

# Xbrane Biopharma AB (publ)

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Translation from Swedish original



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# IN BRIEF ABOUT XBRANE BIOPHARMA

*Xbrane Biopharma is a biotechnology company in the commercial phase which develops and manufactures biosimilars and generic long-acting injectables. The aim of the company is to make difficult to manufacture pharmaceuticals available for the global population based on unique technology platforms which enable cost-effective production. Xbrane has a patented protein production platform with up to eight times higher productivity compared with standard systems in *E.coli*, and world-leading expertise within development and production of microsphere-based pharmaceuticals which have a long-acting effect in the body. Xbrane's head office is located in Stockholm and the company has research and development facilities in Sweden and Italy. Xbrane has been listed on Nasdaq First North since 3 February 2016 under the ticker XBRANE and Avanza Bank AB is Xbrane's certified advisor. For further information, please visit [www.xbrane.com](http://www.xbrane.com).*

## Biosimilars

Biosimilars are equivalent to generics in biological pharmaceuticals, i.e. drugs which compete with the same active molecules as an original biological drug after its patent protection has expired. Biological drugs are drugs with an active ingredient that has been produced in or refined from material of biological origin (living cells or tissue), in distinction from chemical synthesis which is used for production of drugs with a less complex molecular structure. As biological drugs are so complex in their molecular structure, it is not possible to demonstrate that a biosimilar is identical to an originator drug, which is why a distinction is made from generic pharmaceuticals.

## Generic long-acting injectables

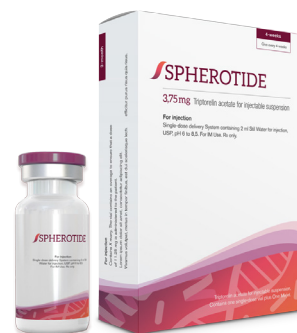
Long-acting injectable pharmaceuticals are characterised by the active ingredient in the drug being released into the bloodstream in a controlled way over a long period. This delivers significant benefits for both patient and healthcare system as the drug can be administered during the treatment period with an interval of several months instead of days. There are several different technologies to achieve a controlled release of the active substance, with Xbrane focusing on encapsulation of the active substance in microspheres of a biological degradable polymer which is slowly broken down in the body and gradually releases the active substance after injection.

## Leading products under development



### Xlucane

Xlucane is a ranibizumab biosimilar (originator drug Lucentis®) which is used in the treatment of age-related macular degeneration (AMD), diabetes-related macular edema (DME) and retinal vein occlusion (RVO). The original product generated annual sales during 2016 of SEK 29 billion and will lose its patent protection in 2020 in the USA and in 2022 in Western Europe.



### Spherotide

Spherotide is a long-acting injectable with the active substance triptorelin. It is used principally in the treatment of prostate cancer, breast cancer, endometriosis and myoma. The drug is based on encapsulation of the active substance in biological degradable microspheres which are broken down in the body after injection, creating a long-acting effect. Spherotide is the world's first generic of long-acting triptorelin (originator drug Decapeptyl®/Pamorelin®/Trelstar®), which has sales of about SEK 4.5 billion annually.

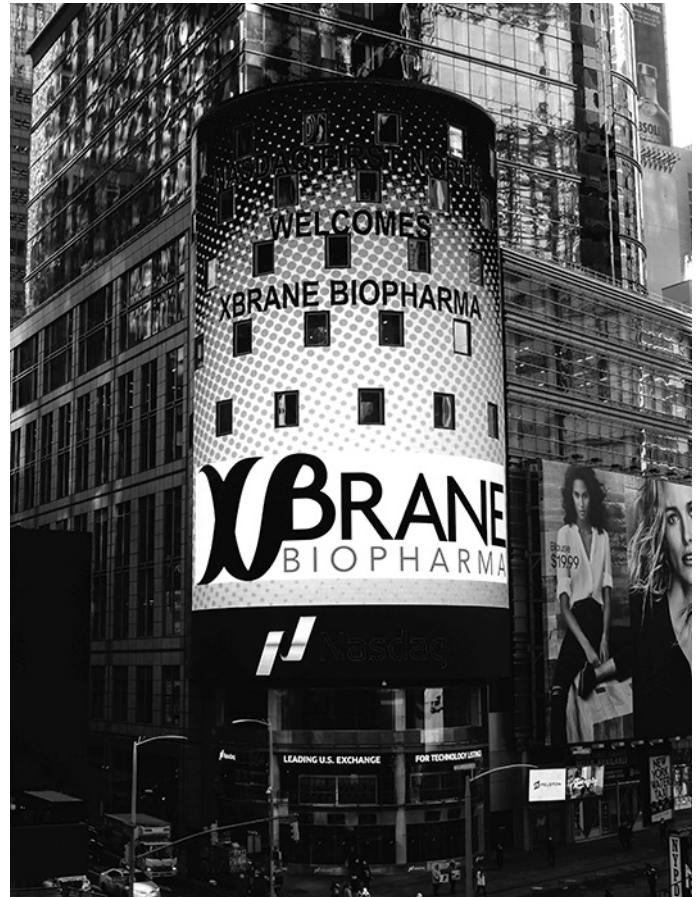
# THE YEAR IN BRIEF

The year started with Xbrane completing a new share issue of SEK 100 million before issuing expenses, with the company's share being listed on Nasdaq First North on 3 February.

For the Italian operation, which focuses on long-acting injectables, 2016 entailed completion of the production facility for the leading product Spherotide. This constituted the basis for GMP approval of the facility, which was received in February 2017, enabling delivery of our first batch of Spherotide at a value of SEK 7 million to our partner in the Middle East in March 2017.

For the Swedish operation, which focuses on biosimilars, 2016 was about strengthening the team, establishing a larger and more modern development lab and completing the production process for Xlucane in pilot scale. Xbrane strengthened its team and added expertise during the year with the recruitment of a further five researchers and technicians, and in June moved into new premises in Solna with state-of-the-art equipment for protein production. The production process for Xlucane was completed in pilot scale and in February 2017 Xbrane was able to demonstrate biosimilarity in relation to the original product according to a panel of analysis methods in accordance with EMA/FDA guidelines.

- » Net sales SEK 2,490,117 (392,859)
- » Revenue growth 534%
- » Total income SEK 4,689,201 (943,326)
- » Earnings before tax SEK -33,288,662 (-11,844,786)
- » Cash flow from operating activities SEK -39,481,391 (-12,386,674)
- » Earnings per share SEK -7.00 (-5.18)
- » The Board of Directors proposes that no dividend be paid for the financial year 2016





# MESSAGE FROM THE CEO

*Dear shareholder,*

## Sales of Spherotide initiated

Xbrane has now initiated sales of Spherotide to our partner in the Middle East. We delivered our first batch in March 2017 at a value of SEK 7 million. We are eagerly looking forward to seeing how the product is received in the local market in Iran and we are anticipating sales of further batches during the year. We estimate that the original product has sales of about USD 30 million in Iran alone.

## GMP approval of the production unit is an important milestone in the development journey

In February 2017 Xbrane received so-called GMP approval of our production facility for Spherotide. This enabled sales of the product to our partner in the Middle East and also that we now can produce material for the clinical study that is required for market approval in Europe. As a preparatory step prior to the clinical study, we did a comparative study in mini-pigs. The study demonstrated no significant difference between Spherotide and the original product in the clinically relevant endpoint, the testosterone level 1 month after the injection was administered. This engenders increased confidence in advance of the clinical study which will be initiated during autumn 2017 and is expected to run for about a year.

## Sights set on Europe and China

Europe and China are the markets with the largest sales potential for Spherotide as the originator drug has sales of around USD 250 million and USD 100 million respectively in these regions. In order to part-finance the clinical programme for Spherotide, our ambition is to outlicense the exclusive rights for Spherotide in these regions before we commence the clinical trials. In China we are in the process of signing a final licensing agreement with one of the largest pharmaceuticals companies in the country and in Europe a number of potential partners are conducting an evaluation of the product. These licensing agreements typically comprise a licensing fee which is paid on the signing of a final agreement and in relation to a number of milestones until market approval is obtained, as well as a transfer price at which Xbrane will sell the product after launch.

## Positive biosimilarity data for Xlucane

In February 2017 we were able to report positive biosimilarity data for Xlucane. The biosimilarity study, which consisted of twenty or so different analysis methods to compare structure and functionality, demonstrated no significant differences in Xlucane compared with the originator drug, Lucentis®. On the basis of this biosimilarity study, we have now received positive scientific advice regarding our clinical and regulatory strategy for Xlucane from EMA and are awaiting advice from FDA. We will be upscaling the production process to commercial scale during 2017, as well as completing all preparations to take Xlucane into a pivotal phase I/III study next year.

## Towards a global outlicensing of Xlucane

On the basis of the positive biosimilarity study, and also through scientific advice from EMA and completion of a clinical and regulatory strategy for Xlucane, we are now in a good position to outlicense the exclusive global (excl. Iran) rights for Xlucane to a marketing partner. A number of potential partners are currently conducting an evaluation of the product and our ambition is to complete this process during this year. Our two competitors outlicensed the exclusive rights to their corresponding products for more than 100 million Euros in licensing fees. Outlicensing Xlucane may thus be of significant size for Xbrane.

## Through our partner in the Middle East, Xlucane can become the world's second ranibizumab biosimilar on the market

Our partner in the Middle East is planning for the local clinical trials to obtain market approval for Xlucane in Iran. As the originator drug is not approved in Iran, Xlucane is expected to become the first VEGFa inhibitor approved for treatment of age-related macular degeneration in the country. Naturally, we think it is fantastic to be able to supply a product which will significantly improve the sight and living conditions for a group of patients in Iran numbering over 70 thousand. We are expecting to start generating royalties from sales of Xlucane in Iran during next year.

*Martin Åmark*  
Martin Åmark



# HISTORY

## 2016

- » Xbrane completed the establishment of a state-of-the-art laboratory for biosimilar development in new premises in Solna.
- » Xbrane enters into license agreement with Helvetic Biopharma to market Xlucane in Iran.
- » Xbrane completes a new share issue of SEK 100 million and lists the company's share on Nasdaq First North

## 2015

- » Xbrane acquires Primm Pharma s.r.l. – an Italian company specialising in development and production of generic pharmaceuticals with controlled release, focusing on the prostate cancer drug Spherotide
- » Xbrane enters into a distribution agreement with the leading biotechnology company Pooyesh Darou for sales and marketing of Spherotide in Iran and nearby countries in the Middle East.

## 2014

- » Xbrane works with some of the world's largest pharmaceutical companies to develop protein production systems under the OptiXpress approach.

## 2013

- » Xbrane launches its OptiXpress service, which is primarily aimed at pharmaceutical companies that require optimisation of their production process for different proteins.

## 2012

- » Xbrane is split into two companies, with Abera AB taking over the vaccine development section and Xbrane focusing on protein production.

## 2011

- » Xbrane signs distribution agreement with DNA 2.0.

## 2009

- » Xbrane signs distribution agreement with New England Biolabs for the protein production platform.

## 2008

- » Xbrane Biopharma is founded by Associate Professor Jan-Wilem de Gier and Doctor Samuel Wagner of Stockholm University based on a discovery which enables higher productivity and thus lower production costs in manufacture of selected proteins compared with existing standard systems on the market.

# VISION, OBJECTIVE, STRATEGY AND BUSINESS MODEL

## Vision

Xbrane's vision is to make cost-effective alternatives to hard to manufacture and expensive pharmaceuticals available in the treatment of serious diseases, and thereby contribute to global health equality.

## Objective

Xbrane's long-term objective is to be a world leader within biosimilars and generic long-acting injectables. The aim for Xlucane and Spherotide is to be the market leading and most cost-effective biosimilar/generic of the respective originator drug available on the global market.

## Strategy

Xbrane's strategy entails applying our technology platforms to products for which there is significant market potential and Xbrane is expected to be able to have a beneficial competitive position. Xbrane's primary competitive advantage lies in utilising unique technology platforms and expertise to achieve a lower production cost for its pharmaceutical candidates compared with competitors. The strategy is based on four cornerstones:

1. Develop unique technology platforms and expertise: At the centre of Xbrane's operation are the technology platforms and the expertise within the production processes for the pharmaceutical candidates. This constitutes the basis for the competitive advantage Xbrane is trying to build for its products; high-quality products at the lowest production cost. Xbrane currently has two technology platforms, one within protein production and one within long-acting injectables, on which it is developing its product portfolio.

