11 distributors in key markets in other parts of the world such as China, India and Japan as well as several countries in Central and South America.

Our distribution agreements also cover countries where IRRAS has initiated the process for regulatory approval. In countries where the regulatory approval process has not yet been initiated, the approval process is driven by IRRAS and each distributor in close cooperation.

## **United States – building the sales organization**

In the United States, the creation of our own sales and marketing organization was initiated in anticipation of FDA approval. In June, we submitted a so-called 510(k) application to the FDA. IRRAS assesses that we will be able to launch IRRAflow in 2018, pending approval from the FDA.

Faced with the new major requirements following the 2018 launch, the organization reinforced its sales, marketing and compliance functions at the end of 2017. These intensified efforts continued at the beginning of 2018. The initial focus of U.S. sales operations will be roughly 150 neurosurgical centers, which account for more than 80 percent of the treatments that IRRAflow is used for in the United States.

Markets outside the EU and United States are complemented by a global network of selected distributors. This approach ensures rapid access to key markets in other parts of the world such as China, India and Japan as well as several countries in Central and South America.

# IMPORTANT MILESTONES

- 
- 2020 –**  
Develop multiple groundbreaking applications for IRR*A*flow technology.
  - 2019**  
Launch of IRR*A*flow in some key markets after registration approval has been obtained.  
Develop IRR*A*flow for treatment in other parts of the body.
  - 2018**  
Launch in the US and in some other key markets.  
Launch of new catheter to IRR*A*flow.
  - 2017**  
Establish IRRAS and IRR*A*flow as innovative solution for managing intracranial bleeding
  - 2016**  
Financing round is being implemented.  
IRRAS operations are established in the United States with offices in La Jolla, California.
  - 2014**  
CE marking and ISO certificate are obtained in the EU.
  - 2012**  
The company's first patent family is acquired from Christos Panotopoulos (Founder of the Company).  
Work on developing and commercializing IRR*A*flow begins.
  - 2011**  
IRRAS AB is founded as a joint venture between Serendipity Innovations AB, Vandel Group and Jaymore Enterprises Limited.  
Patent belonging to the first patent family granted by the European Patent Office (EPO).

**In-house research and development**

The company’s research and development center is located in San Diego, California, a well-known center of excellence for the development and manufacture of equipment in the life-science industry. Development takes place largely using our own resources and focuses on extending the applications and uses of IRRAsflow with minor modifications.

Among other activities, IRRAS is planning a smaller version of IRRAsflow as well as fluid management outside of the central nervous system and a new system of drug delivery to the brain and other parts of the body that are difficult to treat today. IRRAS’s unique product portfolio and pipeline of new products are protected by essential patents and patent applications.

**A flexible and scalable business model**

IRRAS’s business model is built around selling control units and then leveraging recurring revenue streams by selling consumables (tube sets and catheters) for these control units.

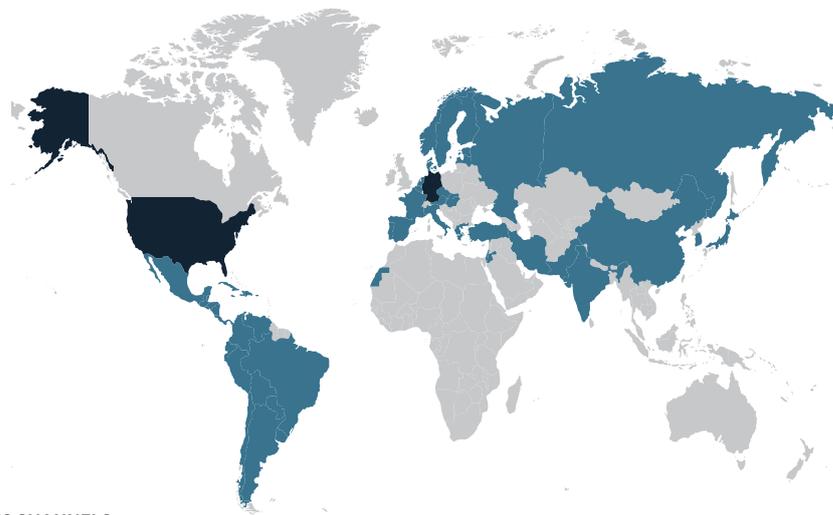
Production is also carried out from the San Diego region, and the IRRAsflow system is manufactured by subcon-

tractors in California in close cooperation with IRRAS’s own specialists.

**Ongoing regulatory processes**

Obtaining permission to market a medical device requires regulatory approval in each market. IRRAS’s growth strategy is supported by an internal process that deals with the application for and management of regulatory approvals. IRRAS is ISO certified under ISO 13485:2016. IRRAsflow received its first CE approval as early as 2014, meaning it is approved for sale in Europe.

IRRAS has 2018 received an updated ISO 13485:2016 certificate and new CE marks for the control unit and tube set. Both products are class II products. The ISO certificate and CE marks are valid until 2021. The CE mark for the catheter is expected in the near future. It is typical for a class III product, such as the IRRAS catheter, to require more time for auditing.



**PLANNED SALES CHANNELS**

- Direct sales
- External distributors

### **Battery problem and voluntary recall**

During a sales demonstration at an office in Germany during December, the battery in a control unit overheated while it was being charged. As part of the IRRAS quality management system, all batteries undergo a charge/discharge cycle test in addition to 24-hour usability testing to identify any manufacturing problems. IRRAS therefore assessed this to be an isolated event caused by a manufacturing defect but nevertheless chose to recall the product and, as a safety measure, temporarily halt sales.

After intensive efforts, in early February we were able to successfully introduce an upgraded version of *IRRAflow* featuring aesthetic and mechanical improvements as well as a new battery configuration. The selected battery is well proven and has been used in tens of thousands of medical devices since 2012.

### **New issue and IPO**

Because the launch of *IRRAflow* attracted great interest and a positive reception, management and the Board saw an opportunity to accelerate marketing activities and start them earlier than planned. To secure financing for the company's growth strategy, develop its product portfolio and support the need for working capital until IRRAS becomes self-financing, IRRAS decided to offer a rights issue and become publicly traded.

IRRAS stock was listed on the Nasdaq First North Premier in Stockholm on November 22. Just over SEK 290 million was subscribed for in the issue, which attracted approximately 600 new shareholders, including several specialized European life-science funds.

# Meets a great clinical need

**IRRAflow is initially marketed in the EU for the purpose of intracranial pressure monitoring and intracranial fluid management in patients with hemorrhagic stroke and chronic subdural hematoma, two types of bleeding under the skull.**

## Market size

IRRAS assesses the annual market in the EU and United States for the use of IRRAflow disposables for hemorrhagic stroke and chronic subdural hematoma to be worth approximately EUR 900 million.<sup>1</sup> There are also sizable markets outside the EU and United States for IRRAflow in countries with well-functioning health insurance systems.

The related area of traumatic subdural hematoma is yet another market segment where IRRAS believes that IRRAflow can be used. In the EU and United States, there are approximately 130,000 cases each year, suggesting an additional market opportunity worth roughly EUR 350 million.<sup>2</sup>

## Hemorrhagic stroke

Stroke is a global health problem, with hemorrhagic stroke being its most severe form. It is caused by bleeding in or around the brain when a blood vessel bursts. The condition causes five percent of all deaths in the United States.<sup>3</sup>

Among the main risk factors are high blood pressure, advanced age, use of blood thinners, smoking, excessive alcohol intake and heredity factors.

Each year, approximately 3.6 million people in the world suffer a hemorrhagic stroke. In the EU and United States, the figure is approximately 460,000 each year, and surgery is performed in more than 40 percent of these cases.<sup>4</sup> So, IRRAflow could be used in the treatment of hemorrhagic stroke in approximately 190,000 cases in the EU and United States alone.

Both in the EU and the United States, 75 percent of all cases of hemorrhagic stroke occur in people older than 65<sup>5</sup>; the number of cases is expected to increase primarily due to a growing elderly population.

Approximately 40 percent of hemorrhagic stroke cases result in death within 30 days, and approximately one-third result in brain damage and permanent disability.<sup>6</sup>

The estimated direct medical costs and indirect costs of care and lost productivity totaled EUR 45 billion in the EU<sup>7</sup> and USD 33 billion in the United States in 2013<sup>8</sup>

## Chronic subdural hematoma

Subdural hematoma occurs when a vein or other blood vessel ruptures between the skull and the outer membrane covering the brain, causing the blood to accumulate (a hematoma) on the brain's surface and creating pressure

- 1) The company's estimates are based on the approximate number of surgically operated hemorrhagic stroke cases (190,000) and chronic subdural hematoma cases (155,000) in the EU and United States, multiplied by EUR 2,600, which is the average sales price for IRRAflow disposables (IRRAflow tube set and catheter).
- 2) Anticoagulation Society Europe Report, Univ.-Prof. Dr. Johann Willeit, Universitätsklinik für Neurologie, Medizinische Universität Innsbruck, 2015.
- 3) Report from the American Heart Association: Heart Disease and Stroke Statistics—2017 Update.
- 4) Anticoagulation Society Europe Report, Univ.-Prof. Dr. Johann Willeit, Universitätsklinik für Neurologie, Medizinische Universität Innsbruck, 2015.
- 5) European Heart Network Report: European Cardiovascular Disease Statistics, 2017 edition.
- 6) Marc Fisher M.D., Bo Norrving M.D., PhD, "American Heart Association, 1st Global Conference on Healthy Lifestyles and Noncommunicable Disease Control," Moscow, 28-29 April 2011, "The International Agenda for Stroke."
- 7) Report from SAFE: The Burden of Stroke in Europe.
- 8) Report from the American Heart Association: Heart Disease and Stroke Statistics—2017 Update.

The number of cases is expected to increase, mainly due to a growing elderly population. The potential of IRRAflow to become a standard therapy can make an active contribution to less human suffering, a higher quality of life and lower costs for healthcare providers.



**75%**

of all cases of  
stroke occur  
among people  
older than 65

on the brain tissue. There are three types of subdural hematoma. IRRAslow is currently marketed for the treatment of chronic subdural hematoma, most commonly caused by moderate head trauma. Main risk factors include the use of aspirin or other antiplatelet agents, advanced age, excessive alcohol intake and previous trauma to the brain.

Each year, an estimated 160,000 cases each of chronic subdural hematoma occur in the EU and in the United States. In more than 95% of cases<sup>9</sup> surgery is performed, which indicates that approximately 155,000 cases of chronic subdural hematoma in the EU and the United States are suitable for treatment with IRRAslow each year.

About one-third of all patients with chronic subdural hematoma die, and an additional one-third become permanently disabled.<sup>10</sup> One example is the United Kingdom, one of the largest countries in Europe, where the total estimated direct medical costs are USD 1.6 billion.<sup>11</sup> Chronic subdural hematoma is expected to become one of the most common neurological brain diseases by 2030, which in turn can mean that fluid drainage for chronic subdural hematoma might become the most commonly performed neurosurgical procedure by 2030.

### Elevated intracranial pressure

The most urgent goal of treatment for patients with elevated pressure inside the skull is to reduce the pressure. This is even done prior to treatment of the underlying brain disease that caused the elevated intracranial pressure. In-

creased intracranial pressure can lead to harmful effects on the brain, and is the most common cause of death among intracranial diseases in neurosurgery. Without treatment, moderate to severe brain damage or death ensues.

In developed countries, stroke is the main cause of disability, the second most common cause of dementia and the third most common cause of death.<sup>12</sup> Continuous monitoring is critical to outcome in patients with elevated intracranial pressure, and access to treatment options for reducing and regulating intracranial pressure is at least as important as monitoring.

### Conventional treatment options

Historically, surgical treatment options include a drainage catheter (minimally invasive) and craniotomy, which is a surgical procedure in which a portion of the patient's skull is opened in order to drain the blood and relieve pressure on the brain.

A conventional external ventricular drainage (EVD) system is based on gravity. An intracranial catheter is inserted through a small hole in the patient's skull and drains the blood and pathological accumulation of fluid into a drainage bag on a drip stand. The drainage rate is regulated by adjusting the height of the drainage bag relative to the catheter tip inside the patient's skull.

Conventional drainage systems are susceptible to obstruction caused by coagulated blood and the accumulation of other particles, which is estimated to occur in up to 30

9) Anticoagulation Society Europe Report, Univ.-Prof. Dr. Johann Willeit, Universitätsklinik für Neurologie, Medizinische Universität Innsbruck, 2015.

10) Report from the World Health Organization: The Global Burden of Stroke, 2013.

11) The epidemiology of surgically treated acute subdural and epidural hematomas, Can J Surg. 2008 Oct;51(5):339-45. Tallon JM, Ackroyd-Stolarz S, Karim SA, et al.

12) Marc Fisher M.D., Bo Norrving M.D., PhD, "American Heart Association, 1st Global Conference on Healthy Lifestyles and Noncommunicable Disease Control," Moscow, 28-29 April 2011, "The International Agenda for Stroke."

percent of treatments. This is likely to adversely affect patient outcomes because the attempt to remove the catheter blockages increases the risk of infection and often fails, resulting in additional operations and new catheter insertions.

IRRAflow is the only system on the market that provides drainage, targeted delivery and intracranial pressure monitoring in a single product, and thus can improve health outcomes significantly.

### Well-established compensation models

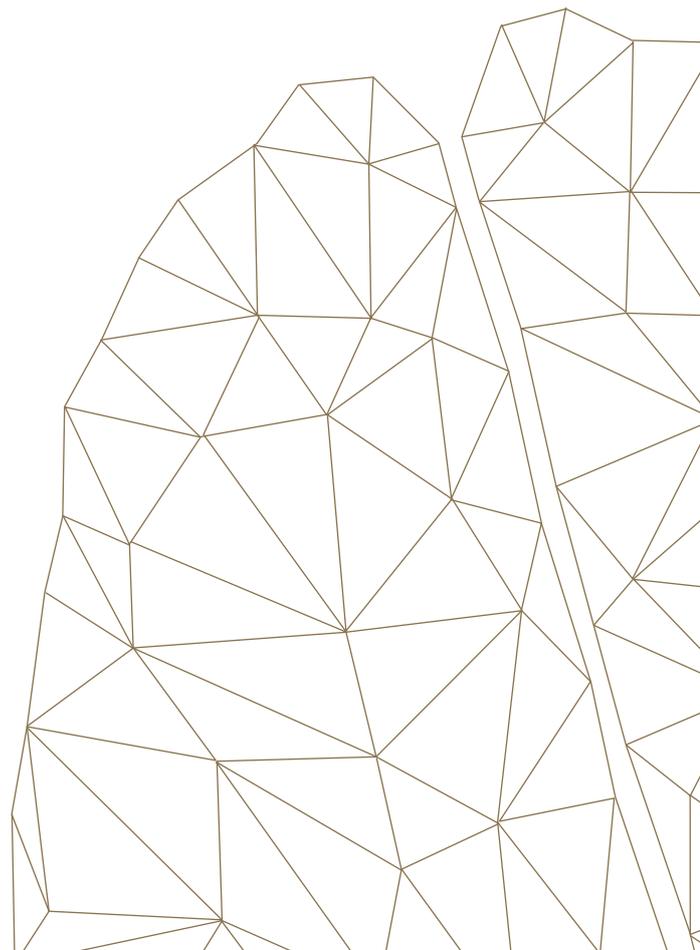
Medical devices that are used by health care providers are often financed by insurance companies or via the public compensation system. Within the EU, IRRAflow is reimbursed through the DRG system, a classification of the payment a hospital receives for procedures performed based on the use of resources, inpatient length of stay and costs for using the medical device.

The United States will also use the DRG system for medical device reimbursement, pending FDA approval. In the U.S. market, care providers are paid directly by patients and by a number of different government and private third-party payers, primarily through federal Medicare,

Medicaid and private health insurance. Since there is no uniform policy for coverage and reimbursement among third-party payers, there is a certain price pressure due to a general effort to reduce health care costs.

IRRAflow consists of a control unit (the technical part of the system, which controls delivery and drainage) and consumables (tube set and catheter). In many markets, reimbursement for the control unit will not be included in the DRG system. It is instead considered a capital investment made by the hospital.

In March 2018, IRRAflow had a so-called DRG code in a total of 13 EU countries. This means that the authorities in each country have approved the product, and will provide a set payment to the care provider for each treatment performed with IRRAflow. IRRAflow will most likely be covered by existing DRG codes in most of the remaining EU countries.



# This is IRRAflow™

**IRRAflow represents a step forward in neurological surgery that should have been developed a long time ago. It offers a significantly improved, minimally invasive solution for monitoring intracranial pressure and fluid management for intracranial bleeding. It is the only system on the market that provides drainage, targeted delivery and intracranial pressure monitoring (ICP) in one single rugged device. This solution lowers the risk of catheter blockage and thereby the risk of infection usually associated with conventional catheter drainage systems.**

## The competitive advantages of IRRAflow

### Digital monitoring

IRRAflow facilitates the work of intensive care personnel through 24-hour monitoring, drainage automation and a safety alarm that signals dangerous changes in intracranial pressure.

### From passive to active drainage

The integrated dynamic fluid management takes place in a closed-circulatory system. Pressure is continuously monitored and adjusted through synchronous infusion and drainage; hence, the drainage rate can be actively guided and optimized for each patient.

### Minimized risk for catheter blockage

Regular infusion (flushing) of fluid in the IRRAflow catheter keeps the holes in the catheter tip unobstructed and prevents catheter blockage (occlusion). This eliminates the need to replace the drainage catheter, which is associated with a high risk of infection. When using conventional drainage catheters, blockages are estimated to occur in 30 percent of the cases and the infection rate is estimated to exceed 15 percent.

### Improved health outcomes

Since the start of sales, IRRAflow has been used in close to 100 medical procedures in four different European countries. No occlusion or blockages have occurred in the catheters, and no infections have been reported. The total length of hospital stay was reduced considerably compared with today's standard therapy.

### Lower costs

Treatment with IRRAflow results in shorter treatment times compared with conventional drainage methods. Cost savings have been estimated at between EUR 4,300 and 7,700 per patient.<sup>1</sup>

### User friendly

IRRAflow has an innovative design compared with conventional drainage methods. Yet it is tailored for current clinical practice, ensuring an easy transition for neurosurgeons, intensive care teams and medical staff. The control unit can accept additional development enhancements through the simple installation of software updates.

<sup>1)</sup> Based on 32 procedures using IRRAflow for the treatment of subdural hematoma after the commercial launch in May 2017. The lower end of the range (EUR 4,300 in average savings) can be compared with the treatment of patients using a conventional EVD that did not require catheter replacement. The upper end of the range (EUR 7,700 in average savings) can be compared with the treatment of patients using conventional EVD that required catheter replacement due to blockage. The length of stay is based on data from the University Medical Center in Lübeck and Rostock, Germany. Treatment costs are based on data from DIMDI.

# 1.

A **fluid exchange system** with an infusing pump and aspirating mechanism that interact with a double lumen catheter to both supply and evacuate fluid to and from an organ or cavity. The system is synchronized to monitor local body cavity within a preprogrammed range.

# 2.

A **monitoring and measuring system** for intracranial pressure based on a method that uses a fluid column for accuracy and reliability.

# 3.

A **safety alarm** that is activated when the pressure is higher or lower than the preprogrammed range.

# 4.

The **programmable periodic bolus infusion** prevents blockage of the catheter and thereby associated surgical complications.



## IRRAsflow

IRRAsflow consists of a technical device (control unit) and consumables (catheter and tube sets). The system features four fully integrated and synchronized functions:



**3,6**

million people  
worldwide suffer  
from a hemorrhagic  
stroke each year

# The share

**Since November 22, 2017 the IRRAS share has been listed on Nasdaq Stockholm's First North Premier market. As per March 31, 2018 IRRAS had 446 shareholders.**

### Market capitalization and turnover

The last price paid on December 31, 2017 was SEK 28.80, which gave IRRAS a market capitalization of SEK 681 million. As per March 31, 2018, the last price paid was SEK 27.94, giving a market capitalization of SEK 661 million. During the fiscal year 2017, since the listing on November 22 an average of 179,228 shares per day were traded. Total turnover was 4,659,943 IRRAS shares in 2017, at a value of SEK 156 million.

