

Invitation to  
acquire B-shares in  
BioArctic AB (publ)

GLOBAL COORDINATOR AND JOINT BOOKRUNNER



JOINT BOOKRUNNER



MARKETS

## IMPORTANT INFORMATION

This offering circular (the "Offering Circular") has been prepared in connection with the offering to the public in Sweden and institutional investors in Sweden and abroad to subscribe for new B-shares and to acquire existing B-shares in BioArctic AB (a Swedish public limited liability company) reg. no. 556601-2679, and admission to trading the Company's B-shares on Nasdaq Stockholm (the "Offering"). "Shares" referred to in the Offering Circular refers to B-shares, unless otherwise clearly stated. In this Offering Circular "BioArctic", the "Company" or the "Group" means, depending on the context, BioArctic AB, subsidiaries to BioArctic AB or the group in which BioArctic AB is the parent company. "Main Shareholders" refers to Demban AB and Ackelsta AB. "Carnegie" or "Global Coordinator" refers to Carnegie Investment Bank AB (publ) and "DNB" refers to DNB Markets, a part of the Swedish branch of DNB Bank ASA. "Joint Bookrunners" refers to Carnegie and DNB. "Cornerstone Investors" refers to HBM Healthcare Investments (Cayman) Limited, Handelsbanken Fonder AB, The Second Swedish National Pension Fund (The Second AP Fund), The Third Swedish National Pension Fund (The Third AP Fund) and John Watin/Inbox Capital. See the section "Glossary and definitions" for definitions of other terms used in this Offering Circular.

The Offering is not aimed at the general public in any other country than Sweden and is not aimed at persons resident in the United States (except as set forth below), Australia, Japan, New Zealand, Singapore, South Africa, Hong Kong or Canada, or in any other country where the Offering or the distribution of the Offering Circular is contrary to applicable laws or regulations or necessitates additional prospectuses, registration or other measures than those that follow from Swedish law. No measure has been taken, or will be taken, in any jurisdiction other than Sweden which might permit the shares to be offered to the public, or which might permit possession or dissemination of this Offering Circular or any other document relating to the Company or shares in such a jurisdiction. Applications to subscribe for or acquire shares that contravene such regulations may be declared invalid. Persons who receive the Offering Circular are encouraged by the Company and the Global Coordinator to obtain information about and observe such restrictions. Neither the Company nor the Global Coordinator assumes legal liability for infringement of such restrictions by any person, whether potential investor or not.

The shares in the Offering have not been reviewed by any federal or state securities commission or regulatory authority in the United States. Nor have the aforementioned authorities confirmed the accuracy, or assessed the adequacy, of the Offering Circular. Any claim to the contrary is a criminal offense in the United States. The Offering does not constitute an offer to sell, or solicitation of an offer to buy shares in any jurisdiction in which such an offer or solicitation would be unlawful. The shares in the Offering have not been and will not be registered under the Securities Act of 1933, as amended (the "Securities Act") or with any securities regulatory authority of any state or other jurisdiction of the United States and may not be offered or sold within the United States, except to persons reasonably believed to be qualified institutional buyers (QIBs) or outside the United States in offshore transactions in reliance on Regulation S. Prospective purchasers are hereby notified that sellers of the shares in the Offering may be relying on the exemption from the provisions of Section 5 of the Securities Act provided by Rule 144A. For a discussion of certain restrictions on transfers of the shares, see the section "Transfer restrictions".

The Offering Circular has been prepared by BioArctic's board of directors in accordance with the Swedish Financial Instruments Trading Act (1991:980), The European Parliament and Council Directive 2003/71/EG (the "Prospectus directive") and the European Commission's regulation (EG) no. 809/2004 of April 29, 2004 regarding the implementation of The European Parliament and Council Directive 2003/71/EG (including regulation (EG) no. 486/2012). The Offering Circular has been prepared in both a Swedish and an English version. In the event of any inconsistency between the language versions the Swedish language version should have precedence except for the sections "Certain U.S. federal tax considerations" and "Transfer restrictions" which only address issues related to the United States. The Swedish version of the Offering Circular has been approved and registered by the Swedish Financial Supervisory Authority on September 28, 2017 in accordance with the provisions of Chapter 2, section 25 of the Swedish Financial Instruments Trading Act (1991:980) and has been published by the Company on the same day. Neither the approval nor the registration implies a guarantee from the Swedish Financial Supervisory Authority that the factual information in the Offering Circular is accurate or complete. The Offering Circular is available at the Company's office with the address Warfväges väg 35, SE-112 51 Stockholm, Sweden, at the Company's website, [www.bioarctic.se](http://www.bioarctic.se), Carnegie's website, [www.carnegie.se](http://www.carnegie.se), DNB's website, [www.dnb.se](http://www.dnb.se), The Swedish Financial Supervisory Authority's website, [www.fi.se](http://www.fi.se) and on the European Securities and Markets Authority's website, [www.esma.europa.eu](http://www.esma.europa.eu). Disputes in relation to the Offering or the contents of this Offering Circular shall be settled in accordance with Swedish law and exclusively by a Swedish court.

### Presentation of financial information

Unless otherwise indicated, all financial amounts are expressed in Swedish kronor ("SEK"). "T" indicates thousand, "M" millions and "B" billions. "USD" means US dollars, "EUR" means euro, "GBP" British pounds and "CHF" Swiss francs. Certain financial information and other information presented in this Offering Circular has been rounded to make the information easily accessible to the reader. As a consequence, the figures in certain columns do not tally with the totals stated.

### Stabilization

In connection with the Offering Carnegie may carry out transactions with the aim of keeping the market price of the shares at a higher level than what otherwise might have been the case in the market. Such stabilization measures will be carried out in compliance with the terms of the EU's market abuse regulation (596/2014) and the Commission's delegated regulation relating to technical standards for buy-back programs and stabilization measures (2016/1052). Stabilization transactions may be carried out on Nasdaq Stockholm, the OTC market or otherwise, and may be carried out at any time during the period beginning on the first day when the shares are traded on Nasdaq Stockholm and ending no later than 30 calendar days thereafter. However, Carnegie is under no obligation to carry out stabilization of any kind and there is no guarantee that stabilization will be carried out. Stabilization, if initiated, can also be discontinued at any time without prior notice. Stabilization transactions will under no circumstances be carried out at a higher price than the price in the Offering.

When applicable, Carnegie will, through the Company, provide information during and after the stabilization period regarding implemented stabilization measures in accordance with the demands for publication of stabilization measures according to the EU's market abuse regulation (596/2014) and the Commission's delegated regulation relating to technical standards for buy-back programs and stabilization measures (2016/1052). For more information, see the section "Legal considerations and supplementary information – Stabilization".

### Forward-looking statements and market information

Information in the Offering Circular that concerns future conditions, such as statements and assumptions concerning the Company's future development and market conditions, are based on current conditions at the time of publication of the Offering Circular. Forward-looking information is always associated with uncertainties as it concerns and is dependent on circumstances beyond the Company's control. When a statement is given in the Offering Circular concerning a certain circumstance, the statement is based on the Company's assessment, unless otherwise is clearly stated. Expressions such as "is expected", "is believed to", "should", "is assessed" and similar are used to indicate that the information should be viewed as estimates and forecasts. The estimates and forecasts are made on the basis of information that contains known as well as unknown risks and uncertainties. No assurance is given, expressly or implied, that the estimates and forecasts given will be realized. Nor does the Company give any commitment to publish updates or revisions of any forward-looking statements as a result of new information or similar that occurs after the publication of the Offering Circular. An investment in shares is always associated with risk. Persons considering investing in the Company are therefore recommended to independently and thoroughly evaluate the Company's development prior to their investment based on this Offering Circular.

The content on the Company's website or the websites of third parties referred to herein does not constitute part of the Offering Circular.

The Offering Circular contains information about the Company's geographic and product markets, market size, market shares, market position and other market-related information pertaining to the Company's operations and market. The Company takes responsibility for the correct reproduction of such information that originates from third parties. As far as the Company is aware no information has been omitted in a way which could render the reproduced information inaccurate or misleading in relation to the original sources. However, the Company has not made any independent verification of the information given by third parties, wherefore the completeness or accuracy of the information presented in the Offering Circular cannot be guaranteed. No third party as described above has, as far as the Company is aware, any essential interests in the Company.

### Important information regarding the possibility to sell allotted shares

Allotment of subscribed shares to the Swedish general public will be notified by the sending out of a contract note, which is expected to happen on or around October 12, 2017. Once payment for the allotted shares has been processed by Carnegie, the shares paid for will be transferred to a custody account or securities account that is designated by the subscriber. The time required for the transfer of payment and the transfer of paid shares to subscribers of the shares in BioArctic may mean that such subscribers will not have the shares they have been allotted available in the designated custody or securities account earlier than October 16 2017. Trading in BioArctic's B-shares on Nasdaq Stockholm is expected to commence around October 12, 2017. Note that the possibility that shares may not be available in the subscriber's custody or securities account may mean that the subscriber is not able to sell these shares on the stock exchange as of the date upon which trading in the shares commences, but only when the shares are available in the securities or custody account.

### Available information

So long as any of the shares placed in accordance with Rule 144A are "restricted securities" within the meaning of Rule 144 (a)(3) under the Securities Act, the Company will, during any period in which it is neither subject to Section 13 or 15 (d) of the U.S. Securities Exchange Act of 1934, as amended (the "Exchange Act"), nor exempt from reporting pursuant to Rule 1.2g3-2 (b) under the Exchange Act, furnish upon request, to any holder or beneficial owner of such restricted securities, or any prospective purchaser designated by any such holder or beneficial owner, the information required to be delivered to such persons pursuant to Rule 144A (d) (4) under the Securities Act. In such cases the Company will also furnish to each such holder or beneficial owner all notices of general meetings and other reports and communications that are generally available to the shareholders.

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## THE OFFERING IN SHORT AND INDICATIVE TIMETABLE

Price	24 SEK per B-share
Application period (the public in Sweden)	October 2–10, 2017
Application period (institutional investors)	October 2–11, 2017
First day of trading on Nasdaq Stockholm	October 12, 2017
Settlement date	October 16, 2017

## OTHER INFORMATION

Market place	Nasdaq Stockholm
ISIN code (B-shares)	SE0010323311
Ticker symbol	BIOA

## FINANCIAL CALENDAR

Interim report January – September 2017	November 8, 2017
Year-end report 2017	February 20, 2018

# Summary

The summaries of Offering Circulars consist of information requirements set out in "Items". The items are numbered in the sections A-E (A.1 – E.7).

This summary contains all the items required in a summary for the relevant type of security and issuer. However, since some items do not apply to all types of Offering Circulars there may be gaps in the item numbering.

While it is required that an item be included in the summary of the relevant type of security and issuer, it is possible that no relevant information can be given on that item. In that case the information is replaced with a brief description of the item, along with the comment "Not applicable".

## SECTION A – INTRODUCTION AND WARNINGS

<b>A.1</b> <i>Introduction and warnings</i>	<p>This summary should be considered an introduction to the Offering Circular. Any investment in the securities should be based on an assessment of the Offering Circular as a whole.</p> <p>If a claim relating to the information contained in the Offering Circular is brought before a court, the investor claimant may, under the national laws of the member states, have to bear the costs of translating the Offering Circular before the legal proceedings are initiated.</p> <p>Civil liability may only be imposed on persons who have submitted the summary, including a translation thereof, but only if the summary is misleading, inaccurate or inconsistent with other parts of the Offering Circular, or if the summary and other parts of the Offering Circular are inadequate in providing investors with the key information they require to consider whether or not to invest in the securities.</p>
<b>A.2</b> <i>Consent to third party use of the Offering Circular</i>	Not applicable. BioArctic does not consent to the use of the Offering Circular by financial intermediaries for the purposes of subsequent resale or placement of the securities covered by this Offering Circular.

## SECTION B – ISSUER

<b>B.1</b> <i>Corporate name and trading name</i>	The name of the Company (and its trading name) is BioArctic AB and its company reg. no. is 556601-2679.
<b>B.2</b> <i>Domicile and legal form</i>	BioArctic is a Swedish public limited-liability company registered in the municipality of Stockholm. The Company has been established in Sweden under Swedish law and its organizational structure is governed the Swedish Companies Act (2005:551).
<b>B.3</b> <i>Description of the issuer's operations</i>	<p>BioArctic is a Swedish research-based biopharma company that develops new innovative disease modifying treatments based on antibodies (immunotherapy) for neurodegenerative diseases (i.e. diseases where the nervous system degenerates) such as Alzheimer's disease and Parkinson's disease and a treatment concept for complete spinal cord injuries (i.e. an injury where the spinal cord is completely broken).</p> <p>The Company's operations are focused on research and development of new drugs for diseases and conditions with great medical needs. The Company's operations are conducted at its premises in Stockholm and through research collaborations with research groups at Swedish universities and global pharma companies. As of June 30, 2017 the Company had 27 employees, most of them working with research and development. BioArctic also works in close cooperation with key consultants and contract organizations.</p>



**B.3** *Description of the issuer's operations cont.*

Research collaborations and partnerships are important parts of BioArctic's operations and over the years the Company has entered into a number of successful strategic collaborations for further development of the Company's product candidates. BioArctic has research collaborations with research groups at Uppsala University, Karolinska Institutet, Karolinska University Hospital, Gothenburg University, Linköping University and Lund University, among others. Research and development work in Alzheimer's disease is since 2005 conducted in partnership with the Japanese global pharma company Eisai Co. Ltd., but also in-house. Research concerning Parkinson's disease is since the autumn 2016 conducted in collaboration with the global biopharma company AbbVie Ireland Unlimited Company. BioArctic conducts in-house clinical development of the Company's treatment concept for complete spinal cord injury. The treatment concept was originally developed by Swenora Biotech AB and since 2008 BioArctic has a global exclusive license to further develop the technology and market and sell future products based on the technology. Several of the Company's projects have also received grant funding from Vinnova and the EU's research and development program Horizon2020.

BioArctic's primary product candidates are:

- ▲ BAN2401, a monoclonal antibody for disease modifying treatment of Alzheimer's disease. The drug candidate has been outlicensed to the Japanese pharma company Eisai and is currently undergoing a clinical Phase 2b study.
- ▲ BAN2401 back-up, a monoclonal antibody and follow-up to BAN2401 for disease modifying treatment of Alzheimer's disease. The drug candidate is in preclinical development and has been outlicensed to the Japanese pharma company Eisai.
- ▲ BAN0805, a monoclonal antibody for disease modifying treatment of Parkinson's disease. The drug candidate is in preclinical development in collaboration with AbbVie, which has an exclusive option for an exclusive license to BAN0805 and BioArctic's other antibodies targeting the protein  $\alpha$ -synuclein.
- ▲ SC0806, a combination of a medical device and a drug for treatment of complete spinal cord injury. The product candidate is currently undergoing a clinical Phase 1/2 study.

In addition BioArctic has several projects in research phase.

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**B.4a** *A description of significant trends in the industry*

Below some trends and tendencies that BioArctic consider to be important in the company's research areas are described.

**GREAT MEDICAL NEEDS ARE DRIVING THE DEVELOPMENT OF NEW DRUGS**

The lack of disease modifying treatments for Alzheimer's disease and Parkinson's disease means that there are great medical needs that are not met today. The great need for disease modifying treatments has led to an increased willingness for financial risk-taking in the connection with the development of such treatments. New government initiatives have also been launched to further the development of drugs in areas where effective treatments are lacking, such as opportunities for conditional approval or accelerated and prioritized review processes.

**GREAT NEED FOR NEW DIAGNOSTIC METHODS**

There is a great need for the development of better and more specific diagnostic methods for Alzheimer's disease and Parkinson's disease, in order to enable a correct diagnosis at an earlier stage and thereby earlier treatment, and to objectively measure the effect of drug treatment and disease progression.

**DEMOGRAPHIC DEVELOPMENT**

Neurodegenerative diseases like Alzheimer's disease and Parkinson's disease primarily affect elderly. Demographic trends such as an aging population mean that an increasing number of patients are affected by Alzheimer's disease and Parkinson's disease.

**COLLABORATIONS BETWEEN PHARMA COMPANIES**

It is becoming increasingly common that big global pharma companies are collaborating with smaller research-based companies in the development of drugs. As a result of larger and costlier Phase 3 studies it is also becoming increasingly common that big pharma companies enter into collaborations with each other. An example of this is Eisai's collaboration with Biogen Inc. regarding Alzheimer's disease.

**INCREASED FOCUS ON ORPHAN DRUG INDICATIONS**

There is an increased interest in the development of efficient treatments for orphan drug indications among pharma companies as well as regulatory authorities.

**INCREASED FOCUS ON REDUCING SOCIETY'S COSTS FOR DRUGS**

The costs for drugs are generally financed or subsidized by public or private reimbursement systems. New drugs are often costly due to the massive investments made during the development process. There is increased political pressure to reduce society's costs for drugs and the current systems for financing, subsidizing and pricing of drugs may come to change.

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**B.5** *The Group*

The Company is the parent company of the wholly-owned Swedish companies Spine-Medical AB, company reg. no. 559003-7080, and LPB Sweden AB, company reg. no. 559035-9112.

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**B.6** *Major shareholders, control of the Company, and notifiable parties*

The Swedish Financial Instruments Trading Act (1991:980) has rules on reporting obligations with regard to certain changes in shareholdings in companies whose shares are admitted to trading on a regulated market (so called flagging). According to Chapter 4. 5 § LHF a change of ownership shall be notified if the change means that the percentage of all shares of the company or of the voting rights of all shares in the company that the holding represents reaches, exceeds or falls below any of the limits 5, 10, 15, 20, 25, 30, 50, 66 2/3 and 90%.

Below the four largest shareholders in BioArctic according to Euroclear as of September 26, 2017, with account taken for known changes thereafter.

Owner	Number of A-shares (10 votes per share)	Number of B-shares (1 vote per share)	Number of votes	Share of capital (%)	Share of votes (%)
Demban AB <sup>1)</sup>	8,639,998	27,038,088	113,438,068	56.58	58.88
Ackelsta AB <sup>2)</sup>	5,759,998	18,026,393	75,626,373	37.72	39.25
Karolinska Development AB	–	1,999,995	1,999,995	3.17	1.04
Uppsala universitet Holding AB	–	999,990	999,990	1.59	0.52
<b>Largest shareholders</b>	<b>14,399,996</b>	<b>48,064,466</b>	<b>192,064,426</b>	<b>99.06</b>	<b>99.69</b>
Other shareholders (31)	–	595,523	595,523	0.94	0.31
<b>Total</b>	<b>14,399,996</b>	<b>48,659,989</b>	<b>192,659,949</b>	<b>100.00</b>	<b>100.00</b>

1) Demban AB is controlled by board director Lars Lannfelt

2) Ackelsta AB is controlled by board director Pär Gellerfors

The Company's main shareholders, Demban AB and Ackelsta AB, will, if the Offering is fully extended and the Over-allotment option is fully utilized, own over-allotment option is fully subscribed, own a total of 14,339,996 A-shares and 38,081,148 B-shares after the Offering, corresponding to 59.6% of the shares and 83.7% of the votes in the Company. Demban AB is controlled by board director Lars Lannfelt and Ackelsta AB is controlled by board director Pär Gellerfors. The Main Shareholders have, through their ownership, the possibility to exercise a significant influence in matters requiring the approval of the shareholders at the general meeting, including the appointment and removal of board directors, decisions on new share issues and amendment of the articles of association. The Companies Act and other applicable regulations and recommendations for corporate governance, such as the Swedish Code of Corporate Governance and good stock market practice, contain rules and principles that prevent the abuse of such a significant influence.