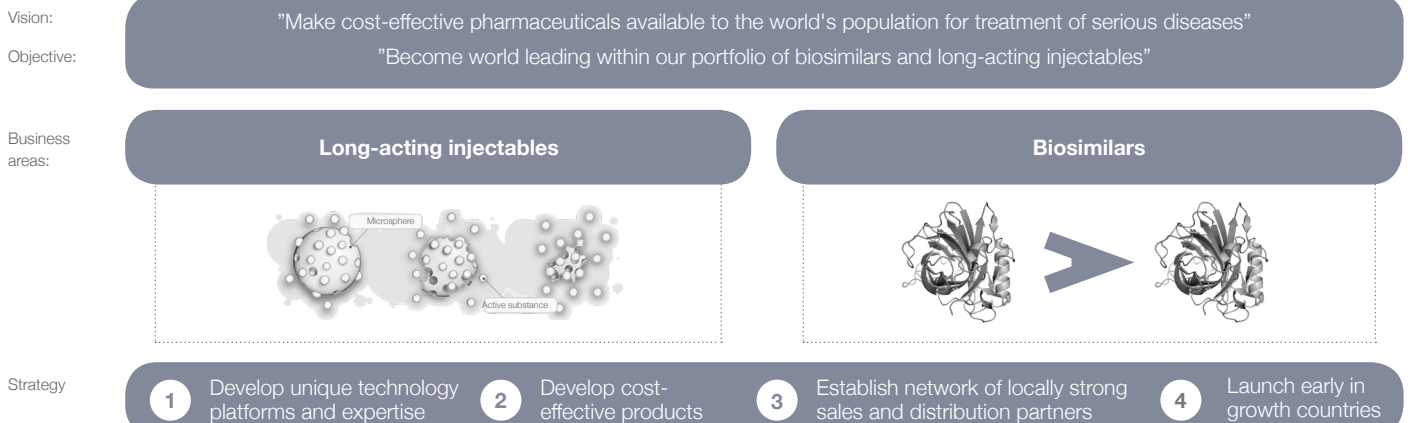
2. Develop cost-effective products: The focus of the development work is the establishment of manufacturing processes which lead to generic/biosimilar candidates which imitate as closely as possible the originator drug at as low a production cost as possible. Xbrane places great importance on optimising the processes from a cost perspective, as early as at the laboratory scale, but also naturally when upscaling to industrial scale.

3. Establish networks of locally strong sales and distribution partners: Xbrane is engaged in developing a network of local and regional collaborative partners for sales of its products. The aim is to use this network to enable launch of the leading products Xlucane and Spherotide as well as further products over time.

4. Launch at an early stage in growth countries: In many cases there is considerable potential for lower priced generic/biosimilar products in selected growth countries. In some countries the original drug is not protected by a patent and in some cases the regulatory route is somewhat abbreviated than in highly regulated regions such as the EU and the USA.

## Business model

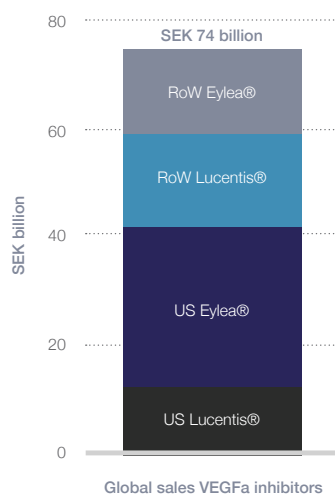
Xbrane's principal business model comprises selling intermediate or finished pharmaceutical products primarily to exclusive sales partners throughout the world at agreed transfer prices. Xbrane typically generates income through agreements with sales partners in part through sales of products and in part through a license fee which is charged for the exclusive sales rights.



# MARKET OVERVIEW

## Xlucane

VEGFa inhibitors are used in treatment of the wet form of age-related macular degeneration (wAMD), diabetes-related macular edema (DME) and retinal vein occlusion (RVO). VEGFa inhibitors acts through binding to the growth factor VEGFa in the eye and thereby preventing growth of the unnatural blood vessels on the retina which cause impaired sight in patients. There are two approved VEGFa inhibitors in treatment of AMD, DME and RVO; Lucentis® which is sold by Roche (USA) and Novartis (the rest of the world), and Eylea® which is sold by Regeneron (USA) and Bayer (the rest of the world). During 2016 the market for VEGFa inhibitors in the treatment of the above mentioned eye diseases had sales of over SEK 74 billion, with Lucentis® comprising SEK 29 billion and Eylea® SEK 45 billion.

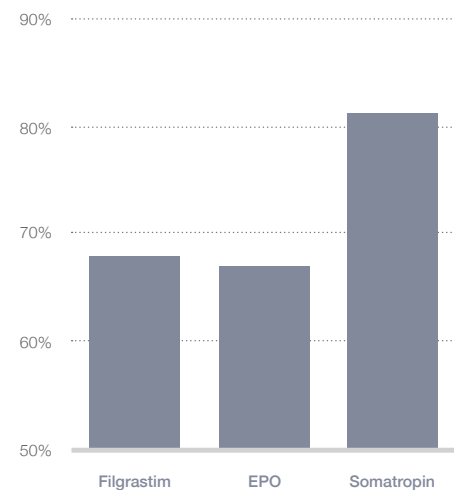


In addition, the drug Avastin® is used off-label in some regions. Avastin® is a VEGFa inhibitor approved for treatment of certain cancer indications, but has been demonstrated to have a similar effect to Lucentis® and Eylea® in treatment of the above mentioned eye diseases. However, Avastin® comes in a larger dose and must be divided into several smaller doses at an eye clinic or in a specialist lab, a procedure which has led to contamination of the drug resulting in serious eye infections in patients. However, the advantage of Avastin® is that one dose can be made available at a lower price compared to Lucentis® and Eylea®, which cost almost USD 1,000 in most countries.

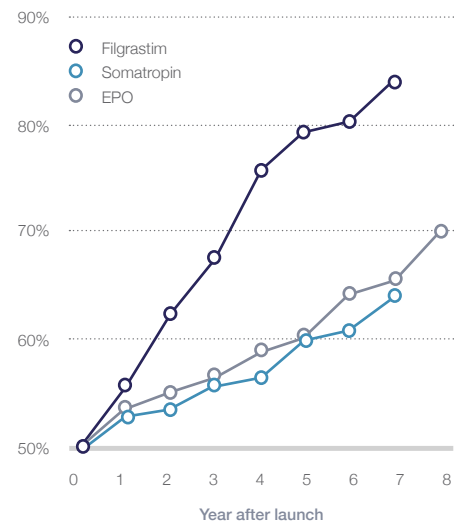
Lucentis® and Eylea® have been shown to have a similar effect and safety in treatment of the above mentioned eye diseases<sup>1</sup>. The benefit of Eylea® which has been emphasised is an 8 week treatment interval compared with 4 weeks for Lucentis®. However, recent studies have shown that eye specialists prescribe both Lucentis® and Eylea® with the same frequency and that the annual cost of treatment per patient is the same<sup>2</sup>.

The patent for Lucentis® expires in the USA in 2020 and in much of Europe in 2022. The biosimilars that have been introduced thus far in Europe have achieved a penetration of 35-85% in relation to the original drug over a 7-8 year period, with a price reduction of on average 20-30%<sup>3</sup>. Taken together this provides an indication of the market potential for biosimilars of Lucentis® in general and Xlucane in particular.

EU average price of biosimilars as a percent of the originator drug's price



EU average penetration for biosimilars



<sup>1</sup> Böhm et al. Comparison of Eylea® with Lucentis® as first-line therapy in patients with treatment-naïve neovascular age-related macular degeneration in real-life clinical practice: retrospective case-series analysis

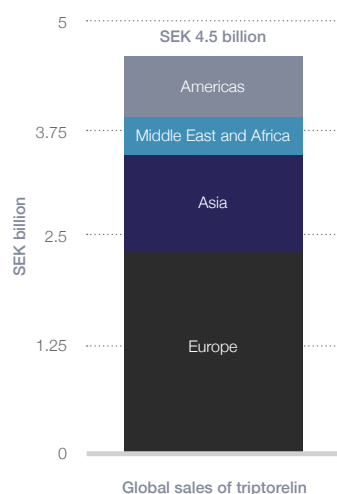
<sup>2</sup> Kiss S, et al. Real-world treatment patterns in injection cost and frequency for ranibizumab versus aflibercept in patients with wet age-related macular degeneration: A 2-year U.S. claims analysis. Presented at: Association for Research in Vision and Ophthalmology meeting; May 1-5, 2016; Seattle.

<sup>3</sup> The impact of biosimilar competition, IMS Health

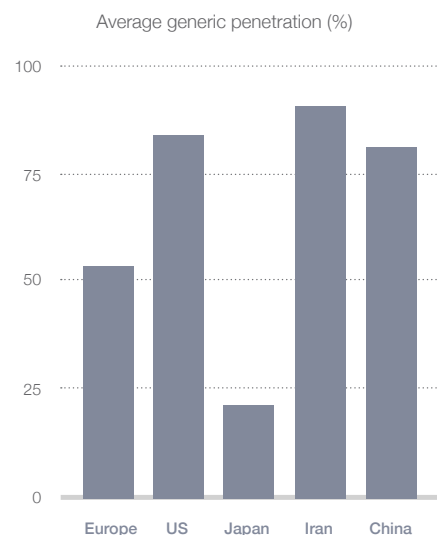
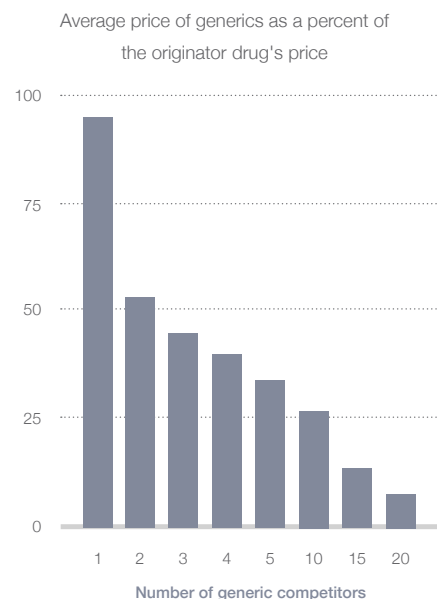


## Spherotide

GnRH analogues are hormone regulating drugs which reduce the production of the sex hormone in the body, testosterone in men, oestrogen in women. In men GnRH analogues are principally used in treatment of prostate cancer, and in women in treatment of endometriosis, breast cancer and myoma. The principal approved GnRH analogues with formulation for long-acting effect are goserelin (originator drug Zoladex®), leuprolide (originator drug Lupron®) and triptorelin (originator drug Decapeptyl®/Pamorelin®/Trelstar®). The market for GnRH analogues was estimated to be about SEK 32 billion during 2016, of which drugs with triptorelin as active substance constituted about SEK 4.5 billion.<sup>4</sup> Spherotide is the world's first generic for long-acting formulation with triptorelin (originator drug Decapeptyl®/Pamorelin®/Trelstar®).



Generic penetration, defined here as the volume share of all sales of generic drugs, differs markedly between regions and countries, everything from around 20% in Japan up to over 90% in Iran.<sup>5</sup> The differences are primarily down to how strong the different incentives and regulations are in moving towards the most cost-effective alternatives, as well as the perception of generics in doctors and patients. Pricing of generics in comparison with the originator drug depends very much on how many competing generic products there are on the market. It is only when the number of competitors approaches 15, which is not unusual for simple small molecule products, that the prices fall by up to 90% compared with the originator drug.<sup>6</sup> If there is only one generic competitor, the price reduction is typically modest. Taken together, this provides an indication of the market potential for Spherotide as the world's first generic of long-acting triptorelin (originator drug Decapeptyl®/Pamorelin®/Trelstar®).



<sup>4</sup> IMS Health and Xbrane analysis

<sup>5</sup> IMS Health, OECD Health Statistics 2015, Deloitte: The next phase: Opportunities in China's pharmaceuticals market, Recent trends in brand-name and generic drug competition, Xbrane analysis

<sup>6</sup> FDA analysis of retail sales data from IMS Health, IMS Health National Sales Perspective (TM) 1999-2004, extracted February 2005

# REGULATORY FRAMEWORK FROM DEVELOPMENT TO MARKET INTRODUCTION

All the long-acting injectables that Xbrane develops have synthetically manufactured peptides<sup>7</sup> as active substances. The regulations for either generics (equivalent for EMA article 10(1) directive 2001/83/EC) or so-called hybrids (equivalent for EMA article 10(3) directive 2001/83/EC) are therefore used for market approval. In highly regulated countries, this requires demonstration of bioequivalence (generic), or alternatively of therapeutic equivalence (hybrid) via a comparative clinical study with the originator drug in human beings. Two drugs are regarded as bioequivalent if the plasma concentration in the blood of the active substance follows a sufficiently similar pattern. A bioequivalence study is normally based on giving the reference product and the test product to two groups of patients or voluntary test subjects, after which the plasma concentration of the active substance is measured over time until it has been eliminated. A study to demonstrate therapeutic equivalence is based on demonstrating that the product has the same effect compared with the originator drug on a clinically relevant endpoint. Naturally, the criteria for whether two drugs are regarded as therapeutically equivalent differ from drug to drug and are

therefore discussed with the regulatory authorities before the study commences.

Biosimilars are a relatively new phenomenon and the regulatory framework is still under development. The majority of developed countries and regions - including the EU and the USA- have specific regulatory frameworks for approval of biosimilars. The development stages for approval generally include pre-clinical trials and clinical phase I/II and phase III studies in order to demonstrate similar safety and effect compared with the originator drug. The scope of the clinical studies is determined in discussion with the respective regulatory authority and thus differs depending on drug and regulatory authority. For biosimilars registered in the EU and the USA, clinical trials with 200 - 1,000 patients have been used for market approval. This is a considerably smaller number of patients compared with the originator drug, where it is not unusual for trials to include over 4,000 people.

	Generics	Hybrid	Biosimilar
Regulatory frameworks:	EU: EMA Directive 2001/83/EC Article 10 (1) USA: FDA 505 (j) ANDA	EU: Directive 2001/83/EC Article 10 (3) USA: FDA 505(b)(2)	EMA Guideline on similar biological medicinal products USA: FDA PHS Act
Clinical trials:	Bioequivalence study which demonstrates bioequivalence, i.e. similar plasma concentration of the active substance, compared with the originator drug.	Study which demonstrates equivalence compared with the originator drug in an effect measurement of clinical relevance.	Phase I/II which demonstrates safety and effect in a smaller patient group and phase III which demonstrates similar therapeutic effect compared with the originator drug in a larger patient group.