Since the listing, the fall in value during 2017 totaled 36 percent. During the same 2017 period, the OMX SPI Index decreased by 1,57 percent.

### Share capital

The share capital of IRRAS as per December 31, 2017 totaled SEK 709,855.89 divided between 23,661,863 shares with a par value of SEK 0.03 per share. IRRAS has only one class of shares, and all shares have equal rights to participation in the company's assets and profits. One trading lot is the equivalent of one (1) share.

### Shareholder agreements

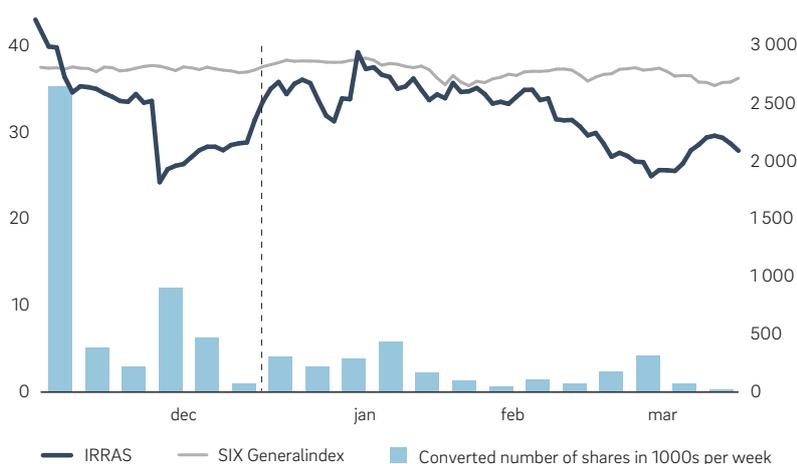
The Board of Directors of IRRAS is not aware of any shareholders' agreement or other agreements between the company's shareholders that aims to jointly control the company.

Neither is the Board aware of any agreements or similar which could lead to changes in control of the company.

### Dividend and dividend policy

The Board of IRRAS has proposed to the annual general meeting that no dividend be paid for the fiscal year 2017. The company's financial goal is to show positive earnings during the fourth quarter of 2019 at the latest. Before positive earnings can be achieved, the Board has no intention to propose to the annual general meeting that a dividend be paid.

SHARE INFORMATION 2017-11-22-2018-03-31



Source: Six Financial Information

In the EU and the US, the figure is 460,000 a year, a surgical procedure occurs in more than 40% of these cases. IRRASflow could thus be used for treatment of hemorrhagic stroke in about 200,000 cases annually, only in the United States and in the EU.

**LARGEST OWNERS\***

	<b>Number of shares</b>	<b>Share of shares /votes</b>
Lexington Holding Assets Ltd (BVI)	3 259 000	13,77 %
F.EX Endotherapy Limited	3 030 800	12,81 %
Bacara Holdings Limited	1 438 334	6,08 %
Serendipity Group AB	1 356 468	5,73 %
Serendipity Ixora AB	781 349	3,30 %
Timoben Medical Holding	652 000	2,76 %
Nyenburgh Holding B.V.	651 325	2,75 %
Fjärde AP-Fonden	595 000	2,51 %
Avanza Pension (nominee shareholders)	550 089	2,32 %
SIX SIS AG	345 500	1,46 %
Other shareholders	11 001 998	46,13 %
<b>Total number of shares</b>	<b>23 661 863</b>	<b>100,00 %</b>

**TABLE OF HOLDINGS\***

<b>Holdings</b>	<b>Number of shareholders</b>
1-500	100
501-5 000	151
5 001-100 000	161
100 001-500 000	25
500 001-	9
<b>Total</b>	<b>446</b>

**DEVELOPMENT OF SHARE CAPITAL**

As per November 21, 2011, the company's registered share capital totaled SEK 50,000, divided between 50 shares, each with a par value of SEK 100. Since then, the share capital has undergone the following changes:

<b>Year</b>	<b>Transaction</b>	<b>Increase in share capital</b>	<b>Increase in number of shares</b>	<b>Share capital, total</b>	<b>Number of shares</b>	<b>Par value, SEK</b>
2011	Foundation	50,000	10,000	50,000	10,000	5.00
2013	New share issue <sup>1)</sup>	9,180	1,836	59,180	11,836	5.00
2016	Share split	-	1,834,164	59,180	11,836,000	0.005
2016	New issue <sup>2)</sup>	18,250	3,650,000	77,430	15,486,000	0.005
2016	Change of convertibles <sup>3)</sup>	8,657	1,731,419	86,087	17,217,419	0.005
2017	Bonus share issue	430,435.48	-	516,522.57	17,217,419	0.03
2017	New share issue <sup>4)</sup>	279,420.41	6,444,444	709,855,89	23 661,863	0.03

1) The subscription price in the issuance was SEK 13,600 per share, corresponding to SEK 13.60 per share adjusted for the share split carried out during 2016.

2) The subscription price in the issuance was SEK 25 per share.

3) The conversion rate in connection with the exchange of the convertible debt was SEK 17.50.

4) The subscription price in the issuance was SEK 45 per share.

\* As of March 31 and then known changes.

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# Management report

**The board and President CEO for IRRAS AB (publ), corporate ID number 556872-7134 with registered office in Stockholm hereby presents the annual report and consolidated financial statements for the fiscal year January 1–December 31, 2017. The result of the year's activities and the parent company and Group's status are presented in the management report and profit-and-loss statements and balance sheets, cash flow analyses, total results for the Group, reports on changes in equity and notes with additional information.**

**The company's shares have been listed on Nasdaq First North Premier since November 2017.**

## Activities

IRRAS is a medical technology company in the commercial phase focused on design, development and commercializing of innovative solutions for brain surgery. The goal is to significantly improve the result for patients, reduce the time the patient has to spend in intensive care and inpatient care and contribute to economic benefits for hospitals and other healthcare providers.

The company's initial product, IRRASflow™, is a fully integrated, self-contained system that enables intracranial fluid drainage and careful monitoring of intracranial pressure in real time.

IRRAS focuses initially on commercializing IRRASflow in the markets for hemorrhagic strokes and chronic subdural hematoma.

## MULTIPLE-YEAR OVERVIEW OF THE GROUP

Amounts in thousands of kronor (SEK)	Group		Parent company	
	2017-01-01 2017-12-31	2016-01-01 2016-12-31	2017-01-01 2017-12-31	2016-01-01 2016-12-31
<b>Result</b>				
Net turnover	11,973	–	3,969	–
Gross marginal %	53%	–	16%	–
Operating result	–61,464	–30,828	–45,309	–24,808
Net result	–60,901	–31,898	–45,169	–25,591
<b>Financial status</b>				
Balance sheet total	329,252	98,260	349,854	103,693
Equity	316,030	95,115	338,877	101,030
Equity ratio, %	96%	97%	97%	97%

The company began a commercial launch of IRRASflow in Europe in 2017. Preparations for introduction in several additional countries are under way.

The IRRAS business model is based on selling control units (infusion pumps) and then taking advantage of the recurrent income flows from the sales of consumables (catheters and cassettes) for the control units.

## Corporate structure

IRRAS AB with headquarters and registered address in Stockholm is the parent company in the Group. The parent company is the sole proprietor of two subsidiaries: IRRAS GmbH in Germany and IRRAS USA, Inc. in the United States.

The Swedish parent company is responsible for functions which affect the entire Group, such as finance, investor relations and IT matters. The American company is responsible for the production and development of existing and new products. The German subsidiary is primarily a sales company.

## Important events during the fiscal year

### Launch of IRRASflow

IRRAS launched IRRASflow in Europe during the summer of 2017. The product was well-received by the users and an advantageous monetary reimbursement to hospitals from authorities and insurance companies for treatment with the product resulted in a good initial sales trend.

### Issuance of new shares and listing with Nasdaq First North Premier

IRRAS issued new shares for a total of SEK 293 million before issuance costs during the month of November. The last part of the proceeds, MSEK 31, was paid in the beginning of 2018. The proceeds will be used for the company's neurosurgical activity, including the launch of the company's product IRRASflow in Europe, the USA and the rest of the world. The proceeds will also be used to finance the development of IRRASflow for other indications. In connection with the issuance of new shares, IRRAS shares were listed at Nasdaq First North Premier. The first trade day was November 22.

### Temporary stop of sales

In December, IRRAS chose to voluntarily stop sales and recall products due to an overheating battery in a control unit during a routine demonstration at an office. The problem with the battery was corrected and the temporary stop on sales was reversed in February 2018 with the launch of an updated product. The sales stop affected sales during 2017 and with an additional SEK 5 million in extra costs as a result of the recall of products.

### Strengthening of the organization

IRRAS has strengthened the organization within all departments during the year. A total of 10 new employees were recruited during the year. Kleanthis G. Xanthopoulos, who was previously a consultant at the company, was hired as President and CEO. In addition, IRRAS also hired an EVP and CFO, a VP Finance, a development manager, a quality manager, a marketing and sales director, and a head of sales to distributors.

### Sales and the market

IRRAS' first product, *IRRAflow*, is being marketed for intracranial pressure monitoring and for intracranial fluid management in patients with hemorrhagic stroke and chronic subdural hematoma, two different types of brain hemorrhages.

In total, approximately 1.1 million people annually in the EU and the USA suffer from hemorrhagic stroke and chronic subdural hematoma. Of these, approximately 350,000 are treated clinically. The total market value in the EU and USA is assessed to be worth approximately EUR 900 million per year. There is a possibility that the indication area for *IRRAflow* will expand, which would result in greater market potential.

After the launch in Germany, IRRAS enjoyed good sales development thanks to a well-planned marketing strategy and well-established network. Work for the German market will continue through the existing sales organization. It is estimated that there is a great deal of interest in Germany and that the country will continue to be a very good market for IRRAS.

Work with other distributors in the rest of the world will intensify during 2018. Agreements have already been concluded with over 40 distributors globally. Launching a product in one country usually requires approval from each country's regulatory authority. In many cases, it is difficult to assess exactly when such approvals can be obtained. However, it is expected that *IRRAflow* will be launched in several additional countries during 2018.

Preparations for a launch in the USA have begun and will intensify during 2018 in order to make a launch possible during 2018 as soon as a registration approval has been received. The plan is to sell *IRRAflow* via the company's internal sales organization in the USA.

### Result and financial position in the Group

IRRAS launched its first product in the summer of 2017. Net turnover for the fiscal year 2017 totaled SEK 12.0 million (0). The share of the turnover attributable to Germany is SEK 11.6 million and the remaining turnover is attributable to the rest of Europe. During 2017, 94 percent of invoices were generated during the third quarter and 6 percent during the fourth quarter.

The gross profit for 2017 was SEK 6.3 million (0.0), which is equivalent to a gross margin of 52.7 percent.

Operating expenses during 2017 totaled SEK 68.4 million (30.4). The higher operating expenses can be explained by an increased investment in marketing and sales through the launch in Europe as well as increased development costs and product maintenance of released products. The higher operating expenses can also be explained by the increased administrative expenses and expenses for the recall of products.

The research and development costs during the year totaled 23.4 (18.8) million, of which SEK 10.8 (15.5) were capitalized and SEK 12.6 (3.3) million were expensed. The research and development costs expenses are equivalent to 105 percent of the net turnover.

The net of other operating revenues and other operating expenses totaled SEK 0.6 (-0.4) million during 2017. Other operating revenues primarily include exchange rate differences on receivables from customers while other operating expenses include exchange rate differences on payables.

The operating results for 2017 totaled SEK -61.5 (-30.8) million. The reason for the decline in the operating results is primarily increased operating costs, which were partly offset by the sales begun during the year.

Net interest income during 2017 totaled SEK 0.6 million (-1.1). The improved net interest income is primarily due to an interest-bearing loan the company held during 2016.

The result before taxes in 2017 totaled SEK -60.9 million (-31.9). The annual results totaled SEK -60.9 (-31.9) million.

The cash flow from operating activities after a change of operating capital in 2017 totaled SEK -53.7 (-18.2) million. The reduced cash flow is explained primarily by the lower result, stock accumulation and increased receivables.

Total net investments, including financial investments during 2017 totaled SEK 157.0 (15.0) SEK. Of the total net investments, investments in intangible assets (primarily capitalized development costs) were SEK 10.8 million (15.0), investments in financial fixed assets (placement of a portion of the proceeds in bond funds) were SEK 145.9 million (0.0) and investments in tangible assets were SEK 0.3 million (0.0).

The year's capital requirements were financed with funds from the issues carried out during 2016 and 2017. Liquid assets at the beginning of the period totaled SEK 70.8 million and totaled SEK 98.3 at the end of the year. Financial investments totaled SEK 145.9 million at the end of the year.

### Production

The registered manufacturer of the company's products is the American subsidiary IRRAS USA, Inc. However, all production is carried out through US contractors.

## Development

The development of existing and new products is a central and prioritized part of IRRAS activities. IRRAS has several ongoing development projects for products in neurosurgery. We are also in the exploratory phase for products related to treatment of other areas of the human body.

Historically, IRRAS has spent extensive money and resources on the development of products. Development costs over the next few years are expected to be at 2017 levels. However, development costs as a percent of revenue will decrease significantly since turnover is expected to increase.

IRRAS' overall product development strategy is geared towards development of innovative, user-friendly, reliable and high-quality internally developed systems. IRRAS has internal expertise for the development of control units and consumables. The internal competence is often complemented by external consultants.

In addition to new product development, the development department also works on product improvement, and together with subcontractors strives to streamline and improve components in the production process. Product development is run by the US subsidiary.

In 2017, research and development costs totaled 23.4 (18.8) million, of which SEK 10.8 (15.5) were capitalized as assets and SEK 12.6 (3.3) million were expensed. The research and development costs capitalized as income are equivalent to 18 (11) percent of the operating expenses.

## Risks and uncertainty factors

Like all other commercial enterprises, IRRAS' activities are also exposed to risks and uncertainty factors. The board has determined that the most important risks and uncertainty factors are sales and market risks, development risks, currency risks, financing risks, risks with legislation and changes in regulations, dependency on key persons and supplier risks.

### Sales and market risks

The company's future sales are dependent on the success of current and new customers. If customer contracts cannot be concluded, maintained or are terminated, it can have a negative impact on the company's continued development, growth and financial status. A negative development could also occur if competitors offer more effective and better products at lower prices.

### Development risks

There is always a risk that new and future development projects are delayed, become more expensive or do not achieve results. This could have a negative impact on the company.

### Currency risks

The Group is exposed for currency risk in the form of transaction exposure and conversion exposure. The transition exposure is relatively low because respective companies currently have their income and expenses primarily in the local currency. The German subsidiary has income and expenses primarily in EUR, whereas the American subsidiary will have income and expenses primarily in USD.

The conversion exposure is relatively high. Consolidation of income statements and balance sheets in the Group entails exposure to changes in the exchange rate to USD (for activities in the American subsidiary) and to EUR (for activities in the German subsidiary). The Group does not currently use derivatives to secure the exposure for currency risks. Currency fluctuations can affect the company's continued development, growth and financial status negatively.

### Financing risk

IRRAS has determined that the new issue of shares carried out in 2017 can finance the ongoing activity until a positive cash flow can be achieved. However, the Group needs to work continuously with the cash flow to secure activities and it cannot be ruled out that additional capital or other financing may be needed to meet IRRAS' requirements until a positive cash flow can be achieved.

### Risks with legislation and regulations

Production, marketing and distribution of technical medical products and equipment take place in a regulated market. If IRRAS does not receive future approval of authorities or does not retain existing approvals, it will have a negative effect on activities.

### Dependency on key persons

IRRAS is distinguished by its focus on advanced technology, which make it dependent on the ability to retain and recruit personnel. Should IRRAS lose key employees or fail to recruit new, qualified employees, it could affect the company negatively.

### Supplier risks

IRRAS relies on contractors and manufacturers of the company's products. There is always a risk that such external parties fail to meet their commitments to the extent that the company wishes and deems necessary. Over time, IRRAS aims to have alternative contractors to enable delivery in the event of problems with a supplier.

## Future development

With *IRRAflow*, IRRAS has a unique product which has been well-received by users and customers since the launch. IRRAS' plan is to sell *IRRAflow* through its internal sales organization in

Germany and the USA and via distributors in other countries. Preparations for the launch, including work to obtain registration approval for the products has begun in over 40 countries. The plan is to launch IRRAsflow in additional countries during 2018 as registration approvals are obtained.

In parallel with the work for marketing and selling the products, work on establishing production and measures for improving production efficiency and thus reducing production costs is also under way. This work will continue during 2018.

Development of new and existing products will always be important for IRRAS. IRRAS has several development projects for products within neurosurgery currently in progress. Preliminary projects relating to products for treatment of diseases outside of the brain have also begun.

## Important events after the end of the fiscal year

### Upgrade of IRRAsflow

The temporary stop of sales that took place in December of 2017 was withdrawn and IRRAS launched an updated and improved version of IRRAsflow in February 2018. The product has been updated esthetically and mechanically and has also received an updated battery configuration from a medical technology supplier.

### Strengthening of the management group

In order to strengthen IRRAS' marketing and sales organization, Will Martin has been hired as Chief Commercial Officer. In order to further improve the recruitment of competence at IRRAS and help

with the development of employees, Kellie Fontes was hired as head of human resources. Martin and Fontes are both stationed in the subsidiary in the USA, are part of the executive management group and report directly to the company's CEO, Kleantis G. Xanthopoulos.

### Final cash proceeds from stock issue

The final cash proceeds from the stock issue, SEK 31 million, were paid in the beginning of 2018.

### Updated ISO- and CE-certificate

IRRAS has 2018 received an updated ISO 13485:2016 certificate and new CE marks for the control unit and tube set. Both products are class II products. The ISO certificate and CE marks are valid until 2021. The CE mark for the catheter is expected in the near future. It is typical for a class III product, such as the IRRAS catheter, to require more time for auditing.

## IRRAS shareholding and ownership

The total number of shares as of December 31, 2017 was 23,661,863. In addition, IRRAS has five incentive programs for employees and key personnel. The programs can currently increase the number of shares by an additional 3,406,110. There is only one type of shares and there is no difference or limitations according to law of the corporate governance with respect to the transfer of shares, voting rights, rights to company assets or dividends. The shares have a quota value of SEK 0.03.

## Personnel

The average number of employees in the Group during 2017 was 8 (2), of which 1 (0) is employed by the parent company. The breakdown of average employees by country was 1 (0) in Sweden, 4 (1) in the USA and 3 (1) in Germany. The average number of women in the Group was 3 (1) and the average number of men was 5 (1).

IRRAS is dependent on its ability to attract and retain employees with high expertise and experience. If IRRAS loses key persons or has difficulty attracting employees with key competence, it can have a negative effect on IRRAS' activities and operating result and delay and impede IRRAS' sales and development work. Therefore, IRRAS actively works to be perceived as an attractive employer with committed employees and an active human resources policy. The company works continuously on competence development, the working environment and equal opportunity. To ensure these efforts, a human resource manager was hired in early 2018.

## SHAREHOLDERS AS OF DECEMBER 31, 2017 AND KNOWN CHANGES THEREAFTER

	Number of shares	Percent of shares/votes
Lexington Holding Assets Ltd (BVI)	3,259,000	13.77 %
F.EX Endotherapy Limited	3,030,800	12.81 %
Bacara Holdings Limited	1,438,334	6.08 %
Serendipity Group AB	1,356,468	5.73 %
Serendipity Ixora AB	781,093	3.30 %
Timoben Medical Holding	652,000	2.76 %
Nyenburgh Holding B.V.	650,325	2.75 %
Fjärde AP-Fonden	595,000	2.51 %
Avanza Pension (shares held in trust)	513,689	2.17 %
SIS SIS AG	469,785	1.91 %
Other shareholders	10,914,961	46.13 %
<b>Total number of shares</b>	<b>23,661,455</b>	<b>100.00 %</b>

### Quality assurance

IRRAS is certified in accordance with ISO 13485:2016. Registration work for approval in several countries is under way.

IRRAS has 2018 received an updated ISO 13485:2016 certificate and new CE marks for the control unit and tube set. Both products are class II products. The ISO certificate and CE marks are valid until 2021. The CE mark for the catheter is expected in the near future. It is typical for a class III product, such as the IRRAS catheter, to require more time for auditing.