**B.7** *Selected historical financial information*

The selected historical financial information below derives from BioArctic's consolidated financial reports as per and for the financial years ending on 31 December 2016 and 2015, which have been prepared in accordance with both International Financial Reporting Standards ("IFRS") as adopted by the EU and RFR 1 Supplementary Accounting Rules for Groups and audited by BioArctic's auditor pursuant to RevR5 Examination of Financial Information in Prospectuses. The information regarding the periods January – June 2017 and January – June 2016 derives from BioArctic's interim report for the period January – June 2017 which has been prepared in accordance with IAS 34 Interim Financial Reporting and reviewed by BioArctic's auditor. No other information in the Offering Circular has been reviewed or audited by the Company auditor.

The Company applies ESMA's guidelines for alternative key figures. An alternative key figure is a financial metric that is not defined or stated in applicable rules for financial reporting (for example IFRS and the Swedish Annual Accounts Act). The alternative key figures shall therefore be explained in financial reports and prospectuses. In accordance with these guidelines, the Company's alternative key figures are defined on page 71 of the Offering Circular, together with key figures defined in accordance with IFRS. The Company considers these alternative key figures to be an important addition, as they enable investors, securities analysts, the Company management, stakeholders and others to better analyze and evaluate the Company's business and economic trends. These alternative financial key figures should not be assessed independently or be considered to replace key figures of performance which have been calculated in accordance with IFRS. Moreover, such key figures, as defined by BioArctic, should not be compared with other key figures with similar names used by other companies. This is due to the fact that the above mentioned key figures are not always defined in the same way and other companies may calculate them in a different way than BioArctic.

**CONSOLIDATED INCOME STATEMENT**

All amounts in TSEK	Unaudited		Audited	
	Jan-Jun 2017	Jan-Jun 2016	Jan-Dec 2016	Jan-Dec 2015
Net sales	58,192	9,991	105,613	41,573
Cost of goods sold	-266	-	-238	-
<b>Gross profit</b>	<b>57,926</b>	<b>9,991</b>	<b>105,375</b>	<b>41,573</b>
Other operating income	5,914	5,367	39,073	7,594
Selling expenses	-696	-689	-1,370	-1,453
Administrative expenses	-10,648	-4,362	-14,544	-4,558
Research and development costs	-43,324	-22,715	-53,665	-38,238
Other operating expenses	-5,229	-100	-238	-74
<b>Operating profit</b>	<b>3,943</b>	<b>-12,508</b>	<b>74,631</b>	<b>4,844</b>
Results from participations in Group companies	-	-	-	-11
Financial income	539	256	8	266
Financial expenses	-12	-1	-503	-308
<b>Result before tax</b>	<b>4,470</b>	<b>-12,253</b>	<b>74,136</b>	<b>4,791</b>
Tax	-1,034	2,626	-16,556	-1,081
<b>Result for the period<sup>1)</sup></b>	<b>3,436</b>	<b>-9,627</b>	<b>57,580</b>	<b>3,710</b>

1) The result for the period is attributable in its entirety to the parent company's shareholders.



**B.7** *Selected historical financial information, cont.*

**CONSOLIDATED BALANCE SHEET**

All amounts in TSEK	Unaudited		Audited	
	June 30, 2017	June 30, 2016	Dec 31, 2016	Dec 31, 2015
<b>ASSETS</b>				
<b>Non-current assets</b>				
<b>Property, plant and equipment</b>				
Leasehold improvements	1,091	1,435	1,275	1,680
Equipment	4,214	2,046	4,369	2,554
<b>Financial assets</b>				
Deferred tax assets	201	130	172	88
Other financial assets	2,675	8,345	2,675	8,345
<b>Total non-current assets</b>	<b>8,181</b>	<b>11,956</b>	<b>8,491</b>	<b>12,667</b>
<b>Current assets</b>				
Accounts receivable	–	760	634	646
Other receivables	2,665	3,988	1,764	2,068
Prepaid expenses and accrue income	5,888	1,728	4,557	1,899
Cash and cash equivalents	622,063	93,411	692,530	113,831
<b>Total current assets</b>	<b>630,616</b>	<b>99,887</b>	<b>699,485</b>	<b>118,444</b>
<b>TOTAL ASSETS</b>	<b>638,797</b>	<b>111,843</b>	<b>707,976</b>	<b>131,111</b>
<b>SHAREHOLDERS' EQUITY AND LIABILITIES</b>				
<b>Shareholders' equity</b>				
Share capital	105	105	105	105
Other capital contributed	958	958	958	958
Accumulated profit including result for the year	63,133	97,595	59,697	107,217
Parent Company shareholders	64,196	98,658	60,760	108,280
Non-controlling interests	–	–	–	5
<b>Total shareholders' equity</b>	<b>64,196</b>	<b>98,658</b>	<b>60,760</b>	<b>108,285</b>
<b>Long-term liabilities</b>				
Deferred tax liabilities	4,136	–	4,136	–
<b>Total long-term liabilities</b>	<b>4,136</b>	<b>–</b>	<b>4,136</b>	<b>–</b>
<b>Current liabilities</b>				
Accounts payable	8,249	1,919	11,736	1,155
Tax liabilities	1,217	–	6,917	1,122
Other current liabilities	1,000	1,968	1,091	835
Accrued expenses and deferred income	559,999	9,298	623,336	19,714
<b>Total current liabilities</b>	<b>570,465</b>	<b>13,185</b>	<b>643,080</b>	<b>22,826</b>
<b>TOTAL SHARE-HOLDERS' EQUITY AND LIABILITIES</b>	<b>638,797</b>	<b>111,843</b>	<b>707,976</b>	<b>131,111</b>

**B.7** *Selected historical financial information, cont.*

**CONSOLIDATED STATEMENT OF CASH FLOW**

All amounts in TSEK	Unaudited		Audited	
	Jan-Jun 2017	Jan-Jun 2016	Jan-Dec 2016	Jan-Dec 2015
<b>Operating activities</b>				
<b>Operating profit</b>	<b>3,943</b>	<b>-12,508</b>	<b>74,631</b>	<b>4,844</b>
Adjustment for items not generating cash flow				
Prepaid revenues	-57,678	-11,917	-9,502	-22,729
Depreciation	892	753	1,556	1,536
Unrealized exchange rate differences	4,424	29	-12,139	-
Capital gain/loss	-	-	-	9
Interest received	-	-	7	233
Interest paid	-1	-1	-5	-9
Tax paid	-7,190	-339	-519	-606
<b>Cash flow from operating activities before changes in working capital</b>	<b>-55,610</b>	<b>-23,983</b>	<b>54,029</b>	<b>-16,722</b>
Changes in working capital	-10,407	3,336	621,102	288
<b>Cash flow from operating activities</b>	<b>-66,017</b>	<b>-20,647</b>	<b>675,131</b>	<b>-16,434</b>
<b>Investment activities</b>				
Acquisition of tangible assets	-553	-	-2,967	-2,291
Acquisition of Group companies	-	-	-5	-
Sale of Group companies	-	-	-	-11
Sales of tangible assets	-	-	-	20
<b>Cash flow from investing activities</b>	<b>-553</b>	<b>-</b>	<b>-2,972</b>	<b>-2,282</b>
<b>Financing activities</b>				
Transactions with non-controlling interests	-	-	-	5
Paid dividend	-	-	-105,100	-
<b>Cash flow from financing activities</b>	<b>-</b>	<b>-</b>	<b>-105,100</b>	<b>5</b>
<b>Cash flow for the period</b>	<b>-66,570</b>	<b>-20,647</b>	<b>567,059</b>	<b>-18,711</b>
Cash and cash equivalents at beginning of period	692,530	113,831	113,831	132,808
Exchange rate differences in cash and cash equivalents	-3,897	227	11,640	-266
<b>Cash and cash equivalents at end of period</b>	<b>622,063</b>	<b>93,411</b>	<b>692,530</b>	<b>113,831</b>

**B.7** *Selected historical financial information, cont.*

## KEY FIGURES AND DEFINITIONS

### IFRS key figures

The key figures below have been calculated in accordance with IFRS.

TSEK (unless otherwise stated)	Jan-Jun 2017	Jan-Jun 2016	Jan-Dec 2016	Jan-Dec 2015
Net sales	58,192	9,991	105,613	41,573
Result for the period	3,436	-9,627	57,580	3,710
Earnings per share, SEK <sup>1)</sup>	0.82	-2.29	13.70	0.88
Cash flow from operating activities	-66,017	-20,647	675,131	-16,434

1) Calculated on 4,203,999 outstanding shares. After June 30, 2017 a 1:15 share-split has been registered. The total number of shares after the split amounts to 63,059,985. There are no potential shares hence there is no dilution effect.

### Alternative key figures not defined in accordance with IFRS

TSEK (unless otherwise stated)	Jan-Jun 2017	Jan-Jun 2016	Jan-Dec 2016	Jan-Dec 2015
Operating profit	3,943	-12,508	74,631	4,844
Cash flow per share from operating activities, SEK <sup>1)</sup>	-15.7	-4.91	160.59	-3.91
Equity/assets ratio	10.0%	88.2%	8.6%	82.6%
Return on equity	5.5%	-9.3%	68.1%	3.5%
Equity per share, SEK <sup>1)</sup>	15.27	23.47	14.45	25.76

1) Calculated on 4,203,999 outstanding shares. After the end of the period a 1:15 share-split has been registered. The total number of shares after the split amounts to 63,059,985 shares. There are no potential shares hence there is no dilution effect.

### Definitions of key figures not defined in accordance with IFRS

Key figure	Definition	Reason for use of financial key figure not defined in accordance with IFRS
Operating profit	Result before financial items	The key figure show earnings ability without regard to the Company's financing
Cash flow per share from operating activities, SEK	The period's cash flow from the operating activities divided by the number of shares at the end of the period	The key figure shows the business generated cash flow per share before investments and before financing
Equity/assets ratio	Equity divided by total assets, expressed as a percentage	The key figure shows how large a part of the balance sheet total has been financed by equity and is used to measure the Company's financial position
Return on equity	Net income divided by equity as a percentage <sup>1)</sup>	The key figure shows the return on invested capital as a percentage
Equity per share, SEK	Equity divided by the number of shares at the end of the period <sup>2)</sup>	The key figure shows how large a part of the company's equity can be attributed to a share. This key figure thus shows the development of the book value for the shareholders

1) Average equity is defined as equity at the beginning of the period plus equity at the end of the period divided by two.

2) BioArctic's interim report for the period January 1, 2017 - June 30, 2017 incorrectly states that the current key figure is calculated as equity divided by the average number of shares. However, this has not affected the calculation.

### SIGNIFICANT EVENTS DURING THE PERIOD JANUARY - JUNE, 2017 AND AFTER JUNE 30, 2017

BioArctic's net sales increased by 48,201 TSEK from 9,991 TSEK during the period January 1 - 30 June, 2016 to 58,192 TSEK during the same period 2017. The increase in net sales was mainly attributable to the research collaboration entered into with AbbVie in September 2016.

The Company's other operating income increased by 547 TSEK from 5,367 TSEK during the period January 1 - 30 June, 2016, to 5,914 TSEK during the same period 2017. The net increase was mainly attributable to increased unrealized exchange profits and a lump sum payment received by the Company in connection with the termination of a sublease agreement, but also to lower grants from Vinnova.

<b>B.7</b> <i>Selected historical financial information, cont.</i>	<p>The operating expenses (including costs of goods sold) increased by 32,297 TSEK from 27,866 TSEK during the period January 1 – 30 June, 2016, to 60,163 TSEK during the same period 2017. The increase in operating expenses was mainly a result of increased administrative costs in the amount of 6,286 TSEK attributable to costs related to new research cooperation agreements and the requirements that will be imposed on the Company in a listed environment, and increased research and development costs in the amount of 20,609 TSEK mainly attributable to the research collaboration entered into with AbbVie.</p> <p>No significant events that affects the Company's financial situation or position on the market has occurred after June 30, 2017.</p> <p>On June 30, 2017, the balance sheet total ran up to 638,797 TSEK compared to 111,843 TSEK as of June 30, 2016. The increase of the balance sheet total of 526,954 TSEK is attributable to a lump payment from AbbVie in the amount of 80 MUSD which was obtained in the autumn 2016.</p> <p>On June 30, 2017, the shareholders' equity amounted to 64,196 TSEK, compared to 98,658 TSEK as of June 30, 2016. The decrease of 34,462 TSEK was mainly a result of a dividend of 105,100 TSEK in November 2016 and a net result of 67,207 TSEK under the second half of 2016. On June 30, 2017, the Company's cash and cash equivalents amounted to 622,063 TSEK, compared to 93,411 TSEK as of June 30, 2016. The increase of 528,652 TSEK is mainly attributable to the lump payment from AbbVie in the amount of 80 MUSD which was obtained in the autumn 2016.</p>
<b>SIGNIFICANT EVENTS IN 2015 AND 2016</b>	
<p>BioArctic's net sales increased by 64,040 TSEK from 41,573 TSEK in 2015 to 105,613 TSEK in 2016. The increase in net sales was mainly attributable to the research collaboration agreement entered into with AbbVie in the autumn 2016, and the lump sum payment in the amount of 80 MUSD which was obtained in connection with the signing of the agreement.</p>	
<p>The Company's other operating income increased by 31,479 TSEK from 7,594 TSEK in 2015 to 39,073 TSEK in 2016. The increase was mainly attributable to grants from Horizon2020 (EU) and foreign exchange gains.</p>	
<p>The operating expenses including cost of goods sold increased by 25,732 TSEK from 44,323 TSEK in 2015 to 70,055 TSEK in 2016. The increase was mainly attributable to increased administration costs with 9,986 TSEK, related to the payment of bonuses, increased consultancy costs in connection with the preparations for the listing and an increase in the Company's research and development costs with 15,427 TSEK, mainly as a result of the research collaboration entered into with AbbVie.</p>	
<p>On December 31, 2016, the balance sheet total amounted to 707,976 TSEK, compared to 131,111 TSEK as of December 31, 2015. The increase of 576,865 TSEK is mainly attributable to the lump payment from AbbVie in the amount of 80 MUSD which was obtained in the autumn 2016. On December 31, 2016, the shareholders' equity amounted to 60,760 TSEK, compared to 108,285 TSEK as of December 31, 2015. The decrease of 47,525 TSEK was attributable to the dividend and to the profit for the year. On December 31, 2016, the Company's cash and cash equivalents amounted to 692,530 TSEK, compared to 113,831 TSEK as of December 31, 2015. The increase of 578,699 TSEK is mainly attributable to the lump payment from AbbVie in the amount of 80 MUSD which was obtained in the autumn 2016.</p>	
<b>B.8</b> <i>Selected pro-forma financial information</i>	Not applicable. The Offering Circular does not contain any pro-forma financial information.
<b>B.9</b> <i>Earnings forecast</i>	Not applicable. The Offering Circular does not contain any earnings forecast.
<b>B.10</b> <i>Notes in the audit report</i>	Not applicable. There are no notes in the auditor's reports for the historical financial information covered by the Offering Circular.
<b>B.11</b> <i>Insufficient working capital</i>	Not applicable. BioArctic believes that the current working capital is sufficient for the current needs in the coming twelve month period. This means that the Company can meet its payment obligations as they fall due.

## SECTION C – SECURITIES

<b>C.1</b> <i>Securities offered</i>	B-shares in BioArctic AB (ISIN SE0010323311).
<b>C.2</b> <i>Currency</i>	The shares are denominated in SEK.
<b>C.3</b> <i>Shares issued</i>	At the day of the Offering Circular the Company's registered share capital amounts to 1,261,199.70 SEK distributed on 63,059,985 shares, 14,339,996 A-shares and 48,659,989 B-shares, each share with a quota value of 0.02 SEK. All shares are fully paid.