<sup>7</sup> Molecules with less than 40 amino acids in sequence

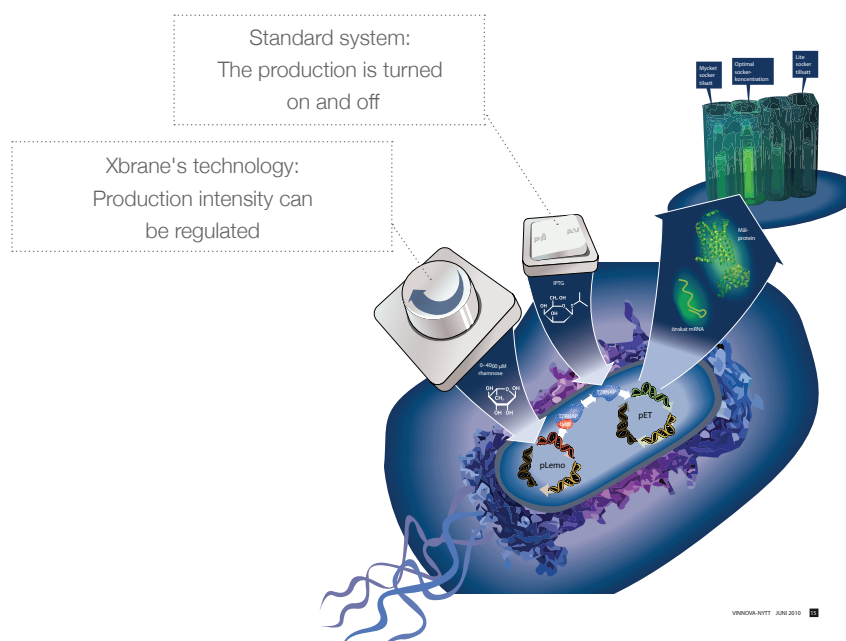
# TECHNOLOGY PLATFORMS

## Xbrane's protein production technology

Biological drugs, and thus biosimilars as well, have proteins as active ingredients. Proteins are complex molecules which cannot be effectively manufactured synthetically but only in living cells through introducing a DNA-sequence into the host cell, which includes the formula for producing the given target protein. Production takes place in fermentation tanks where the cells produce the target protein with the addition of substances including oxygen and glucose. Proteins can be produced in various kinds of living cells, the most common of which are bacteria cells of the *E.coli* type, mammal cells, yeast cells and various types of plant and animal cells. Different cells are suitable for different target proteins. For example, thus far it has not been possible to produce full-length antibodies in *E.coli*, however, for many other proteins *E.coli* has the advantage that the bacteria strains are more cost-effective and have a relatively high regulatory acceptance by the authorities.

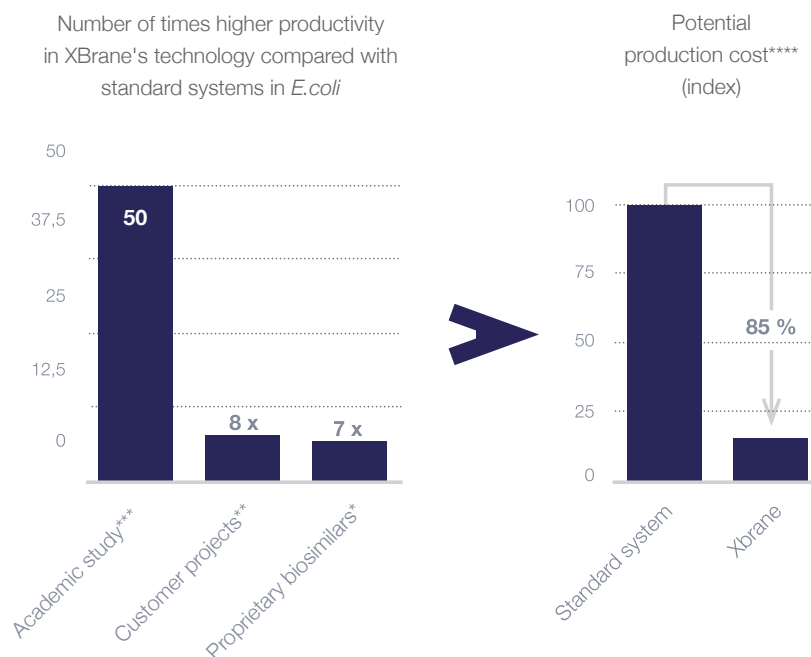
Xbrane's technology is based on production of proteins in *E.coli* cells. The unique aspect of Xbrane's technology is that it can lead to up to 85% lower production costs for specific proteins. This can be achieved because the technology enables the production intensity of the given target protein to be regulated in the host cells. It has been shown that a toxic effect can arise in the host cells at too high a production intensity and the key is therefore to find the optimum production intensity for the given protein, which maximises the productivity for the entire system. This is precisely what Xbrane's technology enables, and it has been demonstrated to potentially lead to up to eight times higher productivity compared with a standard system based on *E.coli*. Productivity refers to the number of grams of protein that are produced per litre in the fermentation tank. As the production cost for a given scale of fermentation tank is independent of the productivity in the system, a higher productivity has a direct effect on the production cost per gram of protein. Productivity that is eight times higher for a specific protein enables Xbrane to achieve up to 85% lower production costs compared with a standard system.

## Xbrane's technology enables regulation of the production intensity



Xbrane's technology enables regulation of the production intensity in the system, illustrated in the picture above as a dimmer function. It has been demonstrated that this can potentially lead to significantly higher productivity and cost efficiency in production of proteins than standard systems in *E.coli*, where the production process only has one on and off mode.

### Xbrane's technology has displayed up to eight times higher productivity compared with standard systems in *E.coli*



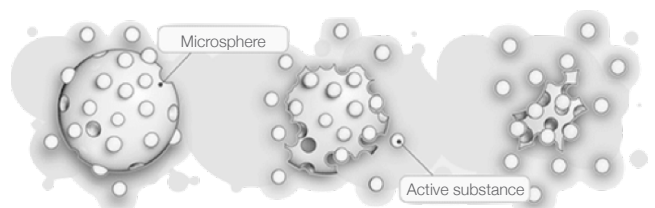
\*\*A total of 10 different customer projects for development of optimised protein production systems based on Xbrane's technology on behalf of the customer. \*\*\*Optimisation of Over-Expression in *E. coli* and Biophysical Characterisation of Human Membrane Protein Synaptogyrin, \*Based on current process for Xlucane \*\*\*\*Given processing in similar size of fermentation tank, Xbrane's technology compared with standard *E.coli* system.

### Xbrane's microsphere technology

Xbrane's technology is based on encapsulating the active substance, typically a synthetically manufactured peptide, in small microspheres consisting of a biologically degradable polymer. The polymer is gradually broken down in the body and the active substance is released.

Xbrane's focus is to develop production processes which lead to microspheres which have as similar a structure and composition as possible to the microspheres in the originator drug, thereby resulting in as similar a release of the active substance over time as possible. This has proven to be difficult as small changes in production process parameters such as temperature, pH and stirring, as well as in the formulation, lead to a different structure and composition of the microspheres and thereby a different release of the active substance in the body over time. The procedure is therefore based on detailed studies of the original product, its chemical composition and behaviour in vivo, followed by experiments with different formulations and production parameters, the results of which are continuously tested in vivo with the aim of comparing the release pattern with that

of the original product. Xbrane has used this method to successfully develop the Spherotide product, which is expected to be the world's first generic of the drug's long-acting formulation with triptorelin (originator drug Decapeptyl®/Pamorelin®/Trelstar®) – a drug which lost its patent protection a number of years ago and has not yet been challenged by a generic.

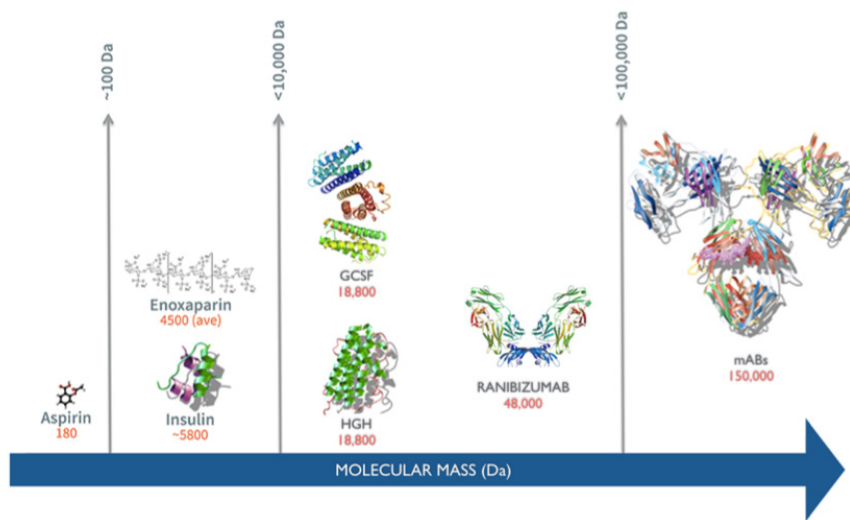


The active substance in the drug is encapsulated inside microspheres of a biological degradable polymer. When the drug is injected, the polymer is broken down, releasing the active substance.

# XLUCANE BIOSIMILARITY STUDIES

The size and complexity of the proteins which constitute active pharmaceutical ingredients (APIs) in biological drugs is much higher compared with ordinary small molecules which are produced through chemical synthesis. A small molecule, such as Aspirin, has a weight of 180 Daltons compared with Ranibizumab, the active pharmaceutical ingredient in Lucentis®, which

has a mass of 48,000 Daltons. A small molecule can be characterised and compared in vitro with the original molecule and shown to be an exact copy. This is not the case for proteins where different analytical methods have to be used to characterise the protein and demonstrate a high a likeness, or biosimilarity, compared with the originator drug as possible.



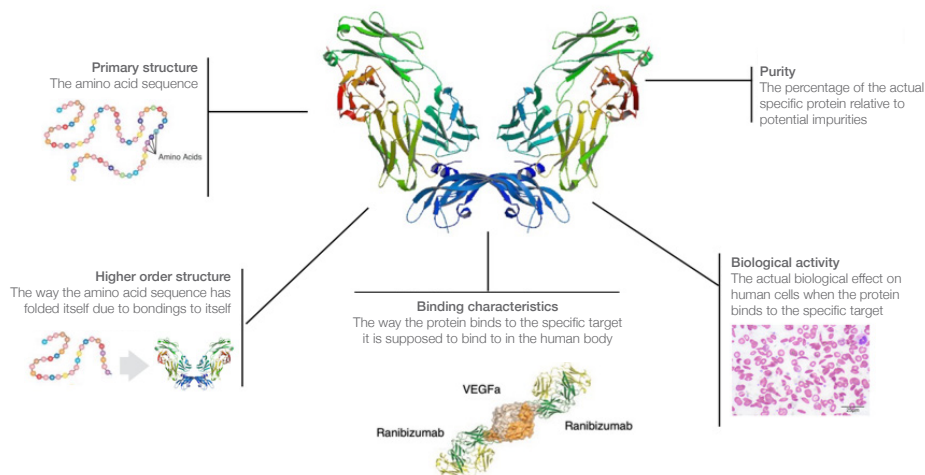
In accordance with guidelines from EMA (European Medicines Agency) and FDA (Food and Drug Administration), the biosimilarity study for Xlucane uses a large number of analysis methods to compare the product with the originator drug along 5 principal dimensions:

- » **Primary structure:** Characterises the amino acid sequence of the protein. Analytical methods typically include mass spectrometry, HPLC, Edman sequence degradation and capillary isoelectric focusing
- » **Structure at higher level:** characterises how the amino acid sequence has folded and formed the 3-dimensional structure of the protein. Analytical methods typically include circular dichroism

» **Binding properties:** characterise how the protein binds to a specific target of interest. In the case of Ranibizumab, it involves analysis of how the protein binds to the growth factor VEGFa

» **Biological activity:** characterises the biological activity of the drug on living cells. In the case of Ranibizumab, the analysis involves how the product inhibits the growth of cells via binding and inhibition of the growth factor VEGFa

» **Purity:** characterises the amount of pure protein in relation to potential impurities





## Interview with CTO David Vikström

### What does biosimilarity mean?

A biosimilar is a copy of a biological drug that is available on the market. The active substance in biological drugs is proteins with complicated 3-D structure. It is impossible to manufacture an exact copy, the term biosimilarity is therefore used, i.e. a product that is extremely similar to the originator drug, but with certain variations that may occur. These variations must not affect how the pharmaceutical functions or whether it is safe to use.

### Why is it so important?

Proteins are made up of amino acids, which are assembled in long chains and which then form a 3-D structure. Xlucane consists of 445 amino acids, all of which have to be positioned in the right order and interact with each other in the right way. Without a correct 3-D structure, the protein is not active, in our case it would not then bind to the signal protein (VEGF), which we want to prevent from signalling to the body that it should start creating new blood vessels in the eye. It is incredibly important that our product is as similar to the originator drug as possible so that we can then demonstrate that our product is active in the same way and totally safe to use.