### Environmental influence

IRRAS' influence on the environment is considered to be minimal. The influence on the environment is primarily due to the use of consumable material.

### Guidelines for remuneration of management

The company operates on the principle that salary levels and other employment conditions should make it possible for the Group to attract and retain competent leading management at a reasonable expense for the company. Remuneration of management will be determined in accordance with the IRRAS remuneration policy: Management remuneration consists of a fixed salary, variable compensation, pension and other benefits. In order to avoid encouraging management at IRRAS from taking unreasonable risks, there should be a balance between fixed and variable compensation. Moreover, the IRRAS annual shareholders' meeting can decide to offer long-term incentive programs, such as programs related to shares or share-prices.

Every management member will be offered a fixed salary appropriate to the market and based on the degree of difficulty of the work and the experience, responsibility, competence and effort of the management member. Every management member can also be offered variable compensation (bonus) in cash. The variable remuneration is based on clear, predetermined and measurable criteria and economic results, partly on individual goals established in advance and company goals, and will be geared towards improving IRRAS' long-term value creation. Variable remuneration must not exceed 12 months' fixed salary.

The management shall be offered pension terms that are competitive in the country where the management member has fixed residence. Non-monetary benefits should facilitate the management in their work in a manner commensurate to the customary market practices.

Fixed salaries during the termination period and severance pay for management should not collectively exceed the fixed salary of 24 months. Should board members carry out work beyond the board work, they can be compensated for such work. The remuneration must be appropriate to the market and approved by the board.

The board will be authorized to divert from the guidelines in a specific case if there is a special reason to do so.

Prior to the annual shareholders' meeting, the board must consider whether additional incentive programs related to shares should be proposed to the shareholders' meeting or not. The shareholders' meeting decides on such incentive programs. Incentive programs should contribute to long-term value growth. Issuance of new shares and transfer of securities which shareholders' meeting has decided to carry out in accordance with the regulations in chapter 16 of the Swedish Companies Act are not comprised by these guidelines to the extent that the shareholders' meeting has or will make such decisions.

### The parent company

The parent company IRRAS AB, headquartered in Stockholm, is responsible for management of the Group and provision of operative support for the trading subsidiaries.

The net turnover of the parent company for 2017 was SEK 4.0 (0.0) million, of which the entire amount relates to invoicing of management fees to subsidiaries. The parent company's operating result totaled SEK -45.3 (-24.8) million. The parent company's equity totaled SEK 338.9 (101.0) million as of December 31, 2017. The company's registered share capital as of December 31, 2017 totaled SEK 23,661,863 divided into a total of 23,661,863 shares. The parent company's credit with companies in the Group consists primarily of credits with IRRAS GmbH.

The parent company's risk and uncertainty factors are the same as those described for the Group and under the section "Risks and uncertainty factors".

### Corporate governance

IRRAS AB applies Swedish Code for Corporate Governance. For a description of how the company handles matters of corporate governance, refer to the "Corporate governance report" on pages 60-63. The Group's system for internal control and risk management are described under the section "Internal control report" in the "Corporate governance report".

### Recommendation for disposal relating to the company's profit

The board recommends that disposable profits as of 2017-12-31, in the amount of SEK 314,766,889, are carried forward to future periods.

For changes in equity capital during the fiscal year, refer to the Group and parent company's report on changes in equity capital.

Please see the financial reports together with the notes for further information.

# Statement of loss

AMOUNTS IN TSEK (UNLESS OTHERWISE STATED)	Notes	2017-01-01 2017-12-31	2016-01-01 2016-12-31
Revenue	5	11,973	–
Cost of sales		–5,658	–
<b>Gross profit</b>		<b>6,315</b>	<b>–</b>
Other operating income	7	644	239
Sales and marketing expenses		–23,724	–9,136
Administrative expenses		–32,061	–17,935
Research and development expenses		–12,613	–3,335
Other operating expenses	7	–26	–662
<b>Operating loss</b>	6	<b>–61,464</b>	<b>–30,828</b>
Finance income		567	1
Finance cost		–4	–1,071
<b>Net financial items</b>	8	<b>563</b>	<b>–1,070</b>
<b>Loss before tax</b>		<b>–60,901</b>	<b>–31,898</b>
Tax	12	–	–
<b>Loss for the year</b>		<b>–60,901</b>	<b>–31,898</b>
Earnings per share for the period before and after dilution (SEK)	26	–3.40	–2.12
Number of shares before dilution, average		17,906,003	15,042,691
Number of shares after dilution, average		17,906,003	15,042,691

Group was formed in July 18, 2016 upon registration of the subsidiaries. The consolidated statement of loss includes the parent company income and expenses for the full year 2016.

## Statement of comprehensive loss

AMOUNTS IN TSEK	2017-01-01 2017-12-31	2016-01-01 2016-12-31
<b>Loss for the period</b>	<b>-60,901</b>	<b>-31,898</b>
<b>Other comprehensive income for the year</b> <i>Items that may be subsequently reclassified to profit or loss</i>		
Translation differences	-1,200	392
<b>Other comprehensive income for the year, net of tax</b>	<b>-1,200</b>	<b>392</b>
<b>Total comprehensive loss for the year</b>	<b>-62,101</b>	<b>-31,506</b>

The Group was formed in July 18, 2016 upon registration of the subsidiaries. The consolidated statement of profit or loss includes the parent company income and expenses for the full year 2016.



# Statement of financial position

AMOUNTS IN TSEK	Notes	2017-12-31	2016-12-31
<b>ASSETS</b>			
<b>Non-current assets</b>			
Capitalized development costs	13	31,515	24,033
Patents	13	2,531	2,847
Tangible non-current assets	14	207	16
Financial investments	15	85,836	–
<b>Total non-current-assets</b>		<b>120,089</b>	<b>26,897</b>
<b>Current assets</b>			
Inventory	16	12,204	–
Advance payment to suppliers		306	–
Current tax liabilities		929	–
Other current receivables	17	37,131	489
Prepaid expenses and accrued income	18	226	60
Short-term investments	15	60,082	–
Cash and cash equivalents		98,286	70,814
<b>Total current assets</b>		<b>209,163</b>	<b>71,363</b>
<b>TOTAL ASSETS</b>		<b>329,252</b>	<b>98,260</b>
<b>EQUITY</b>			
Share capital		710	86
Other paid in capital		439,611	176,211
Reserves		–808	392
Accumulated deficit including result for the year		–123,482	–81,575
<b>Total equity</b>		<b>316,030</b>	<b>95,115</b>
<b>LIABILITIES</b>			
<b>Current liabilities</b>			
Accounts payable		2,288	2,485
Other liabilities		1,348	191
Accrued expenses and prepaid income	20	9,587	469
<b>Total current liabilities</b>		<b>13,223</b>	<b>3,145</b>
<b>TOTAL EQUITY AND LIABILITIES</b>		<b>329,252</b>	<b>98,260</b>

The Group was formed in July 18, 2016 upon registration of the subsidiaries. The consolidated statement of profit or loss includes the parent company income and expenses for the full year 2016.

## Consolidated statement of changes in equity

AMOUNTS IN TSEK	Notes	Share capital	Other paid in capital	Reserves	Retained earnings including result for the year	Total equity
<b>Opening balance as at 2016-01-01</b>		–	–	–	–	–
Registration of subsidiary		59	60,740	–	–60,670	129
<b>Comprehensive income</b>						
Loss for the year					–31,898	–31,898
<b>Other comprehensive income for the year</b>						
Translation differences				392		392
<b>Total comprehensive loss for the year</b>		–	–	392	–31,898	–31,506
<b>Transactions with shareholders</b>						
Incentive schemes	10				10,993	10,993
New share issue		18	91,232			91,250
Issuing charges			–6,052			–6,052
Redemption of convertible bonds		9	30,291			30,300
<b>Total transactions with shareholders</b>		27	115,471	–	10,993	126,491
<b>Equity as at 2016-12-31</b>		86	176,211	392	–81,575	95,115

The Group was formed in July 18, 2016 upon registration of the subsidiaries. The consolidated statement of profit or loss includes the parent company income and expenses for the full year 2016.

## Consolidated statement of changes in equity *continued*

AMOUNTS IN TSEK	Notes	Share capital	Other paid in capital	Reserves	Retained earnings including result for the year	Total equity
<b>Opening balance as at 2017-01-01</b>		<b>86</b>	<b>176,211</b>	<b>392</b>	<b>-81,575</b>	<b>95,115</b>
<b>Comprehensive income</b>						
Loss for the year					-60,901	-60,901
<b>Other comprehensive income for the year</b>						
Translation differences				-1,200		-1,200
<b>Sum of total results</b>		<b>-</b>	<b>-</b>	<b>-1,200</b>	<b>-60,901</b>	<b>-62,101</b>
<b>Transactions with shareholders</b>						
Incentive schemes	10				19,424	19,424
Bonus issue		430			-430	
New share issue		193	292,962			293,155
<i>(out of which not paid in capital)</i>			30,744			30,744
Issuing charges			-29,563			-29,563
<b>Total transactions with shareholders</b>		<b>624</b>	<b>263,399</b>	<b>-</b>	<b>18,993</b>	<b>283,016</b>
<b>Equity as at 2017-12-31</b>		<b>710</b>	<b>439,611</b>	<b>-808</b>	<b>-123,482</b>	<b>316,030</b>

The Group was formed in July 18, 2016 upon registration of the subsidiaries. The consolidated statement of profit or loss includes the parent company income and expenses for the full year 2016.

# Statement of cash flows

AMOUNTS IN TSEK	Notes	2017-01-01 2017-12-31	2016-01-01 2016-12-31
<b>Cash flows from operating activities</b>			
Loss for the year		-61,464	-30,828
Adjustment for non-cash items			
– Depreciation and amortization		3,706	318
– Incentive schemes, recognized in statement of loss	10	18,812	10,993
Interest received		–	1
Interest paid		-4	-4
<b>Cash flow used in operating activities before changes</b>		<b>-38,951</b>	<b>-19,520</b>
<i>Changes in operating capital</i>			
Increase/decrease in operating stock		-12,383	–
Increase/decrease in operating receivables		-7,439	-189
Increase/decrease in operating payables		5,043	1,517
<b>Cash flow used in operating activities</b>		<b>-53,729</b>	<b>-18,192</b>
<b>Cash flows from investing activities</b>			
Investment in capitalized development costs		-10,818	-15,017
Investment in tangible assets		-243	-18
Investment in financial assets		-145,917	–
<b>Cash flow used in investing activities</b>		<b>-156,979</b>	<b>-15,035</b>
<b>Cash flows from financing activities</b>			
Proceeds from issue of share capital		262,411	91,250
Issuing charges		-23,995	-6,052
Incentive schemes		612	–
<b>Cash flow from financing activity</b>		<b>239,028</b>	<b>85,198</b>
<b>Cash flow for the year</b>		<b>28,321</b>	<b>51,971</b>
Cash and cash equivalents at the beginning of the year		70,814	18,408
Exchange rate differences in cash and cash equivalents		-849	435
<b>Cash and cash equivalents at the end of the year</b>		<b>98,286</b>	<b>70,814</b>

The Group was formed in July 18, 2016 upon registration of the subsidiaries. The consolidated statement of profit or loss includes the parent company income and expenses for the full year 2016.

## Statement of loss, parent company

AMOUNTS IN TSEK	Notes	2017-01-01 2017-12-31	2016-01-01 2016-12-31
Revenue	5	3,969	–
Cost of sales		–3,336	–
<b>Gross profit</b>		<b>633</b>	<b>–</b>
Other operating income	7	398	239
Sales and marketing expenses		–3,999	–4,270
Administrative expenses		–32,559	–17,394
Research and development expenses		–9,759	–2,722
Other operating expenses	7	–23	–662
<b>Operating loss</b>	6	<b>–45,309</b>	<b>–24,808</b>
Finance income		143	15
Finance costs		–3	–798
<b>Net financial items</b>	8	<b>140</b>	<b>–783</b>
<b>Loss before tax</b>		<b>–45,169</b>	<b>–25,591</b>
Tax	12	–	–
<b>Loss for the year</b>		<b>–45,169</b>	<b>–25,591</b>

## Statement of comprehensive loss, parent company

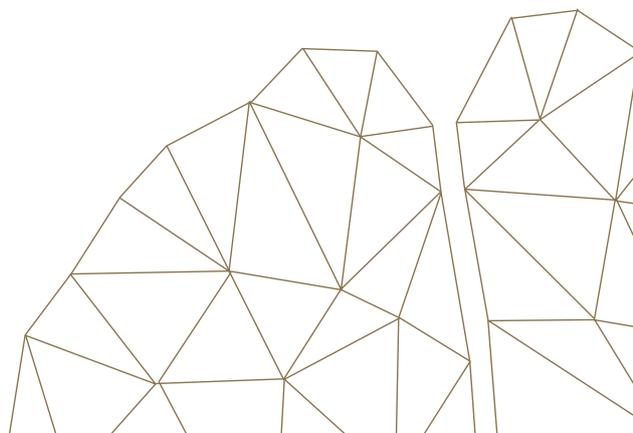
AMOUNTS IN TSEK	2017-01-01 2017-12-31	2016-01-01 2016-12-31
<b>Loss for the year</b>	<b>–45,169</b>	<b>–25,591</b>
<b>Other comprehensive income for the year, net of tax</b>	<b>–</b>	<b>–</b>
<b>Total comprehensive loss for the period</b>	<b>–45,169</b>	<b>–25,591</b>

# Statement of financial position, parent company

AMOUNTS IN TSEK	Notes	2017-12-31	2016-12-31
<b>ASSETS</b>			
Subscribed but not paid in capital		30,744	-
<b>Non-current assets</b>			
<b>Intangible assets</b>			
Capitalized development costs	13	31,515	24,033
Patents	13	2,531	2,847
<b>Total intangible assets</b>		<b>34,046</b>	<b>26,881</b>
<b>Tangible fixed assets</b>			
Inventory	14	162	-
<b>Total tangible assets</b>		<b>162</b>	<b>-</b>
<b>Financial fixed assets</b>			
Investment in subsidiaries	25	24,638	11,193
Receivables from group companies	11	14,587	4,082
Other long-term security holdings	15	85,836	-
<b>Total financial fixed assets</b>		<b>125,061</b>	<b>15,275</b>
<b>Total non-current assets</b>		<b>159,270</b>	<b>42,156</b>
<b>Current assets</b>			
Inventory	16	306	-
<b>Total inventory</b>		<b>306</b>	<b>42,156</b>
<b>Short-term receivables</b>			
Receivables from group companies	11	11,804	563
Other current receivables	17	1,532	454
Prepaid expenses and accrued income	18	302	60
<b>Total short-term receivables</b>		<b>13,638</b>	<b>1,077</b>
<b>Short-term investments</b>	15	<b>60,082</b>	<b>-</b>
<b>Cash and cash equivalents</b>		<b>85,814</b>	<b>60,460</b>
<b>Total current assets</b>		<b>159,840</b>	<b>61,537</b>
<b>TOTAL ASSETS</b>		<b>349,854</b>	<b>103,693</b>

# Statement of financial position, parent company *continued*

AMOUNTS IN TSEK	Notes	2017-12-31	2016-12-31
<b>EQUITY AND LIABILITIES</b>			
<b>Equity</b>			
<b>Restricted equity</b>			
Share capital	19	710	86
Balanced expences for		23,401	15,017
<b>Total restricted equity</b>		<b>24,110</b>	<b>15,103</b>
<b>Unrestricted equity</b>			
Capital surplus		406,034	142,635
Retained earnings		-46,099	-31,117
Loss for the year		-45,169	-25,591
<b>Total unrestricted equity</b>		<b>314,767</b>	<b>85,927</b>
<b>Total equity</b>		<b>338,877</b>	<b>101,030</b>
<b>Short-term liabilities</b>			
Accounts payable		2,042	2,206
Other liabilities		174	-
Accrued expenses and prepaid income	20	8,760	457
<b>Total short-term liabilities</b>		<b>10,976</b>	<b>2,663</b>
<b>TOTAL LIABILITIES AND EQUITY</b>		<b>349,854</b>	<b>103,693</b>



## Statement of changes in equity, parent company

AMOUNTS IN TSEK	Restricted equity		Non-restricted equity			Total equity
	Share capital	Fund for research and development	Other paid in capital	Retained earnings	Loss for the year	
<b>Opening balance as at 2016-01-01</b>	<b>59</b>	<b>–</b>	<b>27,164</b>	<b>–14,233</b>	<b>–12,861</b>	<b>129</b>
<b>Comprehensive income</b>						
Loss allocation as decided at annual general meeting				–12,861	12,861	–
Loss for the year					–25,591	–25,591
<b>Total comprehensive loss for the year</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–12,861</b>	<b>–12,730</b>	<b>–25,591</b>
<b>Transactions with shareholders</b>						
Incentive schemes				10,993		10,993
New share issue	18		91,232			91,250
New share issue costs			–6,052			–6,052
Redemption of convertible bonds	9		30,291			30,300
<b>Total transactions with shareholders</b>	<b>27</b>	<b>–</b>	<b>115,471</b>	<b>10,993</b>	<b>–</b>	<b>126,491</b>
Allocation to fund for research and development		15,017		–15,017		–
<b>Equity as at 2016-12-31</b>	<b>86</b>	<b>15,017</b>	<b>142,635</b>	<b>–31,117</b>	<b>–25,591</b>	<b>101,030</b>

# Statement of changes in equity, parent company *continued*

AMOUNTS IN TSEK	Restricted equity		Non-restricted equity			Total equity
	Share capital	Fund for research and development	Other paid in capital	Retained earnings	Loss for the period	
<b>Opening balance as at 2017-01-01</b>	<b>86</b>	<b>15,017</b>	<b>142,635</b>	<b>-31,117</b>	<b>-25,591</b>	<b>101,030</b>
<b>Comprehensive income</b>						
Loss allocation as decided at annual general meeting				-25,591	25,591	-
Loss for the year					-45,169	-45,169
<b>Total comprehensive loss for the period</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-25,591</b>	<b>-19,578</b>	<b>-45,169</b>
<b>Transactions with shareholders</b>						
Incentive schemes				19,424		19,424
Bonus issue	430			-430		
New share issue	193		292,962			293,155
<i>(out of which not paid in capital)</i>			30,744			30,744
New share issue costs			-29,563			-29,563
<b>Total transactions with shareholders</b>	<b>624</b>	<b>-</b>	<b>263,399</b>	<b>18,993</b>	<b>-</b>	<b>283,016</b>
Allocation to fund for research and development		8,384		-8,384		-
<b>Equity as at 2017-12-31</b>	<b>710</b>	<b>23,401</b>	<b>406,034</b>	<b>-46,099</b>	<b>-45,169</b>	<b>338,877</b>

## Statement of cash flows, parent company

AMOUNTS IN TSEK	Notes	2017-01-01 2017-12-31	2016-01-01 2016-12-31
<b>Cash flows from operating activities</b>			
Loss for the period		-45,309	-24,808
Adjustments for non-cash items			
– Depreciation and amortization		3,679	316
– Incentive schemes, recognized in statement of loss		15,367	8,438
Interest received		–	1
Interest paid		-3	-4
<b>Cash flow used in operating activities before changes</b>		<b>-26,266</b>	<b>-16,056</b>
<i>Changes in operating capital</i>			
Increase/decrease in operating receivables		-12,723	-704
Increase/decrease in operating payables		2,746	1,351
<b>Changes in operating capital</b>		<b>-9,978</b>	<b>646</b>
<b>Cash flow used in operating activities</b>		<b>-36,244</b>	<b>-15,409</b>
<b>Cash flows from investing activities</b>			
Investment in subsidiaries		-10,000	-8,638
Investments in capitalized development costs		-10,818	-15,017
Investment in tangible assets		-189	–
Investment in financial non-current assets		-156,423	-4,082
<b>Cash flow used in investing activities</b>		<b>-177,430</b>	<b>-27,737</b>
<b>Cash flows from financing activities</b>			
Proceeds from issue of share capital		262,411	85,198
New share issue costs		-23,995	
Incentive schemes		612	–
<b>Cash flow from financing activities</b>		<b>239,028</b>	<b>85,198</b>
<b>Cash flow for the period</b>		<b>25,354</b>	<b>42,052</b>
Cash and cash equivalents at the beginning of the year		60,460	18,408
<b>Cash and cash equivalents at end of the year</b>		<b>85,814</b>	<b>60,460</b>

# Notes

## NOTE 1 GENERAL INFORMATION

IRRAS AB is registered in Sweden and is headquartered in Stockholm. The visiting address to the main office is Vasagatan 16, SE-111 20, Stockholm, Sweden.