<b>C.4</b> <i>Rights associated with the securities</i>	<p>A-shares entitle the holder to ten votes per shares, B-shares entitle to one vote per share.</p> <p>If the Company decides to issue new shares the shareholders as a general rule have preferential subscription rights to new shares of the same class in proportion to the number of shares they already own. The same applies in the case of the issuance of warrants or convertible bonds entitling to subscription of or conversion to shares of a specified class of shares.</p> <p>All shares carry equal rights to the company's assets and earnings as well as to any surplus on liquidation. Decisions to pay dividends are made by the general meeting. The payment is arranged by Euroclear. The right to receive dividend payment belongs to the person who on the record date determined by the general meeting is registered as a holder of shares in the share register kept by Euroclear.</p>
<b>C.5</b> <i>Transfer restrictions, if any</i>	Not applicable. The shares are not subject to any restrictions on their free transferability.
<b>C.6</b> <i>Admission for trading on the regulated market</i>	<p>The Company's board has applied for admission of the Company's B-shares for trading on Nasdaq Stockholm. On September 6, 2017 the Nasdaq Stockholm Listing Committee decided to admit the Company's B-shares for trading with customary provisions, among other things that distribution requirements for the Company's shares are met at the latest on the first day of trading, which is expected to be October 12, 2017.</p>
<b>C.7</b> <i>Dividend policy</i>	<p>BioArctic's revenue and profit are today based mainly on income of non-recurring character under the license and collaboration agreements the Company has entered into. BioArctic will continue to focus on the further development and expansion of the Company's project portfolio. Available financial resources and the reported result shall therefore be reinvested in the operations to finance the Company's long-term strategy. The Board's intention is therefore not to propose any dividends to the shareholders until the Company generates long-term sustainable profitability. Any future dividends and the size thereof will be determined on the basis of the Company's long-term growth, earnings trend and capital requirements, taking into account the current objectives and strategies adopted. Dividends shall, in so far as dividends are proposed, be well-balanced with respect to the goals, scope and risks of the operations.</p> <p>Since 2015 dividend has been paid on one occasion, when the Company in November 2016 paid a dividend of 25 SEK per share or 105.1 MSEK in total.</p>

## SECTION D – RISKS

<b>D.1</b> <i>Risks related to the Company and the industry</i>	<p>A number of factors beyond the Company's control, as well as a number of factors the effect of which the Company can influence through its actions, may have a negative impact on the Company's operations, result and financial position. Also other risks and uncertainties that are not currently known to the Company or are currently not considered to be significant, may also negatively affect the Company's operations, result and financial position. Below the main risks linked to the Company's operations and market are summarized, without ranking.</p> <ul style="list-style-type: none"> <li>▲ Risks related to that the development of the Company's product candidates becomes more costly or takes longer than expected, that development projects are discontinued e.g. as the compounds or treatment methods that have been developed do not have the intended effect or have proven to have too severe side effects, or that development projects have become less attractive to complete as a consequence of the product development conducted by the Company's competitors.</li> <li>▲ Risks related to that the implementation of clinical trials is costly, time-consuming and their outcomes and results difficult to predict. The results from preclinical studies do not always correspond to results obtained in clinical studies in humans. Results from smaller clinical studies do not always correspond to the results from more comprehensive studies. Unexpected and/or unsatisfactory study results can mean that concepts and development programs must be re-evaluated, meaning that further studies may be required at high costs, or that development programs are cancelled. BioArctic has two projects in clinical phase – BAN2401 in late Phase 2b in patients with early Alzheimer's disease and SC0806 in combined Phase 1/2 in patients with complete spinal cord injury.</li> <li>▲ Risks related to that the Company's measures to ensure compliance with relevant regulations and approval conditions may be insufficient and that the Company does not fulfill all requirements on the Company. This could damage BioArctic's reputation and lead to delays and/or increased costs for the Company. The Company can furthermore be subject to sanctions such as fines, penalty payments and cancellation of permits.</li> <li>▲ Risks related to that the Company or its partners do not get and retain the necessary regulatory approvals and registrations.</li> </ul>
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**D.1** *Risks related to the Company and the industry, cont.*

- ▲ Risks related to that the Company's patents and other intellectual property rights do not provide adequate commercial protection, that the Company does not succeed in getting or defending its patents or that a third party infringes on the Company's patents or other intellectual property rights. A third party unknown to the Company has raised objections to one of BioArctic's patents (AD II which is a concept patent) and claims that the patent should not have been approved in Europe. European Patent Office (EPO) has made its decision at Oral Proceedings held on 26 September 2017, with the conclusion that the patent is revoked in Europe. The decision from EPO may be appealed within two months from when the written decision is issued by EPO. However, the patent is granted in the US, Canada and Australia and is not affected by the decision. BioArctic will consider appealing the decision, when the written decision is issued. In addition, a third party unknown to the Company has submitted observations (Third Party Observations) to the European Patent Office in connection with the processing of BioArctic's European patent application in the patent family PD V (which is a concept patent). Further, employees making inventions that are acquired by the Company may under certain circumstances be entitled to compensation in addition to the compensation under their terms of employment. The right to compensation is according to law and cannot be negotiated away in advance through the terms of the employment contract or similar. There is thus a risk that employees making inventions that are acquired by the Company may claim additional compensation from the Company.
- ▲ Risks related to that the Company may infringe on or be accused of infringing on patents or other intellectual property rights held by third parties, or that patents or other intellectual property rights held by third parties may limit the possibilities of the Company or one or more of the Company's future partners to freely use the Company's product candidates. The outcomes of intellectual property rights disputes are often difficult to predict. A negative outcome in an intellectual property rights dispute may have serious consequences in the form of a ban on the continued use of the right in question or an obligation to pay damages. The costs for a dispute can be considerable, also in the case of a positive outcome for the Company.
- ▲ Risks related to that the Company has not succeeded to ensure that trade secrets are not spread or used in a way that harms the Company.
- ▲ Risks related to the fiercely competitive situation on the markets where the Company operates and to factors affecting prices, e.g. public and private systems for reimbursement and subsidies.
- ▲ Risks related to that the Company is dependent on partners for the development and sales of the Company's product candidates. The performance of clinical studies, especially in Phase 3, requires extensive resources and it is therefore common that small, research-intensive companies like BioArctic enter into collaboration or licensing agreements with bigger players in the pharma business that run and finance continued clinical studies, processes for marketing approval and sales and marketing of the approved product. In the Alzheimer area BioArctic has entered into strategic collaboration agreements with the Japanese global pharma company Eisai, and in the Parkinson area BioArctic has entered into a collaboration agreement with the American global biopharma company AbbVie. There is a risk that current or future collaboration agreements are cancelled. The Company's partners can also decide to change their priorities and the resource allocation to their projects, which may mean that the development and commercialization of the Company's product candidates may be allocated less resources or be discontinued. There is also a risk that the Company does not succeed in entering into collaboration agreements concerning projects where this is considered to be necessary or suitable, which can mean that the continued development, the implementation of preclinical and clinical trials and future commercialization is delayed, impeded or fails to materialize. BioArctic has also provided some guarantees to its partners, entailing that BioArctic will be liable to pay its partners damages in case of failure to meet these guarantees.
- ▲ Risk related to the fact that the Company is dependent on subcontractors for manufacturing of the substances and medical devices needed for the Company's product development and the carrying out of preclinical and clinical studies. There is a risk that the Company's suppliers do not meet applicable quality demands, that delays occur, or that one or more of the Company's suppliers choose to break off their cooperation with the Company.

<b>D.1</b> <i>Risks related to the Company and the industry, cont.</i>	<ul style="list-style-type: none"> <li>▲ Risks related to that the Company is dependent on the competence and experience of senior executives and key personnel at BioArctic. If the Company were to lose key personnel or if the Company in the future cannot recruit qualified employees this could lead to delays or interruptions in the Company's projects, which could have negative consequences for the Company's operations and result.</li> <li>▲ Risks related to the Company's product liability for personal injuries caused by the use of the Company's products and the Company's responsibility for any incidents that occur in clinical studies with the Company's product candidates where the Company is the sponsor, also when clinical studies are carried out by an external party.</li> <li>▲ Risks related to that the Company's operations are dependent on custom built facilities and certain laboratory equipment. There is a risk that the Company's premises or equipment are damaged e.g. by fire, theft or sabotage, which may lead to delays and increased costs and/or lost revenue for the Company.</li> <li>▲ Risks related to that the Company is dependent on a well-functioning IT environment and the continuous operation of various IT systems in order to run its operations, which means that a major crash or other disturbance in the IT systems can affect the ability to run the operations in general, including BioArctic's research and development work. BioArctic's measures for maintaining security and integrity of personal information and proprietary information and the Company's security measures concerning its systems and other security procedures may be insufficient and there is thus a risk for unauthorized intrusions or the disclosure of personal data or proprietary information.</li> <li>▲ Risks related to that the Company obtains no income from product sales and therefore is dependent of being able to finance its operations in other ways. There is a risk that the Company cannot obtain sufficient capital to finance its product development and planned clinical studies. This can lead to an interruption of the development activities or to BioArctic having to run the operations at a slower pace than desired, which can lead to commercialization and income being delayed or failing to materialize.</li> <li>▲ Risks related to external factors such as supply and demand, economic prosperity and recession, inflation, currency fluctuations and interest rate increases that can affect operating costs and sales prices.</li> </ul>
<b>D.3</b> <i>Risks related to the securities</i>	<p>Investments in securities are associated with risk. Such risks can lead to a reduced value of the Company's shares and that shareholders may lose all or a part of their invested capital. The main risks associated with BioArctic's shares are summarized below, in no particular order.</p> <ul style="list-style-type: none"> <li>▲ Risks related to the development of the share price after the listing, share price fluctuations and psychological factors on the stock market, or that no liquid trading in the Company's share develops after the listing.</li> <li>▲ Risks related to that the subscription commitments made by some investors in connection with the Offering are not covered by a bank guarantee, pledge, deposit or similar arrangement.</li> <li>▲ Risks related to that the Company may not be able to generate results that enable dividends in the future, or that the General Meeting does not decide on dividends.</li> <li>▲ Risks relating to that future new issues can lead to a dilution of the shareholders holdings and that shareholders in some jurisdictions may be prevented from exercising their preferential rights in future new issues.</li> <li>▲ Risks related to that the Company's Main Shareholders,</li> <li>▲ Demban AB and Ackelsta AB, have the possibility to exercise a significant influence in cases that require the approval of the shareholders at the General Meeting. This influence may be to the detriment of shareholders whose interests are different than those of the Main Shareholders. Demban AB is controlled by board member Lars Lannfelt and Ackelsta AB is controlled by board member Pär Gellerfors.</li> <li>▲ Risks related to that future sales of large blocks of shares can affect the price of the Company's share negatively.</li> </ul>

## SECTION E – INFORMATION ABOUT THE OFFERING

<b>E.1</b> <i>Revenues and costs relating to the Offering</i>	<p>If the Offering is fully subscribed it will bring the Company approx. 600 MSEK before expenses for the Offering and listing on Nasdaq Stockholm. These costs are estimated to amount to a maximum of 50 MSEK and the Company's total net income from the Offering thus amounts to approx. 550 MSEK.</p>
<b>E.2a</b> <i>Rationale for the Offering and Use of Proceeds</i>	<p>The Company's strategy is to consolidate its position as a leading player in diseases and injuries of the central nervous system. As a part of the strategy the Company intends to continue the development and expansion of the current project portfolio and to develop new product candidates, diagnostics and technology to improve the quality of life for patients with neurodegenerative diseases and complete spinal cord injury. Long-term BioArctic intends to establish its own sales organization in selected markets, which would increase the revenue base in the form of income from sales of the Company's proprietary product candidates.</p> <p>The Company's strategic collaborations with Eisai and AbbVie mean that a number of the Company's projects, among them the development of the drug candidates BAN2401 and BAN2401 back-up for treatment of Alzheimer's disease and BAN0805 for treatment of Parkinson's disease, are fully financed as BioArctic receives compensation for research collaborations, or the further development is carried out by the Company's partner. In addition to the projects that BioArctic runs in collaboration with Eisai and AbbVie the Company's project portfolio includes a number of proprietary projects that have so far been financed by grant funding, license revenue and milestone payments obtained under the Company's collaboration agreements. An important part of the Company's strategy is to increase the pace and efficiency of the further development of the Company's proprietary projects, which will require increased resources.</p> <p>In line with the above strategy the Company has decided to carry out a new share issue in connection with the listing on Nasdaq Stockholm in order to bring additional resources to its proprietary projects and thereby make it possible to carry out the continued development work in a more focused and effective way. If fully subscribed the net proceeds from the issue is expected to amount to approx. 550 MSEK after the deduction of expenses related to the Offering. BioArctic intends to use the net proceeds from the new share issue according to the order of priority given below, with the approximate share of the issue proceeds given in percent (%):</p> <ul style="list-style-type: none"> <li>▲ Further development of two innovative disease modifying treatments for Alzheimer's disease (AD1502 and AD1503): 25–35%</li> <li>▲ Widening of the indication for BAN2401 to treatment of dementia and cognitive impairment in patients with Down's syndrome and patients with traumatic brain injury: 25–30%</li> <li>▲ Completion of the clinical Phase 1/2 study of SC0806 for the treatment of complete spinal cord injury and registration in the EU, and preparations for the start of Phase 3 studies in Europe and the US: 15–20%</li> <li>▲ Further development of diagnostic methods for Alzheimer's disease (imaging of the brain and biochemical biomarkers): 15–20%</li> <li>▲ Further development of technology to improve the passage of antibodies across the blood-brain barrier: 10–15%.</li> </ul>
<b>E.3</b> <i>Forms and terms of the Offering</i>	<p><b>THE OFFERING</b></p> <p>The Offering is directed to the general public in Sweden and to institutional investors in Sweden and abroad. The Offering includes 25,000,000 newly issued B-shares.</p>

### EXTENSION OF THE OFFERING

The Main Shareholders have reserved the right to increase the Offering by no more than 4 166 666 existing B-shares, corresponding to no more than 16.7% of the number of shares in the Offering.

### OVER-ALLOTMENT OPTION

Demban AB, Ackelsta AB, Karolinska Development AB and Uppsala universitet Holding AB have granted an over-allotment option to the Joint Bookrunners, meaning that the Joint Bookrunners, within 30 days from the first day of trading of the Company's B-shares on Nasdaq Stockholm, has the right to acquire up to a total of 4,375,000 B-shares from aforementioned shareholders, corresponding to a maximum of 15% of the number of shares in the Offering, at a price equivalent to the price in the Offering. The over-allotment option may only be used for the purpose of covering any over-allocation of the Offering

**E.3** *Forms and terms of the Offering, cont.*

**APPLICATION PERIOD AND APPLICATION**

The application period for the general public in Sweden is October 2–10, 2017. Application for the acquisition of shares must be for a minimum of 100 B-shares and a maximum of 40,000 B-shares in blocks of 100 B-shares.

The application period for institutional investors in Sweden and abroad is October 2–11, 2017.

The Company's board reserves the right to extend or shorten the application period in the Offering.

The application is binding.

**OFFER PRICE**

The price in the Offering has been set to 24 SEK per B-share by the Company's board of directors in consultation with the Joint Bookrunners, based on a number of factors, including discussions with certain institutional investors, a comparison with the market price of other comparable listed companies, an analysis of previous transactions carried out for companies in the same industry and development phase, current market conditions and estimations regarding the Company's commercial potential and earnings prospects. No commission is payable.

**ALLOTMENT**

Decisions on the allotment of shares will be made by the Company's board of directors in consultation with the Joint Bookrunners, where the goal is to achieve a wide spread of shares among the public in order to enable regular and liquid trading of the Company's shares on Nasdaq Stockholm. When deciding on the allotment of shares in the Offering to institutional investors, efforts will be made to achieve a good institutional ownership base for BioArctic. Cornerstone Investors, however, are guaranteed allocation corresponding to their respective subscription commitments. The Third AP Fund, HBM Healthcare Investments, Handelsbanken Fonder AB, The Second AP Fund and John Wattin/Inbox Capital are Cornerstone Investments and their subscription commitment amounts to 100 MSEK or 4,166,667 shares, 65 MSEK or 2,708,333 shares, 50 MSEK or 2,083,334 shares, 25 MSEK or 1,041,667 shares respectively 25 MSEK or 1,041,667 shares, corresponding to 32,9% of the Offering (based on full extension of the Offering and full utilization of the Over-allotment option).

In the event of oversubscription, allotment may be withheld or made with a lower number of shares than that stated in the application, in which case allocation may be determined in full or in part by random selection.

Employees and some key consultants in BioArctic will be prioritized in the allotment of shares equal to no more than 30 TSEK per person. Customers of the Joint Bookrunners may be prioritized in connection with the allotment. Allotment can also be made to employees of the Joint Bookrunners, however with no priority. Allotment will in such cases be made in accordance with the rules of the Swedish Securities Dealers Association and the regulations of the Swedish Financial Supervisory Authority.

**CONDITIONS**

The Company, the Main Shareholders and the Joint Bookrunners intend to enter into an agreement on the placing of shares in BioArctic on or around October 11, 2017 ("the **Placing Agreement**").

The Offering is conditional upon that interest for the Offering is large enough, in the view of the Joint Bookrunners, for achieving appropriate trading in the share, that the Placing Agreement is entered into, that certain customary completion conditions in the agreement are fulfilled, and that the Placing Agreement is not terminated. The Joint Bookrunners can terminate the Placing Agreement up to the settlement date October 16, 2017 if any material adverse events occur, if the guarantees that the Company and the Main Shareholders have given the Joint Bookrunners should prove to be deficient, or in the case of non-fulfilment of other terms of the investment agreement.

**LISTING AND ADMISSION TO TRADING ON NASDAQ STOCKHOLM**

The Company's board of directors has applied for admission of the Company's B-shares for trading on Nasdaq Stockholm. On September 6, 2017 the Nasdaq Stockholm Listing Committee decided to admit the B-shares in BioArctic for trading with customary conditions, among other things that the distribution requirement for the Company's B-share is met at the latest on the day of listing.

<b>E.3</b> <i>Forms and terms of the Offering, cont.</i>	<p><b>STABILIZATION</b></p> <p>In connection with the Offering the Joint Bookrunners may carry out transactions on Nasdaq Stockholm that stabilize the price of the share or keeps this price at another level than what otherwise might have been the case on the market. Stabilizing transactions will under no circumstances be performed at a higher price than the price in the Offering.</p>
<b>E.4</b> <i>Interests and conflicts of interest</i>	<p>Carnegie and DNB are financial advisors to the Company in connection with the Offering. Carnegie is also the issuing agent. Carnegie and DNB receive a pre-arranged compensation in connection with the Offering.</p> <p>Advokatfirman Lindahl KB is the legal advisor to the Company in connection with the Offering and receives compensation on current account for services rendered according to contract. Advokatfirman Lindahl KB has no a financial or other interest in the Offering in addition to this.</p> <p>No conflicts of interest are expected to exist between the Company and the parties that according to the above have financial or other interests in the Offering.</p> <p>Advokatfirman Lindahl KB also provides other business legal services to the Company and receives compensation on current account for such services under contract. Former board director Mikael Smedeby is active as a lawyer and partner in Advokatfirman Lindahl and has previously also been a board director of Advokatfirman Lindahl.</p>
<b>E.5</b> <i>Sellers of the securities and lock-up agreements</i>	<p>Demban AB and Ackelsta AB (the Main Shareholders) are together with Karolinska Development AB and Uppsala universitet Holding AB selling shareholders. Demban AB is controlled by board director Lars Lannfelt and Ackelsta AB is controlled by board director Pär Gellerfors.</p> <p>Before listing on Nasdaq Stockholm the Main Shareholders, board directors and senior executives holding shares in the Company and certain selected shareholders have entered into an agreement with Carnegie, under which these persons commit for a certain period from the first day of trading on Nasdaq Stockholm not to sell, lend, pledge or otherwise transfer shares or other securities entitling to subscription or exchange for shares in the Company without written consent from Carnegie.</p> <p>Notwithstanding the above, however, shares may be sold under the terms of a public offer for the purchase of shares. The lock-up commitments apply during twelve months from the first day of trading, except for the Main Shareholders, whose lock-up commitments apply during 18 months from first day of trading and Karolinska Development AB and Uppsala universitet Holding AB, whose lock-up commitments apply for six months from the first day of trading.</p> <p>Furthermore the Company has made a commitment to Carnegie not to issue new shares or other securities in the Company without Carnegie's consent for period of 365 days from the first day of trading on Nasdaq Stockholm. Carnegie decides when such consent can be given with regard to the purpose of the lock-up agreement.</p>
<b>E.6</b> <i>Dilution effect</i>	<p>At full subscription of the Offering, the number of B-shares will increase by no more than 25,000,000 B-shares, which means that the number of shares in the Company after the Offering will be no more than 88,059,985, of which 14,399,996 A-shares and 73,659,989 B-shares. If the Offering is fully subscribed the A-shares will represent a total of 16.4% of the shares and 66.2% of the votes and the B-shares will represent a total of 83.6% of the shares and 33.8% of the votes in the Company.</p> <p>The Offering implies a dilution of a maximum of 28.4% of the total number of shares and a maximum of 11.5% of the total number of votes in the Company.</p> <p>The dilution effect for the shares has been calculated by the maximum number of shares issued in the offer divided by the maximum total number of shares which the Company may have after the Offering. The dilution effect for the votes in the Company has been calculated by the total number of votes that the maximum number of shares in the Offering entitles to divided by the total number of votes in the Company after the Offering.</p>
<b>E.7</b> <i>Costs for the investor</i>	<p>Not applicable. No costs will be imposed on investors in the Offering.</p>



# Risk factors

*An investment in shares is always associated with risk. A number of factors beyond the Company's control, as well as a number of factors the effect of which the Company can influence through its actions, may have a negative impact on the Company's operations, result and financial position, which can cause the shares of the Company to decrease in value and lead to shareholders losing all or part of their investment. The following account does not claim to be complete. Also other risks and uncertainties that are not currently known to the Company, or that are currently not considered to be significant, may also negatively affect the Company's operations, financial position, result or share price. The sequence in the description of the risk factors is not arranged according to degree of significance and it is not intended to rank the likelihood for the occurrence of the various circumstances. Nor does it give any indication of how great impact the risks could have on the Company's operations, financial position, result or share price.*

*In assessing the Company's future development it is important to take into account and evaluate these risk factors. Ownership of shares is always associated with risk and persons considering acquiring shares in the Company are therefore urged, in addition to the information given in the Offering Circular, to make their own assessment of the mentioned and potential additional risk factors and their significance for the future development. In the event of uncertainty concerning the risk assessment, advice should be sought from qualified advisors.*

## **RISKS RELATED TO THE COMPANY'S INDUSTRY AND BUSINESS**

### **Research and development**

Drug development is a time and resource consuming activity requiring extensive work in the form of research and development as well as clinical studies and regulatory approval processes before a final product is ready for commercial introduction. Drug development is also associated with high risk as considerable financial resources are invested in products and projects that may never lead to approved drugs.