### Say more about the biosimilarity results for Xlucane. What do they show?

A large range of advanced methods are used to demonstrate biosimilarity between a biosimilar and an original drug, including mass spectrometry in order to obtain information that all amino acids are placed in the right order and that certain especially important bindings within the protein have the right position. In addition, there are methods to check that our product really binds to the target protein in the same way as the originator drug and that it is active in cell culture tests, which are now used instead of

experiments on animals. We have used more than 20 different "state of the art methods" to compare our Xlucane product with the originator drug Lucentis® and we have ascertained that the two products do not demonstrate any significant differences in terms of the most important aspects, primary structure, structure at a higher level, binding properties and functionality. This is naturally extremely gratifying for us and gives us full confidence in the on-going upscaling of the production process as well as for the clinical study. In terms of purity, we identified an impurity in the study which through optimising one of the purification steps in the process, we think we have now succeeded in removing.

### What is the next step in the development of Xlucane?

The next step in the development, which has already begun, is to scale up the production to a commercial scale in an environment adapted for pharmaceutical manufacture. We can then use the material produced for our clinical trials with our sights set on Europe and the USA. According to plan we will initiate the clinical trials in early 2018.

**David Vikström**



# SPHEROTIDE GMP APPROVAL

## **Interview with Paolo Sarmientos, Head of Longacting Injectables at Xbrane.**

You recently received GMP approval from AIFA for the production facility for Spherotide. What does this mean?

A GMP approval means that the production facility has been judged to meet the regulatory requirements set within the EU for manufacture of pharmaceuticals for human use. This is an incredibly important step in the development of Spherotide. It enables us to sell Spherotide to customers throughout large parts of the world which can, in accordance with local regulations, register the product on the local market. For pharmaceutical companies a GMP certificate is an incredibly important asset, which is a result of several years of investment and initiatives. This GMP approval enhances our credibility in relation to potential pharmaceuticals partners and allows Xbrane to enter into more profitable commercial collaborations throughout the world. It is important to add that our GMP approval applies to manufacture of products where an active hormone-regulating substance is encapsulated inside microspheres. We will thus also be able to use our facility and certification for other products in our pipeline.

Which were the most difficult aspects surrounding completion of the production facility and obtaining GMP approval?

The most difficult was for our researchers and technicians to scale up the production process from laboratory scale to industrial scale. Several technical details and issues had to be investigated and adapted to the plant. Finally, the production process had to be optimised and organised according to the international guidelines for GMP manufacture. All in all, it has been a major effort from our team in recent years.

What makes the production facility you have established for Spherotide so unique? Why are there so few companies which produce these types of products on a commercial scale?

Long-acting injectables based on microsphere technology are complicated to produce on a commercial scale in a reproducible way. In our facility, we have specially designed equipment to handle the critical steps in the production process, principally the coacervation in which the microspheres are formed. It is a process which is complicated to perform on a commercial scale in a controllable way.

What is the next step in the development of Spherotide?

Thanks to GMP approval, we can now initiate the clinical study which is required for market approval in Europe for the 1-month formulation of Spherotide. At the same time, we are completing the development of the 3-month formulation which will be produced in the same production facility.



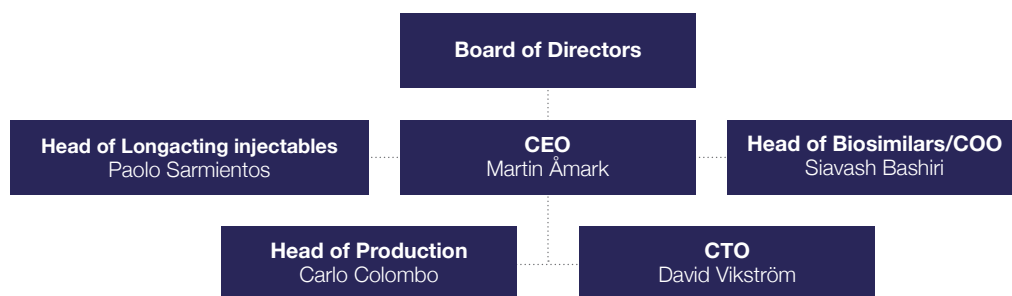
**Paolo Sarmientos**

# ORGANISATION AND PERSONNEL

Xbrane has a laboratory in Sweden where we focus on development of biosimilars. We have modern equipment for small-scale fermentation, purification and simple characterisation of proteins. As of 28 April 2017, Xbrane has 10 employees in Sweden. During 2015 Xbrane acquired the Italian company Primm Pharma, which is responsible for development and production of the microsphere products. Production of the leading product

Spherotide takes place in its own plant, established within the pharmaceuticals company ICI's facilities according to an outsourcing agreement. The development of new products takes place via a license agreement with the fellow subsidiary Primm by a team of 5 researchers. As of 28 April 2017, Primm Pharma has 4 employees and its head office is in Milan.

## Organisation



# MANAGEMENT



## **Martin Åmark | CEO**

Martin Åmark has an MSc in Industrial Engineering from the Institute of Technology at Linköping University and an MBA from INSEAD. He has eight years experience from Bain & Co, where he worked as a management consultant. At Bain & Co Martin was principally engaged in acquisitions, strategy and organisation together with the office's Nordic clients who operate within several industries, including life science and pharmaceuticals.



## **Siavash Bashiri | Head of Biosimilars/COO**

Siavash Bashiri holds an MSc in Molecular Biotechnology from Uppsala University. In recent years, Siavash Bashiri has successfully led Xbrane's Swedish operations and worked with several large pharmaceutical companies in delivering tailored protein production systems. In addition, he has previous experience from Agilent Technologies where he was sales manager in EMEA for one of Agilent Technologies' products. He also has experience of the process of bringing biotech start-ups to market.



## **David Vikström | CTO**

David Vikström has a PhD in expression systems for proteins in *E.coli*. He started at Xbrane in 2010 and since then has successfully developed new technologies and strains for different proteins. He currently leads the development of Xbrane's biosimilar candidates.



## **Paolo Sarmientos | Head of Longacting Injectables**

Paolo Sarmientos has a PhD in bioorganic chemistry from the University of Naples. He has more than 25 years' experience of leading positions within the pharmaceuticals industry for Pfizer, Genetica and Menarini. In recent years, Paolo has worked as CEO of Primm S.r.l. and successfully developed a service business focused on the pharmaceuticals industry as well as led the development of Spherotide and other generics candidates with controlled release.



## **Carlo Colombo | Head of Production**

Carlo Colombo has a PhD in Industrial Chemistry from the University of Milan. He has more than 15 years' experience of pharmaceutical manufacturing from generics manufacturers such as ICI and Euticals. Carlo Colombo has previously been site director for five different production facilities for pharmaceuticals including ICI's plant in Celiole. He has great experience of all aspects of pharmaceutical manufacturing, including regulatory requirements (GMP), process and supply chain optimisation and quality control.

# BOARD OF DIRECTORS



## **Saeid Esmaeilzadeh | Chairman**

Saeid Esmaeilzadeh is Adjunct Professor in Inorganic Chemistry at Stockholm University. He received his PhD from the same University in 2000 and was appointed as Sweden's youngest associate professor in 2002. He has received a large number of prizes and distinctions for his research and initiatives as an entrepreneur. Saeid was previously CEO of Sdiptech AB (publ) and Diamorph AB (publ). Saeid is a serial entrepreneur and has participated in the development of several research-based companies.



## **Peter Edman | Board Member**

Peter Edman has long experience of drug development from the pharmaceuticals industry and has held a number of senior research positions within Orexo, Sobi, Biovitrum, AstraZeneca, Astra and Pharmacia. He has also been Associate Professor at the Swedish Medical Product Agency, as well as Professor in Pharmaceutical Formulation and Adjunct Professor in Drug Delivery at the Faculty of Pharmacy, University of Uppsala.



## **Maris Hartmanis | Board Member**

Maris has 30 years' experience in leading positions including CEO and R&D director, as well as board experience from the international Life Science field. He has experience of both large organisations and smaller start-up companies. Maris has been CEO of two Swedish public pharmaceuticals companies, Medivir and BioPhausia. Maris has a PhD in Biochemistry from the Royal Institute of Technology in Stockholm, where is also an Associate Professor.



## **Karin Wingstrand | Board Member**

Karin Wingstrand has wide-ranging experience of the international pharmaceuticals industry from senior positions within regulatory, pharmaceutical and analytical R&D, project management and clinical development. Karin Wingstrand has held the position of Global Head and Vice President of Clinical Development at AstraZeneca.



## **Giorgio Chirivi | Board Member**

Giorgio was educated in finance and business administration at the Luigi Bocconi University in Italy and works as Head of Mergers & Acquisitions at UBI Banca SpA. Giorgio is a board member for Axxam SpA.



## **Alessandro Sidoli | Board Member**

Alessandro was educated in biology at Pavia University in Italy and works as CEO of Axxam SpA. Alessandro is a board member of Federchimica, ALISEI and Externautics SpA.



# ADMINISTRATION REPORT

*The Board of Directors for Xbrane Biopharma AB, 556749-2375 hereby submit the annual report for 2016, the company's ninth financial year.*

## Scope and type of operations

Xbrane Biopharma is a biotechnology company in the commercial phase which develops and manufactures biosimilars and generic long-acting injectables. The aim of the company is to make difficult to manufacture pharmaceuticals available for the global population based on unique technology platforms which enable cost-effective production. Xbrane has a patented protein production platform with up to eight times higher productivity compared with standard systems in *E.coli*, and world-leading expertise within development and production of microsphere-based pharmaceuticals which have a long-acting effect in the body.

Xbrane's leading product within the segment of long-acting injectables is Spherotide. Spherotide is a long-acting formulation with the active ingredient triptorelin which is used primarily in the treatment of prostate cancer, endometriosis and myoma. The plan is for Spherotide to be launched in Iran during 2017 and in Europe during 2019. Xbrane's leading product within the biosimilars segment is Xlucane. Xlucane is a ranibizumab biosimilar (originator drug Lucentis®) which is used in the treatment of various eye diseases, principally the wet form of age-related macular degeneration. The plan is to launch Xlucane in the US 2020 and Europe 2022.

Since 30 September 2015 Xbrane has owned the Italian subsidiary Primm Pharma srl which focuses on long-acting injectables and the Spherotide product. Primm Pharma owns the fixed assets related to the production facility for Spherotide outside Naples in Italy.

## Significant events during the financial year

- » Xbrane implemented a new share issue raising a total of SEK 100.3 million before transaction costs spread over 2,360,000 shares and approximately 1,300 shareholders, and from 3 February 2016 Xbrane's share was traded on Nasdaq First North
- » Xbrane signed an agreement regarding sales and distribution of its leading ranibizumab biosimilar, Xlucane, for launch on the Iranian market by the Swiss biopharmaceuticals company Helvetic Biopharma.
- » Xbrane reached the first of two milestones in the agreement with Helvetic Biopharma for the commercialization of Xlucane in Iran which entailed completion of satisfactory comparative biochemical in vitro characterisation of Xlucane in relation to the originator drug, as well as successful technology transfer for commercial production of Xlucane to a local production facility
- » Xbrane completed the establishment of a new state-of-the-art laboratory for biosimilar development in our new premises in Solna.

- » Xbrane signed an agreement with the Lithuanian contract manufacturer Biotechpharma for large-scale production of Xlucane under GMP conditions.
- » Xbrane submitted the application for GMP approval (Good Manufacturing Practice) for the production facility for Spherotide to AIFA, the Italian Medicines Agency, and AIFA inspected the facility with a positive outcome
- » Oxford Nanopore Technologies licensed Xbrane Biopharma's protein production technology
- » Xbrane signed a non-binding term-sheet with a Chinese pharmaceuticals company concerning outlicensing of Spherotide in China
- » Xbrane outlicensed the rights to sales and marketing of Spherotide to Bioavenir in Israel

## Significant milestones planned during 2017

- » Completion of agreement with our Chinese partner regarding sales and marketing of Spherotide in China
- » Establishment of partnership for sales of Spherotide in Europe
- » Initiation of pivotal phase III clinical trial in Europe for Spherotide 1-month formulation
- » Establishment of partnership for sales and marketing of Xlucane globally (excluding Iran)

## Risks and uncertainty factors

If any of the risks described below were to materialise, it could entail extensive negative effects to the group's operations, earnings, financial position and prospects

### Regulatory approvals

To be able to market and sell products, market approval must be obtained from the authority responsible in the respective country. Xbrane cannot guarantee that such market approval will be received to the extent required to be able to achieve the future objectives.

### Clinical trials

Most countries where Xbrane intends to launch its products require implementation of clinical trials which demonstrate satisfactory similarity with the originator drug in terms of safety and effect in order to obtain market approval. Xbrane's intention is to conduct its own comparative clinical trials for both Spherotide and Xlucane, as well as in collaboration with partners. If these studies were to result in unforeseen or negative results, this could have a negative impact on the company.

#### *Collaborative partners*

The group is dependent on, and will continue to be dependent on, collaborations with a range of partners in order to produce, market and sell its current products and develop future ones. The group's business is thus largely dependent on outside partners. If these partners do not fulfil their obligations as agreed, do not meet expected deadlines, or if there is inadequate quality or precision in the work performed, planned marketing and sales activities, as well as product development, can be delayed or terminated. Further, unforeseen cancellations of agreements with existing partners can have a negative effect on Xbrane's operations, financial position or earnings.