All amounts are presented in thousands of kronor (TSEK) unless otherwise stated. Figures in parentheses refer to the previous year.

The annual report and Group annual report with corresponding notes are presented in whole kronor, but presented in thousands of kronor in the annual report. For this reason, the presented total of sub-items may differ by one to two thousand kronor.

## NOTE 2 SUMMARY OF SIGNIFICANT ACCOUNTING PRINCIPLES

### Basis for preparation

The consolidated financial statements have been prepared in accordance with International Financial Reporting Standards (IFRS) as adopted by the EU as well as RFR1 *Supplementary Accounting Rules for Groups*. This is the first published annual report created in accordance with IFRS. The transition to IFRS took place on January 1, 2017 with a conversion of the accounts since the group was established in 2016. Conversion to IFRS took place following the issue of a prospectus, dated November 13, 2017.

Assets and liabilities are reported at their historical cost, unless otherwise detailed in the below notes.

The key accounting policies applied in these consolidated accounts are presented below.

The preparation of financial statements in accordance with IFRS requires the use of critical accounting estimates. Management has made judgments, estimates, and assumptions that affect the application of the Group's accounting policies and the reported amounts of asset, liabilities, income and expenses. The areas involving a higher degree of judgment or complexity, or areas where assumptions and estimates are of significance to the consolidated accounts, are stated in Note 4.

The parent company financial statements are prepared in accordance with RFR 2 *Accounting for legal entities* and the Annual Accounts Act. Where the parent company applies accounting principles which differ from the group, this is detailed in 2.21 below.

### New and amended standards which must be applied by the group in the current period

All applicable standards which came into effect during 2017 until the signing of this report have been applied for the group annual report. However, they have not affected the group's accounting principles.

### Standards, amendments and interpretations to existing standards which take effect in 2018 or later and which are considered to have or which could have an effect on the financial statements

During preparation of the annual report as of December 31, 2017, a number of standards and interpretations have been published, that become effective in 2018 or later. Below is a summary of the most significant new

standards or amendments to existing standards that are deemed to be applicable for the group in future financial statements.

The group has not adopted the new or amended standards in advance of the effective date in preparing these consolidated financial statements.

### IFRS 9 *Financial instruments*

IFRS 9 *Financial instruments* addresses classification, valuation and accounting of financial assets and liabilities. The complete version of IFRS 9 was issued in July 2015. It replaces the parts of IAS 39 which handles classification and valuation of financial instruments. IFRS 9 retains a mixed valuation standard, but the standard is simplified in certain respects. IFRS 9 also introduces a new model for calculation of credit loss reserve, which is based on expected credit losses. The classification and valuation do not change for financial liabilities, except where a liability should be presented for the actual value over the income statement. The standard must be applied for fiscal years beginning on or after January 1, 2018, with earlier application permitted.

After evaluation, the management has determined that IFRS 9 will have a limited effect on the group annual report.

### IFRS 15 *Revenue from contracts with customers*

IFRS 15 *Revenue from contracts with customers* establishes a comprehensive framework for determining how revenue shall be recognized. The extended disclosure requirements mean that information must be submitted about the revenue type, timing of settlement, uncertainties related to revenue reporting as well as cash flow attributable to equity holders of the company's client contracts. According to IFRS 15, revenue should be reported when the customer obtains control of the sold product or service and has the ability to use and obtain benefits from the product or service.

IFRS 15 replaces IAS 18 Revenue and IAS 11 Construction contracts as well as SIC and IFRIC which are related thereto. IFRS 15 is effective as of January 1, 2018. Early application is permitted, but has not taken place.

The company's project group has determined that IFRS 15 will not have any significant effects on the annual report. Since sales will still be limited, the effect will be extremely limited.

### IFRS 16 *Leases*

IFRS 16 *Leases* requires that assets and liabilities attributable to all leasing agreements are recognized in the financial statements, with the exception for agreements for periods shorter than twelve months and/or which represent low amounts. IFRS 16 replaces IAS 17 Leases, with additional interpretations. This entails that the distinction between an operating lease and a finance lease is erased and replaced with the concept of right-of-use and an obligation to settle continuous payments as lessee.

The standard is expected to not have a significant impact on the groups's financial statements since its lease contracts are currently limited and consist only of rent for premises, for which the cost is not considered a significant sum.

The standard is to be applied starting in 2019 and was approved by the EU in November 2017.

## Consolidated financial statements

### Subsidiaries

Subsidiaries are all companies over which the group has control. The group controls a company when it has exposure or rights to variable returns from its stake in the company and has the ability to affect the amount of the returns through its power over the entity. Subsidiaries are included in the consolidated financial statements as of the date on which the controlling influence is transferred to the Group. They are excluded from the consolidated financial statements as of the date on which the controlling influence ceases.

### Segment reporting

When IRRAS' own capital instruments are traded in an active market, IFRS 8 Operating segments are applied. An operating segment is part of a company whose operating income is normally reviewed by the group's "Highest executive decision-maker", which makes decisions about which resources should be allocated to the segment and evaluates the segment's income.

IRRAS's operations are currently focused on research, development and sales within the IRRAflow product field, so the management decided to monitor the activity as one reporting unit. Therefore, the Company only has one operating segment which is wholly reflected in the Group's financial statements. The CEO and the board of directors are assessed as the chief operating decision makers.

### Earnings per share

Earnings per share has been calculated as net income divided by the number of weighted-average shares outstanding throughout the period, including the effects of share splits. If a negative net income is reported, the income per share after dilution is equivalent to the income per share before dilution. If the earnings become positive in the future, the options may give rise to dilution.

## Foreign currency translation

### Functional currency and presentation currency

Items included in the financial statements for the Group are measured using the currency of the primary economic environment in which the entity operates (the functional currency). In the consolidated financial statements Swedish krona (SEK) is used as the presentation currency, which is also the Parent Company's functional currency and presentation currency.

### Transactions and balance sheet items

Foreign currency transactions are translated into the functional currency using the exchange rates prevailing on the transaction date. Exchange gains and losses arising from the payment of such transactions and from the translation of monetary assets and liabilities denominated in foreign currencies at closing day exchange rates are recognized in the income statement. Exchange differences on lending and borrowing are reported in net financial items, while other exchange differences are included in the operating profit.

### Group companies

The earnings and financial position of all Group entities that have a functional currency other than the presentation currency are translated to the Group's presentation currency as follows:

- Assets and liabilities for each balance sheet are translated at the closing day rate;
- Income and expenses for each income statement are translated at average exchange rates (insofar as this average exchange rate gives a reasonable approximation of the accumulated effect of the exchange rates which were applicable on the transaction date; otherwise,

income and expenses are converted to the rate on the transaction date), and

- All exchange differences arising from the above are recognized as a separate component of other comprehensive income.

Upon consolidation, exchange differences are posted that arise from the translation of the net investment in foreign operations and from borrowings to equity. When a foreign operation is disposed of in its entirety or partially such that control, significant influence or joint control is lost, the cumulative amount in the translation reserve related to that foreign operation is reclassified to profit or loss as part of the gain or loss on disposal.

Goodwill and fair value adjustments arising upon the acquisition of a foreign operation are treated as assets and liabilities of that operation and are translated at the closing rate.

## Intangible assets

### Capitalized expenditures for development and similar items

Development costs that are directly attributable to the development and testing of identifiable and unique products controlled by the Group are recognized as intangible assets when the following criteria are met:

- it is technically feasible to finalize the product so that it can be used;
- the company's intention is to finalize the product and to use or sell it;
- there are opportunities to use or sell the product;
- it can be shown how the product will generate probable future economic benefits;
- adequate technical, financial and other resources to complete the development and to use or sell the product are available; and
- the expenditure relating to the product during its development can be measured reliably.

Directly attributable expenditure carried forward as part of the asset includes expenses for staff, materials and a development-attributable share of indirect costs. Upon capitalization, the portion of expenses recognized as income against received/expected contributions is taken into account. Capitalized development costs are recognized as intangible assets and are amortized starting from the date when the asset is ready for use. So far, no amortization has been recognized.

### Patents

Patents acquired separately are recognized at cost. Patents acquired through a business combination are recognized at fair value on the acquisition date. Patents have a finite useful life and are recognized at cost less accumulated amortization and any impairment losses. Costs for discontinued patents are recognized as an intangible asset at the time the patent was granted.

### Amortization period for intangible assets

Patent	14 years
Capitalized expenditures for development and similar items	5 years

## Property, plant and equipment

All property, plant and equipment (PP&E) is recognized at cost less depreciation. The cost includes expenditure that is directly attributable to the acquisition of the asset.

In the Group, PP&E consists of equipment.

Subsequent expenditure is added to the asset's carrying amount or recognized as a separate asset, as appropriate, only when it is probable that the future economic benefits associated with the asset will flow to the Group and the asset's acquisition value can be measured reliably. The carrying amount of the replaced part is derecognized. All other forms of repair and maintenance are recognized as expenses in the income statement during the period in which they arise.

Depreciation of tangible assets, to distribute their cost down to the estimated residual value over the estimated useful life, is calculated on a straight-line basis as follows:

**Depreciation period for property, plant and equipment**

Inventory, tools and equipment	3–10 years
--------------------------------	------------

Gains and losses on disposals are determined by comparing the sales proceeds and the carrying amount and are recognized in other operating income and other operating expenses in the income statement.

See also the following section regarding the description of impairment of non-financial assets.

**Impairment of non-financial assets**

PP&E and intangible assets that are depreciated or amortized are assessed with respect to impairment whenever events or changes in circumstances indicate that the carrying amount might not be recoverable. An impairment loss is recorded for the amount by which the asset's carrying amount exceeds its recoverable amount. The recoverable amount is the higher of the asset's fair value less selling costs and its value in use. When assessing impairment, assets are grouped at the lowest levels for which there are separately identifiable cash flows (cash generating units).

An impairment loss is reversed if there is any indication that the impairment ceases to exist and there has been a change in the assumptions underlying the calculation of the recoverable amount. A reversal is only recognized to the extent that the carrying amount of the asset after the reversal does not exceed the carrying amount that would have been recognized, less any depreciation where applicable, if no impairment loss had been recognized.

**Impairment of property, plant and equipment**

The assets' useful lives are reviewed at each balance sheet date and adjusted if necessary. An asset's carrying amount is written down immediately to its recoverable amount if the asset's carrying amount is greater than its estimated recoverable amount.

**Impairment of intangible assets**

Intangible assets on which amortization has not yet been recognized are tested for impairment on at least an annual basis.

**Financial instruments**

**General principles**

Purchases and sales of financial assets and liabilities are recognized on the trade date – the date that the Group commits itself to purchase or sell the asset or liability. Financial assets and liabilities are initially recognized at fair value plus transaction costs if not recognized at fair value through profit or loss. Financial assets and liabilities measured at fair value through profit or loss are initially recognized at fair value, while attributable transaction costs are recognized in the income statement. Financial assets are derecognized when the rights to receive cash flows from the instrument have expired or have been transferred, and the Group has transferred virtually all risks and benefits associated with ownership. Financial liabilities are derecognized when the contractual obligations have been fulfilled or otherwise terminated.

Loan receivables, trade receivables, trade payables and other financial liabilities are reported after the acquisition date at amortized cost using the effective interest method.

The fair value of borrowings is calculated, for purposes of disclosure, by discounting the future contractual cash flows at the current market interest rate available to the Group for similar financial liabilities.

The Group classifies its financial assets in the following categories: financial assets and liabilities valued at actual value via the annual income statement, loans and advances and trade receivables, financial assets which can be sold and other financial liabilities. The classification depends

on the purpose for which the financial asset or liability was acquired. Currently, there are only loans and advances and trade receivables and other financial liabilities in the group.

**Loans and receivables**

Loans and receivables are non-derivative financial assets that have fixed or determinable payments that are not quoted in an active market. They are included in current assets, except for items with a maturity date more than twelve months after the balance sheet date, which are classified as non-current assets. Loans and receivables are reported as receivables, other receivables, accrued income and financial assets in the balance sheet. Cash and cash equivalents are also included in this category. An impairment of trade receivables is recognized in the income statement as other external costs.

**Other financial liabilities**

The Group's borrowings (includes the items for borrowing from credit institutions, borrowing from related parties and other non-current liabilities) are classified as other financial liabilities; see the description of the accounting policies in Section 2.14 below.

**Impairment of financial assets**

The Group assesses at the end of each reporting period whether there is objective evidence of impairment for a financial asset or a group of financial assets. A financial asset or a group of financial assets is impaired and impairment losses are incurred only if there is objective evidence of impairment as a result of one or more events that occurred after the initial recognition of the asset (a "loss event") and that the loss event has an impact on the estimated future cash flows of the financial asset or group of financial assets that can be reliably estimated.

**Inventories**

Inventories are measured at the lower of cost and net realizable value. The cost of inventories is determined using the first-in, first-out principle and consists of the cost of goods purchased. Borrowing costs are not included in the cost of inventories. Inventories consist mostly of finished goods. Net realizable value is the estimated selling price in the ordinary course of business.

**Trade receivables**

Trade receivables are initially recognized at fair value and subsequently measured at amortized cost using the effective interest method, less any provision for impairment. A provision for impairment of trade receivables is established when there is objective evidence that the Group will not be able to recover any amounts that are past due according to the original terms of the receivables. Significant financial difficulties of the debtor, probability that the debtor will go bankrupt or undergo financial restructuring and missed or late payments (more than 30–60 days past due dependent on the customer's geographical location) are regarded as indicators that an impairment loss of a receivable can be present. The size of the provision is the difference between the asset's carrying amount and the present value of estimated future cash flows, discounted at the original effective interest rate. Losses in respect of trade receivables as well as reversals of previously impaired receivables are recognized in the statement of loss in the selling costs.

The carrying amount of trade receivables, after any impairment, is assumed to be equal to its fair value due to the short term nature of this item.

**Cash and cash equivalents**

Cash and cash equivalents include cash, bank balances and other short-term investments with a maturity of three months or less from the acquisition date.

## Equity

Ordinary shares are classified as equity. Transaction costs directly attributable to the issue of new shares are reported, net of tax, in other paid-in capital as a deduction from the proceeds.

## Trade payables

Trade payables are initially recognized at fair value and subsequently at amortized cost using the effective interest method. The carrying amount of trade payables is assumed to correspond to its fair value, due to the short term nature of this item.

## Borrowings

Borrowings (including from credit institutions, from related parties and other long-term borrowings) are initially recognized at fair value, net of transaction costs. Borrowings are subsequently recognized at amortized cost, and any difference between the amount received (net of transaction costs) and the repayment amount is recognized in the income statement over the term of the loan, with the application of the effective interest method.

Borrowings are classified as current liabilities unless the Group has an unconditional right to defer payment of the liability for at least twelve months after the balance sheet date.

Borrowing costs (interest expenses and transaction costs) are recognized in the income statement in the period in which they are incurred. Accrued interest not paid is reported within borrowings on the balance sheet. As at balance sheet date, neither the Group nor the Parent Company had outstanding loans payable.

## Current and deferred taxes

The current tax expense is calculated on the basis of the tax rules that, at the statement of financial position date, are enacted or substantively enacted in the countries in which the company's subsidiaries operate and generate taxable income. Management regularly evaluates the claims made in tax returns with respect to situations in which applicable tax rules are subject to interpretation and, when deemed appropriate, it makes provisions for amounts that are likely to be paid to the tax authorities.

Deferred tax is recognized in its entirety, according to the liability method, for all temporary differences arising between the tax base of assets and liabilities and their carrying amounts in the consolidated financial statements. The deferred tax is not recognized, however, if it occurs as a result of a transaction that constitutes the initial recognition of an asset or liability in a transaction other than a business combination and that, at the time of the transaction, affects neither reported or taxable profit. Deferred income tax is determined using tax rates (and tax laws) that have been enacted or substantively enacted at the balance sheet date and are expected to apply when the deferred tax asset is realized or the deferred tax liability is regulated.

Deferred tax assets are recognized only to the extent that it is probable that future taxable profit will be available, against which the temporary differences can be utilized. As of the balance sheet date, no fiscal deficit has been reported as deferred tax liabilities in the group.

## Remuneration to employees

### Pension commitments

The group has only so-called contribution pension plans. IRRAS pays fees to publicly or privately administrated pension plans on a mandatory, contractual or voluntary basis for contribution pension plans. The group does not have any further payment commitments once the fees have been paid. The fees are reported as personnel cost because they are accrued as a result of the employee performing services for the company. Prepaid fees

are reported as an asset in this respect as repayment of cash or as a reduction of future payments which can benefit the Group.

Expenses for job performance during earlier periods are reported directly in the income statement.

## Incentive programmes

IRRAS has five outstanding incentive schemes for employees, key individuals and board members. The options are regulated with shares, which makes them equity-regulated, share-related compensation. The actual value of the options at the start of the program is reported as a personnel cost with an equivalent increase directly in equity. At the end of each reporting period, the assessments of how many shares are expected to be earned based on the terms must be re-evaluated. Any re-evaluations affecting the accumulated expenses is reported and affect the current period's cost.

### Incentive programme No. 1

The programme comprises a total of 1,900,000 share options. Each share option entitles the holder to subscribe for new shares in the company at SEK 13.60 per share until 30 April 2020, provided vesting conditions are met. Of the share options, 25% vest per year.

In 2016 a total of 1,900,000 share options were issued without charge to management and key individuals in the Group. The CEO has 1,275,000 share options and three senior executives have between 96,426 and 164,286 share options each. In the fourth quarter of 2017, 40,000 share options were returned to the company because an employee left the company. This means 1,860,000 share options are outstanding.

### Incentive programme No. 2

The programme comprises a total of 650,000 share options. Each share option entitles the holder to subscribe for new shares in the company at SEK 35.00 per share until 31 October 2021, provided vesting conditions are met. The first third of the options is vested after 1 year, then the options vest pro rata monthly.

In the third quarter of 2017, a total of 350,000 options were issued without charge to the management and key individuals in the group. Two senior employees have between 50,000 and 145,000 options each. There was no change in the number of options in the fourth quarter. This means 350,000 share options are outstanding.

### Incentive programme No. 3

The programme comprises a total of 400,000 share options. Each share option entitles the holder to subscribe for new shares in the company at SEK 50.00 per share until 31 October 2020. The options do not have any vesting conditions.

In the third quarter of 2017, 260,000 warrants were issued to the management and key employees in the group, who acquired them at market price. One senior employee holds 200,000 share options. The number of share options did not change in the fourth quarter. This means 260,000 share options are outstanding.

### Incentive programme No. 4

The programme comprises a total of 100,000 share options. Each share option entitles the holder to subscribe for new shares in the company at SEK 50.00 per share until 31 October 2020. The options do not have any vesting conditions.

In the third quarter of 2017, 100,000 share options were issued to the chairman of the board, who acquired them at market price. This means 100,000 share options are outstanding.

### Incentive programme No. 5

Under an agreement between IRRAS and the President CEO, the President CEO is entitled to 236,618 shares in the event of an IPO and to 475,603 shares if and when 510 (k) FDA approval is received. In the third quarter of 2017 an agreement was concluded whereby the three largest shareholders in the Company at the time would provide the President CEO with half of the shares under the share incentive scheme. Of the shares received by the CEO, 50% will therefore not have dilutive effect. However, from an IFRS perspective, 100 per cent of the share are carried as an expense from the date of the agreement until the exercise date. The IPO carried out in November 2017 means the President CEO is entitled to 236,618 shares but the share will be distributed in early 2018.

At the end of each reporting period, the assessments of how many shares are expected to be earned based on the terms of employment must be re-evaluated. Any re-evaluations affecting the accumulated expenses is reported and affect the current period's expense.