The Company's projects and product candidates are in various stages of development, from early research phase to clinical phase, and will continue to require considerable research and development work and great investments. There is a risk that the continued development is more costly or takes longer than expected.

The Company can decide to discontinue a development project if it cannot be demonstrated that the compounds or treatment methods developed have the intended effect, or if they have too severe side effects. The Company's development projects may also become less attractive to complete as a result of the product development conducted by the Company's competitors. There is a risk that the Company's projects are discontinued in early as well as in late phases of development and that the Company's product candidates will not lead to final products that can be introduced on a commercial market, which can affect the Company's operations, income and result negatively.

### **Clinical trials**

Before a drug can be introduced on the market sufficient tolerability and clinical efficacy in the treatment of humans must be ensured through adequate and well controlled clinical studies. Clinical studies are costly and time consuming to perform and it is difficult to predict their outcomes and results. During the development work the Company's drug candidates may prove not to have the anticipated effect or have unexpected and unwanted side effects or other properties that can delay or stop the continued product development and limit or prohibit the commercial use of the drug candidates. Results from preclinical studies do not always correspond to the results that are obtained in clinical studies in humans, and results from smaller clinical studies do not always correspond to the results from more comprehensive studies.

Unexpected and/or unsatisfactory study results can entail that concepts and development programs must be re-evaluated, meaning that further studies may be required at high costs, or that development programs are cancelled. There is a risk that the results in the planned clinical studies are not satisfactory and that BioArctic's drug candidates are not good enough for market introduction for safety and/or efficacy reasons, which can affect the Company's operations, income and result negatively. BioArctic has two projects in clinical phase – BAN2401 in late phase 2b in patients with early Alzheimer's disease and SC0806 in combined Phase 1/2 in patients with complete spinal cord injury.

### Regulatory issues

Parts of the Company's operations require that the Company obtains permissions and approvals from relevant authorities in Sweden and abroad. The Company is also subject to strict quality requirements and is obliged to follow applicable regulations. BioArctic's measures to ensure compliance with relevant regulations and conditions for permits may be insufficient and there is thus a risk that the Company does not fulfill all requirements on the Company. This could damage BioArctic's reputation and lead to delays and/or increased costs for the Company. The Company can furthermore be subject to sanctions such as fines, penalty payments and cancellation of permits.

In order to market and sell drugs and medical devices registration and approval must be obtained from the relevant regulatory authority in the respective market, e.g. the FDA in the US and the EMA in Europe. In the event that the Company, directly or through partners, does not succeed in getting the necessary regulatory approvals and registrations, the Company's financial position and ability to generate income may be negatively affected. Also comments on the Company's proposed design of future studies may lead to delays and/or increased costs for the Company. Current rules and interpretations may be changed, which may impair the Company's possibilities to meet relevant regulatory demands.

Approved drugs are continuously monitored by the relevant authorities and there is a risk that an approved drug may be recalled from the market, for example for safety reasons.

### Patents and other intellectual property rights

The Company's value is to a large extent dependent on the ability to obtain and defend patents and the ability to protect specific knowledge. Patents and other intellectual property rights have a limited lifespan and there is a risk that patents applied for are not granted. There is also a risk that the current and/or future patent portfolio and other intellectual property rights held by the Company will not provide complete commercial protection. There is furthermore a risk that a third party may infringe on the Company's intellectual property rights.

There is a risk that patents already granted are declared invalid or are limited after objections from third parties. A third party unknown to the Company has raised objections to one of BioArctic's patents (AD II) in Europe and claims that the patent should not have been granted in Europe. The patent is a concept patent concerning the Company's treatment strategy for Alzheimer's disease which covers a general mechanism for the antibody's selective binding to oligomers and protofibrils, but not monomers, of the peptide A $\beta$ . The complaining party claims that the prerequisites for patentability have not been met. European Patent Office (EPO) has made its decision at Oral Proceedings held on 26 September 2017, with the conclusion that the patent is

revoked in Europe. However, the patent is granted in the US, Canada and Australia and is not affected by EPO's decision. The decision from EPO may be appealed within two months from when the written decision is issued by EPO. BioArctic will consider appealing the decision, when the written decision is issued. Further, a third party unknown to the Company has submitted observations (Third Party Observations) to the European Patent Office in connection with the processing of BioArctic's European patent application in the patent family PD V. The patent is a concept patent concerning the Company's treatment strategy for Parkinson's disease which covers a general mechanism for the antibody's selective binding to oligomers and protofibrils, but not monomers, of the peptide  $\alpha$ -synuclein.

Employees making inventions that are acquired by the Company may under certain circumstances be entitled to compensation in addition to the compensation under the terms of employment. The right to compensation follows from applicable law and cannot be negotiated away in advance through the terms of the employment contract or similar. There is thus a risk that employees making inventions that are acquired by the Company may claim additional compensation from the Company.

### Infringement of patents and other intellectual property rights held by third parties

There is a risk that the Company may be accused of infringing on patents or other intellectual property rights held by third parties. Further, patents and other intellectual property rights held by third parties may limit the possibilities of the Company or one or more of the Company's future partners to freely use the Company's product candidates. There is a risk that a dispute over intellectual property rights held by a third party may lead to a ban on the continued use of the right in question or an obligation for the Company to pay damages.

The outcomes of intellectual property rights disputes are difficult to predict. The costs for a dispute can be considerable, also in the case of a positive outcome for the Company, which can affect the Company's result and financial position negatively. Intellectual property rights disputes can also result in difficulties and delays in out-licensing and sales of the Company's product candidates.

### Trade secrets and know-how

The Company is dependent on being able to protect also trade secrets not covered by patents, patent applications or other intellectual property rights, such as information concerning innovations for which patent applications have not yet been filed. There is a risk that a person with access to trade secrets spreads or uses this information in a way that harms the Company, which can affect the Company's operations, financial position and result negatively.

### Competition and commercialization

There are several companies and research institutions that conduct development of drug products in the Company's therapy areas, which means that there is stiff competition in the Company's area of operations. Other pharmaceutical companies develop immunotherapy for disease modifying treatments of Alzheimer's disease and Parkinson's disease, which are based on a treatment strategy which is similar to the Company's strategy. There are several antibodies which target A $\beta$ , designed for treatment of Alzheimer's disease in late clinical phase. Further, there are several antibodies which target  $\alpha$ -synuclein, designed for treatment of Parkinson's disease, in preclinical and clinical development. Some of the Company's competitors are multinational companies with considerable financial resources. The Company's competitors may also have larger production and distribution capacity and be better equipped to sell and market their products than the Company and the Company's partners. The Company's competitors may develop drugs or products that are more effective, tolerable and cheaper than the Company's product candidates, which can affect the Company's income and result negatively.

Outlicensing of product candidates is a part of the Company's business model. This means that a part of the Company's future income will be dependent on the sales price on drugs that may be commercialized by the Company or by its partners. The competitive situation in the pharma industry is hard and the general trend of drug prices is beyond the Company's control. Furthermore drug prices are in some cases set by authorities. There are currently no disease modifying treatments for Alzheimer's disease or Parkinson's disease and treatments for chronic complete spinal cord injuries are totally lacking. Consequently it is very difficult to estimate the price at which such drugs may be sold. There is a risk that sufficient product margins cannot be achieved, which can affect the Company's earning capacity negatively.

The costs for drugs are usually financed or subsidized by public or private reimbursement systems. New drugs are often costly as a result of the great investments made during the long development process. There is increased political pressure to reduce society's costs for drugs and there is a risk that the current system for financing, subsidizing and pricing of drugs may change, which can affect the Company's earning capacity negatively.

### Dependence on partners for product development and commercialization

A significant part of BioArctic's business model is to enter into collaboration agreements with pharma and biopharma companies concerning development and sales of the Company's product candidates. BioArctic is also dependent on collaborations and agreements with other parties for the development of its product candidates and the implementation of preclinical and clinical studies.

The performance of clinical studies, especially in Phase 3, requires extensive resources and it is therefore

common that small, research-intensive companies like BioArctic enter into collaboration or licensing agreements with bigger players in the pharma business. These partners are normally responsible for conducting and financing continued clinical studies, processes for marketing approval and sales and marketing of the approved product. In the Alzheimer area BioArctic has entered into strategic collaboration agreements with the Japanese global pharma company Eisai, according to which Eisai has the main responsibility for the performance of clinical studies, marketing approval and commercialization of BioArctic's antibodies BAN2401 and BAN2401 back-up. In the Parkinson area BioArctic has entered into an agreement with the American global biopharma company AbbVie, according to which BioArctic, with financing from AbbVie, is responsible for the development of the Company's product candidates for the treatment of Parkinson's disease up to clinical phase. Under the agreement AbbVie also has an option to acquire an exclusive license for further development and commercialization of the Company's drug candidates for the treatment of Parkinson's disease. BioArctic's rights to milestone payments and royalty are, among other things, dependent on AbbVie exercising its option.

A large part of the Company's expected future income consists of milestone payments and royalty according to signed collaboration agreements. There is a risk that current or future collaboration agreements are terminated. There is also a risk that AbbVie does not exercise the option described above. The Company's partners can also decide to change their priorities and the resource allocation between their projects, which may mean that the development and commercialization of the Company's product candidates may be allocated less resources or be discontinued. BioArctic has also provided guarantees to its partners entailing that BioArctic will be liable to pay its partners damages in case of failure to meet these guarantees. If any of these events should occur it can lead to reduced or lost income for the Company, which can affect the Company's earning capacity and financial position negatively.

The Company itself runs the development of the project SC0806 for treatment of complete spinal cord injury (currently in clinical Phase 1/2). The Company also has a number of projects in early research phase. There is a risk that the Company does not succeed in entering into collaboration agreements concerning projects where this is considered to be necessary or suitable, which can mean that the continued development, the performance of preclinical and clinical studies and future commercialization is delayed, impeded or fails to materialize.

### Manufacturing and suppliers

The Company does not have any in-house manufacturing, which means that the Company relies on subcontractors for the manufacturing of the substances and medical devices needed for the Company's product development

and the carrying out of preclinical and clinical studies. For these purposes there are strict quality demands, such as Good Manufacturing Practice (GMP). BioArctic is also dependent on certain subcontractors performing according to agreements in order for BioArctic to fulfill its commitments in relation to its collaboration partners. BioArctic has e.g. concluded agreements with Lonza which are essential in order for BioArctic to fulfill its obligations according to the collaboration and license agreement with AbbVie.

There is a risk that the Company's suppliers and manufacturers do not fully meet the quality demands stipulated in the contracts, or that apply according to applicable laws and regulations, which may delay the Company's projects or planned clinical studies. Further, delays can occur if the suppliers fail to fulfil their obligations in time and in a cost-effective manner, which can affect BioArctic's operations negatively.

There is a risk that one or more of the Company's suppliers choose to end their cooperation with the Company, or that the price of their goods and services changes considerably, which could have a negative impact on the Company's operations and result. Similarly, the establishment of new suppliers or manufacturers may be more costly or take longer than expected.

#### **Dependence on key personnel**

BioArctic's success is to a large extent dependent on the Company's senior executives and the comprehensive competence and long experience from the Company's area of operations that they and other key personnel at BioArctic have. The contributions of each of these key persons will continue to be important to BioArctic. The ability to recruit and retain qualified employees is of importance to ensure the level of competence in the Company. There is a risk that recruitments cannot be made under satisfactory terms as a result of competition for labor with other companies in the industry, universities or other institutions. If the Company were to lose key personnel or if the Company in the future cannot continue to recruit qualified employees, this could lead to delays or interruptions in the Company's projects, which could have negative consequences for the Company's operations and result.

#### **Product liability and insurances**

The Company has a so-called product liability for personal injuries caused by the use of the Company's products. The Company may also be held responsible for any incidents that occur in clinical studies with the Company's product candidates where the Company is the sponsor, also when clinical studies are carried out by an external party.

There is a risk that the Company's insurance protection is not sufficient to cover possible future legal claims that may be made due to the Company's product liability or responsibility for clinical studies. Such claims can affect the Company negatively, in terms of its reputation as well as financially.

#### **Dependence on premises, equipment, etc.**

The Company's research and development operation is conducted in custom built facilities and is dependent on certain laboratory equipment. There is a risk that the Company's premises or equipment are damaged e.g. by fire, theft or sabotage, which may lead to delays and increased costs and/or lost revenue for the Company.

#### **Dependence of a well-functioning IT environment**

BioArctic is dependent on the efficient and continuous operation of various IT systems in order to run its operations. A major crash or other disturbance in the IT systems can affect the ability to run the operations in general, including BioArctic's research and development work. There is also a risk that employees and other partners do not act in accordance with the Company's instructions and guidelines for maintaining an adequate IT security.

The IT environment in which BioArctic acts is also governed by restrictive laws, rules and regulations, including but not limited to data privacy and data protection, which are often revised.

BioArctic's measures for maintaining security and integrity of personal information and proprietary information and the Company's security measures concerning its systems and other security procedures may be insufficient and there is thus a risk for unauthorized intrusions or the disclosure of personal data or proprietary information. This could damage BioArctic's reputation and lead to increased costs and/or lost revenue. If any of these events would occur it might have a substantial negative effect on BioArctic's operations, financial position or result.

#### **Future financing**

The Company has no approved products on the market and thus obtains no income from product sales, which means that it is necessary for the Company to finance its operations in other ways. Currently BioArctic gets its income through payments from the Company's collaboration partners Eisai and AbbVie under signed collaboration agreements, and through grants from the EU's research and development program Horizon2020 and from Swedish Vinnova. Thus, the Company's operations are currently of the kind that there is not a steady stream of income, but instead this comes irregularly in the connection with the signing of research collaboration agreements, licensing agreements and achieved milestones.

If the collaboration agreements are terminated or the grants from Horizon2020 or Vinnova are lost or substantially decreased this can affect BioArctic's financial result and financial position negatively. There is a risk that a situation occurs where BioArctic must acquire new capital on terms unfavorable for the Company's shareholders.

There is a risk that the Company cannot obtain sufficient capital for financing its product development and planned clinical studies. This can lead to an interruption of the development activities or to BioArctic having to run the operations at a slower pace than desired, which



can lead to commercialization and income being delayed or failing to materialize.

The access to further financing is influenced by a number of factors like market conditions, the general access to credits and the Company's credit rating and credit capacity. Disturbances and uncertainties on the capital and credit markets can also limit the access to the capital necessary for conducting the business. If BioArctic in the future should fail to acquire necessary capital on reasonable terms, the Company's operations, financial position and result may be negatively affected.

### External factors

External factors such as supply and demand, economic prosperity and recession, inflation and interest rate increases can impact operating costs and sales prices. There is a risk that these factors may affect BioArctic's costs and future income negatively.

The Company has considerable bank balances which are affected by the interest rates. The Company is thus exposed to an interest rate risk. At June 30, 2017 the Company's cash and cash equivalents amounted to 622,063 TSEK. An interest rate change of 0.5 percentage units in the period January – June 2017 would thus have impacted the result to the amount of +/- 3,110 TSEK. At June 30, 2017 the Company had no external loan financing and is thus at no interest rate risk due to such commitments.

Parts of the Company's income and expenses are received and paid in USD, GBP, EUR, CHF and other international currencies. Exchange rates can change substantially and there is a risk that exchange rate fluctuations may affect the Company's costs and future income negatively.

Liquid assets in foreign currency amounted to 227,294 TSEK at June 30, 2017. Of this sum GBP constituted 157,488 TSEK, USD constituted 18,716 TSEK, CHF constituted 22,119 TSEK and EUR constituted 28,891 TSEK. A 10% currency change in the period January – June 2017 in GBP versus SEK would thus have impacted the result to the amount +/- 15,749 TSEK and the corresponding change in USD, CHF and EUR versus SEK would have impacted the result to the amounts of 1,872 TSEK, 2,220 TSEK and 2,889 TSEK respectively.

## RISKS RELATED TO THE SHARE AND THE OFFERING

### Share price fluctuations and psychological factors

Potential investors should consider that an investment in shares is always associated with risk and that the shares can increase as well as decrease in value. There is therefore a risk that an investor will not get the invested capital back. The development of the share price is dependent on a number of factors, some of which are company specific and others are linked to the stock market as a whole. Share price variations can also occur as a result of great changes in buying and selling volumes and do not necessarily have a connection with the Company's underlying value. Every decision concerning investments in shares should be preceded by a thorough analysis.

The stock market in general and the Company's shares in particular may be affected by psychological factors. The Company's shares may be affected in the same way as all other shares regularly traded at Nasdaq Stockholm. Psychological factors and their effect on the share price are in many cases difficult to predict and may affect the price of the Company's shares negatively.

### Liquidity

Before the Offering there has been no organized market for trading in the shares of the Company. There is a risk that the price in the Offering will not correspond to the price at which the shares will be traded at Nasdaq Stockholm after the Offering. There is also a risk that active trading in the Company's shares will not evolve after the listing, which may make it more difficult for shareholders to sell their shares without the price of the shares being negatively affected for the seller.

### Subscription undertakings are not secured

HBM Healthcare Investments, Handelsbanken Fonder AB, The Third AP Fund, The Second AP Fund and John Wattin/Inbox Capital (together Cornerstone Investors) has agreed to acquire shares in the Offering equivalent to a total of 265 MSEK. These commitments are not covered by a bank guarantee, pledge, deposit or similar arrangement, which means that there is a risk that these undertakings will not be fulfilled. The agreements also contain conditions for fulfillment and provisions for termination. If any of these conditions are not fulfilled there is a risk that the Cornerstone Investors do not fulfill their commitments. Consequently a violation or termination of any of the agreements could have a considerable negative impact on the Company's possibilities to successfully complete the Offering.