#### *The establishment of new sales and marketing partners*

Xbrane's earning capacity is dependent on it succeeding in entering into further agreements for sales and marketing of its products. The potential to enter into such agreements is dependent, among other things, on the quality on Xbrane's products and Xbrane's credibility as a potential partner. There is a risk that Xbrane will not succeed in establishing such partnerships or that the company will be forced to enter into them on unfavourable terms.

#### *Competition*

The market for follow-ups to biological drugs, so called biosimilars, has produced major interest in several companies, both large pharmaceuticals companies and smaller niche companies. The field of generic pharmaceuticals with controlled release has also garnered interest, primarily from small, niche companies. Besides existing competition, there is a risk that Xbrane will have new competition, including from companies which do not currently operate in the Company's market. It is possible that some of Xbrane's competitors will have access to one, or all, of the following: greater financial resources, better purchasing economy and/or lower cost base – which can give them a competitive advantage and have a negative effect on Xbrane's sales, profit and margins. Xbrane's competitors may take aggressive action to retain or increase their market share. Increased competition from existing and/or future competitors can lead to lower sales, profit and margins, which can have a negative impact on the Group's operations, financial position or earnings.

#### *Sales-related risk*

It is difficult to foresee the market's reception of a new product. Even if market approval is obtained, a partner for sales and marketing is established and a competitive price set, there is no guarantee of successful sales.

#### *Development of pharmaceutical candidates*

Research and development, both present and future, constitute the basis of Xbrane's operations. The company's intention is to develop new products within its area of operations, and also to further develop its existing

products. Xbrane's future success is dependent on the Company's ability to develop existing products and produce new ones which meet the requirements the market sets. In the event that the results of product development are delayed or fail to materialise, or that the commercialization of the products fails, it can have a negative impact on the Company's operations, financial position or earnings.

#### *Key individuals*

The group is dependent on a number of key employees, including the senior management and other employees with specialist expertise within the Group's field of business. The group's future development and success is dependent on its ability to recruit and retain such key employees.

#### *Financing risk*

The group has needed and will also continue to need extensive capital to pursue research, development and commercialization of the Group's existing and future products. The group is in an expansive phase and it might be necessary to look for additional external capital in the future in order to continue to operate the business. However, there is a risk of such additional financing not being available for the Group on acceptable terms, or at all.

#### *Credit risk*

The group is exposed to credit risks. The credit risk for the group principally arises through credit exposure to customers, i.e. that the Group does not receive payments as agreed or makes a loss as a result of a counterparty's inability to meet its undertaking in relation to the group.

#### *Liquidity risk*

Liquidity risk is the risk that the group cannot meet its payment liabilities on the due date. If it transpires that the Group's liquidity sources are insufficient, the risk exists that the Group can only meet its payment liabilities through raising capital with terms which significantly increase the financing cost or that the group cannot meet its payment liabilities at all, and as a result, default on payments in agreements made.

## Ownership Structure

As of 2016-12-31, Xbrane had a total of 489 shareholders according to the public share register and nominee list distributed over 4,755,546 shares. The ten largest owners as of 2016-12-31 are set out in the table below.

Name	Number of shares	Equity interest (%)
Serendipity Ixora AB	1,220,810	25.67
Försäkringsaktiebolaget Avanza pension	237,706	5.00
Nordnet Pensionsförsäkring AB	156,166	3.28
Michael Löfman	146,000	3.07
Clearstream banking S.A.	122,460	2.58
Jan-Willem De Gier	114,900	2.42
Christer Skogum	111,800	2.35
Martin Åmark	110,490	2.32
Swedbank försäkring	97,526	2.05
Siavash Bashiri	86,730	1.82
Total 10 largest shareholders	2,404,588	50.56
Total other shareholders	2,350,958	49.44
<b>Total</b>	<b>4,755,546</b>	<b>100.00</b>

Xbrane implemented a new issue of 2,360,000 shares in January 2016, leading to a spread of ownership.

## Share information

At the end of the quarter, Xbrane's share capital amounted to SEK 1,066 SEK divided among 4,755,546 shares. The par value of all shares is 0.224 and they have an equal right to a share in the company's assets and earnings. Xbrane's share was listed on Nasdaq First North on 3 February

2016 and as of 31 December 2016, there were 489 shareholders in Xbrane according to the public share register and administration record. As of 31 December 2016 the closing rate for the share amounted to SEK 40.5, giving the company a market value of SEK 192.6 million.

## Financial development in summary for the group

Amounts in kronor (SEK)	2016	2015	2014	2013	2012
Net sales	2,490,117	392,859	189,627	189,523	991,081
Operating income	-33,221,759	-11,550,797	-2,574,131	-2,107,340	-832,728
Balance sheet total	118,110,115	75,330,530	6,688,595	9,195,327	657,007
Equity/assets ratio	90.8%	63.0%	94.2%	94.5%	13.4%
Earnings per share	-7.0	-5.2	-11.6	-9.5	-679.2

Definitions of key ratios are available under the accounting principles

## The Group

### Earnings trend

Net sales during the full year amounted to SEK 2,490 (393) thousand and relate primarily to royalties from outlicensing of Xlucane in Iran. Other operating income during the full year amounted to SEK 2,199 (550) thousand.

Operating income during the full year amounted to SEK -33,222 (-11,551) thousand. Personnel expenses amounted to SEK 9,410 (4,139) thousand. Other external costs amounted to SEK 18,562 (6,632) thousand, and principally comprise analysis and upscaling of production of Xlucane of SEK 3,818 thousand, development of microsphere products according to R&D agreement with Primm of SEK 2,856 thousand, in-vivo trials of Spherotide of SEK 857 thousand, regulatory and clinical consultancy fees of SEK 1,574

thousand, consumables for the laboratory of SEK 1,623 thousand, costs in relation to accounts, administration and legal advice of SEK 1,279 thousand, expenses for premises of SEK 754 thousand and miscellaneous.

### Cash flow and financial position

The group's cash flow from operating activities amounted to SEK -39,426 (-12,387) thousand. Investments amounted to SEK 3,232 (0) thousand in relation to intangible assets and SEK 8,855 (1,146) thousand in relation to tangible assets. The new share issue during the first quarter of 2016 raised SEK 100.3 million before transaction costs. The new share issue was spread over 2,360,000 shares and approximately 1,300 share-holders.

## Financial development in summary for the parent company

Amounts in kronor (SEK)	2016	2015	2014	2013	2012
Net sales	2,490,117	392,859	189,627	189,523	991,081
Operating income	-20,862,527	-8,994,165	-2,574,131	-2,107,340	-832,728
Balance sheet total	128,147,564	66,698,695	6,688,595	9,195,327	657,007
Equity/assets ratio (%)	97.2	79.8	94.2	94.5	13.4

Definitions of key ratios are available under the accounting principles

## The Parent Company

### Earnings trend

Net sales during the full year amounted to SEK 2,490 (393) thousand and relate to licensing revenues from outlicensing of Xlucane. Other operating income amounted to SEK 645 (41) thousand. The difference between the periods comprises the EU subsidy received during 2016. Operating income during the full year amounted to SEK -20,863 (-8 994) thousand. Personnel expenses amounted to SEK 6,504 (3,977) thousand. The number of employees increased from 6 to 10. Other external costs amounted to SEK 16,112 (5,332) thousand.

### Cash flow and financial position

The parent company's cash and cash equivalents at the end of the year amounted to SEK 30,512 (2,197) thousand. The equity/assets ratio amounted to 97 (80) percent. Cash flow from operating activities amounted to SEK -20,489 (-7,341) thousand.

### Environmental impact

The operations in the company are not deemed to entail any environmental hazards and are currently conducted without environmentally-related permits being required from the authorities for Xbrane in Sweden or Primm Pharma in Italy. The operations are performed according to applicable health and safety regulations. The subsidiary Primm Pharma s.r.l has a production facility in Italy where production takes place according to contract with the company ICI. ICI holds the environmental permit which is required from the authorities to conduct the operations, and makes evaluations on a continuous basis to monitor any environmentally-related risks in the business.

### Certified advisor

Xbrane's Certified Adviser at Nasdaq First North is Avanza bank AB.

### Auditors

The 2015 annual general meeting elected the registered auditing company KPMG with Duane Swanson as principal auditor.

### Proposed distribution of the company's profit or loss

The Board of Directors proposes that the available profit be distributed as follows:

Share premium reserve:	163,609,625
Loss brought forward	- 19 278 335
Loss for the year:	-20,791,270
<b>Total</b>	<b>123,540,020</b>
To be carried forward:	123,540,020

For the company's earnings and position in general, refer to the subsequent income statement and balance sheet, along with supplementary disclosures. All amounts are stated in Swedish kronor unless indicated otherwise.



# FINANCIAL INFORMATION

## Consolidated income statement

Amounts in kronor (SEK)	Note	2016-01-01	2015-01-01
		2016-12-31	2015-12-31
Net sales	1	2,490,117	392,859
Other operating income	2	2,199,084	550,467
<b>Total income</b>		<b>4,689,201</b>	<b>943,326</b>
<b>Operating expenses</b>			
Raw materials and consumables	3	-1,180,067	-256,615
Other external expenses	4	-18,562,463	-6,632,497
Personnel expenses	5	-9,409,836	-4,138,606
Depreciation and amortization		-8,539,334	-1,441,338
Other expenses		-219,259	-25,067
<b>Earnings before interest and tax</b>		<b>-33,221,759</b>	<b>-11,550,797</b>
<b>Financial items</b>			
Interest income and similar		137,645	424
Interest expenses and similar		-204,549	-294,413
<b>Earnings after financial items</b>		<b>-33,288,662</b>	<b>-11,844,786</b>
<b>Earnings before tax</b>		<b>-33,288,662</b>	<b>-11,844,786</b>
Tax on the year's earnings	7	-	-
<b>Earnings for the year (attributable to the parent company's shareholders)</b>		<b>-33,288,662</b>	<b>-11,884,786</b>

## Consolidated balance sheet

Amounts in kronor (SEK)	Note	2016-12-31	2015-12-31
<b>ASSETS</b>			
<b>Fixed assets</b>			
<b>Intangible fixed assets</b>	8		
Capitalised expenditure for development work		8,461,933	6,025,702
Goodwill		48,905,994	51,847,636
<b>Total intangible fixed assets</b>		<b>57,367,926</b>	<b>57,873,338</b>
<b>Tangible fixed assets</b>	9		
Machinery and technical plant		9,856,174	-
Equipment, tools, fixtures and fittings		6,724,979	825,462
New construction in progress and advances relating to tangible fixed assets		-	9,198,532
<b>Total tangible fixed assets</b>		<b>16,581,154</b>	<b>10,023,994</b>
<b>Financial fixed assets</b>			
Other non-current receivables	10	634,700	-
<b>Total financial fixed assets</b>		<b>634,700</b>	<b>-</b>
<b>Total fixed assets</b>		<b>74,583,780</b>	<b>67,897,332</b>
<b>Current assets</b>			
<b>Current receivables</b>			
Inventories		2,496,875	160,913
Accounts receivable – trade		1,499,241	169,448
Current tax receivable	11	4,867,636	2,655,288
Other receivables		346,957	1,717,420
Prepaid expenses and accrued income		2,977,247	42,568
<b>Cash and bank balances</b>		<b>31,338,378</b>	<b>2,687,560</b>
<b>Total current assets</b>		<b>43,526,334</b>	<b>7,433,198</b>
<b>TOTAL ASSETS</b>		<b>118,110,115</b>	<b>75,330,530</b>

## Equity and liabilities

Amounts in whole SEK	Note	2016-12-31	2015-12-31
<b>Equity</b>			
Share capital		1,066,127	500,000
Other capital contributed		162,923,655	73,182,031
Translation reserve		-374,021	-3,147,111
Retained earnings including loss for the year		-56,314,387	-23,025,725
<b>Total equity</b>		<b>107,301,374</b>	<b>47,509,195</b>
<b>Provisions</b>			
Other provisions	12	638,744	353,004
<b>Total provisions</b>		<b>638,744</b>	<b>353,004</b>
<b>Liabilities</b>			
<b>Non-current liabilities</b>			
Other non-current liabilities	13	4,285,617	4,063,676
<b>Total non-current liabilities</b>		<b>4,285,617</b>	<b>4,063,676</b>
<b>Current liabilities</b>			
Accounts payable		2,363,641	4,762,519
Liabilities to group companies		-	10,264,242
Current tax liabilities		93,756	59,250
Other current liabilities		362,045	6,801,747
Accrued expenses, deferred income	14	3,064,938	1,516,897
<b>Total current liabilities</b>		<b>5,884,380</b>	<b>23,404,655</b>
<b>TOTAL LIABILITIES AND EQUITY</b>		<b>118,110,115</b>	<b>75,330,530</b>