### Provisions

Provisions are recognized when the Group has a legal or constructive obligation as a result of a past event, and it is probable that an outflow of resources will be required to settle the obligation, and a reliable estimate can be made of the amount of the obligation. No provisions are recognized for future operating losses. There are no deductions in the group as of the balance sheet date. Provisions are measured at the present value of the amount expected to be required to settle the obligation. In that regard, a pre-tax discount rate is used that reflects a current market assessment of the time value of money and the specific risks associated with the provision. The unwinding of the discount is recognized as a finance cost.

### Revenue recognition

Revenue comprises the fair value of consideration received or receivable for goods sold and services rendered within the Group. The Group recognizes revenue when the amount can be measured reliably, and it is probable that future economic benefits will flow to the Group.

### Sale of goods

The Group's revenue is generated in part from the sale of products developed by the Group.

Revenues from the sale of goods is recognized when the risks and rewards of ownership are transferred from the Group to the customer, when the group no longer exerts any real control over the goods sold, revenues and related expenses can be estimated reliably, and it is probable that the economic benefits associated with the sale of goods will flow to the Group.

### Government grants

Government grants, including non-monetary grants at fair value, are recognized as income in the statement of loss. The Group does not recognize revenue until there is reasonable assurance that the conditions associated with the grants have been met and it is decided that the grants will be received. The grants are recognized as income at the time the grant is received when obtained funds do not imply a future repayment obligation or other obligation, except that future payments can be stopped.

### Interest income

Interest income is recognized over the term to maturity using the effective interest method.

### Leases

Leases in which a significant portion of the risks and benefits of ownership are retained by the lessor are classified as operating leases. Payments made during the lease term (net of any incentives from the lessor) are recognized in the income statement on a straight-line basis over the lease term. The Group currently has no leases that are classified as finance leases. The Group's operating lease consists entirely of rent for premises.

### Convertible loans

A convertible loan issued by IRRAS can, when certain events occur related to the ownership of IRRAS, be convertible into IRRAS AB shares. If such an event occurs, the conversion rate is determined with reference to the price of the ownership transaction. If none of the events occurs before the end of the convertible period, it is converted to shares at a fixed conversion rate. Because the convertible loan gives the right to convert into a number of shares that is not fixed, but varies depending on the price of possible ownership transactions or on whether any such transaction takes place, the convertible is classified in accordance with IAS 32 as a liability. Upon conversion to shares, the liability is transferred to equity. Previous convertible bond within the Group were converted to shares in 2016.

### Accounting policies in the parent company

The accounting policies in the Parent Company are consistent in all material respects with the consolidated financial statements. The Parent Company's financial statements are prepared in accordance with RFR 2, Accounting for Legal Entities, and the Swedish Annual Accounts Act. RFR 2 specifies exemptions from and amendments to the standards released by IASB as well as interpretations issued by IFRIC. Exceptions and amendments shall apply from the date on which the legal entity applies the specified standard or interpretation within its consolidated financial statements.

The Parent Company uses the formats set out in the Annual Accounts Act, of which the primary difference is a presentation of equity.

Shares in subsidiaries are reported at amortized cost less any impairment losses. When there is an indication that stocks and shares in subsidiaries have decreased in value, an estimate is made of the recoverable amount. If this is lower than the carrying amount, an impairment loss is taken. Impairment losses would be recognised in the statement of loss. The carrying value of subsidiaries includes transaction costs. Transaction costs are expensed in the consolidated financial statements in the period in which they arise.

The incentive scheme plan described in Section 2.16 means that for the Parent Company the issue of equity instruments is deemed to be a shareholder contribution in the subsidiaries from the Parent Company, which is therefore accounted for as investment in the subsidiaries and not against the income statement as personnel expenses. The investment is assessed as with other contributions, for impairment. If impairment is required for shares in subsidiaries, the effect is that a financial cost is recognized in the Parent Company income statement.

### NOTE 3 FINANCIAL RISK MANAGEMENT

The Group's operations expose it to various financial risks: currency risk, credit risk and liquidity risk/financing risk. The Group's overall risk management policy focuses on the unpredictability of the financial markets and an effort to minimize potential negative effects on the result and liquidity due to financial risks. As of December 31, 2017, the financial risks are limited, as the business is still in a relatively early stage.

The risk management is handled by the executive director and the boards in the respective companies according to the guidelines established by the board. Part of the risk function is to identify and evaluate financial risks. The Group does not apply hedge account under IAS 39.

#### Currency risk

IRRAS is a Group with operations in several geographic markets and thus carries out transactions in foreign currencies. The reporting currency is the Swedish krona. This means that the Group is exposed to currency risk as changes in exchange rates can affect earnings and shareholder equity. Exposure to changes in currency rates is typically divided into two main categories: translation exposure and transaction exposure.

#### Translation exposure

The foreign subsidiaries' assets less liabilities represent a net investment in a foreign currency, which upon consolidation creates a currency translation difference. Such currency translation differences are posted immediately to equity and are recognized under the separate category of equity called Reserves. The Group's guidelines stipulate that net investments in foreign currency should not be secured with financial derivatives, in part to avoid any unwanted liquidity effects when the derivative is extended. However, it is permissible to secure the net investment by taking out a loan in the current currency. The Group currently has no loans in foreign currencies. A

related form of translation exposure is the earnings accumulated during the year in the foreign subsidiaries which form a component of foreign equity.

Intra-group receivables and liabilities are translated at the current closing day rate of the entity with the claim or debt denominated in currencies other than the functional currency of the respective entity. Net intra-group loans have no impact on equity, however they affect the income statement for the Group.

#### Transaction exposure

Transaction exposure usually means both exposure arising from commercial cash flows (i.e., cross-border sales and purchases) and exposure from financial flows. As of December 31, 2017 there are two foreign subsidiaries, but both with limited operations. Transaction exposure arises mainly from remuneration to employees abroad, as well as consulting fees.

#### Credit risk

Credit risk, or counterparty risk, is the risk that the counterparty to a financial transaction defaults on the due date. Credit risk is managed at the Group level and arises from trade receivables and cash on deposit at banks and financial institutions. As of December 31, 2017 outstanding claims against third parties are minimal.

#### Liquidity risk/financing risk

As of December 31, 2017, the Group had available liquidity of TSEK 98,286. Liquidity consists of cash and cash equivalents. As of the same date, there were no external borrowings in the Group. The objective regarding capital is to safeguard the Group's ability to continue its operations in order to provide returns for shareholders and benefits for other stakeholders, and to maintain an optimal capital structure to minimize the cost of capital.

#### Financial instruments by category

	Financial assets valued at the actual value via the income statement	Loan receivables and customer receivables	Financial assets applicable for sales	Total
<i>Group</i>				
<b>2017-12-31</b>				
<b>Assets</b>				
Financial investments	–	85,836	–	<b>85,836</b>
Current tax liabilities	–	929	–	<b>929</b>
Other liabilities	–	37,131	–	<b>37,131</b>
Prepaid expenses and accrued income	–	86	–	<b>86</b>
Short-term investments	–	60,082	–	<b>60,082</b>
Cash	–	98,286	–	<b>98,286</b>
<b>Total assets</b>	<b>–</b>	<b>282,349</b>	<b>–</b>	<b>282,349</b>
		Financial liabilities valued at the actual value via the income statement	Other financial liabilities	Total
<b>2017-12-31</b>				
<b>Liabilities</b>				
Accounts payable	–	–	2,288	<b>2,288</b>
Other liabilities	–	–	1,348	<b>1,348</b>
Accrued expenses and prepaid income	–	–	9,587	<b>9,587</b>
<b>Total liabilities</b>	<b>–</b>	<b>–</b>	<b>13,223</b>	<b>13,223</b>

**NOTE 3** *continued***Financial instruments by category**

	Financial assets valued at the actual value via the income statement	Loan receivables and customer receivables	Financial assets applicable for sales	Total
<i>Group</i>				
<b>2016-12-31</b>				
<b>Assets</b>				
Other liabilities	-	489	-	<b>489</b>
Cash	-	70,814	-	<b>70,814</b>
<b>Total assets</b>	<b>-</b>	<b>71,303</b>	<b>-</b>	<b>71,303</b>
		Financial liabilities valued at the actual value via the income statement	Other financial liabilities	Total
<b>2016-12-31</b>				
<b>Liabilities</b>				
Accounts payable		-	2,485	<b>2,485</b>
Other liabilities		-	191	<b>191</b>
Accrued expenses and prepaid income		-	469	<b>469</b>
<b>Total liabilities</b>		<b>-</b>	<b>3,145</b>	<b>3,145</b>

The carrying amount of financial placements, current assets and current liabilities represents a reasonable approximation of actual value.

	<b>Group</b>		<b>Parent company</b>	
NET LIABILITY (AMOUNT IN TSEK)	2017-12-31	2016-12-31	2017-12-31	2016-12-31
Cash	98,286	70,814	85,814	60,460
Short-term investments	60,082	-	60,082	-
Financial investments	85,836	-	85,836	-
Total loans	-	-	-	-
<b>Net liability</b>	<b>-244,203</b>	<b>-70,814</b>	<b>-231,731</b>	<b>-60,460</b>

#### NOTE 4 IMPORTANT ESTIMATES AND ASSESSMENTS FOR APPLICATION OF THE GROUP'S ACCOUNTING PRINCIPLES

##### Significant estimates and assumptions for accounting purposes

The Group makes estimates and assumptions concerning the future. The estimates for accounting purposes will, by definition, seldom correspond to the actual outcome. The estimates and assumptions which can entail a risk for significant adjustments in the reported value for assets and liabilities during the coming fiscal year are summarized below.

##### Incentive programs

A personnel incentive scheme for a number of key individuals in IRRAS' international subsidiaries was established in 2016. Three additional incentive programs were established for Swedish and international key individuals in 2017. There has been a share award program in place for the company's CEO since 2015.

The period for earning and utilizing the option right extends over several fiscal years and the assumptions and estimates have been necessary with respect to the probable time of utilization. Furthermore, additional assumptions and estimates were necessary with respect to input for valuation of the option rights. One of the incentive programs includes non-market-related result terms. This means that estimates are necessary with respect to when it is more likely than not that the terms will be fulfilled; only then is an expense reported for the incentive program.

For additional information regarding assumptions for valuation of the option rights and terms, see section 2.16 under Summary of significant accounting principles and note 10 Remuneration to employees and information about personnel.

##### Capitalized development costs

IRRAS continuously evaluates the value of capitalized development costs.

The most critical assumption, which has been a subject of assessment by the management, is whether capitalized expenses will generate future advantages which are at least equivalent to the capitalized expense. It is the management's assessment at the balance sheet date that future cash flows will cover investments by a wide margin, so there is no need for a depreciation.

#### NOTE 5 REVENUE

The net turnover is divided into fields of activity as follows:

	Group		Parent company	
	2017-01-01 2017-12-31	2016-01-01 2016-12-31	2017-01-01 2017-12-31	2016-01-01 2016-12-31
Germany	11,549	–	1,286	–
Europe, excluding Germany	424	–	–	–
USA	–	–	2,683	–
<b>Total revenue by geographic market</b>	<b>11,973</b>	<b>–</b>	<b>3,969</b>	<b>–</b>

The parent company's sale relate to a management fee to the subsidiaries.

#### NOTE 6 BREAKDOWN OF EXPENSES BY NATURE

##### Operating result, expenses by nature

	Group		Parent company	
	2017-01-01 2017-12-31	2016-01-01 2016-12-31	2017-01-01 2017-12-31	2016-01-01 2016-12-31
Revenue	11,973	–	3,969	–
Other operating income	644	294	398	239
Raw materials and consumables used	–2,778	–15	–	–
Other external expenses	–37,361	–16,409	–27,729	–15,127
Employee benefits	–30,211	–13,717	–18,244	–8,942
Depreciation and amortization	–3,706	–318	–3,679	–316
Other operating expenses	–26	–662	–23	–662
<b>Operating result</b>	<b>–61,464</b>	<b>–30,828</b>	<b>–45,309</b>	<b>–24,808</b>

##### Operating result, expenses by function

	Group		Parent company	
	2017-01-01 2017-12-31	2016-01-01 2016-12-31	2017-01-01 2017-12-31	2016-01-01 2016-12-31
Revenue	11,973	–	3,969	–
Cost of sales	–5,658	–	–3,336	–
Other operating income (Note 7)	644	239	398	239
Sales and marketing expenses	–23,724	–9,136	–3,999	–4,270
Administrative expenses	–32,061	–17,935	–32,559	–17,394
Research and development expenses	–12,613	–3,335	–9,759	–2,722
Other operating expenses (Note 7)	–26	–662	–23	–662
<b>Operating result</b>	<b>–61,464</b>	<b>–30,828</b>	<b>–45,309</b>	<b>–24,808</b>

**NOTE 7 OTHER OPERATING INCOME  
& OTHER OPERATING EXPENSES****Other operating income**

	2017-01-01 2017-12-31	2016-01-01 2016-12-31
<b>Group</b>		
Exchange rate differences	517	239
Other	128	-
<b>Total other variable income</b>	<b>644</b>	<b>239</b>
<b>Parent company</b>		
Exchange rate differences	398	239
<b>Total other operating income</b>	<b>398</b>	<b>239</b>

**Other variable expenses**

	2017-01-01 2017-12-31	2016-01-01 2016-12-31
<b>Group</b>		
Exchange rate differences	23	662
Other	2	-
<b>Total other operating expenses</b>	<b>26</b>	<b>662</b>
<i>Parent company</i>		
Exchange rate differences	23	662
<b>Total other operating expenses</b>	<b>23</b>	<b>662</b>

**NOTE 8 FINANCIAL ITEMS**

	<b>Group</b>		<b>Parent company</b>	
	2017-01-01 2017-12-31	2016-01-01 2016-12-31	2017-01-01 2017-12-31	2016-01-01 2016-12-31
<b>Financial income</b>				
Exchange rate differences	565	-	-	-
Interest income	2	1	143	15
<b>Total financial income</b>	<b>567</b>	<b>1</b>	<b>143</b>	<b>15</b>
<b>Finance costs</b>				
Exchange rate differences	-	273	-	-
Interest expenses	4	4	3	4
Loan expenses	-	795	-	795
<b>Total finance costs</b>	<b>4</b>	<b>1,071</b>	<b>3</b>	<b>798</b>
<b>Result from financial items, net</b>	<b>563</b>	<b>-1,070</b>	<b>140</b>	<b>-783</b>

**NOTE 9 AUDIT FEES**

The audit engagement is the statutory audit of annual and consolidated financial statements and accounting, and the board's and executive director's administration, auditing and other supervision as agreed upon by contract or agreement. Furthermore, this includes other tasks which the company's auditors carry out and consulting or other assistance initiated by observations in the course of such monitoring or the implementation of such tasks.

	2017-01-01 2017-12-31	2016-01-01 2016-12-31
<b>Group</b>		
KPMG		
Audit engagement	350	92
Other audit engagement*	2,228	-
Tax consulting	-	-
Other consulting services	-	-
<b>Total</b>	<b>2,578</b>	<b>92</b>
<b>Parent company</b>		
KPMG		
Audit engagement	350	92
Other audit engagement*	2,228	-
Tax consulting	-	-
Other consulting services	-	-
<b>Total</b>	<b>2,578</b>	<b>92</b>

\* Relates primarily to expenses for exchange introduction, the majority of which is reported against equity as expenses for issuance of new shares.

## NOTE 10 REMUNERATION TO EMPLOYEES AND INFORMATION ABOUT PERSONNEL

### Employee benefit expenses

	2017-01-01 2017-12-31	2016-01-01 2016-12-31
<b>Group</b>		
Wages and salaries	9,906	2,205
Social security costs	931	158
Warrants granted to key employees	18,812	10,993
Pension commitments	477	–
<b>Total</b>	<b>30,126</b>	<b>13,356</b>
<b>Parent company</b>		
Wages and salaries	1,960	–
Social security costs	419	–
Warrants granted to key employees	15,367	8,438
Pension commitments	157	–
<b>Total</b>	<b>17,903</b>	<b>8,438</b>

### Salaries and other remunerations divided between managing decision-makers and other employees

	2017-01-01 2017-12-31			2016-01-01 2016-12-31		
	Salaries and other remuneration	Pension commitments	Incentive schemes	Salaries and other remuneration	Pension commitments	Incentive schemes
<b>Group</b>						
Board members, executive directors and other senior executives	1,114	–	15,999	–	–	9,460
Other employees	8,791	477	2,813	2,363	–	1,533
<b>Total</b>	<b>9,906</b>	<b>477</b>	<b>18,812</b>	<b>2,363</b>	<b>–</b>	<b>10,993</b>
<b>Parent company</b>						
Board members, executive directors and other senior executives	1,114	–	15,367	–	–	8,438
<i>consisting of</i>						
CEO and board member, Kleantlis G. Xanthopoulos	748	–	15,367	–	–	8,438
Chairman of the board, Anders Wiklund	167	–	–	–	–	–
Board member, Saied Esmailzadeh	67	–	–	–	–	–
Board member, Anita Tollstadius	67	–	–	–	–	–
Board member, Marios Fotiadis	67	–	–	–	–	–
Other employees	846	157	–	–	–	–
<b>Total</b>	<b>1,960</b>	<b>157</b>	<b>15,367</b>	<b>–</b>	<b>–</b>	<b>8,438</b>

**NOTE 10** *continued***Average number of employees**

	2017-01-01 2017-12-31		2016-01-01 2016-12-31	
	Average number of employees	Of which are men	Average number of employees	Of which are men
<b>Parent company</b>				
Sweden	1	50 %	–	–
<b>Total in the parent company</b>	<b>1</b>	<b>50 %</b>	<b>–</b>	<b>–</b>
<b>Subsidiaries</b>				
Germany	3	67 %	1	0 %
USA	4	25 %	1	100 %
<b>Total in subsidiaries</b>	<b>7</b>	<b>43 %</b>	<b>2</b>	<b>50 %</b>
<b>Total in the Group</b>	<b>8</b>	<b>43 %</b>	<b>2</b>	<b>50 %</b>

**Gender distribution for board members and other senior executives**

	2017-01-01 2017-12-31		2016-01-01 2016-12-31	
	Number on the balance sheet date	Of which are men	Number on the balance sheet date	Of which are men
<b>Group</b>				
Board members	8	88.0 %	6	100.0 %
Executive director and other senior executives	3	100.0 %	–	0.0 %
<b>Total in the Group</b>	<b>11</b>	<b>91 %</b>	<b>6</b>	<b>100 %</b>
<b>Parent company</b>				
Board members	5	80.0 %	5	100.0 %
Executive director and other senior executives	2	100 %	–	0 %
<b>Total in the parent company</b>	<b>7</b>	<b>86 %</b>	<b>5</b>	<b>100 %</b>

**Incentive program No. 1**

In May 2016, a total of 1,900,000 options were granted to key individuals, vested on the basis of the terms of employment over periods of 1 year, 2 years, 3 years and 4 years, with one-fourth being issued each year, starting in May 2016. The cost of each fourth is allocated over the respective earning period, so a large share of the expense for the program is reported during its first year. The cost decreases over the subsequent three years. The options' actual value, calculated with the Black & Scholes valuation model, has been taxed at SEK 11.5–SEK 12.2 for different maturity with the following inputs on May 1, 2016:

Share price on the valuation date:	SEK 25
Exercise price	SEK 13.6
Estimated volatility:	30 %
Term, options with 1 year vesting	2 years
Term, options with 2 year vesting	3 years
Term, options with 3 year vesting	4 years
Term, options with 4 year vesting	4 years
Risk-free interest	neg. 0.7 – neg. 0.5%

The last day to exercise vested options is March 30, 2020.

As of 2017-12-31, there are 1,860,000 outstanding options, of which 875,179 are vested options. The reported expense for the fiscal year is SEK 8,013,000 (7,766,000).

**Incentive program No. 2**

In September 2017, 350,000 options were granted to key individuals, on the basis of the terms of employment over periods of 1 year, 2 years and 3 years with one-third being vested each year, starting in May 2017. The first third of the options is vested after 1 year, then the options are vested pro rata monthly. The expenses for each third are allocated over the respective earning period, so a large share of the expense for the program is reported during its first year. The expense decreases over the subsequent two years. The options' actual value, calculated with the Black & Scholes valuation model, has been taxed at SEK 3.3–SEK 4.4 for the various terms with the following input for September 2017:

Share price on the valuation date:	SEK 30
Exercise price	SEK 35
Estimated volatility:	30 %
Term, options with 1 year vesting	2 years
Term, options with 2 year vesting	3 years
Term, options with 3 year vesting	3 years
Risk-free interest	0.0 %

The last day to exercise vested options is October 31, 2021.