### Future dividends

According to Swedish law, the General Meeting decides on dividends. Dividends may only be made if there are distributable earnings at BioArctic and provided that such a decision is justifiable, considering the requirements posed by the nature, scope and risks of the business on the amount of equity capital in the Company and the Company's need for consolidation, liquidity and financial position. Furthermore, the main rule is that the shareholders cannot decide on higher dividends than proposed and approved by the Board of Directors. With the exception of the right of minority shareholders to demand dividends in accordance with the Swedish Companies Act, if the General Meeting does not decide on dividends according to what is stated above, shareholders cannot make demands on dividends and the Company has no obligation to pay dividends. There are many factors that may affect the Company's business negatively and there is therefore a risk that the Company may not be able to generate results that enable dividends in the future or that the General Meeting does not decide on dividends.



### **Dilution in future new issues**

The Company has made a commitment towards Carnegie not to decide on new issues of shares or other securities in the Company without consent from Carnegie during period of 365 days from the first day of trading at Nasdaq Stockholm. After that time period the Company may decide on new issues of shares or other securities in order to raise capital. All such offerings can reduce the proportional ownership and the share of voting power of shareholders in the Company and earnings per share in the Company. New issues can have a negative effect on the market price of the shares.

### **Shareholders with significant influence**

The Company has two classes of shares, A-shares and B-shares. A-shares entitle the holder to ten votes per share, while B-shares entitle the holder to one vote per share. Following the Offer, provided that the Offer and the over-allotment option is fully subscribed, the total number of shares in the Company will amount to 88,059,985, distributed on a total of 14,399,996 A-shares and 73,659,989 B-shares, representing 66.2% respectively 33.8% of the total number of votes in the Company. Due to the number of votes related to the A-shares, it will result in a limited shareholder influence for the holders of B-shares. All A-shares in the Company are held by the Main Shareholders.

Following the Offer, provided that the Offer is fully extended and that the over-allotment option is fully exercised, the Main Shareholders will own a total of 14,399,996 A-shares and 38,081,148 B-shares, representing a total of 59.6% of the shares and 87.3% of the votes in the Company. Through their ownership the Main Shareholders have the possibility to exercise a significant influence in matters that require the approval of the shareholders at the General Meeting, including appointment and removal of board members, decisions on new issues and changes in the articles of association. This influence may be to the detriment of shareholders shareholders whose interests are different than those of the Main Shareholders.

### **Future sales of major shareholdings**

The Main Shareholders, the board members and the senior executives that hold shares in the Company view their holdings as a long-term investment. The Main Shareholders, board members and senior executives that own shares and some selected shareholders have through so-called lock-up agreements committed themselves not to sell their respective holdings during a certain period of time from the first day of trading on Nasdaq Stockholm. However, Carnegie can decide to grant exemptions from the limitations on share trading during the lock-up period. When the lock-up period has expired also these shareholders are free to sell or otherwise dispose of their shares. Futures sales of major shareholdings and sales by the Main Shareholders, board members and/or senior executives may affect the price of the Company's share negatively.

### **Some foreign shareholders may be prevented from exercising their preferential rights**

Shareholders who are residents in or have a registered address in some other jurisdictions than Sweden, shareholders in the US among others, may be prevented from exercising their preferential rights relating to their shares in the Company in connection with future new issues, unless an act of registration or equivalent measure according to applicable laws in the respective jurisdiction has been undertaken regarding such shares, or an exemption from the demand for registration or equivalent according to applicable laws in the respective jurisdiction is applicable. The Company can decide to carry out new issues without undertaking such measures, which means that the proportional ownership and voting rights for shareholders residing in certain other jurisdictions than Sweden may be reduced as a result of new issues.

# Invitation to acquire B-shares in BioArctic

In order to promote BioArctic's continued development and the expansion of the Company's operations, the Company's Board of Directors, together with the Main Shareholders, has decided on a new issue of B-shares in BioArctic and at the same time a diversification of ownership through sales of existing B-shares ("**The Offering**"). The Offering is directed to the general public in Sweden and to institutional investors in Sweden and abroad. The Company's Board of Directors has also applied for admission of the Company's B-shares for trading on Nasdaq Stockholm's Main Market. On September 6, 2017 the Nasdaq Stockholm Listing Committee decided to admit the Company's B-shares for trading subject to customary conditions, among other things that the distribution requirements are met at the latest on the first day of trading, which is expected to be October 12, 2017.

Investors are hereby invited, in accordance with the terms of the Offering Circular, to subscribe for a maximum of 25,000,000 new issued B-shares in BioArctic, which will be issued pursuant to the authorization given at the Annual General Meeting of May 31, 2017. The Main Shareholders has reserved the right to extend the Offer and to sell a total of 14,166,666 existing B-shares.

The price in the Offering has been set to 24 SEK per B-share by the Company's Board of Directors and the Main Shareholders in consultation with the Joint Bookrunners based on a number of factors, including discussions with certain institutional investors, a comparison with the market price of other comparable listed companies, an analysis of previous transactions carried out for companies in the same industry and development phase, current market conditions and estimations regarding the Company's commercial potential and earnings prospects. A valuation has been made in order to establish an indicative value of the Company as a starting point for the discussions with institutional investors. The valuation consists of two parts, DFC analysis and a comparative analysis. The DFC analysis includes estimations of the Company's future cash flow based on several assumptions, including growth in the underlying patient population, price per treatment and the probability of reaching the market. The comparative valuation consists of an analysis of previous transactions carried out for companies in the same industry and development phase as well as a comparison with the market prices of comparable listed companies.

The new share issue is expected to provide BioArctic around 550 MSEK after deduction of expenses related to the Offering. The subscription price in the new share issue shall correspond to the price in the Offering.

In case of full subscription of the new share issue, the number of shares will increase by a maximum of 25,000,000 B-shares, which means that the number of shares in the Company after the Offering will amount to a maximum of 88,059,985, whereof 14,399,996 A-shares and 73,659,989 B-shares. This corresponds to a maximum dilution of 28.4% of the total number of shares and a maximum of 11.5% of the total number of votes in the Company.

In order to cover any over-allotment in connection with the Offering the Main Shareholders, Karolinska Development AB and Uppsala universitet Holding AB, have committed to sell, at the request of the Joint Bookrunners, additional B-shares corresponding to a maximum of 15% of the number of shares in the Offering and no more than 5.0% of the total number of shares and 2.0% of the total number of votes in the Company at full subscription of the Offering ("**The Over-allotment option**"). If the Offer is fully extended and if the Over-allotment option is exercised in full and if the Offering is fully subscribed, the Offering will include 33,541,666 B-shares in BioArctic, corresponding to approx. 38.1% of the total number of shares and 15.4% of the total number of votes in the Company after completion of the Offering.

The Third AP Fund, HBM Healthcare Investments, Handelsbanken Fonder AB, The Second AP Fund and John Watin/Inbox Capital (together "**Cornerstone Investors**") have committed to subscribe for shares in the Offering equivalent to a total of 265 MSEK. If the Offering is fully subscribed, the Offer is fully extended and the Over-allotment option is fully exercised the undertakings include 11,041,668 B-shares, corresponding to 32.9% of the total number of shares included in the Offering and 12.5% of the total number of shares and 5.1% of the total number of votes in the Company after the Offering. For further information, see the section "*Legal considerations and supplementary information – Subscription commitments*".

The total value of the Offering amounts to approx. 600 MSEK and to approx. 805 MSEK if the Offer is fully extended and if the Over-allotment option is fully exercised.

Stockholm, September 27, 2017

**BioArctic AB (publ)**  
*The Board of Directors*

**The Main Shareholders**

# Background and rationale

BioArctic is a Swedish biopharma company active in research and development of innovative and effective biological drugs with the potential to improve the quality of life for patients with neurodegenerative diseases like Alzheimer's disease and Parkinson's disease, and for patients with complete spinal cord injury. Since the founding of the Company in 2003 BioArctic has through compensation for research collaborations and licensing revenue from partners, such as Eisai and AbbVie, and grant funding built an extensive project portfolio. The Company's project portfolio includes the first generation of disease modifying drug candidates for the treatment of Alzheimer's disease and Parkinson's disease, and a new treatment of complete spinal cord injury. The Company is furthermore active in research and development of diagnostics and biomarkers for Alzheimer's disease and Parkinson's disease. These diagnostic methods are important complements to the Company's drug candidates and have the potential to improve the possibilities for early and correct diagnosis, monitoring of the disease progression and more effective treatment of the diseases on which the Company is focusing. The Company therefore believes that these methods have important commercial potential.

The Company's strategy is to consolidate its position as a leading player in diseases and injuries of the central nervous system. As a part of the strategy the Company intends to continue the development and expansion of the current project portfolio and to develop new product candidates, diagnostics and technology to improve the quality of life for patients with neurodegenerative diseases and complete spinal cord injury. Long-term, BioArctic intends to establish its own sales organization in selected markets, which would increase the revenue base in the form of income from sales of the Company's proprietary product candidates.

The Company's strategic collaborations with Eisai and AbbVie mean that a number of the Company's projects, among them the development of the drug candidates BAN2401 and BAN2401 back-up for the treatment of Alzheimer's disease and BAN0805 for the treatment of Parkinson's disease, are fully financed as BioArctic receives compensation for research collaborations, or the further development is carried out by the Company's partner. In addition to the projects that BioArctic runs in collaboration with Eisai and AbbVie, the Company's project portfolio includes a number of proprietary projects that have so far been financed by grant funding, license revenue and milestone payments obtained under the Company's collaboration agreements. An important part of the Company's strategy is to increase the pace and efficiency of the further development of the Company's proprietary projects, which will require increased resources.

The Main Shareholders and the Board of Directors are working actively to realize BioArctic's long-term strategy and believe that the time is right to apply for listing of the Company's shares on Nasdaq Stockholm. A listing of the shares in BioArctic is a logical next step for the Company and its operations which will also give BioArctic access to the Swedish and international capital markets. The Main Shareholders will remain active long-term major shareholders, but intend to sell shares to a maximum value of 168 MSEK in connection with the listing in order to achieve a good distribution of ownership.

In line with the above strategy the Company has decided to carry out a new share issue in connection with the listing on Nasdaq Stockholm in order to bring additional resources to its proprietary projects and thereby make it possible to carry out the continued development work in a more focused and effective way. If fully subscribed the net proceeds from the issue is expected to amount to approx. 550 MSEK after the deduction of expenses related to the Offering. BioArctic intends to use the net proceeds from the new share issue in the order of priority indicated below, with the approximate share of the issue proceeds given in percent (%):

- ▲ Further development of two innovative disease modifying treatments for Alzheimer's disease (AD1502 and AD1503): 25–35%
- ▲ Widening of the indication for BAN2401 to treatment of dementia and cognitive impairment in patients with Down's syndrome and patients with traumatic brain injury: 25–30%
- ▲ Completion of the clinical Phase 1/2 study of SC0806 for the treatment of complete spinal cord injury and registration in the EU, and preparations for the start of Phase 3 studies in Europe and the US: 15–20%
- ▲ Further development of diagnostic methods for Alzheimer's disease (imaging of the brain and biochemical biomarkers): 15–20%
- ▲ Further development of technology to improve the passage of antibodies across the blood-brain barrier: 10–15%.

Drug development is associated with risks and uncertainties. Some factors are beyond the Company's control, such as judgements and decisions by regulatory authorities, which may affect the timetable and contribute to delays, and lead to increased costs and capital needs. Consequently it is difficult to exactly assess the costs for realizing the Company's strategy, and when these costs will be incurred. Similarly there is a risk the Company's product candidates produce clinical results which mean that the further development of the candidate is no longer sustainable.

*Please refer otherwise to the content of this Offering Circular, which has been prepared by the Board of Directors of BioArctic by reason of the application for admission to trading of the Company's shares on Nasdaq Stockholm and the Offering made in connection with this.*

*The Board of Directors of BioArctic is responsible for the content of the Offering Circular. It is hereby assured that all reasonable precautionary measures have been taken to ensure that the information in the Offering Circular, as far as the Board of Directors is aware, corresponds to the actual circumstances and that nothing has been omitted that could affect its meaning.*

Stockholm, September 27, 2017

**BioArctic AB (publ)**

*Board of Directors*

*The Board of Directors of BioArctic is solely responsible for the content of this Offering Circular in accordance with what is stated herein. The Main Shareholders confirm, however, their commitment under the terms of the Offering in accordance with what is stated in the sections "Invitation to acquire B-shares in BioArctic".*

Stockholm September 27, 2017

**The Main Shareholders**

# Market overview

*Below follows a general description of the Company's industry, geographic markets and product markets, market size, market share, market position and other market information relating to the Company's operations and market. Market and industry data concerning Alzheimer's disease and Parkinson's disease have primarily been gathered from market reports purchased by the Company from the market analysis company GlobalData. For more information on the Company's responsibility for information gathered from external sources, see the section "Legal considerations and supplementary information – Information from third parties".*

*Market and industry information includes estimates of future market development and other so-called forward-looking statements. Forward-looking information is always associated with uncertainty as it relates to and is dependent on circumstances beyond the Company's control. Expressions such as "is expected", "is believed to", "should", "is assessed" and similar are used to indicate that the information should be viewed as estimates and forecasts. The estimates and forecasts are made on the basis of information that contains known as well as unknown risks and uncertainties. No assurance is given, expressly or implied, that the estimates and forecasts given will be realized. Nor does the Company give any commitment to publish updates or revisions of any forward-looking statements as a result of new information or similar that occurs after the publication of the Offering Circular. Future results and developments may differ materially from those expressed in forward-looking statements.*

## INTRODUCTION TO BIOARCTIC'S BUSINESS AND INDUSTRY

BioArctic develops new innovative disease modifying treatments based on antibodies (a form of immunotherapy) for neurodegenerative diseases such as Alzheimer's disease and Parkinson's disease. The Company has also developed an innovative treatment for complete spinal cord injury which is in clinical phase. The Company's project portfolio is described in more detail in the section "Description of the operations" below.

Common to all the Company's therapeutic areas is that there are currently great medical needs that cannot be met by the treatments available on the market. For Alzheimer's disease and Parkinson's disease there are several symptomatic treatments, i.e. drugs that alleviate the symptoms of the disease, but no disease modifying treatments that can stop or delay the disease progression. There is no treatment for complete chronic spinal cord injury. BioArctic therefore believes that there is a great demand for new treatments in these areas.

Several companies and research institutions, including leading pharma and biopharma companies, are engaged in the development of drugs in the Company's therapy areas, which means that there is fierce competition within the Company's area of operation. The Company's markets and the competitive situation in these are described in more detail below.

## NEURODEGENERATIVE DISEASES

Neurodegenerative diseases is a collective term for conditions in which cells in the brain degenerate and die. These cells do not regenerate, so damage to the nervous system is devastating. Normally the neurodegenerative process begins long before any symptoms appear, but eventually result in dysfunction and disability. These diseases markedly affect the lives of millions and lead to increased costs for individuals and society.

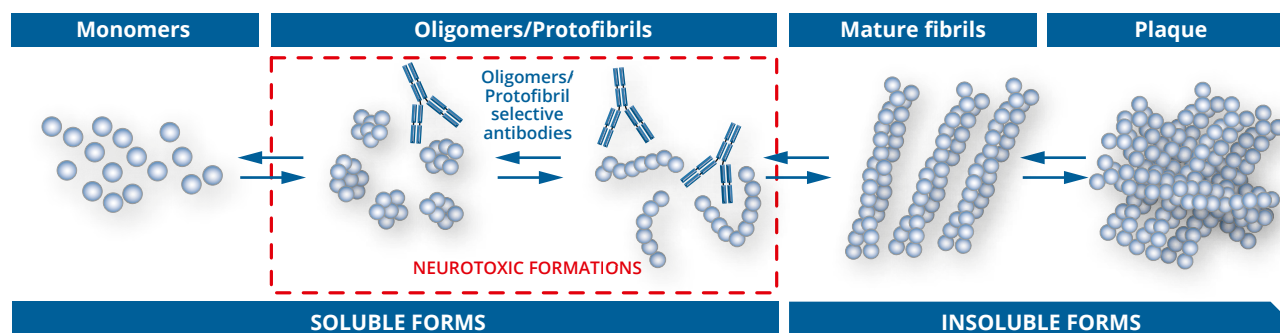
To prevent the occurrence of neurodegenerative diseases and treat them is an important goal for medical research today. The prevalence of most of these diseases increases with age. Today there is no cure or effective treatment to stop or alter disease progression. The treatments that are available on the market today cannot influence disease progression, but only the disease symptoms short term. The lack of effective treatments that can influence the course of the disease is a major medical need.

In recent years the knowledge of neurodegenerative diseases has moved from a description of symptoms to an understanding of the underlying mechanisms that cause the diseases. The key molecular events in these diseases are today believed to be protein misfolding and spreading of toxic soluble protein aggregates that lead to neuronal dysfunction, cell death, brain damage and symptoms of disease.<sup>1)</sup> A reduction of these toxic proteins is believed to be of significant importance for

1) Walsh et al. 1997, Conway et al. 2000.



influencing the disease progression. BioArctic's treatment strategy is to reduce or eliminate these toxic proteins. In this way the disease can be halted or given a slower progression.<sup>1)</sup>



The Amyloid beta peptide ( $A\beta$ ) is produced in all cells in the body, but in the brain  $A\beta$  has a tendency to aggregate (accumulate in larger clusters) due to its "sticky" character. In the brains of Alzheimer patients there are plaques mainly containing fibrils of  $A\beta$ . Each fibril contains millions of single  $A\beta$  molecules, monomers. The fibrils are so large that they are no longer soluble but fall out in the brain tissue and form plaques. An intermediate stage between monomers and fibrils is oligomers/protofibrils, which are still in solution. Today the general opinion is that it is these soluble, aggregated forms of  $A\beta$  that are harmful for the brain. BioArctic's treatment strategy is to attack these forms of  $A\beta$ <sup>1)</sup>.

## ALZHEIMER'S DISEASE

Alzheimer's disease is estimated to be the cause of 50–60% of all cases of dementia, and is thus the most common dementia condition with onset in adulthood. The disease is characterized by death of neurons in the brain causing a progressive deterioration of memory and cognitive skills, such as intellectual ability, language, orientation, recognition and learning ability. The disease can also lead to personality changes and psychiatric symptoms, such as apathy, depression, disorientation, paranoia and aggressiveness, and motor symptoms, such as stiffness, reduced mobility and impaired responsiveness. A patient with far advanced Alzheimer's disease often suffers from serious cognitive and motor symptoms that affect the patient's ability to care for oneself and handle everyday situations. The disease thus impairs the quality of life for the patients as well as their families. These patients also demand comprehensive nursing which means great costs for society.<sup>2)</sup>

The disease development in Alzheimer's disease likely starts several years before the patient shows any clinical symptoms. The disease also has a progressive development, which means that the symptoms increase as the disease progresses. A disease modifying treatment, aimed at halting or slowing down the disease progression, therefore needs to be initiated before the degeneration of the brain has gone too far. This has led to an increased focus on the earlier stages of the disease, as it is at these stages that a future disease modifying treatment is expected to have the best effect.