## Consolidated statement of changes in equity

2015-12-31	Share capital	Share premium reserve	Translation reserve	Profit/loss brought forward	Profit/loss for the year	Total equity
Opening balance	100,000	17,378,831	-	-8,608,938	-2,572,001	6,297,892
Profit/loss for the year	-	-	-	-	-11,844,786	-11,844,786
<i>Changes directly against equity</i>						
Translation reserve	-	-	-3,147,111	-	-	-3,147,111
<b>Total</b>	-	-	<b>-3,147,111</b>	-	-	<b>-3,147,111</b>
<i>Transactions with owners</i>						
New share issue	-	56,203,200	-	-	-	56,203,200
<b>Total</b>	-	<b>56,203,200</b>	-	-	-	<b>56,203,200</b>
<i>Transfer between items in equity</i>						
Bonus issue	399,100	-399,100	-	-	-	-
Transfer of previous year's profit/loss	-	-	-	-2,572,001	2,572,001	-
Registration of new share issue	900	-900	-	-	-	-
<b>Total</b>	<b>400,000</b>	<b>-400,000</b>	-	<b>-2,572,001</b>	<b>2,572,001</b>	-
<b>At year end</b>	<b>500,000</b>	<b>73,182,031</b>	<b>-3,147,111</b>	<b>-11,180,939</b>	<b>-11,844,786</b>	<b>47,509,195</b>
<b>2016-12-31</b>						
Opening balance	500,000	73,182,031	-3,147,111	-11,180,939	-11,844,786	47,509,195
Profit/loss for the year	-	-	-	-	-33,288,662	-33,288,662
<i>Changes directly against equity</i>						
Translation reserve	-	-	2,773,090	-	-	2,773,090
<b>Total</b>	-	-	<b>2,773,090</b>	-	-	<b>2,773,090</b>
<i>Transactions with owners</i>						
New share issue	-	90,307,750	-	-	-	90,307,750
<b>Total</b>	-	<b>90,307,750</b>	-	-	-	<b>90,307,750</b>
<i>Transfer between items in equity</i>						
Conversion of convertible	29,645	-29,645	-	-	-	-
Transfer of previous year's profit/loss	-	-	-	-11,844,786	11,844,786	-
Registration of new share issue	536,482	-536,482	-	-	-	-
<b>Total</b>	<b>566,127</b>	<b>-566,127</b>	-	<b>-11,844,786</b>	<b>11,844,786</b>	-
<b>At year end</b>	<b>1,066,127</b>	<b>162,923,654</b>	<b>-374,021</b>	<b>-23,025,725</b>	<b>-33,288,662</b>	<b>107,301,373</b>

## Consolidated cash-flow analysis

	2016-01-01	2015-01-01
Amounts in kronor (SEK)	2016-12-31	2015-12-31
<b>Cash flow from operating activities</b>		
Operating profit/loss before financial items	-33,221,759	-11,550,797
Adjustment for items not included in cash flow		
- Adding back of depreciation	8,539,334	1,441,338
Interest received	137,645	424
Interest paid	-204,549	-294,413
Tax paid	-	-4,671
<b>Cash flow from operating activities before changes in working capital</b>	<b>-24,749,328</b>	<b>-10,408,119</b>
<b>Changes in working capital</b>		
Increase/decrease accounts receivable	-1,329,793	-164,635
Increase/decrease inventories	-2,335,962	-160,913
Increase/decrease other current receivables	-3,776,564	-1,928,582
Increase/decrease accounts payable	-2,398,878	513,488
Increase/reduction in trade liabilities	-4,835,659	-237,913
<b>Cash flow from operating activities</b>	<b>-39,426,184</b>	<b>-12,386,674</b>
<b>Cash-flow from investment activities</b>		
Investments in tangible fixed assets	-8,855,000	-1,146,335
Investments in intangible fixed assets	-3,232,193	-
Rent deposits paid	-634,700	19,473
<b>Cash-flow from investment activities</b>	<b>-12,721,893</b>	<b>-1,126,862</b>
<b>Cash flow from financing activities</b>		
New share issue	90,576,952	-
Raising/Amortization of loans	-9,778,060	10,000,000
<b>Cash flow from financing activities</b>	<b>80,798,892</b>	<b>10,000,000</b>
<b>Cash flow for the year</b>	<b>28,650,816</b>	<b>-3,513,536</b>
<b>Reconciliation of changes in liquid funds</b>		
Opening balance, liquid funds	2,687,561	6,201,096
Closing balance, liquid funds	31,338,378	2,687,561
<b>Change in liquid funds</b>	<b>28,650,817</b>	<b>-3,513,536</b>



## Parent company income statement

Amounts in kronor (SEK)	Note	2016-01-01 2016-12-31	2015-01-01 2015-12-31
Net sales	1	2,490,117	392,859
Other operating income	2	644,881	40,770
<b>Total income</b>		<b>3,134,998</b>	<b>433,629</b>
<b>Operating expenses</b>			
Raw materials and consumables	3	-40,551	-42,686
Other external expenses	4	-16,111,879	-5,331,943
Personnel expenses	5	-6,504,337	-3,976,905
Depreciation and amortization		-1,205,789	-64,938
Other expenses		-134,970	-11,322
<b>Earnings before interest and tax</b>		<b>-20,862,527</b>	<b>-8,994,165</b>
<b>Financial items</b>			
Financial income		135,569	127
Financial expenses		-64,312	-266,899
<b>Earnings after financial items</b>		<b>-20,791,270</b>	<b>-9,260,937</b>
<b>Earnings before tax</b>		<b>-20,791,270</b>	<b>-9,260,937</b>
Tax	7	-	-
<b>Profit/loss for the year</b>		<b>-20,791,270</b>	<b>-9,260,937</b>

## Parent company balance sheet

Amounts in kronor (SEK)	Note	2016-12-31	2015-12-31
<b>ASSETS</b>			
<b>Fixed assets</b>			
<b>Tangible fixed assets</b>	9		
Equipment, tools, fixtures and fittings		6,111,521	158,723
<b>Total tangible fixed assets</b>		<b>6,111,521</b>	<b>158,723</b>
<b>Financial fixed assets</b>			
Participations in group companies	6	88,335,486	62,775,435
Other non-current receivables	10	634,700	-
<b>Total financial fixed assets</b>		<b>88,970,186</b>	<b>62,775,435</b>
<b>Total fixed assets</b>		<b>95,081,707</b>	<b>62,934,158</b>
<b>Current assets</b>			
<b>Current receivables</b>			
Accounts receivable – trade		1,499,241	169,448
Current tax receivable		5,709	-
Other receivables		289,498	1,382,942
Prepaid expenses and accrued income		759,410	14,999
<b>Liquid assets</b>		<b>30,511,999</b>	<b>2,197,148</b>
<b>Total current assets</b>		<b>33,065,857</b>	<b>3,764,537</b>
<b>TOTAL ASSETS</b>		<b>128,147,564</b>	<b>66,698,695</b>

## Equity and liabilities

Amounts in whole SEK	Note	2016-12-31	2015-12-31
<b>Restricted equity</b>			
Share capital		1,066,127	500,000
<b>Total restricted equity</b>		<b>1,066,127</b>	<b>500,000</b>
<b>Unrestricted equity</b>			
Share premium reserve		163,609,625	72,018,491
Profit/loss brought forward		-19,278,335	-10,017,399
Profit/loss for the year		-20,791,270	-9,260,937
<b>Total equity</b>		<b>124,606,147</b>	<b>53,240,155</b>
<b>Liabilities</b>			
<b>Current liabilities</b>			
Accounts payable		1,923,219	1,467,552
Liabilities to group companies		-	10,264,242
Current tax liabilities		-	-5,709
Other current liabilities		269,897	215,558
Accrued expenses, deferred income	14	1,348,301	1,516,897
<b>Total current liabilities</b>		<b>3,541,417</b>	<b>13,458,540</b>
<b>TOTAL LIABILITIES AND EQUITY</b>		<b>128,147,564</b>	<b>66,698,695</b>

## Parent company statement of changes in equity

	Restricted equity	Unrestricted equity			Total equity
	Share capital	Share premium reserve	Profit/loss brought forward	Profit/loss for the year	
<b>2015-12-31</b>					
Opening balance	100,000	16,215,291	-7,445,398	-2,572,001	6,297,892
Profit/loss for the year	-	-	-	-9,260,937	-9,260,937
<i>Transactions with owners</i>					
New share issue	-	56,203,200	-	-	56,203,200
<b>Total</b>	-	<b>56,203,200</b>	-	-	<b>56,203,200</b>
<i>Transfer between items in equity</i>					
Bonus issue	399,100	-399,100	-	-	-
Transfer of previous year's profit/loss	-	-	-2,572,001	2,572,001	-
Registration of new share issue	900	-900	-	-	-
<b>Total</b>	<b>400,000</b>	<b>-400,000</b>	<b>-2,572,001</b>	<b>2,572,001</b>	<b>-</b>
<b>At year end</b>	<b>500,000</b>	<b>72,018,491</b>	<b>-10,017,399</b>	<b>-9,260,937</b>	<b>53,240,155</b>

As a result of the convertible issued, a maximum of an additional 1,322,428 shares can be issued as at 2015-12-13.

### 2016-12-31

Opening balance	500,000	72,018,491	-10,017,399	-9,260,937	53,240,155
Profit/loss for the year	-	-	-	-20,791,270	-20,791,270
<i>Transactions with owners</i>					
New share issue	-	92,157,262	-	-	92,157,262
<b>Total</b>	-	<b>92,157,262</b>	-	-	<b>92,157,262</b>
<i>Transfer between items in equity</i>					
Conversion of convertible	29,645	-29,645	-	-	0
Transfer of previous year's profit/loss	-	-	-9,260,937	9,260,937	0
Registration of new share issue	536,482	-536,482	-	-	0
<b>Total</b>	<b>566,127</b>	<b>-566,127</b>	<b>-9,260,937</b>	<b>9,260,937</b>	<b>0</b>
<b>At year end</b>	<b>1,066,127</b>	<b>163,609,625</b>	<b>-19,278,335</b>	<b>-20,791,270</b>	<b>124,606,147</b>

As a result of the convertible issued, a maximum of an additional 1,190,196 shares can be issued as at 2016-12-13.

## Parent company cash flow analysis

	2016-01-01	2015-01-01
Amounts in kronor (SEK)	2016-12-31	2015-12-31
<b>Cash flow from operating activities</b>		
Operating profit/loss before financial items	-20,862,527	-8,994,165
Adjustment for items not included in cash flow		
- Adding back of depreciation	1,205,789	64,938
- Other non-cash items	-	-
Interest received	135,569	127
Interest paid	-64,312	-266,899
Tax paid	0	0
<b>Cash flow from operating activities before changes in working capital</b>	<b>-19,585,481</b>	<b>-9,195,999</b>
<b>Changes in working capital</b>		
Increase/decrease accounts receivable	-1,329,793	-164,635
Increase/decrease other current receivables	349,033	-1,053,528
Increase/decrease accounts payable	455,667	1,353,725
Increase/reduction in trade liabilities	-378,500	1,719,823
<b>Cash flow from operating activities</b>	<b>-20,489,074</b>	<b>-7,340,615</b>
<b>Cash-flow from investment activities</b>		
Investments in tangible fixed assets	-7,158,587	-91,097
Shareholder contribution made	-25,560,051	-6,572,235
Rent deposits paid	-634,700	0
<b>Cash-flow from investment activities</b>	<b>-33,353,338</b>	<b>-6,663,332</b>
<b>Cash flow from financing activities</b>		
New share issue	92,157,263	-
Repayment of loan Ixora	-10,000,000	10,000,000
<b>Cash flow from financing activities</b>	<b>82,157,263</b>	<b>10,000,000</b>
<b>Cash flow for the year</b>	<b>28,314,851</b>	<b>-4,003,947</b>
<b>Reconciliation of changes in liquid funds</b>		
Opening balance, liquid funds	2,197,148	6,201,096
Closing balance, liquid funds	30,511,999	2,197,149
<b>Change in liquid funds</b>	<b>28,314,851</b>	<b>-4,003,947</b>

# SUPPLEMENTARY DISCLOSURES

## Accounting principles

Amounts in SEK unless otherwise stated.

Xbrane Biopharma AB (Xbrane) applies the Swedish Annual Accounts Act (1995:1554) and the General Guidelines of the Swedish Accounting Standards Board BFNAR 2012:1 Annual financial statements and consolidated financial statements ("K3").

The 2015 financial year was the first year in which Xbrane prepared consolidated accounts. The Italian company Primm Pharma s.r.l was acquired in September 2015.

The consolidated financial statement is prepared using the purchase (accounting) method. The acquisition date is the date when control is obtained. Identifiable assets and liabilities are measured initially at their fair values at the acquisition date. The minority share of the net assets acquired is valued at fair value. Goodwill is the difference between the acquired identifiable net assets at the date of acquisition and the acquisition cost, including the value of the minority interest, and are initially measured at the acquisition cost. Transactions between group companies are fully eliminated. Subsidiaries in other countries prepare their annual accounts in foreign currency. At consolidation, the entries for these companies' balance sheets and income statements are translated at the closing rate and the spot rate on the date at which each business event took place. The resulting exchange differences are recognized in accumulated translation differences in the equity.

## Key ratio definitions

### Net sales

Comprised of income from goods sold and services performed which are included in the company's normal operations.

### Earnings before interest and tax

Comprises the difference between the business's income and the business's expenses.

### Balance sheet total

The total of all assets or the total of all liabilities and equity.

### Equity/assets ratio

Comprised of how great a proportion of the assets that are financed with equity in order to show the company's long-term solvency, that is to say, equity through total assets.

## Valuation principles

Assets, provisions and liabilities have been evaluated based on acquisition value unless indicated otherwise below.

### Depreciation

Depreciation is implemented lineally across the estimated useful life of the

asset, since it reflects the expected depletion of the asset's future economic benefits. The depreciation is expensed in the income statement.