The total program comprises 650,000 options; as of 2017-12-31, there are 350,000 outstanding options, of which 26,389 are vested options. The reported expense for the fiscal year is SEK 810,000 (0).

**NOTE 10** *continued***Incentive program No. 3**

The total program comprises 400,000 and each option entitles the holder to sign a new share for SEK 50 per share until Saturday, October 31, 2020. In September 2017, 260,000 warrants were issued to the management and key individuals in the Group, who acquired them at market value during the fourth quarter of 2017. Consequently, there is no expense for the company, which is the case in incentive program No. 1 and 2.

The options do not have any vesting conditions. The actual value is calculated with the Black & Scholes valuation model and has been taxed at SEK 1.7 with the following input for September 2017:

Share price on the valuation date:	SEK 30
Exercise price:	SEK 50
Estimated volatility:	30 %
Term:	3 years
Risk-free interest:	0.0 %

**Incentive program No. 4**

The total program comprises 100,000 and each option entitles the holder to sign a new share for SEK 50 per share until Saturday, October 31, 2020. In September 2017, 100,000 warrants were issued to the chairman of the board, who acquired them at market value during the fourth quarter of 2017. Consequently, there is no expense for the company, which is the case in incentive program No. 1 and 2.

The options do not have any vesting conditions. The actual value is calculated with the Black & Scholes valuation model and has been taxed at SEK 1.7 with the following input for September 2017:

Share price on the valuation date:	SEK 30
Exercise price:	SEK 50
Estimated volatility:	30 %
Term:	3 years
Risk-free interest:	0.0 %

**Incentive program No. 5**

There is an agreement in place between IRRAS and IRRAS' CEO which entitles the CEO to 236,618 shares in the event of a listing and raising of capital and 475,603 shares when a 510 (k) approval has been received. During the third quarter of 2017, an agreement was made that the three largest owners of the company at the time would provide the CEO with half of the shares in the incentive program. Consequently, half of the shares that the CEO receives do not entail a dilution, and costs for 100% of the shares are recognized as an expense from the time of the conclusion of the agreement until the time of utilization. The listing and raising of capital carried out in November 2017 entitle the CEO to 236,618 shares, but the allocation will take place in the beginning of 2018.

The terms for the listing and raising of capital with 510 (k) approval are so-called non-market-related result terms. The outcome is that they will expire or not. According to IFRS, non-market-related result terms are not part of the initial valuation of options and should be considered ongoing. An expense is reported in the Group once it is more likely to be incurred than that the options will expire. Continuous re-evaluation takes place with respect to when the option is expected to expire, which affects when the remaining part is expensed. When the term is fulfilled, 100% of the expense must have been factored into the result.

The reported expense for the fiscal year is SEK 9,989,000 (3,226,000).

**NOTE 11 TRANSACTIONS WITH CLOSELY RELATED PARTIES**

We have defined closely related parties as company management, the board in the parent company and Group, owners of the Group and subsidiaries. Shares in subsidiaries and lending between companies in the Group are eliminated in the consolidated income statement, so no additional reporting is made for these amounts.

	2017-12-31	2016-12-31
<b>Parent company</b>		
Receivables from Group companies, long-term	14,587	4,082
Receivables from Group companies, short-term	11,804	563

During the fiscal year, sales in the parent company with respect to management fees to subsidiaries totaled SEK 3,969,000 (0), which is equivalent to 100% of turnover. The entire amount is outstanding as of the balance sheet date. No purchases have been made from subsidiaries during the fiscal year or comparison year.

The following transactions with closely associated persons have taken place during the fiscal year and comparison year in addition to the transactions listed in note 10;

	Invoiced, consulting fee	Total
<b>2017-01-01–2017-12-31</b>		
<i>Group / Parent company</i>		
Chairman of the board, Anders Wiklund	233	233
Management group member, Christos Panatopoulos	1,695	1,695
Executive director, Kleanthis G. Xanthopoulos	6,784	6,784
<b>Total</b>	<b>8,712</b>	<b>8,712</b>

	Invoiced consulting fee	Total
<b>2016-01-01–2016-12-31</b>		
<i>Group / Parent company</i>		
Chairman of the board, Kleanthis G. Xanthopoulos	5,222	5,222
Board member, Christos Panatopoulos	1,417	1,417
Board member, Anders Wiklund	299	299
<b>Total</b>	<b>6,939</b>	<b>6,939</b>

**NOTE 11** *continued*

The Group has leased offices from a person closely related to CEO Kleanthis G. Xanthopoulos during 2017. The expenses for the year totaled SEK 115,000 (49,000).

Since 2015, CEO Kleanthis G. Xanthopoulos has had a consulting agreement with IRRAS via his company Helios Capital, according to which he has invoiced for the services rendered via said company (as well as in his role as acting CEO) and for the expenses that he has incurred (such as travel expenses). The consulting agreement terminated November 22, 2017 and Kleanthis G. Xanthopoulos is now employed by IRRAS AB.

Christos Panotopoulos, the company's third-largest owner and Chief Scientific Officer, offers IRRAS consulting services with respect to his medical expertise via his company F.EX.Endotherapy Ltd. The agreement also entitles Christos Panotopoulos to invoice IRRAS for other expenses, such as travel expenses. Christos Panotopoulos is a member in the management group and was a board member until September 13, 2017.

Chairman Anders P. Wiklund had a consulting agreement with IRRAS until August 22, 2017 which entitled him to remuneration for the work he carried out for the company. He was also entitled to invoice IRRAS for other expenses, such as travel expenses.

Invoicing to IRRAS for closely related companies has also taken place as stipulated below. There are no unpaid invoices as of the balance sheet date.

	<b>Group/ Parent company</b>	<b>Group/ Parent company</b>
	2017-01-01– 2017-12-31	2016-01-01– 2016-12-31
Juno Ekonomi AB (indirectly owned by Serendipity Group)	<b>303</b>	<b>490</b>
<b>Total</b>	<b>303</b>	<b>490</b>

Transactions with closely associated parties have taken place according to terms appropriate to the market.

**NOTE 12 INCOME TAX**

	<b>Group</b>		<b>Parent company</b>	
	2017-01-01 2017-12-31	2016-01-01 2016-12-31	2017-01-01 2017-12-31	2016-01-01 2016-12-31
Current taxes for the year	–	–	–	–
<b>Total taxes on the annual result</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>

The differences between a reported tax expense and a calculated tax expense based on the applicable tax rate are as follows:

	<b>Group</b>		<b>Parent company</b>	
	2017-01-01 2017-12-31	2016-01-01 2016-12-31	2017-01-01 2017-12-31	2016-01-01 2016-12-31
Loss before tax	–60,901	–31,898	–45,169	–25,591
Income tax calculated in accordance with the statutory tax rate (22%)	13,398	7,018	9,937	5,630
Non-taxable revenue	175	–	0	–
Non-deductible expenses	–4,029	–2,800	–3,340	–2,116
Unreported tax-deductible expenses	5,448	–	5,448	–
Tax losses for which no deferred income tax asset was recognized	–16,668	–4,491	–12,045	–3,514
Effect of foreign tax rates	1,676	273	–	–
<b>Income tax</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

The tax rate applicable for the Group has been considered to be 22%, which is the tax rate for the parent company. The effect of the international tax rates depends, therefore, on the difference from the tax rates in the countries in which the subsidiaries are operative. The tax rate applied for Germany is 31% and for the USA is 40%.

	<b>Group</b>		<b>Parent company</b>	
	2017-01-01 2017-12-31	2016-01-01 2016-12-31	2017-01-01 2017-12-31	2016-01-01 2016-12-31
Carried forward tax loss (not recognized on the balance sheet)	145,399	77,549	129,282	74,646

**NOTE 13 INTANGIBLE ASSETS**

A summary of intangible assets (in thousands of SEK) and its changes during presented periods is as follows:

**Capitalized expenditure for research and development**

	Group		Parent company	
	2017-12-31	2016-12-31	2017-12-31	2016-12-31
Opening acquisition cost	24,033	9,016	24,033	9,016
Capitalized during the year	10,818	15,017	10,818	15,017
<b>Closing accumulated acquisition cost</b>	<b>34,851</b>	<b>24,033</b>	<b>34,851</b>	<b>24,033</b>
Opening amortization	–	–	–	–
Amortization change	–3,336	–	–3,336	–
<b>Closing accumulated amortization</b>	<b>–3,336</b>	<b>–</b>	<b>–3,336</b>	<b>–</b>
<b>Closing net book amount</b>	<b>31,515</b>	<b>24,033</b>	<b>31,515</b>	<b>24,033</b>

**Patents**

	Group		Parent company	
	2017-12-31	2016-12-31	2017-12-31	2016-12-31
Opening acquisition cost	4,429	4,429	4,429	4,429
<b>Closing accumulated acquisition cost</b>	<b>4,429</b>	<b>4,429</b>	<b>4,429</b>	<b>4,429</b>
Opening depreciation	–1,582	–1,266	–1,582	–1,266
Depreciation charge	–316	–316	–316	–316
<b>Closing accumulated depreciation</b>	<b>–1,898</b>	<b>–1,582</b>	<b>–1,898</b>	<b>–1,582</b>
<b>Closing net book amount</b>	<b>2,531</b>	<b>2,847</b>	<b>2,531</b>	<b>2,847</b>

**NOTE 14 PROPERTY, PLANT AND EQUIPMENT****Inventory, tools and equipment**

	Group		Parent company	
	2017-12-31	2016-12-31	2017-12-31	2016-12-31
Opening acquisition cost	18	–	–	–
Additions	243	18	189	–
Exchange rate differences	1	–	–	–
<b>Closing accumulated acquisition cost</b>	<b>262</b>	<b>18</b>	<b>189</b>	<b>–</b>
Opening depreciation	–2	–	–	–
Depreciation charge	–54	–2	–27	–
<b>Closing accumulated depreciation</b>	<b>–55</b>	<b>–2</b>	<b>–27</b>	<b>–</b>
<b>Closing net book amount</b>	<b>207</b>	<b>16</b>	<b>162</b>	<b>–</b>

**NOTE 15 FINANCIAL INVESTMENTS**

	Group		Parent company	
	2017-12-31	2016-12-31	2017-12-31	2016-12-31
At the beginning of the year	–	–	–	–
Additions	145,917	–	145,917	–
<b>Closing net book value</b>	<b>145,917</b>	<b>–</b>	<b>145,917</b>	<b>–</b>
Obligations, long-term	85,836	–	85,836	–
Obligations, short-term	60,082	–	60,082	–
<b>Closing net book value</b>	<b>145,917</b>	<b>–</b>	<b>145,917</b>	<b>–</b>

The obligations are classified in the parent company as *Other long-term security holdings* and *Short-term investments*, whereas they are classified in the Group as *Financial investments* and *Short-term investments*. These are valued at the accrued acquisition value according to the effective interest method. The investments are primarily shares in larger listed credit institutes where 41% of holdings have a credit rating of A or higher. A credit rating could not be carried out for 52% of the holdings. The credit risk in these receivables is deemed to be limited.

The actual value of the holdings is equivalent to the most recently reported value.

**NOTE 16 INVENTORY**

	2017-12-31	2016-12-31
<b>Group</b>		
Finished goods and merchandise	12,204	–
<b>Outgoing reported value</b>	<b>12,204</b>	<b>–</b>
<b>Parent company</b>		
Advance payment to suppliers	306	–
<b>Outgoing reported value</b>	<b>306</b>	<b>–</b>

**NOTE 17 OTHER LIABILITIES**

	Group		Parent company	
	2017-12-31	2016-12-31	2017-12-31	2016-12-31
Subscribed but not paid-in capital	30,744	–	–	0
Tax account	–	31	–	31
Escrow	235	–	235	0
Recoverable VAT	5,420	157	565	157
Other liabilities	732	301	732	267
<b>Total other receivables</b>	<b>37,131</b>	<b>489</b>	<b>1,532</b>	<b>454</b>

Subscribed but not paid-in capital is reported on a separate line in the balance sheet of the parent company.

**NOTE 18 PREPAID EXPENSES AND ACCRUED INCOME**

	Group		Parent company	
	2017-12-31	2016-12-31	2017-12-31	2016-12-31
Prepaid rent	–	25	–	25
Prepaid insurance expenses	–	21	–	21
Accrued interest	86	–	242	14
Other items	140	14	61	–
<b>Total prepaid expenses and accrued income</b>	<b>226</b>	<b>60</b>	<b>302</b>	<b>60</b>

**NOTE 19 SHARE CAPITAL**

	Number of shares (units)	Share capital (SEK)
<b>Parent company</b>		
<b>Incoming balance as of January 1, 2016</b>	11,836	59,180
Split 1/1000	11,824,164	–
Convertible promissory note – equity part	1,731,419	8,657
Issue of new shares	3,650,000	18,250
<b>Outgoing balance as of December 31, 2016</b>	<b>17,217,419</b>	<b>86,087</b>
Bonus issue	–	430,435
Issue of new shares	6,444,444	193,333
<b>Outgoing balance as of December 31, 2017</b>	<b>23,661,863</b>	<b>709,855</b>

The number of shares above is the number which is registered in the parent company. For further information, refer to the parent company's report on changes in equity. Specifications on changes in equity are indicated in the report Changes in equity, which closely follows the balance sheet.

The shares have a quota value of SEK 0.03 per share.

**NOTE 20 NOTE 20 ACCRUED EXPENSES AND PREPAID INCOME**

	Group		Parent company	
	2017-12-31	2016-12-31	2017-12-31	2016-12-31
Accrued salary	644	–	644	–
Accrued vacation pay	76	–	76	–
Accrued social insurance contributions	226	–	226	–
Other personnel-related items	939	–	195	–
Consulting fees	6,590	417	6,506	417
Auditing	350	40	350	40
Other	761	12	762	–
<b>Total accrued expenses and prepaid income</b>	<b>9,587</b>	<b>469</b>	<b>8,760</b>	<b>457</b>

**NOTE 21 SECURITIES AND CONTINGENT LIABILITIES**

	Group		Parent company	
	2017-12-31	2016-12-31	2017-12-31	2016-12-31
Bank guarantee	–	50	–	50
<b>Total</b>	<b>–</b>	<b>50</b>	<b>–</b>	<b>50</b>

**NOTE 22 COMMITMENTS****Commitments regarding operational leasing**

	Group		Parent company	
	2017-12-31	2016-12-31	2017-12-31	2016-12-31
<b>Group</b>				
Within one year	121	74	–	74
More than one but less than five years	–	–	–	–
More than five years	–	–	–	–
	121	74	–	74

The Group's operational leasing consists of rent for premises.

**NOTE 23 EVENTS AFTER THE END OF THE FISCAL YEAR****Re-launch of IRRAflow**

The temporary sales stop that took place in December of 2017 has been withdrawn and IRRAS launched an updated and improved version of IRRAflow. The product has been updated esthetically and mechanically and has also received an updated battery configuration from a German medical technology supplier. The temporary stop of sales has been withdrawn and the initial products were delivered to customers in mid-February.

**Updated ISO- and CE-certificate**

IRRAS has received an updated ISO 13485:2016 certificate and new CE marks for the control unit and tube set. Both products are class II products. The ISO certificate and CE marks are valid until 2021. The CE mark for the catheter is expected in the near future. It is typical for a class III product, such as the IRRAS catheter, to require more time for auditing.

**NOTE 24 SHARES IN GROUP COMPANIES**

	2017-12-31	2016-12-31
<b>Parent company</b>		
Opening acquisition value	11,193	–
Incentive programs	3,445	8,638
Capital injections	10,000	2,555
<b>Closing net book value</b>	<b>24,638</b>	<b>11,193</b>

The parent company holds shares in the following subsidiaries, both of which were established in 2016:

Name	Corporate ID number	Registered office	Share of capital and votes	Number of shares	Reported value 2017-12-31	Reported value 2016-12-31
IRRAS GmbH	DE308005079	Munich	100%	1	2,561	1,260
IRRAS USA Inc	611800152	San Diego	100%	10,000,000	22,078	9,933
					<b>24,638</b>	<b>11,193</b>

The options program described under section 2.16 entails that the issue of equity instruments in parent company (to the part regarding options expenses in subsidiaries) is considered to be a shareholder contribution in the subsidiaries from the parent company, so it is reported as an investment in the subsidiary and not as a personnel expense in the income statement. The investment is evaluated later for a need for depreciation, similar to other contributions. If there is a need for a depreciation for shares in subsidiaries, the effect is that a financial expense is reported in the parent company's income statement.

**NOTE 25 PROPOSAL FOR DISTRIBUTION OF PROFITS**

The board recommends that disposable profits as of 2017-12-31, in the amount of SEK 314,766,889, are carried forward to future periods.

For changes in equity capital during the fiscal year, refer to the Group and parent company's report on changes in equity capital.

**NOTE 26 EARNINGS PER SHARE**

SEK	Before dilution		After dilution	
	2017	2016	2017	2016
Earnings per share	–3.40	–2.12	–3.40	–2.12

Amounts used in the numerator are consistent with net income attributable to shareholders of the company, TSEK –60,901 (–31,898). Amounts used in the denominator are reported below.

The weighted average number of shares amounted to 17,906,003 (15,042,691), which have been affected by a split and conversion of convertible loans during the previous fiscal year, as well as new issues during the current and previous fiscal years. The number of shares outstanding at year-end was 23,661,863 (17,217,419).

**Instruments that can provide dilution and changes after the balance sheet date**

The weighted average number of shares after dilution and earnings after dilution amount to the same as before dilution. Since the Group reported a loss for the year and the previous fiscal year, potential ordinary shares bring no dilution in terms of average number of shares. There are incentive programs, such as the day the group recognizes profit will cause a dilution effect. For more information about the terms of the incentive programs and the number of written options, see Note 2.16 and Note 10. No changes in the number of shares before or after dilution have occurred after the balance sheet date.

The Group's income statement and balance sheets will be presented to the annual shareholders' meeting on 2018-06-01 for approval.

Stockholm, May 10 2018

Anders P. Wiklund  
*Chairman of the board*

Kleanthis G. Xanthopoulos  
*Executive director and board member*

Saeid Esmailzadeh  
*Board member*

Marios Fotiadis  
*Board member*

Anita Tollstadius  
*Board member*

Our audit report was submitted on May 10 2018  
KPMG AB

Duane Swanson  
*Authorized public accountant*

# Auditor's Report

To the general meeting of the shareholders of IRRAS AB, corp. id 556872-7134

## Report on the annual accounts and consolidated accounts

### Opinions

We have audited the annual accounts and consolidated accounts of IRRAS AB for the year 2017. The annual accounts and consolidated accounts of the company are included on pages 24-56 in this document.

In our opinion, the annual accounts have been prepared in accordance with the Annual Accounts Act, and present fairly, in all material respects, the financial position of the parent company as of 31 December 2017 and its financial performance and cash flow for the year then ended in accordance with the Annual Accounts Act. The consolidated accounts have been prepared in accordance with the Annual Accounts Act and present fairly, in all material respects, the financial position of the group as of 31 December 2017 and their financial performance and cash flow for the year then ended in accordance with International Financial Reporting Standards (IFRS), as adopted by the EU, and the Annual Accounts Act. The statutory administration report is consistent with the other parts of the annual accounts and consolidated accounts.

We therefore recommend that the general meeting of shareholders adopts the income statement and balance sheet for the parent company and the statement of comprehensive income and statement of financial position for the group.

### Basis for Opinions

We conducted our audit in accordance with International Standards on Auditing (ISA) and generally accepted auditing standards in Sweden. Our responsibilities under those standards are further described in the Auditor's Responsibilities section. We are independent of the parent company and the group in accordance with professional ethics for accountants in Sweden and have otherwise fulfilled our ethical responsibilities in accordance with these requirements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinions.