Alzheimer's disease and certain other forms of dementia are preceded by the patient presenting with mild impairment of memory and other cognitive abilities without meeting the criteria for dementia, which means that a social disability occurs. If the patient also shows signs of Alzheimer pathology, shown by biomarkers, the clinical diagnosis of mild cognitive disorder caused by Alzheimer's disease is made. Prodromal Alzheimer's disease is another concept corresponding to mild cognitive impairment as a result of Alzheimer's disease. The term early Alzheimer's disease includes mild cognitive impairment as a result of Alzheimer's disease and mild Alzheimer's disease. The disease later develops into moderate and severe Alzheimer's disease.

## Need for treatment

The demographic development with an ageing population and increasing life expectancy has led to a dramatic increase in the incidence of diseases that affect the elderly, such as various forms of dementia. Alzheimer's disease is the most common neurodegenerative disease and also the most common form of dementia. Alzheimer's disease accounts for about 50–60% of all diagnosed dementia. Currently it is estimated that about 47 million people worldwide suffer from some form of dementia and the global costs for dementia care in 2010 was estimated to approximately 820 BUSD.<sup>3)</sup> The costs are in part attributable to drugs and medical care related to dementia diseases as such, but the majority of the costs are indirect costs for assisted living and similar.

1) Lannfelt et al. 2014.

2) Boken om Demenssjukdomar, Liber förlag 2013 page 12–13; Läkemedelsboken 2014 page 1088.

3) World Alzheimer Report – Alzheimer's Disease International, 2015.

In 2030 approximately 75 million people are expected to suffer from some form of dementia, and the care costs for these persons in the same period is expected to rise to about 2,000 BUSD.<sup>1)</sup> In the absence of effective disease modifying treatments that can stop or slow down the progression of the disease the estimated number of people with dementia, including Alzheimer's disease, is expected to reach more than 130 million by 2050,<sup>1)</sup> which highlights the great medical need for innovative drugs in the area.

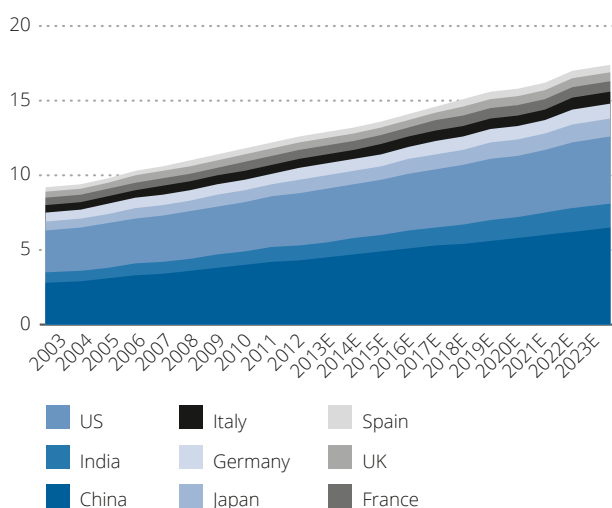
**Description of the market**

According to data compiled by GlobalData<sup>2)</sup> the prevalence (i.e. all diagnosed patients) of Alzheimer's disease in the nine biggest markets for Alzheimer's disease, i.e. China, the US, India, Japan and the EU-5 (9MM), was approximately 13 million in 2013. China had the highest prevalence with approx. 4.5 million cases, followed by the US (3.6 million cases) India (1.0 million) and Japan (0.9 million). The prevalence in EU-5 (France, Germany, Italy, Spain and the UK) amounted to 2.9 million cases. Mild Alzheimer's disease constituted a little over 50% of the total prevalence of Alzheimer's disease in the 9MM in 2013, followed by moderate Alzheimer's disease (32%) and severe Alzheimer's disease (16%).

GlobalData forecasts that the total prevalence of Alzheimer's disease in the 9MM will increase by 34% to approx. 17 million by 2023 and that the fastest average annual growth will be in India.

**Alzheimer's Disease in 9MM**

Prevalence of AD in ≥60 years of age (N)



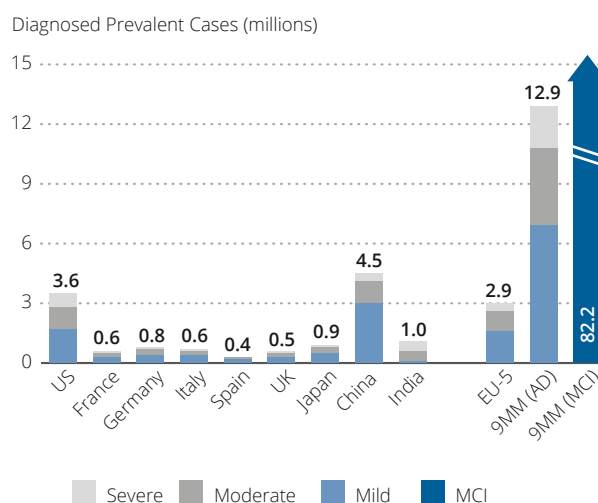
Source: GlobalData.

As described earlier, mild cognitive impairment (MCI) could be a sign of Alzheimer's disease. Today, improved diagnostic methods make it possible to make the diagnosis mild cognitive impairment caused by Alzheimer's

disease. In the dataset compiled by GlobalData, no distinction is made between MCI with Alzheimer's pathology and MCI due to other dementia diseases. GlobalData estimates that there were a total of slightly more than 80 million cases of MCI in the 9MM in 2013. China had the highest number of MCI (approx. 32 million cases), followed by India (approx. 16 million) and the US (approx. 13 million).

Over the forecast period up to 2023, GlobalData projects that the total prevalent cases of MCI in the 9MM will increase by slightly more than 30% to approx. 110 million cases by 2023.

**Prevalence per stage of disease (2013)**



Source: GlobalData.

The main contributing reason for the increase in prevalence of Alzheimer's disease and MCI across the 9MM is the aging population. In less developed countries, an improved ability to diagnose Alzheimer's disease and MCI as well increased access to advanced medical care is likely to contribute to the prevalence growth as more cases are correctly detected and documented.

**Treatments currently on the market**

The treatments for Alzheimer's disease currently on the market are used to alleviate the symptoms in Alzheimer patients, but they cannot halt or slow down the disease progression. Examples of current symptomatic treatments for Alzheimer's disease include Aricept® (Donepezil), Exelon® (Rivastigmin), Reminyl® (Galantamin) and Ebixa® (Memantin).

Future disease modifying treatments are generally intended to be used earlier in the course of the disease, in some cases already before the patient has showed any symptoms. BioArctic's assessment is therefore that disease modifying treatments will not compete directly with existing symptomatic treatments, but more likely be used together with them. However, as the resources

1) World Alzheimer Report – Alzheimer's Disease International, 2015.

2) The data from GlobalData referred to in this section are taken from GlobalData's market report on Alzheimer's disease.

spent on drugs are limited, different types of treatment options may affect each other in terms of pricing and in public and private reimbursement and insurance systems.

The competing alternatives to BioArctic's drug candidates will primarily be other disease modifying treatments. No such treatments are currently on the market. There are however a number of compounds in various phases of clinical development intended to have a disease modifying effect.

**Disease modifying treatments for Alzheimer's disease under development**

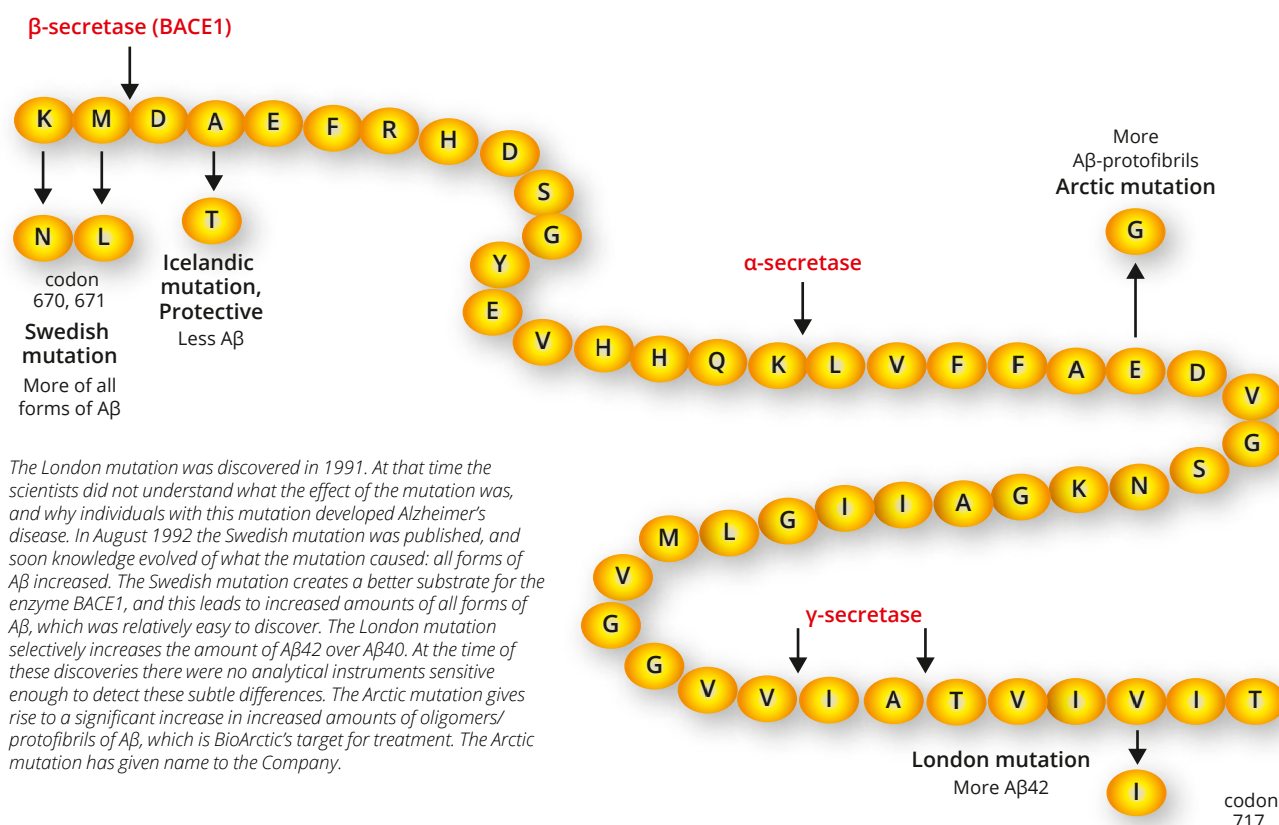
*The Amyloid hypothesis*

The amyloid beta (Aβ) peptide is the main constituent in the plaques found in the brains of Alzheimer patients<sup>1)</sup> and genetic findings such as the discovery of the Swedish mutation<sup>2)</sup> strongly point to Aβ as the disease-initiating molecule in Alzheimer's disease.<sup>3)</sup> Other pathological features in the diseased brain are intra-neuronal tangles containing the tau protein and neuronal loss.

The monomeric form of Aβ forms soluble (oligomers and protofibrils) and insoluble (fibrils and amyloid plaques) aggregates. Research has shown that the

amyloid plaque density in the brain does not correlate with the severity of dementia.<sup>4)</sup> Instead, the soluble aggregated forms of Aβ, oligomers or protofibrils, are considered to be the main toxic species in Alzheimer's disease.<sup>5)</sup> During the 1990's, several research groups showed that neuronal injury was caused by soluble aggregated forms of Aβ rather than insoluble plaques.<sup>6)</sup>

Oligomers/protofibrils is the major form of soluble aggregated Aβ in Alzheimer brains and has been shown to induce electrophysiological changes and cause neurotoxicity in neurons. Aβ oligomers/protofibrils have also been shown to induce an inflammatory process through microglial activation, an effect not seen with insoluble fibrils.<sup>8)</sup> One of the mutations causing early onset of familial Alzheimer's disease, the Arctic mutation (APP E693G), has been shown to specifically increase the rate of formation of oligomers/protofibrils.<sup>9)</sup> The levels of oligomers/protofibrils in the brain, but not the levels of total Aβ, correlated with spatial learning, adding further evidence to the theory of soluble oligomers/protofibrils being toxic forms of Aβ.<sup>10)</sup>



The London mutation was discovered in 1991. At that time the scientists did not understand what the effect of the mutation was, and why individuals with this mutation developed Alzheimer's disease. In August 1992 the Swedish mutation was published, and soon knowledge evolved of what the mutation caused: all forms of Aβ increased. The Swedish mutation creates a better substrate for the enzyme BACE1, and this leads to increased amounts of all forms of Aβ, which was relatively easy to discover. The London mutation selectively increases the amount of Aβ<sub>42</sub> over Aβ<sub>40</sub>. At the time of these discoveries there were no analytical instruments sensitive enough to detect these subtle differences. The Arctic mutation gives rise to a significant increase in increased amounts of oligomers/ protofibrils of Aβ, which is BioArctic's target for treatment. The Arctic mutation has given name to the Company.

1) Glenner and Wong 1984; Masters et al. 1985.  
 2) Mullan et al. 1992; Basun et al. 2008.  
 3) Selkoe and Hardy 2016.  
 4) Terry et al. 1991; Dickson et al. 1995; Naslund et al. 2000.  
 5) Walsh et al. 1997, Walsh et al. 1999, Nilsberth et al. 2001.

6) Pike et al. 1991.  
 7) Hartley et al. 1999.  
 8) Paranjape et al. 2013.  
 9) Nilsberth et al. 2001; Johansson et al. 2006; Sahlin et al. 2007.  
 10) Basun et al. 2008, Lord, Englund, et al. 2009. Lord et al. 2009.

The recent clinical setbacks for a number of small molecules and immunotherapies against A $\beta$  (such as verubecestat, bapineuzumab and solanezumab) do not necessarily mean that A $\beta$  is the wrong target for disease modifying treatments for Alzheimer's disease. In the recent late phase failures, a large group of patients had been misdiagnosed, as the disease can be difficult to diagnose if modern biomarkers is not used. Post hoc analyses of early bapineuzumab and solanezumab trials suggest that as much as 30% of the patients enrolled in those studies did not have Alzheimer's disease, which probably affected the results of the studies. It is also possible that the severity of disease in the trial population did not allow for clinical improvement, i.e. the treatment was given too late in the disease progression, or that instruments for measurement of effect were not sensitive enough. The poor clinical outcome could also be caused by low dosing due to side effects.<sup>1)</sup> In the design of the ongoing Phase 2b study with BioArctic's drug candidate BAN2401 lessons have been learned from previous failed clinical studies.

#### *Antibodies targeting A $\beta$*

A $\beta$  immunotherapy has gained a lot of attention and has emerged as one of the most attractive approaches for disease intervention in Alzheimer's disease. There are several antibodies targeting various forms of A $\beta$ . These are in different stages of preclinical and clinical development. A number of antibodies are also evaluated in so-called prevention studies, which are further described below.

BioArctic's monoclonal antibody BAN2401 aims to halt or slow down the progression of the disease and the negative cognitive decline in Alzheimer patients by selectively targeting and eliminating the oligomers/protofibrils of A $\beta$ . BAN2401 is highly selective for A $\beta$  oligomers/protofibrils and has low binding to A $\beta$  mono-

mers. Furthermore, BAN2401 binds 10–15 times stronger to A $\beta$  oligomers/protofibrils than to A $\beta$  fibrils.<sup>2)</sup> BAN2401 is currently studied in a phase 2b study with 856 early stage Alzheimer patients in the US, Canada, EU and Asia.<sup>3)</sup> In BioArctic's opinion, there is a solid scientific rationale behind the Company's treatment strategy for Alzheimer's disease. The hypothesis that neurotoxic oligomers/protofibrils cause neurodegeneration in Alzheimer's disease is supported by both disease pathology and genetic findings. Further, the results in the aducanumab study (see below) provide additional support for the A $\beta$  hypothesis.

Results from previous clinical trials concerning immunotherapy for Alzheimer's disease have demonstrated the importance of attacking the disease early. Therefore diagnostic methods for imaging of the brain (PET) and cerebrospinal fluid biochemistry are used in the ongoing BAN2401 phase 2b trial to identify early stage Alzheimer patients. This is also being done in clinical studies with aducanumab (Biogen's antibody to A $\beta$ ). In the BAN2401 study, a novel, sensitive clinical composite score is being used to monitor disease progression and drug effects. An adaptive study design will allow for an optimized number of patients and dose arms in the study. When a chronic treatment is introduced to a vulnerable patient population, safety and tolerability will be crucial for a successful treatment. Early clinical studies with BAN2401 showed a low rate of side effects<sup>4)</sup>. Based on preclinical and clinical data BioArctic believes that BAN2401 is a promising candidate for A $\beta$  immunotherapy in early Alzheimer's disease.

As previously mentioned, the research field is highly competitive and there are several anti-A $\beta$  antibodies in different stages of development. In the diagram below a selection of the competing drug candidates in late clinical phase and their binding profiles are shown.

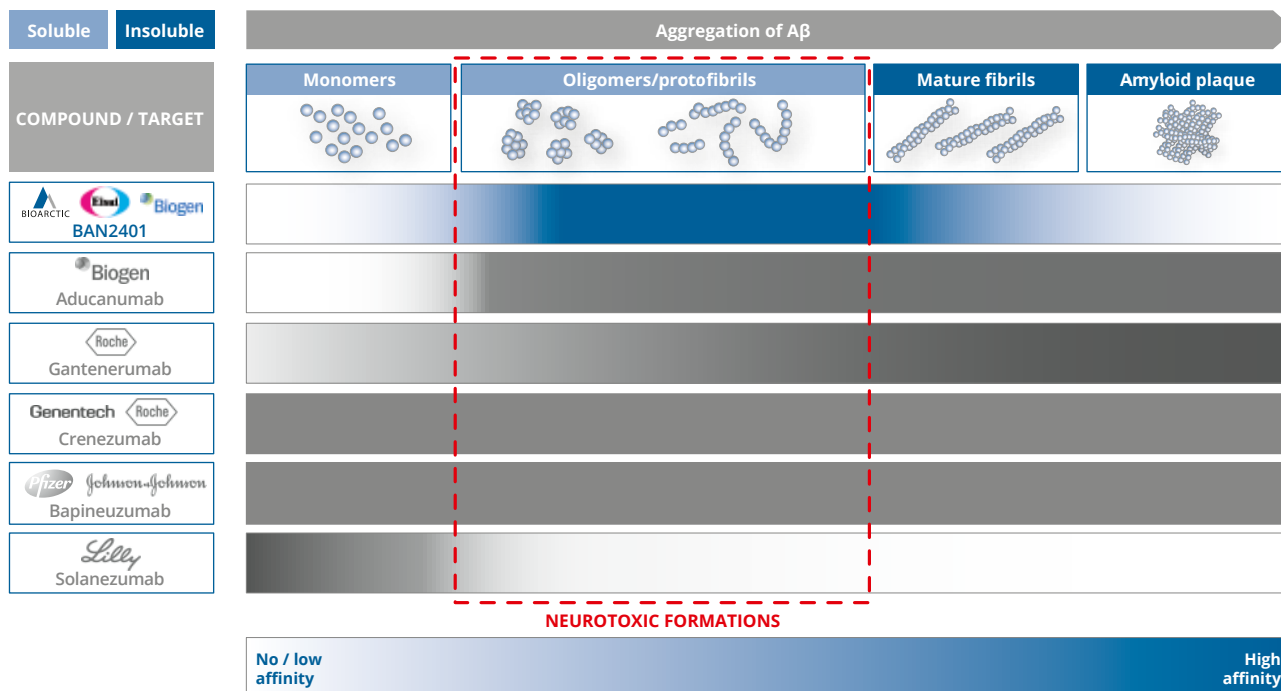
1) Okello et al. 2009.