### Tangible assets

	Years
Machinery and other technical plant	10
Equipment, tools, fixtures and fittings	3 to 5

## Leases

Leasing agreements that mean that the financial risks and benefits of owning an asset are essentially transferred from the lessor to a company are classified in the consolidated financial statements as financial leasing agreements. A financial leasing agreement means that the rights and obligations are recognised as assets or liabilities in the balance sheet. The assets and liabilities are initially measured at the asset's fair value or the current value of the minimum leasing fees, whichever is the lower. Expenses that are directly attributable to the leasing agreement are added to the value of the asset. The leasing fees are divided into interest and repayment according to the effective interest rate method. Variable fees are recognised as expenses in the period in which they are incurred. The leased asset is depreciated on a straight-line basis over the estimated useful life.

The leasing fees according to operational leasing agreements, including increased initial rent but excluding charges for services such as insurance and maintenance, are reported as costs lineally over the lease period.

## Translation to foreign currency

Monetary items in foreign currency are translated at the rate on the balance sheet date. Non-monetary items are not translated, but are reported at the rate at the time of acquisition.

### Functional currency and report currency

The parent company's accounting currency is SEK. The subsidiary's accounting currency is EUR, translation to SEK takes place in the group.

### Transactions and balance sheet items

Transactions in foreign currency are translated to SEK according to the exchange rates which apply on the balance sheet date for balance sheet items or alternatively the average rate during the period for profit/loss items. Exchange rate gains and losses resulting from the settlement of such transactions and from the translation of monetary assets and liabilities denominated in foreign currencies at the balance sheet date rate are reported in the income statement. Exchange rate differences on lending and borrowing are reported in the net interest income/expense, while other exchange rate differences are included in the earnings before interest and tax.

## Intangible fixed assets

### Research and development

Expenditure for research is reported as an expense when it arises in the group.

An intangible asset which arises through development or in the development

phase of an internal project, can be recognised as an intangible asset only if all the below conditions are met:

- a ) It is technically possible to complete the development of the product so that it will be available for use
- b ) The management intends to complete the product, use or sell it
- c ) There is a possibility of using or selling the product
- d ) It can be demonstrated that it is likely the product will generate future economic benefits
- e) There are adequate technical, economic and other resources to complete the development and to use or sell the product
- f ) The expenditure that is assignable to the intangible asset during its development

According to the above mentioned criteria, no internally developed intangible assets in Xbrane have been reported, however, equivalent costs are reported in the income statement. An assessment is made at each major milestone in the company's product development and Xbrane AB may capitalize development expenditure in the future. Development expenditure has been capitalized in Primm pharma s.r.l. Besides capitalized development, there is goodwill in the group.

#### *Goodwill*

Goodwill is depreciated on a straight-line basis over the estimated useful life. The long-term character of the company's operations means that a ten year period of use is deemed to be correct.

#### **Tangible fixed assets**

All tangible fixed assets are reported at acquisition cost less deductions for depreciation. Historical cost includes expenses directly attributable to the acquisition of the asset.

Additional expenses are added to the asset's carrying amount or recognised as a separate asset, depending on which is appropriate, only when it is probable that future economic benefits associated with the item will flow to the company and the historical cost of the asset can be measured reliably. Reported value for the part compensated is removed from the balance sheet. All other types of repairs and maintenance are reported as expenses in the income statement in the period in which they occur.

The assets' residual values and useful lives are tested at the end of each reporting period and adjusted as necessary. An asset's carrying amount is written down immediately to its recoverable amount if the asset's carrying amount exceeds its estimated recoverable amount.

Profits and losses on disposal are determined by a comparison between the sales revenue and the carrying amount and are recognised in other operating income and operating expenses respectively in the income statement.

#### **Financial assets and liabilities**

Financial assets are initially evaluated at acquisition value, including any transaction expenses which are directly attributable to the acquisition of the

asset. After initial recognition, current financial assets are recognised at the lowest of acquisition value and net realizable value on the balance sheet date. Trade and other receivables that are current assets are valued individually at the amount expected to be collected. After initial recognition, financial fixed assets are valued at acquisition value with deduction for any depreciation and with the addition of any appreciation. Interest-bearing financial assets are measured at amortised cost using the effective interest method. With valuation at the lowest value principle and assessment of write-down requirement respectively, the company's financial instruments which are held for risk diversification are deemed to be included in a securities portfolio and are consequently valued as one item. Derivatives instruments which constitute financial assets and for which hedge accounting has not been applied, are valued after the initial recognition at the lowest of the acquisition value and the net realizable value on the balance sheet date.

Financial liabilities are measured at amortised cost: Expenditure which is directly attributable to taking out loans, correct the loan's acquisition value and are allocated to a period according to the effective interest method. Derivatives instruments with negative value and for which hedge accounting has not been applied, are reported as financial liabilities and valued at the amount which is most beneficial for the company if the obligation is regulated or transferred on the balance sheet date.

#### **Impairment of non-financial fixed assets**

Tangible assets and such intangible assets that are depreciated are assessed in regard to value reduction whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. An impairment loss is the amount by which the asset's carrying amount exceeds its recoverable amount. No write-down requirement has been identified during the 2016 financial year.

#### **Income recognition**

Income is recognised when it can be calculated in a reliable way and when fundamentally all risks and rights which are associated with ownership are transferred to the purchaser, which is normally in connection with delivery.

Interest income is recorded in accordance with the effective interest method.

#### **Taxes**

Current taxes are calculated according to the tax rates and tax rules that apply at the balance sheet date.

The tax on the profit/loss for the year in the income statement consists of current tax and deferred tax. Current tax is the income tax for the current financial year relating to the taxable profit for the year, as well as the part of the income tax for previous financial years that has not yet been reported. Deferred tax is the income tax on the taxable profit relating to future financial years as a result of previous transactions or events.

Deferred tax liabilities are recognised for all taxable temporary differences, except for temporary differences arising from initial recognition of goodwill

Deferred tax assets are recorded for deductible temporary difference and for the option of utilising fiscal loss carry-forward in the future. The evaluation is based on how the recorded value for the corresponding asset or liability is expected to be recycled or settled respectively. The amounts are based on the tax rates and regulations that were decided as of the balance sheet date and have not been computed for present value.

### **Inventory**

Inventories are measured at purchase value or net realisable value, whichever is the lower.

### **Receivables**

Receivables are recorded in the amounts expected to be paid.

### **Provisions**

The company makes a provision when there is a legal or informal undertaking and a reliable estimate of the amount can be made. There are provisions in the subsidiary Primm pharma s.r.l and they relate to severance pay for the CEO and other employees.

### **Liabilities**

Liabilities are reported at their nominal amount.

### **Equity**

The acquisition of Primm Pharma s.r.l was financed through the issuing of a convertible which is classified as equity. The convertible, which was held by Primm Pharma's former owner, amounted to SEK 56 million and can be converted to shares equivalent to the issue price of SEK 42.5. Conversion can take place during a period up to 2020 provided that a total of 6 different milestones regarding the commercialization of Spherotide are achieved. The convertible is reported as equity in that the terms stipulate that it will always be converted to shares and it therefore does not entail any cash payment for the company. 10% of the convertible was converted to shares during 2016 as the first milestone in the agreement was reached.

### **Receivables and liabilities in foreign currency**

Receivables and liabilities in foreign currency have been valued at the rate on the balance sheet date and unrealized exchange profits and losses are included in the earnings.

Advances from customers are recognised at the rates which prevailed when the respective advance was received, as no obligation to repay is expected.

Unrealized exchange profits on long-term receivables and liabilities are settled against unrealized exchange losses as excess exchange profits or losses are recognised in the income statement as a financial income or financial expense.

Exchange profits (losses) on receivables and liabilities relating to operations are reported as other operating revenues (business expenses).

Exchange rate differences in relation to financial assets and liabilities are reported under earnings from financial investments.

### **Payments to employees**

Short-term payments in the group consist of salaries, social insurance expenses, paid holidays, paid absence due to illness, healthcare and bonuses. Short-term payments are recognised as an expense and a liability when there is a legal or constructive obligation to make a payment.

### **Parent company**

#### *Financial fixed assets*

Shares and participations in subsidiaries are recognised at acquisition value after deductions for any impairment. The acquisition value includes the purchase price that was paid for the shares, as well as acquisition costs. Any capital contribution and group contribution is added to the acquisition value when they are submitted. Dividends from subsidiaries are reported as income.

#### *Other accounting principles*

In other respects, the parent company applies the same accounting principles as the group.

All leases are reported as operating leases.



# NOTES

## Note 1 Net sales

Group	2016-12-31	2015-12-31
Services	-	-
Protein expressions system (inkl. biosimilarer)	2,490,117	392,859
<b>Total</b>	<b>2,490,117</b>	<b>392,859</b>

### Parent Company

Services	-	-
Protein expressions system (inkl. biosimilarer)	2,490,117	392,859
<b>Total</b>	<b>2,490,117</b>	<b>392,859</b>

## Note 2 Other operating income

Group	2016-12-31	2015-12-31
Royalties	-	40,610
Exchange rate profits on liabilities/receivables relating to operations	101,242	160
Contributions received	543,639	-
Other	1 554 203	509,697
<b>Total</b>	<b>2 199 084</b>	<b>550,467</b>

The "miscellaneous" item includes tax relief of SEK 1,403 thousand for Primm Pharma relating to a specifically instituted programme in Italy to promote research-intensive companies. Contributions received for 2016 consist of an EU grant.

### Parent Company

Royalties	-	40,610
Exchange rate profits on liabilities/receivables relating to operations	101,242	160
Contributions received	543,639	-
Other	-	-
<b>Total</b>	<b>644,881</b>	<b>40,770</b>

## Note 3 Raw materials and consumables

### Group

Purchase of consumables and lab materials used in the production of the product which the company sells are reported as production expenses. Costs for raw materials and consumables amounted to SEK 1,180 (257) thousand and principally refer to consumable supplies related to production of Spherotide in Primm Pharma S.r.l.

### Parent Company

Costs for raw materials and consumables amounted to SEK 40,551 (42,686) and refer to consumable supplies related to delivery of expression systems according to agreement with customers

#### Note 4 Other external expenses

##### Group

Other external expenses during 2016 amounted to SEK 18,562 (6,632) thousand and principally comprise analysis and upscaling of production of Xlucane SEK 3,818 thousand, R&D service agreement with Primm for development of long-acting injectables SEK 2,856 thousand, in vivo trials of Spherotide SEK 857 thousand, Regulatory and clinical consultant fees SEK1,574 thousand, Laboratory consumables SEK 1,623 thousand, costs in relation to accounts, administration and legal SEK 1,279 thousand.

Audit assignment refers to the auditor's compensation for the statutory audit. The work comprises review of the annual report and the accounts, the administration by the board of directors and the chief executive officer,

as well as a fee for audit advice which was provided in connection with the audit assignment. The expenses from KPMG in relation to 2016 correspond to SEK 264 thousand.

##### Parent Company

Other external expenses during 2016 amounted to SEK 16,112 (5,332) thousand and principally comprise upscaling of production for Xlucane SEK 3,818 thousand, in vivo trials of Spherotide SEK 857 thousand, regulatory and clinical consultant fees SEK1,574 thousand, Laboratory consumables SEK 1,623 thousand, costs in relation to accounts, administration and legal SEK 1,279 thousand.

#### Note 5 Number of employees, salaries, other remuneration and social insurance costs

Group	2016-12-31	2015-12-31
<b>The average number of employees and the distribution according to gender is</b>		
Women	6	2
Men	8	5
<b>Total</b>	<b>14</b>	<b>7</b>
<b>Distribution of senior executives as of the balance sheet date</b>		
2016-12-31	2015-12-31	
Women:		
board members	1	1
Men:		
board members	5	4
<b>Total</b>	<b>6</b>	<b>5</b>
<b>Salaries and other remuneration</b>		
Board of Directors and CEO	1,506,410	808,799
(of which bonuses and comparable remuneration)	-	-
Other employees	6,267,870	2,550,478
<b>Total salaries and other remuneration</b>	<b>7,774,280</b>	<b>3,359,277</b>
Social insurance costs in accordance with law and contracts	1,645,498	779,269
<b>Total salaries, remuneration, social security expenses and pension expenses</b>	<b>9,419,778</b>	<b>4,138,546</b>

Board fees are not included in personnel expenses, but under other costs in the income statement

Parent Company	2016-12-31	2015-12-31
<b>The average number of employees and the distribution according to gender is</b>	4	2
Women	6	4
Men	10	6
<b>Total</b>		
<b>Distribution of senior executives as of the balance sheet date</b>	<b>2016-12-31</b>	<b>2015-12-31</b>
Women:		
board members	1	1
Men:		
board members	5	4
<b>Total</b>	<b>6</b>	<b>5</b>
	<b>2016-12-31</b>	<b>2015-12-31</b>
<b>Salaries and other remuneration</b>		
Board of Directors and CEO	1,506,410	808,799
(of which bonuses and comparable remuneration)	-	-
Other employees	4,135,238	2,408,072
<b>Total salaries and other remuneration</b>	<b>5,641,648</b>	<b>3,216,871</b>
Social insurance costs in accordance with law and contracts	1,322,342	760,034
<b>Total salaries, remuneration, social security expenses and pension expenses</b>	<b>6,963,990</b>	<b>3,976,905</b>

Board fees are not included in personnel expenses, but under other costs in the income statement.

## Note 6 participations in subsidiaries

Holdings of participations in subsidiaries comprise the following:

Company name	Corporate identity number	Registered office	Share of equity in %
Primm Pharma s.r.l	09197180962	Italy	100%
	<b>2016</b>	<b>2015</b>	
Opening acquisition value	62,775,435	-	
Acquisition	-	56,203,200	
Shareholder contribution	25,560,051	6,572,235	
Closing carrying amount	88,335,486	62,775,435	

100% of Primm Pharma s.r.l was acquired by the parent company during 2015. The acquisition value and the shareholder contribution was included in the consolidated accounts for the period after the acquisition date.