### Responsibilities of the Board of Directors and the Managing Director

The Board of Directors and the Managing Director are responsible for the preparation of the annual accounts and consolidated accounts and that they give a fair presentation in accordance with the Annual Accounts Act and, concerning the consolidated accounts, in accordance with IFRS as adopted by the EU. The Board of Directors and the Managing Director are also responsible for such internal control as they determine is necessary to enable the preparation of annual accounts and consolidated accounts that are free from material misstatement, whether due to fraud or error.

In preparing the annual accounts and consolidated accounts The Board of Directors and the Managing Director are responsible

for the assessment of the company's and the group's ability to continue as a going concern. They disclose, as applicable, matters related to going concern and using the going concern basis of accounting. The going concern basis of accounting is however not applied if the Board of Directors and the Managing Director intend to liquidate the company, to cease operations, or has no realistic alternative but to do so.

### Auditor's responsibility

Our objectives are to obtain reasonable assurance about whether the annual accounts and consolidated accounts as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinions. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs and generally accepted auditing standards in Sweden will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these annual accounts and consolidated accounts.

As part of an audit in accordance with ISAs, we exercise professional judgment and maintain professional scepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the annual accounts and consolidated accounts, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinions. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of the company's internal control relevant to our audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the company's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the Board of Directors and the Managing Director.
- Conclude on the appropriateness of the Board of Directors' and the Managing Director's, use of the going concern basis of accounting in preparing the annual accounts and consolidated accounts. We also draw a conclusion, based on the audit evidence obtained, as to whether any material uncertainty exists related to events or conditions that may cast significant doubt on the company's and the group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report

to the related disclosures in the annual accounts and consolidated accounts or, if such disclosures are inadequate, to modify our opinion about the annual accounts and consolidated accounts. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause a company and a group to cease to continue as a going concern.

- Evaluate the overall presentation, structure and content of the annual accounts and consolidated accounts, including the disclosures, and whether the annual accounts and consolidated accounts represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient and appropriate audit evidence regarding the financial information of the entities or business activities within the group to express an opinion on the consolidated accounts. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our opinions.

We must inform the Board of Directors of, among other matters, the planned scope and timing of the audit. We must also inform of significant audit findings during our audit, including any significant deficiencies in internal control that we identified.

## Report on other legal and regulatory requirements

### Opinions

In addition to our audit of the annual accounts and consolidated accounts, we have also audited the administration of the Board of Directors and the Managing Director of IRRAS AB for the year 2017 and the proposed appropriations of the company's profit or loss.

We recommend to the general meeting of shareholders that the profit be appropriated in accordance with the proposal in the statutory administration report and that the members of the Board of Directors and the Managing Director be discharged from liability for the financial year.

### Basis for Opinions

We conducted the audit in accordance with generally accepted auditing standards in Sweden. Our responsibilities under those standards are further described in the Auditor's Responsibilities section. We are independent of the parent company and the group in accordance with professional ethics for accountants in Sweden and have otherwise fulfilled our ethical responsibilities in accordance with these requirements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinions.

### Responsibilities of the Board of Directors and the Managing Director

The Board of Directors is responsible for the proposal for appropriations of the company's profit or loss. At the proposal of a dividend, this includes an assessment of whether the dividend is justifiable considering the requirements which the company's and the group's type of operations, size and risks place on the size of the parent company's and the group's equity, consolidation requirements, liquidity and position in general.

The Board of Directors is responsible for the company's organization and the administration of the company's affairs. This includes among other things continuous assessment of the

company's and the group's financial situation and ensuring that the company's organization is designed so that the accounting, management of assets and the company's financial affairs otherwise are controlled in a reassuring manner.

The Managing Director shall manage the ongoing administration according to the Board of Directors' guidelines and instructions and among other matters take measures that are necessary to fulfill the company's accounting in accordance with law and handle the management of assets in a reassuring manner.

### Auditor's responsibility

Our objective concerning the audit of the administration, and thereby our opinion about discharge from liability, is to obtain audit evidence to assess with a reasonable degree of assurance whether any member of the Board of Directors or the Managing Director in any material respect:

- has undertaken any action or been guilty of any omission which can give rise to liability to the company, or
- in any other way has acted in contravention of the Companies Act, the Annual Accounts Act or the Articles of Association.

Our objective concerning the audit of the proposed appropriations of the company's profit or loss, and thereby our opinion about this, is to assess with reasonable degree of assurance whether the proposal is in accordance with the Companies Act.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with generally accepted auditing standards in Sweden will always detect actions or omissions that can give rise to liability to the company, or that the proposed appropriations of the company's profit or loss are not in accordance with the Companies Act.

As part of an audit in accordance with generally accepted auditing standards in Sweden, we exercise professional judgment and maintain professional scepticism throughout the audit. The examination of the administration and the proposed appropriations of the company's profit or loss is based primarily on the audit of the accounts. Additional audit procedures performed are based on our professional judgment with starting point in risk and materiality. This means that we focus the examination on such actions, areas and relationships that are material for the operations and where deviations and violations would have particular importance for the company's situation. We examine and test decisions undertaken, support for decisions, actions taken and other circumstances that are relevant to our opinion concerning discharge from liability. As a basis for our opinion on the Board of Directors' proposed appropriations of the company's profit or loss we examined whether the proposal is in accordance with the Companies Act.

Stockholm May 10 2018

KPMG AB

Duane Swanson  
Authorized Public Accountant

# Corporate governance report

**The corporate governance within IRRAS AB defines the decision-making system, clarifies roles and assignment of responsibilities between the board, managerial and controlling bodies and ensures openness towards stakeholders in the corporation.**

## IRRAS AB corporate governance

The corporate governance is based on Swedish legislation, primarily the Swedish Companies Act and the listing agreement with Nasdaq Stockholm. IRRAS AB applies Swedish Code for Corporate Governance (the "Code").

## Shareholders' meeting

The shareholders' meeting is the corporation's highest decision-making body. The shares are of the same type and each share gives one vote. The annual meeting elects the board, auditors and makes decisions in accordance with the Swedish Companies Act and the Articles of Association. The board presents the annual report and financial statements at the annual meeting. The auditors present the audit report and the group audit report. Information about the matters which will be up for vote is provided in the summons to the annual meeting, which is published in a press release and on the web page. Resolutions passed by vote are published by press release and on the web page.

The 2018 annual meeting will be held June 1 at 11:00 am at IVA Konferenscenter, Grev Turegatan 16, Stockholm.

## Nominating committee

The annual meeting decides how the nominating committee shall be composed. An extra shareholders' meeting in September 2017 resolved that the nominating committee shall consist of four members representing the three largest shareholders at the end of the month of September and the chair of the board. The make-up was published after issue carried out during November 2017.

Prior to the annual meeting, Director Christer Hellström, representing the corporation's fourth largest shareholder, Serendipity Group AB, was appointed as chair of the nominating committee. The nominating committee produces documentation for the decisions made by the shareholders' meeting with respect to the choice and remuneration of the chair of the shareholders' meeting, the board, the chair of the board and auditors.

The nominating committee presents its work at the annual meeting. There is no compensation for the work in the nominating committee. Shareholders can contact the nominating committee with recommendations and opinions regarding the make-up of the

board. The selection of auditors took place at the ordinary 2017 annual shareholders' meeting.

The make-up of the nominating committee as of March 2018 is presented in the table below.

Name	Representing	Percentage of ownership, %, March 31, 2018
Christer Hellström	Serendipity Group AB and Serendipity Ixora AB	9.03
Marios Fotiadis	Lexington Holding Assets Ltd (BVI) and Bacara Holdings Limited	19.85
Christos Panotopoulos	F.EX Endotherapy Limited	12.81
Anders Wiklund	Chairman of the board	0.05

## The board

According to the articles of association, the board shall consist of at least three and a maximum of seven members without alternates. Changes to the articles of association are resolved by the shareholders' meeting. Since the extra shareholders' meeting on September 1, 2017, the board consists of five members. At the meeting, Anders Wiklund was elected chairman and Saeid Esmaeilzadeh, Marios Fotiadis, Anita Tollstadius and Kleanthis G. Xanthopoulos as members.

The board's responsibility is regulated in the Swedish Companies Act and in the rules of procedure. The rules of procedure define the distribution of the board's work between the board's committees and between the board and the executive director. According to the rules of procedure, the board shall determine strategy and budget, produce the annual financial reports and other external financial reports, important policies and payment authorization instructions, appoint an executive director and evaluate the executive director's work, define rules for internal control and determine the effectiveness of the internal control, decide on larger investments and long-term agreements, decide on the direction of the board's work, appoint an audit committee and remuneration committee and to evaluate the board's work. The board shall also define necessary guidelines for the corporation's public image for the purpose of ensuring its long-term value-creating capability. The board shall also determine whether established guidelines on remuneration of leading decision-makers have been followed and propose guidelines for remuneration of the annual meeting.

**MEMBERS OF THE BOARD AFTER THE EXTRA SHAREHOLDERS' MEETING ON SEPTEMBER 1, 2017**

Name	Term	Function	Presence	Independent management	Independent owner	Share-holdings	Appointed	Audit committee member	Audit committee presence
Anders Wiklund	9/1-12/31	Chairman	4/4	Yes	Yes	13,182	2016	Yes	-
	1/1-8/31	Member	3/3	Yes	Yes	13,182	2016	No	-
Kleanthis G. Xanthopoulos	9/1-12/31	Member	4/4	No	Yes	367,274	2015	No	-
	1/1-8/31	Chairman	3/3	No	No	367,274	2015	No	-
Saeid Esmailzadeh	1/1-12/31	Member	7/7	Yes	No	2,137,561	2013	Yes	-
Marios Fotiadis	9/1-12/31	Member	7/7	Yes	No	4,697,334	2012	Yes	-
Anita Tollstadius	9/1-12/31	Member	4/4	Yes	Yes	2,000	2017	No	-

The board's chair leads the board's work. The board's chair shall follow the company's development and ensure that the board receives the information that is required in order to be able to fulfill its undertaking.

During 2017, the members of the board focused on certain topics, such as launch plans, financing and listing of the corporation, revision of strategies and goals, evaluation of development projects and organization.

According to the rules of procedure, the board's chair shall represent the corporation in matters of proprietorship.

The corporation has not appointed an internal revision function. This is due to the size of the corporation.

**Remuneration of the board members**

At the extra annual shareholders' meeting in September 2017, the shareholders' meeting approved a total annual compensation of SEK 1,100,000. SEK 500,000 of the compensation is designated for the chair's board and SEK 200,000 in compensation is designated to each of the other board members who are not employed by the corporation.

**The board's work**

The board's meetings are prepared by the chairman of the board together with the President and Deputy President. The board receives written material prior to each meeting. Certain questions are prepared in the audit committee and in the remuneration committee. Recurrent matters at the board meeting include a

review of the state of affairs and financial reporting. The board minutes are kept by the corporation's VP of Finance.

**Evaluation of the board's work**

The board evaluates the board's work in accordance with the rules of procedure. This takes place in discussions within the board and through annual external evaluations.

**Summary of the board's meetings during the year**

The board has held seven meetings in 2017. The state of affairs and financial reporting were discussed at every board meeting. The external auditors have participated in one board meeting during the year. Matters that are address, except for recurrent matters, include other continuous reviews of long-term strategies, reviews of new product possibilities and the 2018 budget. The board's members are listed in the table at the bottom of the page.

**Audit committee**

Board members Marios Fotiadis (chairman), Anders Wiklund and Saeid Esmailzadeh make up the audit committee since the constituent board meeting in the Autumn of 2017.

The primary task of the committee is to ensure the quality of the financial reporting, which comprises internal control, review of pertinent auditing and valuation matters and a review of the corporation's external reports. The audit committee evaluates auditing and assists the nominating committee with recommen-

dations in the choice of auditors and remuneration of auditing work. The audit committee defines which services other than auditing that the corporation can purchase from the corporation's auditors. Some meetings between the audit committee and the external auditors shall take place without the presence of employees. The audit committee reports to the board. Since the committee was appointed as late as September 2017, no meetings have been held during the year.

### Remuneration committee

Board members Saeid Esmailzadeh (chairman), Anders Wiklund and Anita Tollstadius make up the remuneration committee since the constituent board meeting in the Autumn of 2017.

The committee's primary task is to recommend salaries, other remuneration and terms of employment for the President. The committee drafts recommendations for principles for remuneration and terms of employment for other leading decision-makers in the corporate management and recommendations for incentive programs. The remuneration committee shall ensure compliance with the defined guidelines for remuneration for leading decision-makers. Since the committee was appointed as late as September 2017, no recorded meetings have been held during the year.

### Authorization for the board

At the extra meeting on September 1, 2017, the board was authorized to make decisions about increasing the corporation's share capital on one or multiple occasions by issuing new shares, warrants and/or convertible instruments in the corporation within the scope for applicable corporate governance, with or without deviating from preemptive rights of the shareholders. The issues shall be made at market price, with reservation for an issue discount at market price in the present case, and payment shall be able to take place, aside from payment in cash, with capital contributed in kind or through offsetting, or otherwise with terms and conditions. The authorization is being asserted to raise capital in connection with listing on First North Premier.

### Principles for remuneration and other terms of employment for corporate management

The annual meeting defines principles for remuneration of the corporate management. The recommendation is drawn up by the remuneration committee. The main principle is that IRRAS shall offer terms appropriate to the market which make it possible for the corporation to recruit and retain competent personnel. Remuneration of the company management shall consist of fixed

salary, variable remuneration, a long-term incentive program, retirement benefits and other normal benefits. The remuneration is based on the commitment and performance of the individual with respect to the goals established beforehand, both individually and collectively for the entire company. Evaluation of the individual performance takes place continuously.

### Auditing

The corporation's auditors are elected for a term of one year at the annual shareholders' meeting. At the ordinary 2017 shareholders' meeting, KPMG was chosen as auditor, with the authorized auditor Duane Swanson as the primary responsible person for auditing within the corporation. The corporation's auditors carry out a coherent review of at least one interim report per year. Other statutory auditing of the annual report, corporate annual report and accounting, as well as the board and executive director's management are carried out in compliance with International Standards on Auditing and generally accepted auditing standards in Sweden. The auditors meet the board on an annual basis and the audit committee in its entirety in the presence of and without the company management.

### Financial reporting to the board

The board determines which reports should be provided so that the board can follow the corporation's development. The quality of the financial reporting to the board is evaluated by the audit committee as a first instance.

### External financial information

In accordance with the corporation's information policy, which is passed each year by the board, the corporation submits financial information in the form of a consolidated report, annual report and press releases in connection with significant activities which can affect the market rate. The disclosure of information conforms to the requirements stipulated in the listing agreement with Nasdaq Stockholm. The board reviews the external financial reports before they are published. The information policy also defines how the communication shall take place and which parties represent the corporation. Information that is distributed via press releases is also available on the corporation's web page, as well as other information that is determined to be valuable.

## Internal control report

The board is responsible for internal controlling in accordance with the Swedish Companies Act and the Code. The board's report relates to the internal controlling with respect to financial reporting for the corporation. The board's work with internal control is based on environmental control, risk evaluation, control activities, information and communication, and monitoring. The internal control is a process that is shaped by the board, the company management and other employees and is designed in order to provide reasonable assurance that the corporation's goals are achieved with respect to appropriate and effective activities, reliable financial reporting and compliance with laws and regulations.

### Control environment

The board is ultimately responsible to establish and maintain good internal control. A good control environment is based on designing the organization, decision-making channels, authorities and responsibilities, expressed in policies and guidelines. Collective values establish common ground and bolster the internal control. During 2017, a great deal of work has been carried out to reinforce the internal control. Harmonization of the various companies in the Group has been carried out, monitoring of results has been improved, terms of employment have been harmonized and numerous processes for improvement are in progress. Authoritative documents have been drafted in the form of procedures for the board and instructions for the executive director. The board defines certain policies and instructions, including payment authorization instructions. The board and company management consider quick and accurate reporting to be important. The finance department ensures that all activities are evaluated and streamlined. The evaluation of the internal control within the Group follows a plan which is approved by the audit committee on an annual basis. The respective department manager is responsible to establish processes which are appropriate for the purpose of internal control.

### Risk assessment

The corporation has established a process for risk assessment and risk management in order to ensure that the risks to which the corporation is exposed are within the scope defined by the board. This is monitored by the audit committee. This work will continue and intensify during 2018.

Business processes are evaluated with respect to effectiveness and risk. This includes identification of risk for errors in the financial reporting. The company's supporting processes are also analyzed. An overall risk assessment is carried out each year. The risks are graded and coupled to processes. Processes that are

determined to be critical include development, production, sales and supporting processes such as closing and IT. The processes for disbursements and salaries and pensions are considered to be critical and comprised by the evaluation. The risks for important errors or shortcomings in the financial reporting will be reported to the audit committee.

### Control activities

The risks that are identified with respect to financial reporting shall be handled with control measures. Important processes are documented and evaluated in order to improve the effectiveness of control systems. The control structure includes defined authorities, distribution of work and the management's continuous monitoring of financial information.

### Information and communication

The board and management have defined information and communication routes in order to ensure completeness and correctness of the financial reporting. Controlling documents, such as internal policies, guidelines and instructions are available within the corporation's quality system. Personnel from the Group management visit the companies regularly.

### Monitoring

The board has determined that monitoring of the internal control shall take place by evaluating critical processes. Processes which must be documented and evaluated during the year are defined on the basis of a risk assessment. Self-evaluation means that personnel evaluate and provide an opinion on the risks and controls within their respective area of activity. The work procedure involves employees and establishes an understanding of the importance of internal control.

The corporation's internal self-evaluation work has comprised continued evaluation of the various companies during 2017. The purpose of analyzing the corporations is to identify the overall control environment and important risks, and to introduce common rules with respect to overall control matters.

The audit committee monitors the company's internal control work with continuous feedback. The audit committee is continuously in contact with the external auditors, which also contributes to the board's overall impression of the internal control.

## Planned activities for 2018

The business processes and control processes will be documented and evaluated during 2018, both in terms of self-evaluation and by means of external evaluation..

## Board of directors



**Anders P. Wiklund**  
**M. Pharm.**

*Chairman*

Born in 1940. Chairman of the Board since 2017. Member of the Board since 2016. Member of the audit committee and the remuneration committee.

**Education and relevant experience:** Pharmacist (MSc Pharm) from Farmaceutiska Institutet. He has also studied Business at Stockholm University. Anders P. Wiklund has more than 40 years of global experience in leading positions in pharmaceutical and biotechnology companies, inter alia as co-founder of Esperion and former President and CEO of KabiVitrum Inc and KabiPharmacia Inc.

**Other current assignments:** Board member of Efrx Pharmaceuticals SA, Life Medical Sweden AB and Wiklund International AB. Member of the advisory board of Inspirion Drug Technologies LLC.

**Shareholding in IRRAS:**  
13,182 shares

**Holding of warrants:**  
100,000 warrants in program 2017/2020  
Anders P Wiklund is independent in relation to the company and its management and in relation to major shareholders.



**Saeid Esmaeilzadeh**  
**Ph.D.**

*Board Member*

Born in 1974. Member of the Board since 2013. Chairman of the remuneration committee and member of the audit committee.

**Education and relevant experience:** Saeid Esmaeilzadeh holds a Ph.D. in Chemistry from the Stockholm University. Saeid Esmaeilzadeh has been rewarded several awards for research and entrepreneurial accomplishments. He is the founder of several innovative companies within MedTech, Industrials and CleanTech.

**Other current assignments:** Chairman of the board of Xbrane Biopharma AB, Serendipity Ixora AB (publ), Premuna AB (publ) and S. Professionals AB. Board member in Diamorph AB (publ), Sdipitech AB (publ), Episurf Medical AB, Serendipity Group AB, Swecure AB (publ), Nextseal AB, Build-r AB, Nextmune MC AB, Nextmune HoldCo AB and Nextmune AB. Deputy board member of Serendip Invest AB, VZL Vilande AB, Auremune AB, Leonova CONSULTING AB, Premune IPR AB, Swecure Europe AB, Intelligent Art AB, Swecure IPR AB, Serendipity Innovations AB, DynaSeal LCT AB and Serendipity Ventures AB.

**Shareholding in IRRAS:**  
2,137,561 shares via Serendipity Group AB and Serendipity Ixora AB

Saeid Esmaeilzadeh is independent in relation to the company and its management but not in relation to its major shareholders.