2) Magnusson et al. 2013.

3) Early Alzheimer's disease includes mild Alzheimer's disease and mild cognitive impairment with Alzheimer pathology.

4) Logovinski et al. 2016.

Target and binding profile of BAN2401 and differentiation vs competitors



The grey scale shows the drug candidates' affinity (i.e. how strong the antibody binds) to the different forms of Aβ. BAN2401 is highly selective for Aβ oligomers/protofibrils and has low binding to Aβ monomers and fibrils and amyloid plaques.

Aducanumab (Biogen) is a monoclonal antibody that mainly binds to oligomers and fibrils of Aβ, and that only has a limited binding to Aβ monomers. Thus, it has a binding profile which is similar to BAN2401. However, BioArctic's antibody BAN2401 binds 10–15 times stronger to oligomers/protofibrils than to fibrils.<sup>1)</sup> Aducanumab has demonstrated clinical effect on cognition and also a dose dependent reduction of Aβ plaques in PET measurements.<sup>2)</sup> The positive results from the study have been important to the whole field of research and are considered as a breakthrough for immunotherapy as disease modifying treatment of Alzheimer's disease. However, Aducanumab has a relatively high frequency of ARIA-E (Amyloid Related Imaging Abnormalities Edema), one of the most common side effects of Aβ immunotherapies caused by fluid leaking into the brain from the blood vessels. The frequency of ARIA-E was 55% in the highest dose group,<sup>2)</sup> compared to less than 5% in the first clinical study of BAN2401.<sup>3)</sup> The difference may be explained by BAN2401's high selectivity for oligomers/protofibrils of Aβ compared with fibrils, but can have other explanations as well.

Gantenerumab (Roche) targets aggregated forms of Aβ, such as oligomers/protofibrils, fibrils and plaques,

and is intended for use in prodromal and mild forms of Alzheimer's disease. The antibody is currently being prepared for clinical Phase 3 studies and will also be evaluated in the so-called DIAN trial. Previous clinical studies of gantenerumab were halted due to lack of effect. A relatively high rate of ARIA-E has also been observed. Roche has restarted the clinical development, now with significantly higher doses than in previous studies.<sup>4)</sup>

Crenezumab (Genentech/Roche) targets all forms of Aβ (i.e. monomers, oligomers/protofibrils, fibrils and plaques). Crenezumab is in Phase 3 trials for prodromal Alzheimer's disease and is evaluated in Alzheimer's Prevention Initiative (API).<sup>5)</sup>

Solanezumab (Lilly) is a monoclonal antibody targeting the monomer form of Aβ. It recently showed very limited clinical efficacy in mild Alzheimer patients.<sup>6)</sup> Lilly has announced that it will not continue the clinical development of solanezumab for the treatment of mild or moderate dementia due to Alzheimer's disease.<sup>7)</sup>

Bapineuzumab and several other early Aβ immunotherapy programs have run into safety problems that have led to the termination of the programs.<sup>8)</sup> The probable cause for the side effects that occurred in the clinical

1) Magnusson et al. 2013.  
 2) Sevigny et al. 2016.  
 3) Logovinski et al. 2016.  
 4) <http://www.alzforum.org/therapeutics/gantenerumab>.  
 5) <http://www.alzforum.org/therapeutics/crenezumab>.  
 6) <http://www.alzforum.org/therapeutics/solanezumab>.  
 7) <https://investor.lilly.com/releasedetail.cfm?ReleaseID=1000871>.  
 8) Ivanoiu et al., 2016.



trials with bapineuzumab was the antibody’s strong binding to all forms of Aβ: monomers, oligomers/protofibrils and fibrils. The side-effect was mainly a high rate of ARIA-E, i.e. leakage of fluid from the blood vessels into the brain.

Solanezumab (Lilly), bapineuzumab (Pfizer/Johnson & Johnson), gantenerumab (Roche) and crenezumab (Genentech/Roche) are all antibodies that have failed to show effect in clinical development phase. Solanezumab, gantenerumab and crenezumab are the subjects of non-regulatory trials (so-called prevention studies) in special Alzheimer populations, mainly concerning preventive treatment of hereditary forms of Alzheimer’s disease. Roche and Genentech have announced that they are starting new Phase 3 studies with very high doses of gantenerumab and crenezumab.

Additional passive anti-Aβ immunotherapy programs in early clinical development are AstraZeneca’s antibody against a C-terminal epitope in Aβ, in partnership with Lilly, Sanofi’s and KHK’s antibodies against Aβ protofibrils and Lilly’s antibody against pGluAβ.<sup>1)</sup>

*BACE1 inhibitors*

BACE1 inhibitors are the main alternative to passive immunotherapy, which is antibodies, as potential disease modifying treatments for Alzheimer’s disease. The enzyme BACE1 has for a long time been investigated as a potential therapeutic target in Alzheimer’s disease. The enzyme BACE1 cleaves the precursor molecule of Aβ, Amyloid Precursor Protein (APP), so that Aβ can be released. BACE1 inhibition is a very effective way of diminishing production of newly formed Aβ from cells. This is done with small molecules that inhibit the activity of BACE1. One problem with this approach is that the enzyme BACE1 has many other substrates to cleave than APP. Thus, there is a risk of side effects. Another problem with this strategy is that it only affects de novo production of Aβ. It does not – as BAN2401 – diminish and clear toxic forms of Aβ already present in the brain. In the future, when patients can be recruited to clinical trials well in advance of clinical symptoms, this type of therapeutic strategy might be important. Further, combinations of anti-Aβ immunotherapy and BACE1-inhibitors have shown positive effects in preclinical models.

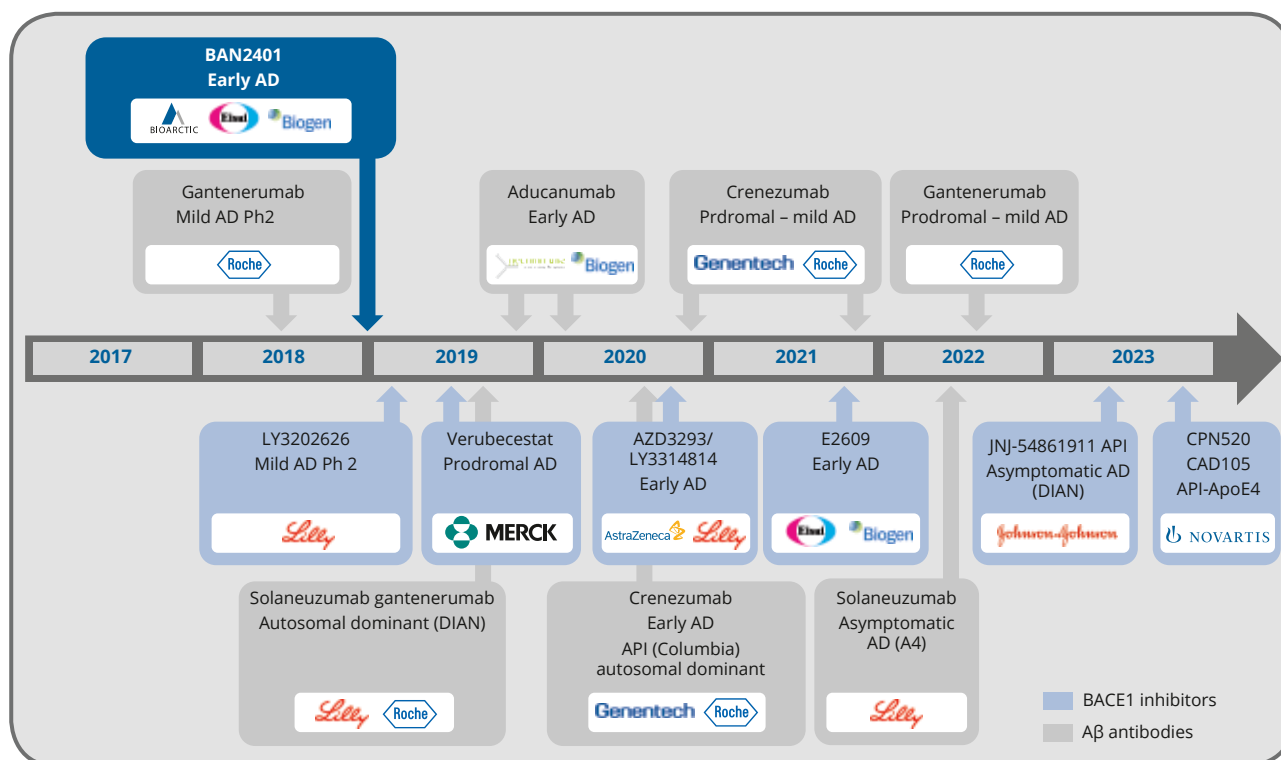
A brief overview of the BACE1 inhibitors in clinical Phase 3 is set out below.<sup>2)</sup>

**BACE 1 inhibitors in clinical Phase 3**

Compound	Company	Clinical trial	Read-out	Stage
Verubecestat	Merck	1,500 prodromal Alzheimer’s Disease, 24 months 1,960 mild to moderate Alzheimer’s disease, 18 months (halted)	1H 2019	Phase 3
AZD3293	AstraZeneca/Lilly	2.200 mild or prodromal Alzheimer’s disease, 24 months	mid 2019	Phase 3
E2609	Eisai/Biogen	700 mild or prodromal Alzheimer’s disease, 18 months	2022	Phase 3

1) <https://clinicaltrials.gov/ct2/show/NCT02036645?term=medi1814&rank=1>, <https://clinicaltrials.gov/ct2/show/NCT01485302?term=SAR228810&rank=1>, <https://clinicaltrials.gov/ct2/show/NCT01837641?term=ly3002813&rank=2>  
 2) The information in the table is compiled from information on each substance gathered from clinicaltrials.gov.

Current Development Status of BAN2401 and Stage in Relation to Competitive Landscape



Other treatment strategies

Other potential strategies for the development of disease modifying treatments of Alzheimer’s disease are for example Aβ aggregation inhibitors, active immunotherapy/vaccination against Aβ and passive immunotherapy targeting the tau protein.

An early treatment strategy was to inhibit the process that leads to the aggregation of the toxic forms of Aβ through the use of small molecule drugs. The strategy was not successful, since the required doses led to considerable side effects.

Vaccines trigger the patient’s own immune system to produce antibodies against the particular antigen (in this case Aβ). An advantage with active vaccines is that they are cheap to produce, in contrast to antibodies where the production costs are relatively high. However, older individuals usually have a weakened immune response and react only weakly to these types of vaccines. Another major disadvantage with a vaccine in Alzheimer’s disease is that it is difficult to target a specific form of the molecule of interest, and it is also almost impossible to control the dose to achieve a certain effect. It is also difficult to terminate treatment if a side-effect should appear. The first immunotherapies tried for Alzheimer’s disease more than 15 years ago were vaccines, but they have so far not been successful.<sup>1)</sup>

Patients suffering from Alzheimer’s disease have increased levels of the tau protein in the cerebrospinal fluid and tau could thus be regarded as a potential target for immunotherapy. However, there is no evidence suggesting that an overproduction of tau causes problems in Alzheimer’s disease or other diseases with tau pathology. Increased tau levels in cerebrospinal fluid found in Alzheimer’s disease are most likely caused by an ongoing breakdown of nerve cells and subsequent leakage of tau from dying nerve cells. Tau is a very interesting protein found in a pathologically changed state in Alzheimer’s disease and several other diseases that are characterized by tau pathology. Our current knowledge is too limited to allow for a good understanding of disease mechanisms due to pathological tau. Vaccines and antibodies against tau are in clinical development.

PARKINSON’S DISEASE

Parkinson’s disease is the second most common neurodegenerative disease among elderly, after Alzheimer’s disease. Parkinson’s disease is a progressive disease of the nervous system that affects the ability to move due to reduced levels of dopamine in the brain. Tremor, stiffness and slow movements are the best known sign of Parkinson’s disease. The disease develops gradually and can start with hardly noticeable tremor in a hand or symptoms related to disturbances in the REM sleep. The disease often also leads to stiffness or slow movements.

1) Schenk et al. 1999; Sterner, Takahashi, and Yu Ballard 2016.

Patients with Parkinson’s disease may also suffer from non-motor symptoms such as dementia, depression, hallucinations and sleeping difficulties. As the disease affects mobility and body control it often leads to difficulties handling everyday situations.

**Need for therapy**

As the second most common neurodegenerative disease, after Alzheimer’s disease, Parkinson’s disease affects a large number of persons. Compared to Alzheimer’s disease, Parkinson’s disease affects a younger patient group, which means that many who fall ill with Parkinson’s disease are still at working age, with considerable financial consequences for the individual and society. There is currently no disease modifying treatment for Parkinson’s disease that can stop or delay the disease progression. This means that the condition of patients with Parkinson’s disease gradually deteriorates. The disease will finally limit the patient’s ability to work and lead a normal and independent life, which also affects the patient’s family and friends.

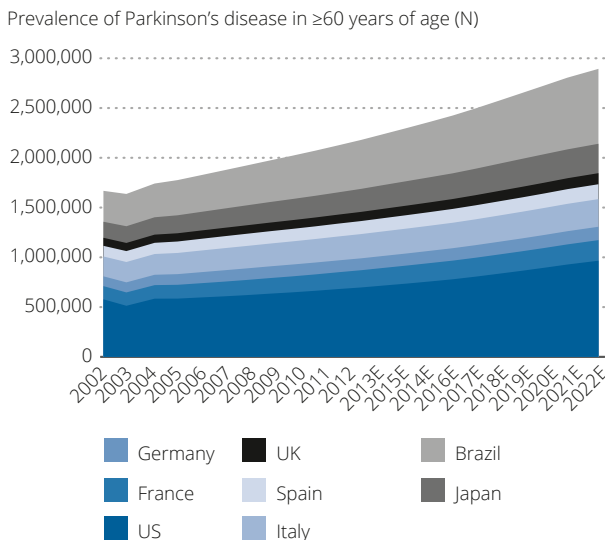
There are currently no estimates of the global public costs for Parkinson’s disease. An estimate regarding the US alone calculated the direct and indirect costs linked to treatment of Parkinson’s disease in 2010 to 14 BUSD, a figure expected to double to 28 BUSD in 2040.<sup>1)</sup> Direct costs associated with Parkinson’s disease include patient care, medication and care costs. Indirect costs associated with Parkinson’s disease include the stress on the caregiver and the patient’s lost productivity.

Researchers at the National Parkinson’s Foundation (NPF) have used a predictive financial model showing that savings amounting to about 60 TUSD per patient can be achieved if the disease progression is slowed down by 20%. If the disease progression is stopped completely the savings would amount to more than 440 TUSD per patient.<sup>2)</sup> The first generation of disease modifying drugs is expected to bring great advantages, primarily for the patients, but also for society as a whole. Researchers have also focused on better possibilities for early diagnosis and treatment of younger working-age patients, e.g. through initiatives like the Parkinson’s Progression Markers Initiative (PPMI).

**Description of the market**

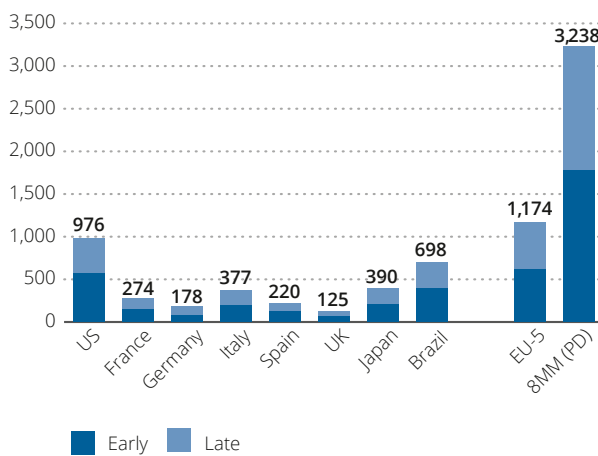
According to data compiled by GlobalData<sup>3)</sup> the prevalence of Parkinson’s disease in 2012 was 2.2 million in the eight biggest markets for Parkinson’s disease (8MM), i.e. the US, Brazil, Japan and EU-5. 55% of the patients were at an early stage of the disease and 45% at a more advanced stage. The US had the highest prevalence (0.7 million), followed by Brazil (0.5 million). In EU-5 the prevalence was estimated to 0.8 million, with the highest prevalence in Italy (0.2 million).

**Parkinson’s Disease in 8MM**



By 2022, GlobalData estimates that there will be approx. 3 million cases of Parkinson’s disease in the 8MM. As a consequence of an aging population, more patients will be in the early stage of the disease (approx. 75%).

**Prevalence per stage of disease (2012)**



As for Alzheimer’s disease, the growth in prevalence is largely related to the aging population. To some degree the increase is due to better ability to diagnose Parkinson’s disease in developing countries. As in the case of Alzheimer’s disease, research is in progress to identify earlier stages of Parkinson’s disease where disease modifying treatment can be initiated.

1) Kowal et al. 2013.

2) Johnson et al. 2013.

3) The data from GlobalData referred to in this section are gathered from GlobalData’s market report on Parkinson’s disease.

### Treatments currently on the market

The treatments for Parkinson's disease that are currently on the market are focused on relieving the motor symptoms in Parkinson's patients, but cannot stop or slow down the progression of the disease. The most common and most effective treatment on the market is the dopamine precursor levodopa, which is converted to dopamine in the body. As high doses of levodopa can cause long-term motor disorders it is usually combined with a so-called decarboxylase inhibitor that enables a lower dosage of levodopa, or with drugs that prolong the effect of levodopa. Another restriction with levodopa is that the effect of the treatment decreases after extended use.