## Note 7 Tax on the profit/loss for the year

### Reconciliation of effective tax

Group	2016-12-31	2015-12-31
Reconciliation of effective tax		
<b>Earnings before tax</b>	<b>-33,288,662</b>	<b>-11,844,786</b>
Tax according to the current tax rate, 22 %	7,323,506	2,605,853
Tax effect of:		
Non-deductible expenses	97,499	10,366
Non-taxable income	-358,816	-75,436
Increase in loss carry-forward	-7,062,189	-2,540,783
<b>Reported tax</b>	<b>-</b>	<b>-</b>

As of 2016-12-31, accumulated loss carry-forward for the group amounted to 53,311,223.

### Parent Company

<b>Earnings before tax</b>	<b>-20,791,270</b>	<b>-9,260,937</b>
Tax according to the current tax rate, 22 %	-4,574,079	-2,037,406
Tax effect of:		
Non-deductible expenses	37,420	8,452
Non-taxable income		
Increase in loss carry-forward	4,611,499	2,028,954
<b>Reported tax</b>	<b>-</b>	<b>-</b>

As of 2016-12-31, accumulated loss carry-forward for the parent company amounted to 40,177,497.

## Note 8 intangible fixed assets

### Goodwill

Group	2016-12-31	2015-12-31
Opening accumulated acquisition values	53,125,847	-
Purchases via acquisition during the year	-	56,203,200
Translation difference	2,671,750	-3,077,353
<b>Closing accumulated acquisition values</b>	<b>55,797,597</b>	<b>53,125,847</b>
Opening accumulated depreciations	-1,278,211	-
Depreciation for the year	-5,445,532	-1,350,100
Translation difference	-167,860	71,889
<b>Closing accumulated depreciations</b>	<b>-6,891,603</b>	<b>-1,278,211</b>
<b>Closing residual value according to plan</b>	<b>48,905,994</b>	<b>51,847,636</b>

Goodwill of SEK 51,848 thousand arose with the acquisition of Primm Pharma srl.

Depreciation takes place over 10 years from the acquisition date.

Development expenditure

Group	2016-12-31	2015-12-31
Opening accumulated acquisition values	6,041,240	-
Acquisitions for the year	2,837,798	6,236,746
Translation difference	388,676	-195,506
<b>Closing accumulated acquisition values</b>	<b>9,267,714</b>	<b>6,041,240</b>
Opening accumulated depreciations	-15,538	-
Depreciation for the year	-795,962	-15,319
Translation difference	5,719	-219
<b>Closing accumulated depreciations</b>	<b>-805,781</b>	<b>-15,538</b>
<b>Closing residual value according to plan</b>	<b>8,461,933</b>	<b>6,025,702</b>

**Parent Company**

There is no capitalized expenditure for research and development work in Xbrane Biopharma AB.

**Note 9 tangible assets**Equipment, tools, fixtures and fittings

Group	2016-12-31	2015-12-31
Opening accumulated acquisition values	967,429	198,648
Acquisitions for the year	7,180,746	768,781
Translation difference	43,495	-
<b>Closing accumulated acquisition values</b>	<b>8,191,669</b>	<b>967,429</b>
Opening accumulated depreciations	-141,967	-66,048
Scheduled depreciation for the year	-1,321,656	-75,919
Translation difference	-3,067	-
<b>Closing accumulated depreciations</b>	<b>-1,466,690</b>	<b>-141,967</b>
<b>Closing residual value according to plan</b>	<b>6,724,979</b>	<b>825,462</b>

**Parent Company**

Opening accumulated acquisition values	289,744	198,648
Acquisitions for the year	7,158,587	91,096
<b>Closing accumulated acquisition values</b>	<b>7,448,331</b>	<b>289,744</b>
Opening accumulated depreciations	-131,021	-66,084
Depreciation for the year	-1,205,789	-64,937
<b>Closing accumulated depreciations</b>	<b>-1,336,810</b>	<b>-131,021</b>
<b>Closing residual value according to plan</b>	<b>6,111,521</b>	<b>158,723</b>

#### Machinery and technical plant

Group	2016-12-31	2015-12-31
Opening accumulated acquisition values	-	-
Acquisitions for the year	1,228,799	-
Reclassifications	9,198,532	-
Translation difference	452,199	-
<b>Closing accumulated acquisition values</b>	<b>10,879,530</b>	-
Opening accumulated depreciations	-	-
Scheduled depreciation for the year	-976,183	-
Translation difference	-47,172	-
<b>Closing accumulated depreciations</b>	<b>-1,023,355</b>	-
<b>Closing residual value according to plan</b>	<b>9,856,175</b>	-

Machinery/equipment owned under financial leases are included with a reported value of 2,602,197.

#### Note 10 Other non-current receivables

Group	2016-12-31	2015-12-31
Opening accumulated acquisition values	-	-
Acquisitions for the year	634,700	-
<b>Closing accumulated acquisition values</b>	<b>634,700</b>	-
Opening accumulated depreciations	-	-
Scheduled depreciation for the year	-	-
<b>Closing accumulated depreciations</b>	<b>-</b>	-
<b>Closing residual value according to plan</b>	<b>634,700</b>	-

Parent Company	2016-12-31	2015-12-31
Opening accumulated acquisition values	-	-
Acquisitions for the year	634,700	-
<b>Closing accumulated acquisition values</b>	<b>634,700</b>	-
Opening accumulated depreciations	-	-
Scheduled depreciation for the year	-	-
<b>Closing accumulated depreciations</b>	<b>-</b>	-
<b>Closing residual value according to plan</b>	<b>634,700</b>	-

The long-term receivables which were added during 2016 consisted of a rent deposition for Xbrane's premises in Solna.

#### Note 11 Current tax receivable

The current tax receivable consisted of a VAT claim from the subsidiary and tax relief received for the subsidiary in Italy

#### NOTE 12 Other provisions

Other provisions is related to provisions according to employment contracts with all employees in Italy in accordance with Italian law

#### Note 13 Other long-term liabilities

Long-term liabilities in the group consisted of a debt to Primm Pharma's CEO Paolo Sarmientos of SEK 2,706 thousand, the remaining part of financial leasing for a fixed asset in the production facility for Spherotide outside Naples in Italy of SEK 1,196 thousand, and a loan for a company car of SEK 384 thousand. The loan to Primm Pharma's CEO arose as a long-term loan as a result of accrued severance pay to be paid according to Italian law when the employment terminates. The current value of future payments relating to financial lease obligations are reported respectively under other short- and long-term liabilities in the group.

Group	2016		Total	2015		Total
	Between 1 and 5 years	Later than 5 years		Between 1 and 5 years	Later than 5 years	
Financial leasing	1,195,863	-	<b>1,195,863</b>	1,479,879	-	<b>1,479,879</b>
Debt to Primm Pharma's CEO	-	2,705,959	<b>2,705,959</b>	-	2,583,798	<b>2,583,798</b>
Bank loan for company car	383,795	-	<b>383,795</b>	-	-	-

The parent company has no long-term liabilities.

#### Note 14 Accrued expenses and prepaid income

Group	2016-12-31	2015-12-31
Accrued holiday pay	511,700	210,496
Accrued social insurance expenses	352,157	-
Prepaid income	397,152	-
Other items	1,803,928	1,306,401
<b>Total</b>	<b>3,064,938</b>	<b>1,516,897</b>

#### Parent Company

Accrued holiday pay	443,956	210,496
Accrued social insurance expenses	126,795	-
Prepaid income	397,152	-
Other items	380,398	1,306,401
<b>Total</b>	<b>1,348,301</b>	<b>1,516,897</b>

#### Note 15 Related-party transactions

Closely related parties include the group's employees and board members. Overall during the period, members of Xbrane's board of directors have invoiced SEK 606 thousand for board fees. Primm Pharma's liabilities as of 31 December 2016 included a debt to Primm Pharma's CEO of SEK 2,706 thousand.

Xbrane purchased services during the year from Juno Ekonomi AB (corp. ID no.: 556834-0235) related to accounting and administration services for SEK 486 thousand. Juno Ekonomi AB is 100 percent owned by Sdiptech AB (corp. ID no.: 556672- 4893). In turn, 76 percent of Sdiptech AB is owned by Serendipity Group AB (corp. ID no.: 556799-6813), 50 percent of which is in turn owned by Saeid Esmaeilzadeh, who is chairman of the board of directors of Xbrane.

During the year Xbrane purchased services from Serendipity Communications AB (corp. ID no.: 556967-7981) at a value of SEK 92 thousand. Serendipity Communications AB is 80 percent owned by Sdiptech AB (corp. ID no.: 556672- 4893). In turn, 76 percent of Sdiptech AB is owned by Serendipity Group AB (corp. ID no.: 556799-6813), 50 percent of which is in turn owned by Saeid Esmaeilzadeh, who is chairman of the board of directors of Xbrane. In order to secure working capital until the new share issue was completed, on 8 October 2015, XBrane borrowed SEK 10 million from Serendipity Ixora AB (publ), corp. ID no.: 556863-3977. The loan carried 12 percent interest and was fully repaid on 20 January 2016.



**Note 16 Important events after the end of the period**

- » Xbrane received GMP approval from AIFA (the Italian Medicines Agency) for the Spherotide production facility in Italy.
- » Xbrane delivered its first batch of Spherotide at a value of SEK 7 million to its partner in the Middle East.
- » Xbrane reported positive comparative pre-clinical data for Xlucane.
- » Xbrane reported positive comparative in-vivo effect data for Spherotide .

**Note 17 Pledged assets and contingent liabilities**

	<b>2016-12-31</b>	<b>2015-12-31</b>
Pledged assets	351,210	-
Contingent liabilities	-	-

In 2016 pledged assets consisted of a company car as security for a bank loan for a company car

**Note 18 Appropriation of profits**

The Board of Directors proposes that the available profit be distributed as follows:

Share premium reserve:	163,609,625
Loss brought forward	-19,278,335
Loss for the year:	-20,791,270
<b>Total</b>	<b>123 540 020</b>
To be carried forward:	123,540,020

# SIGNATURES

The income statement and balance sheet will be presented to the AGM on May 18, 2016 for adoption. The Board of Directors and the CEO certify that the consolidated accounts have been prepared in accordance with K3 and give a true and fair view of the Group's financial position and results. The annual financial statements have been prepared in accordance with generally accepted accounting principles and give a true and fair view of the parent company's financial position and results. The Administration Report for the Group and Parent company provides a fair review of the development of the Group and the Parent Company's operations, position and results and describes significant risks and uncertainty factors that the Parent Company and the companies included in the Group face.

Stockholm 28 April 2017

.....  
**Saeid Esmailzadeh**  
Chairman

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**Alessandro Sidoli**  
Director

.....  
**Peter Edman**  
Director

.....  
**Maris Hartmanis**  
Director

.....  
**Karin Wingstrand**  
Director

.....  
**Martin Åmark**  
CEO

Our audit report was presented on 28 April 2017  
KPMG AB

.....  
**Giorgio Chiviri**  
Director

.....  
**Duane Swanson**  
Authorised Public Accountant

# Auditor's report

Translation from the Swedish original

To the general meeting of the shareholders of Xbrane Biopharma AB (publ), corp. ID no. 556749-2375.

## Report on the annual accounts and consolidated accounts

### Opinions

We have audited the annual accounts and consolidated accounts of Xbrane Biopharma AB (publ) for the year 2016. The annual accounts and consolidated accounts of the company are included on pages 19-43 in this document.

In our opinion, the annual accounts and consolidated 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 and the group as of 31 December 2016 and their financial performance and cash flow for the year then ended in accordance with 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 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.

### Other Information than the annual accounts and consolidated accounts

This document also contains other information than the annual accounts and consolidated accounts and is found on pages 1-18. The Board of Directors and the Managing Director are responsible for this other information. Our opinion on the annual accounts and consolidated accounts does not cover this other information and we do not express any form of assurance conclusion regarding this other information.

In connection with our audit of the annual accounts and consolidated accounts, our responsibility is to read the information identified above and consider whether the information is materially inconsistent with the annual accounts and consolidated accounts. In this procedure we also take into account our knowledge otherwise obtained in the audit and assess whether the information otherwise appears to be materially misstated. If we, based on the work performed concerning this information, conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

### Responsibilities of the Board of Directors and CEO

The Board of Directors and the CEO 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. The Board of Directors and the CEO 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 have 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 judgement 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 CEO.
- » 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. We must also provide the Board of Directors with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

## 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 Xbrane Biopharma AB (publ) for the year 2016 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 Boards of Directors and CEO

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 is responsible for the organization of the company and management of its 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 CEO shall manage the ongoing administration according to the Board of Directors' guidelines and instructions and among other matters take measures that are necessary to fulfil 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 judgement 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 judgement 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, April 28, 2017

KPMG AB

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Duane Swanson

Authorised Public Accountant

# FURTHER INFORMATION

## Dividends

The Board of Directors and CEO propose that no dividend be paid for the financial year 2016-01-01--2016-12-31.

The Board of Directors and CEO propose that the company's accumulated loss be carried forward.

## Financial calendar

Annual General Meeting	18 May 2017
Interim report Jan-March	18 May 2017
Interim report April-June	28 August 2017
Interim report July-Sep	27 November 2017

## For further information

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