**Marios Fotiadis**  
**M.B.A.**

*Board Member*

Born in 1973. Member of the Board since 2012. Chairman of the audit committee.

**Education and relevant experience:** Marios Fotiadis holds an MBA from Columbia University, New York. Marios Fotiadis has more than 20 years of experience from positions within private equity and venture capital in the life science sector, Partner of Advent International and TVM Capital and prior to that, he started his career in private equity and venture capital at SG Capital Partners.

**Other current assignments:** He is currently the Chairman and CEO of Cerus Advisors DMCC and board member of Mediolanum Farmaceutici SpA, Klaris SA, Sente Inc., Plastics Unbound Ltd. and Rossart Ltd.

**Shareholding in IRRAS:**  
4,697,334 shares via Lexington Holding Assets Ltd (BVI) and Bacara Holdings Limited

Marios Fotiadis is independent in relation to the company and its management but not in relation to its major shareholders.



**Anita Tollstadius**  
**M.Sc and M.B.A.**

*Board Member*

Born in 1955. Member of the Board since 2017. Member of the remuneration committee.

**Education and relevant experience:**

Anita Tollstadius holds an MSc in Pharmacy from Uppsala University and an MBA from the Stockholm School of Economics. Anita Tollstadius has more than 30 years of experience from global strategic marketing management positions within the life sciences sector both in Sweden and abroad.

**Other current assignments:**

CEO of ContextVision AB and board member of Tollstadius & Co AB.

**Shareholding in IRRAS:**

2,000 shares

Anita Tollstadius is independent in relation to the company and its management and in relation to major shareholders.



**Kleanthis G. Xanthopoulos Ph.D.**

*Board Member, President and CEO*

Born in 1958. Member of the Board since 2015.

**Education and relevant experience:**

Kleanthis G. Xanthopoulos holds an M.Sc. and a Ph.D. in Molecular Biology from Stockholm University and was an Associate Professor at Karolinska Institute in Stockholm, Sweden. Kleanthis G. Xanthopoulos has more than 25 years' experience from operational positions in the life science sector. Kleanthis G. Xanthopoulos also has extensive experience as an investor in life science companies in the United States and the European Union and has founded three life science companies before joining IRRAS, of which two have been listed at Nasdaq (Anadys Pharmaceuticals, Inc. which was acquired by F. Hoffmann-La Roche Inc. for USD 230 million in 2011, and Regulus Therapeutics Inc). Kleanthis G. Xanthopoulos has also financed and brokered numerous creative strategic alliance and partnership deals with large pharmaceutical partners.

**Other current assignments:**

Chairman of the board of Apricus Biosciences Inc., board member of ZosanoPharma Inc., and Sente Inc. Management member in Cerus Advisors DMCC and President of Helios Inc.

**Shareholding in IRRAS:**

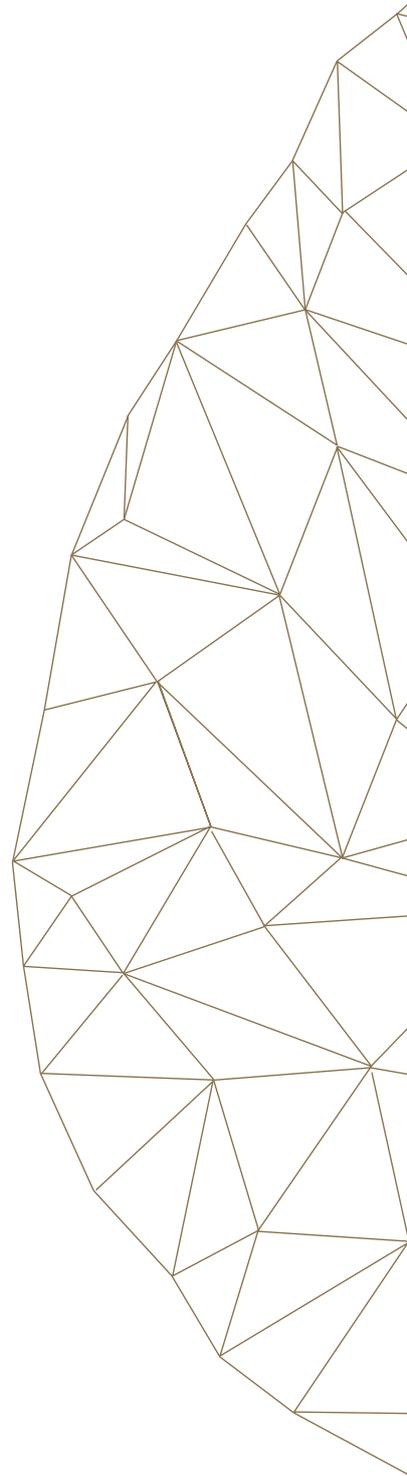
367,275 shares

**Holding of warrants:**

1,275,000 warrants under the 2016/2020 warrant scheme.

Share award program: The share award program entitles Dr Xanthopoulos to 475,604 shares when a 510 (k) clearance is received.

Kleanthis G. Xanthopoulos is not independent in relation to the company and its management and not in relation to major shareholders.



## Management team\*



### **Kleanthis G. Xanthopoulos Ph.D.\***

*President and CEO*

Born in 1958. Joined IRRAS in 2015.

#### **Education and relevant experience:**

Kleanthis G. Xanthopoulos holds an M.Sc. and a Ph.D. in Molecular Biology from Stockholm University and was an Associate Professor at Karolinska Institute in Stockholm, Sweden. Kleanthis G. Xanthopoulos has more than 25 years' experience from operational positions in the life science sector. Kleanthis G. Xanthopoulos also has extensive experience as an investor in life science companies in the United States and the European Union and has founded three life science companies before joining IRRAS, of which two have been listed at Nasdaq (Anadys Pharmaceuticals, Inc. which was acquired by F. Hoffmann-La Roche Inc. for USD 230 million in 2011, and Regulus Therapeutics Inc). Kleanthis G. Xanthopoulos has also financed and brokered numerous creative strategic alliance and partnership deals with large pharmaceutical partners.

#### **Other current assignments:**

Chairman of the board of Apricus Biosciences Inc., board member of ZosanoPharma Inc., and Sente Inc. Management member in Cerus Advisors DMCC and President of Helios Inc.

#### **Shareholding in IRRAS:**

367,274 shares

#### **Holding of warrants:**

1,275,000 warrants under the 2016/2020 warrant scheme.

Share award program: The share award program entitles Dr Xanthopoulos to 475,604 shares when a 510 (k) clearance is received.

Kleanthis G. Xanthopoulos is not independent in relation to the company and its management and not in relation to major shareholders.



### **Christos Panotopoulos M.D., Ph.D.**

*Chief Scientific Officer & Founder*

Born 1962.

Founded IRRAS in 2011.

#### **Education and relevant experience:**

Dr. Panotopoulos graduated and received a Ph. D. degree from the Medical Faculty of Athens University, Greece, holds a title of Speciality in Neurosurgery from Athens Prefecture and a Microsurgery degree from the Faculté de Médecine Paris-Sud, Université Paris XI, France. Dr. Christos Panotopoulos is a Neurosurgeon and Inventor of medical devices with extensive clinical and research experience in Greece, France, Sweden and India.

Christos Panotopoulos has devoted the last seventeen years developing IRRASflow.

#### **Other current assignments:**

Administrator in Microdialysis Ltd, FEX Endotherapy Ltd and Jaymore Ltd. He is senior consultant Neurosurgeon in Mediterraneo Hospital in Athens, Greece, as well as in Brains-Sparsh Hospital and Neurosurgical Research Center, Bangalore, India.

#### **Shareholding in IRRAS:**

3,030,800 shares via F.EX. Endotherapy Limited.

#### **Holding of warrants:**

150,000 warrants under the 2016/2020 warrant scheme.



### **Fredrik Alpsten\* M.Sc.**

*Chief Financial Officer and Deputy Chief Executive Officer*

Born in 1966.

Joined IRRAS in 2017.

#### **Education and relevant experience:**

Mr. Alpsten received a Master of Science degree from the Stockholm School of Economics. Fredrik Alpsten brings approximately twenty years of operational, financial, and strategic business experience as an executive in the medical technology field. Most recently, Mr. Alpsten served as Senior Vice President and CFO of Boule Diagnostics AB (Boule), a Swedish publicly-traded diagnostics company. Prior to his tenure at Boule he was President and CEO of Doxa AB, a publicly-traded medical technology company located in Sweden.

#### **Other current assignments:**

Mr. Alpsten currently serves as Chairman of the Board of Personlig Almanacka Nordic AB and board member and chairman of the audit committee of Oniva Online Group Europe AB.

#### **Shareholding in IRRAS:**

9,200 shares

#### **Holding of warrants:**

200,000 warrants under the 2017/2020 warrant scheme.

\* The executive management group consists of Kleanthis G. Xanthopoulos, Fredrik Alpsten, Will Martin, C. Lance Boling and Kellie Fontes.



**Karl-Matthias Moehlmann**  
M.Sc., M.B.A., M.PH.

Senior Vice President  
Commercial Operations,  
General Manager Europe

Born 1975.  
Joined IRRAS in 2016.

**Education and relevant experience:**

Matthias Moehlmann has more than fifteen years of experience as an executive or consultant for leading medical device companies in the neurological, trauma and orthopedic categories. He has managed Commercial Operations, Marketing and R&D for many leading public and private companies, with a proven record of leadership and strategic expertise to deliver bottom line results and achieve business growth.

Matthias Moehlmann was formerly Director of Marketing at Kyphon B.v.B.a and was also VP of Business Development at Bonesupport AB. He has held leadership and consultancy roles at aap Bioimplants, Benvenue Medical, CRA DePuy Spine, X-Spine, Miedke Hydrocephalus Solutions and Mimedx Biologics.

He holds a M.Sc. in Biochemistry from University of Hanover, an M.B.A in Economics and Master of Public Health from the University of Graz.

**Other current assignments:** –

**Shareholding in IRRAS:** –

**Holding of warrants:**

164,286 warrants under the 2016/2020 warrant scheme, 50,000 warrants under the 2017/2021 incentive scheme for Swedish co-workers.



**C. Lance Boling\***  
M.Sc. and BA

Vice President of  
Product Development

Born 1959.  
Joined IRRAS in 2016.

**Education and relevant experience:**

Mr. Boling has a BA in Business Management from the University of Phoenix as well as Post Graduate studies in Manufacturing Technology at Stanford University. He holds over 40 pioneering patents, granted and pending in the medical device industry, provides guidance to several national and international fledgling start-ups. He also has had key leadership positions in disruptive Silicon Valley start-up ventures such as Nanostim, Nevro Corporation, NeuroPace Inc., and Autonomic Technology.

**Other current assignments:** –

**Shareholding in IRRAS:** –

**Holding of warrants:**

96,429 warrants under the 2016/2020 warrant scheme, 145,000 warrants under the 2017/2021 incentive scheme for Swedish co-workers.



**Sabina Berlin**  
M.Sc.

Vice President Finance

Born 1983.  
Joined IRRAS in 2017.

**Education and relevant experience:**

Sabina Berlin has a master's degree in auditing and financial control from the School of Business, Economics and Law at the University of Gothenburg. Sabina Berlin has extensive experience within the areas of business control, accounting and business analysis. During 2014–June 2017, Sabina Berlin held the position as CEO of Juno Ekonomi, a company providing accounting and payroll services to a number of companies within the Serendipity group.

**Other current assignments:**

Board member and major shareholder of Zymology Consulting AB..

**Shareholding in IRRAS:**

2,215 shares

**Holding of warrants:**

100,000 warrants under the 2017/2020 incentive scheme for Swedish co-workers.

## Management team *continued*



**Will Martin\***  
**BA, MBA**

*Chief Commercial Officer*

Born 1975.  
Joined IRRAS in 2018.

**Education and relevant experience:**

Will Martin is a lieutenant in the US Navy and holds an BA from Notre Dame and a MBA from John Hopkins University.

Mr. Martin most recently served as General Manager of the Peripheral Vascular (PV) devices business for Philips Healthcare. In this role, Mr. Martin oversaw the growth and expansion of Philips into the PV interventional space, was responsible for defining and owning the global PV business strategy, and played a key role in the acquisition of Spectranetics for more than \$2B. During his tenure, the PV segment was one of the fastest growing businesses in Philips.

Prior to Philips, Mr. Martin was Vice President of Commercial Operations and Vice President of Marketing and Business Development at AtheroMed, Inc. (acquired by Volcano, Inc).

He served as Vice President of Sales and Marketing at Hotspur Technologies, Inc. (acquired by Teleflex), the VP of International Sales at AccessClosure, Inc. (acquired by Cardinal Health), and held other key commercial roles at Boston Scientific Corporation, Aventis Pharmaceuticals, and Corning, Inc.

**Other current assignments:** –

**Shareholding in IRRAS:** –

**Holding of warrants:**

20,000 warrants under the 2016/2020 warrant scheme, 230,000 warrants under the 2017/2021 warrant scheme.



**Kellie Fontes\***

*Senior Director of Human Capital*

Born 1961  
Joined IRRAS in 2018.

**Education and relevant experience:**

Kellie Fontes holds a BSc in Speech Communication from Montana State University.

Most recently, she acted as Employee Relations and Compliance Director at the high-technology systems company General Atomics. Prior to General Atomics, she held several leading HR positions for nearly ten years at GlaxoSmithKline and acted as a US Director.

Ms. Fontes has vast experience in Human Resources within the pharmaceutical and high-technology industries and brings in-depth knowledge of HR compliance and risk management. She is recognized for her strong skills in developing strategies to strengthen compliance and mitigate risk as well as driving change and facilitating the creation of strong teams.

She has led extensive coaching of senior leaders on building personal capabilities and execution of business strategy.

**Other current assignments:** –

**Shareholding in IRRAS:** –

**Holding of warrants:**

35,000 warrants under the 2017/2021 warrant scheme.



**Dessie Lyakov**

*Director, Regulatory, Quality*

Born 1970.  
Joined IRRAS in 2017

**Education and relevant experience:**

Dessi Lyakov holds a Master Degree of Chemical Engineering from the University of Chemical Technology and Metallurgy, Sofia, Bulgaria.

She has more than fifteen years of experience in the biotechnology industry. She executes regulatory strategy with focus on efficient, rapid and timely product market clearance. Her creativity and innovation balances business needs with regulatory compliance. Dessi's background encompasses the development and management of comprehensive quality systems within products manufacturing environment and global regulatory compliance. Her extensive experience of 510(k) Submissions, CE Mark Certification and direct interaction with global regulatory agencies lead the success of Aalto Scientific and the establishment and growth of AUDIT Microcontrols.

**Other current assignments:** –

**Shareholding in IRRAS:** –

**Holding of warrants:**

8,571 warrants under the 2016/2017 warrant scheme, 30,000 warrants under the 2017/2021 warrant scheme.

# Annual General Meeting

The 2018 annual meeting will be held June 1 at 11:00 am at IVA Konferenscenter, Grev Turegatan 16, Stockholm, Sweden.

## Notice of participation

Shareholders who wish to participate in the Annual General Meeting must be

- entered in the shareholders' register held by Euroclear Sweden AB on Friday, May 25th 2018,
- and provide the Company with notification of their attendance by 3.00 p.m. on Monday, May 28th 2018 at the latest: by contacting IRRAS AB, Vasagatan 16, 111 20 Stockholm, Sweden; through the Company's website [www.irras.com](http://www.irras.com) or by e-mailing [AGM2018@irras.com](mailto:AGM2018@irras.com) or via phone +46 706 67 3106. Such notice must contain the shareholder's name, personal identification number (or corporate ID number), address, telephone number and the number of shares represented as well as advisors/ assistance (a maximum of two). The data submitted in such notification will be processed and used for the 2018 AGM.

Shareholders whose shares are held in trust must temporarily register their shares in their own name in order to exercise their voting rights at the AGM.

Such changes in registration must be completed no later than May 25th 2018.

If a shareholder intends to participate by representation through a proxy, the original of the proxy notice as well as any documents for authorisation must be sent to the Company well before the AGM. Representatives of a legal entity must also submit a certified copy of the registration certificate or equivalent documents for authorisation that demonstrate that they are entitled to represent the legal entity.

## Financial Calendar

- 2018-05-29  
Interim report Q1 2018
- 2018-06-01  
Annual General Meeting
- 2018-08-30  
Interim report Q2 2018
- 2018-11-07  
Interim report Q3 2018

## IR Contact

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# Addresses

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**IRRAS GmbH:**

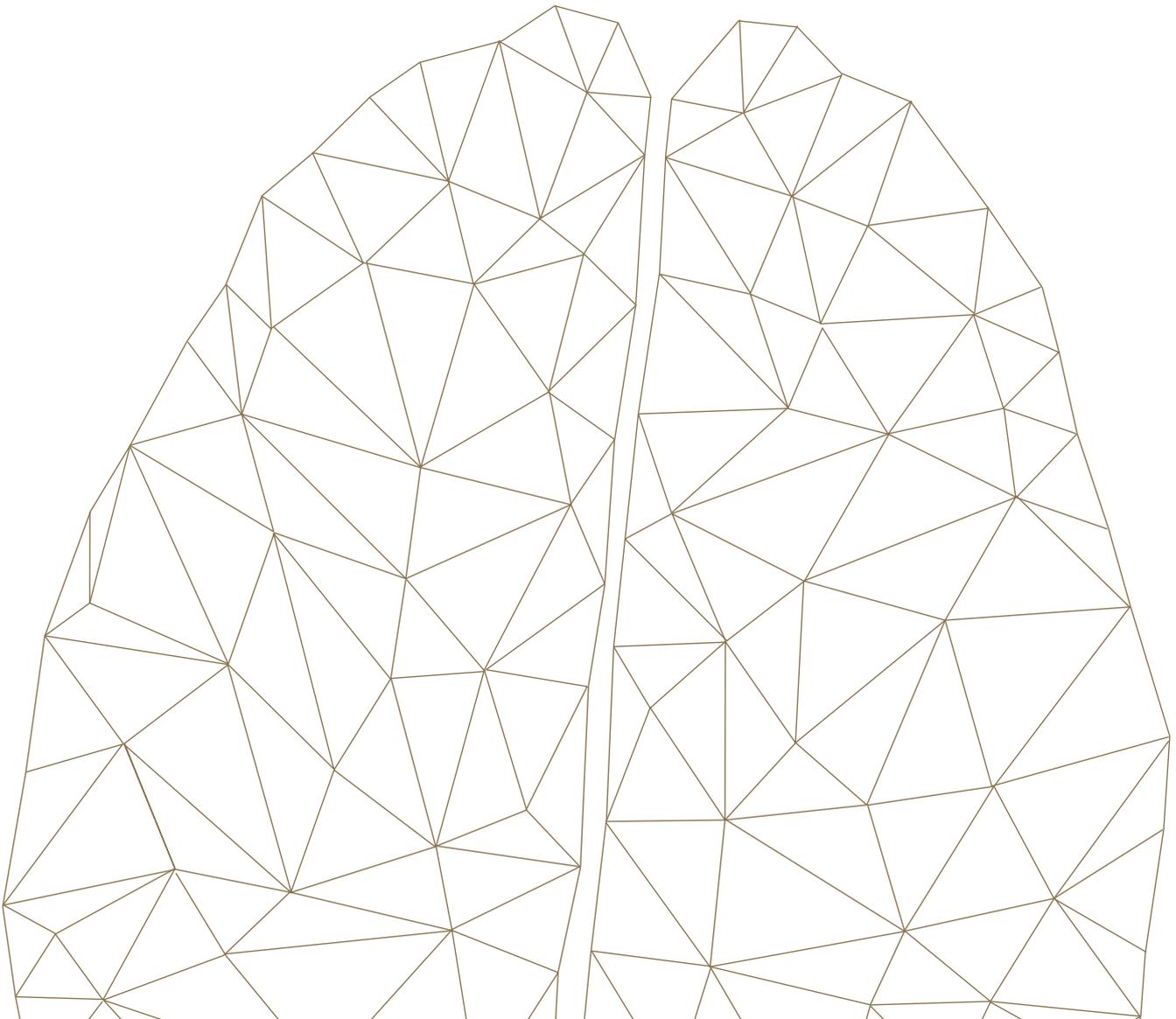
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IRRAS

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