### Disease modifying treatment under development

#### *The $\alpha$ -synuclein hypothesis*

Patients with Parkinson's disease suffer from extensive loss of nerve cells in certain areas of the brain. In the nerve cells, there are so-called Lewis bodies consisting of  $\alpha$ -synuclein.<sup>1)</sup>  $\alpha$ -synuclein is a protein mainly located in the presynaptic space affecting the regulation of neurotransmitter release.<sup>2)</sup> In addition,  $\alpha$ -synuclein can be released from the cells and transfer to nearby cells whereby the disease can spread from one brain area to another.<sup>3)</sup>

Genetic findings show that mutations in the  $\alpha$ -synuclein gene leads to Parkinson's disease. To date, six point mutations, as well as duplications and triplications of the  $\alpha$ -synuclein gene, have been identified, all of which lead to early-onset forms of familial synucleinopathy.<sup>4)</sup> Some of the  $\alpha$ -synuclein mutations have been shown to promote the formation of large soluble aggregates of oligomers – or protofibrils – which continue to aggregate

to Lewy bodies.<sup>5)</sup> Whereas the insoluble  $\alpha$ -synuclein aggregates do not seem to confer cellular damage, numerous studies have demonstrated that soluble oligomers/protofibrils exert pronounced neurotoxic effects. Differently sized  $\alpha$ -synuclein oligomers can be detected in the central nervous system and increased levels of soluble aggregates of  $\alpha$ -synuclein oligomers were measured in brains with Lewy pathology compared to brains from non-diseased individuals.<sup>6)</sup> Oligomers/protofibrils of  $\alpha$ -synuclein seem to be more prone to transfer between cells and would thereby be responsible for the propagation of pathology in the affected brain. Targeting  $\alpha$ -synuclein oligomers/protofibrils should thus be an possible strategy for early therapeutic intervention in Parkinson's disease and related disorders.

#### *Antibodies targeting $\alpha$ -synuclein*

The hypothesis that soluble aggregates of  $\alpha$ -synuclein causes Parkinson's disease is based on a solid scientific rationale supported by both disease pathology and genetic findings. BioArctic's product candidate BAN0805 is a monoclonal antibody which selectively targets oligomers/protofibrils of  $\alpha$ -synuclein. The monomeric  $\alpha$ -synuclein most likely has important physiological functions and is abundant in the blood. BAN0805 binds only weakly to the monomeric forms of the protein, allowing selective targeting of brain oligomers/protofibrils, and reduces the risk of peripheral sequestration and potential peripheral side effects. In preclinical studies, BAN0805 has been shown to decrease the levels of  $\alpha$ -synuclein protofibrils, decrease motor symptoms and double the life span of transgenic Parkinson mice.<sup>6)</sup>

1) Jakes, Spillantini, and Goedert 1994.

2) Burre et al. 2010.

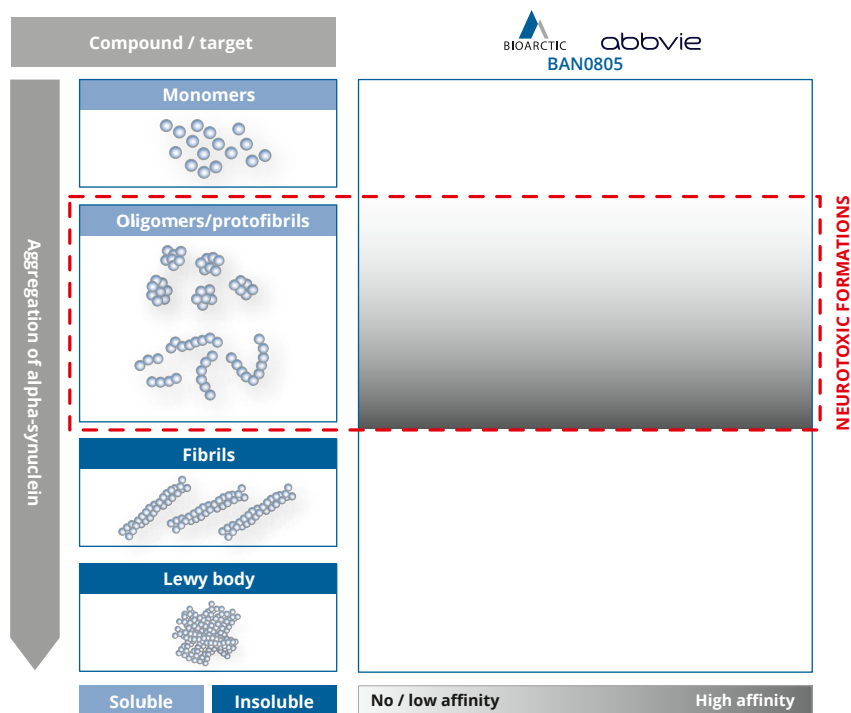
3) Li et al. 2008.

4) Houlden and Singleton 2012.

5) Conway et al. 2000.

6) Ingelsson 2016.

**Binding profile of BAN0805**



The grey scale shows the drug candidate's affinity (i.e. how strong the antibody binds) to the different forms of  $\alpha$ -synuclein.

There are several other antibodies targeting  $\alpha$ -synuclein in different stages of preclinical and clinical development. Disease modifying treatments for Parkinson's disease is a relatively new research area and the products under development are in general in earlier stages of development compared with for example disease modifying treatments for Alzheimer's disease. There are currently two antibodies against  $\alpha$ -synuclein in clinical phase, which are described below.

The pharma company Roche is collaborating with the American biotech company Prothena, which has developed monoclonal antibody against  $\alpha$ -synuclein. Results from a dose ascending Phase 1-study were announced at the end of 2016. A Phase 2 study has recently been initiated with 300 subjects with early stage Parkinson's disease who will be treated during 52 weeks.<sup>1)</sup> The Phase 1 study enrolled 80 patients with Parkinson's disease who received doses by intravenous

infusion during up to three months. The antibody was found to be safe and well-tolerated.<sup>2)</sup> Biogen and the Swiss biotech company Neurimmune have initiated a collaboration to develop a monoclonal antibody, BIIB054, targeting  $\alpha$ -synuclein. A phase 1 clinical study is ongoing.<sup>3)</sup>

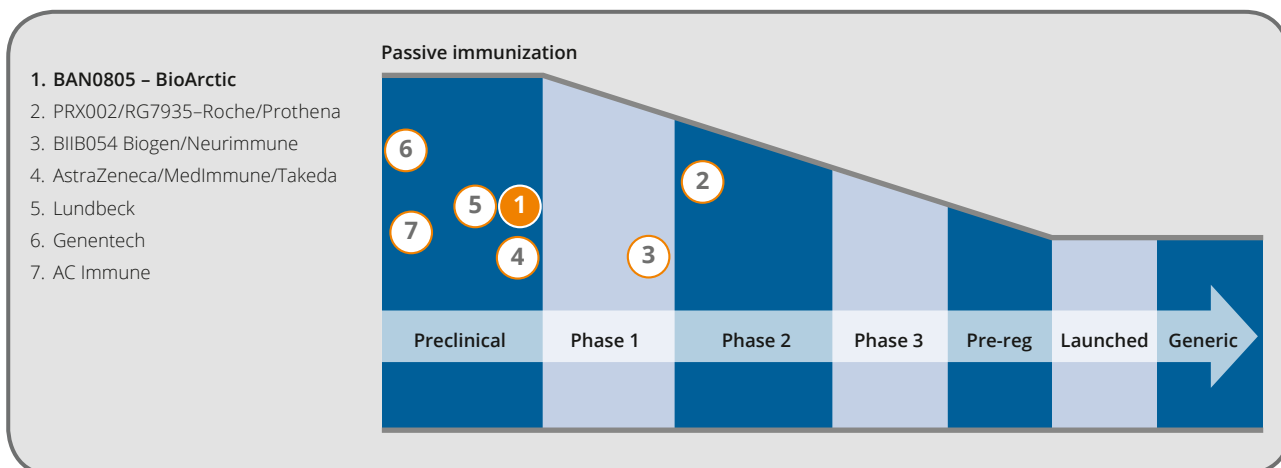
*$\alpha$ -synuclein vaccination*

The Austrian biotech company Affiris develops an active immunotherapy treatment (vaccine) to prevent the formation of  $\alpha$ -synuclein oligomers. The treatment consists of short peptides, so-called affitopes, from the  $\alpha$ -synuclein molecule that are bound to a carrier molecule. The vaccine is aimed at generating an immune response and has shown results in the form of a decreased accumulation of  $\alpha$ -synuclein in axons and dendrites in transgenic mice. The project is currently in early clinical phase.<sup>4)</sup>

1) <http://www.prothena.com/pipeline/prx002/>.  
 2) <http://ir.prothena.com/releasedetail.cfm?ReleaseID=998603>.  
 3) <https://clinicaltrials.gov/ct2/show/NCT02459886>.  
 4) <https://clinicaltrials.gov/ct2/show/NCT02267434?term=affiris&draw=1&rank=10>



Development pipeline for passive immunotherapy in Parkinson’s disease



SPINAL CORD INJURY

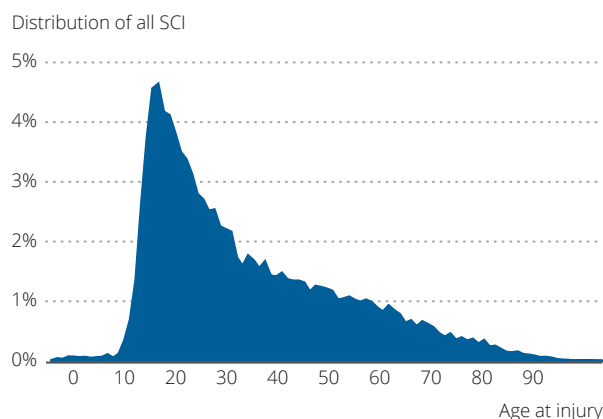
Spinal cord injuries are usually caused by traumatic events resulting in partial or complete paralysis. The extent of paralysis depends on where the damage occurs, i.e. in the neck, thoracic spine or lumbar spine. A complete injury is defined as an injury where the patient can accomplish no voluntary movements or sensory feedback below the injury. A spinal cord injury causes degeneration of the nerve fibers below the site of injury as nerve cells do not regenerate. Besides paralysis patients with complete spinal cord injury suffer from other serious symptoms, including neuropathic pain, bowel and bladder incontinence, motor deficits, sensory loss, pressure sores, infertility and sexual dysfunction. Restoring bowel and bladder control, removing pain or enabling sexual functionality would constitute a major improvement in the quality of life for spinal cord injury victims.

Need for therapy and description of the market

Complete spinal cord injuries are more common among younger persons and most common in males, among other things as a result of active and more risky lifestyles and working environments. A treatment that could reduce the paralysis or help restore functions would be a significant step forward not only for the patients and their families, but also for society from a cost perspective. Currently there is no treatment available for chronic complete spinal cord injury and the unmet need is huge.

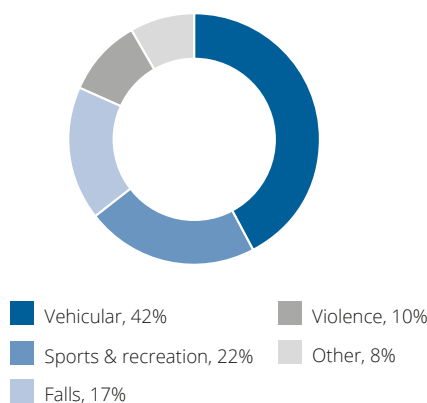
The incident ranges between 12.7 and 44.3 per million inhabitants depending on country.<sup>1)</sup> Some 40% of these patients are estimated to have chronic complete spinal cord injury.<sup>2)</sup> Patients with complete spinal cord injury require life-long therapy and care, which means high costs for the healthcare system.

Age distribution



Source: NSCISC Annual Statistics report 2015

Causes



Source: NSCISC Annual Statistics report 2015

1) Datamonitor, Stakeholder Opinions: Spinal Cord Injury, 2010.  
 2) NSCISC Annual Statistics report 2010.

### Treatments under development

The acute treatment of spinal cord injuries has improved during the last 70 years. However, there has been little clinical progress in treating complete injuries and there is still no effective treatment for chronic complete spinal cord injuries.

SC0806 is BioArctic's treatment concept for patients with complete spinal cord injury. SC0806 is a biologically degradable implant containing channels for nerve grafts as well as the growth factor FGF1. The product is a combination of a medical device (the implant) and a pharmaceutical (FGF1). The channels in the implant are designed to guide axon growth from white to grey matter in the spinal cord, which is a precondition for nerve regeneration. The treatment is based on a surgical procedure where the scar tissue in the injured part of the spinal cord is removed and replaced with nerve grafts from the patient's legs (the sural nerve) which are positioned at the site of the injury by means of the device. The nerve grafts that have been inserted into the channels of the implant have the function to stimulate regeneration of axons. The growth factor FGF1 has two functions, on the one hand to stimulate the growth of axons, on the other to inhibit gliosis, a process resulting in scar tissue. The surgery is followed by 18 months of rehabilitation through intensive training in a robotic system to support muscle rebuilding in the part of the body affected by paralysis.

In preclinical studies BioArctic has demonstrated nerve regeneration, transfer of electrical impulses and some return of motor function in animals. The project is in clinical phase and a Phase 1/2 study is ongoing.

The competition within this field is limited and the most promising approaches are mentioned below.

In 2014 a Polish research group presented a study where it was reported that a completely paralyzed man had improved mobility of the legs after the following treatment: The spinal cord scar was resected, cultured cells from the patient's nasal mucosa were transplanted into the 8 mm gap and bridged by sural nerves from the patient's lower leg. After eleven months of rehabilitation the patient had improved mobility in his legs.<sup>1)</sup> BioArctic has a similar treatment concept, but with a more organized approach to guide the nerve growth over the injured part of the spinal cord.

The US company In Vivo Therapeutics has initiated a study in 20 patients with acute spinal cord injury with a scaffold made from polymers placed at the epicenter of the contusion injury. So far, ten patients have been implanted. The first implanted patient has improved in sensorimotor function six months after the implantation.<sup>2)</sup>

A third approach initiated by The Miami Project to Cure Paralysis is based on cultivation of the patient's own Schwann cells (coming from a saphenous nerve in the leg) and implanting them into the injury area. The first part of the study, which included six patients with complete spinal cord injury, has been reported not to demonstrate any significant treatment effect or serious adverse events. The study is ongoing.<sup>3)</sup>

### TRENDS AND TENDENCIES

Below some trends and tendencies that BioArctic consider to be important in the Company's research areas are described.

#### Great medical needs are driving the development of new drugs

The lack of disease modifying treatments for Alzheimer's disease and Parkinson's disease means that there are great medical needs that are not met today. The urgent need for disease modifying treatments has led to an increased willingness for financial risk-taking in the connection with the development of such treatments. New government initiatives have also been launched to further the development of drugs in areas where effective treatments are lacking, such as opportunities for conditional approval and accelerated review processes.

#### Great need for new diagnostic methods

There is a great need for the development of better and more specific diagnostic methods for Alzheimer's disease and Parkinson's disease, in order to enable a correct diagnosis at an earlier stage and thereby earlier treatment, and to objectively measure the effect of drug treatment and disease progression.

#### Demographic development

Neurodegenerative diseases like Alzheimer's disease and Parkinson's disease primarily affect elderly. Demographic trends such as an aging population mean that an increasing number of patients are affected by Alzheimer's disease and Parkinson's disease.

#### Collaborations between pharma companies

It is becoming increasingly common that big global pharma companies are collaborating with smaller research-based companies in the development of drugs. As a result of larger and costlier Phase 3 studies it is also becoming increasingly common that big pharma companies enter into collaborations with each other. An example of this is Eisai's collaboration with Biogen regarding Alzheimer's disease.

1) Tabakow et al. 2014.

2) <https://clinicaltrials.gov/ct2/show/NCT02138110?cond=spinal+cord+injury&spons=In+Vivo+Therapeutics&rank=1>.

3) Anderson et al. 2017.

### Increased focus on orphan drug indications

There is an increased interest in the development of effective treatments for orphan drug indications among pharma companies as well as regulatory authorities.

### Increased focus on reducing society's costs for drugs

The costs for drugs are generally financed or subsidized by public or private reimbursement systems. New drugs are often costly due to the massive investments made during the development process. There is increased political pressure to reduce society's costs for drugs and the current systems for financing, subsidizing and pricing of drugs may come to change.

## DEVELOPMENT AND APPROVAL OF DRUGS

### General aspects of drug development

In order for a drug to be marketed and sold, marketing approval from the authorities concerned on the relevant markets is required. The process for gaining marketing approval is subject to detailed regulations, which among other things means that it is necessary to carry out comprehensive studies to document the effect and tolerability of the drug. Only a small number of the drug candidates developed finally become approved products that can be launched on the market. This means that drug development is a time and resource demanding activity associated with high risk. The complete development process – from discovery to approved drug – normally takes between 10 and 15 years.

### Research phase

Early research is directed at studying and mapping the underlying molecular disease mechanisms. In the case of the Company this means studying which mechanisms that lead to Alzheimer's disease and Parkinson's disease. Then research is started in order to identify and develop antibodies that can be used to influence a disease mechanism, i.e. reduce the levels of toxic oligomers/protofibrils of A $\beta$  or  $\alpha$ -synuclein in the brain. The development process starts with identifying a drug candidate, whose properties and effect are then studied and evaluated. In the research phase normally studies *in vitro* as well as more comprehensive *in vivo* studies in animal models are performed in order to validate the treatment concept.

BioArctic has five drug projects in research phase; the Alzheimer projects AE1501, AD1502 and AD1503, and two early Parkinson projects.

### Preclinical phase

When a drug candidate that is believed to have effect on the relevant disease mechanism has been identified the preclinical phase is started. Before a drug can be tested on humans extensive work must be performed to ensure that the product is sufficiently safe and stable and to clarify how it behaves in the body and how it leaves the body. The preclinical studies must show that the substance is not toxic, i.e. that it does not have serious

side effects in the doses that have the desired effect on the disease. It is also necessary to develop a production process and a dosage form (solution, tablet, injection, infusion, etc.) that is medically appropriate. In normal cases the preclinical phase takes 18–24 months.

BioArctic has two drug projects in preclinical phase; BAN2401 backup for the treatment of Alzheimer's disease and BAN0805 for the treatment of Parkinson's disease.

### Clinical phase

Studies on humans are generally performed in hospitals or health care centers in collaboration between the care giver and the person, company, institution or organization that is responsible for initiating, organizing or financing a clinical trial (the so-called sponsor). Before a drug can be tested in humans an application must be submitted to the regulatory authorities concerned in the countries where the clinical trial will take place. This application contains documentation from the preclinical phase and also describes how the clinical studies will be performed. In addition to an approval from the regulatory authorities the company must also apply for and receive approval from the local and national ethics committees in the respective countries. To enable an objective interpretation of the studies the endpoints to be evaluated are stated already in advance.

How the study program for a particular drug shall be designed is continuously evaluated and regulatory approval is required for each individual study. The clinical trials are divided into three phases – Phase 1, 2 and 3. However, the study phases may be combined as Phase 1/2 or Phase 2/3 studies, which is especially common in the Company's research areas. The number of patients enrolled is also fewer in clinical studies concerning rare diseases (so-called orphan drug indications).

Phase 1 is the first time a new substance is given to humans. Normally the study subjects are healthy volunteers under constant medical supervision. In clinical studies concerning immunotherapy for Alzheimer's disease and Parkinson's disease Phase 1 studies are also conducted in patients, as the target molecule is not present in healthy subjects. The purpose of the trial is to determine if the subjects tolerate the drug and if it performs in the body in the way indicated by the pre-clinical studies and other research. A Phase 1 study normally takes about a year and comprises a smaller group of subjects (rarely more than 100 persons).

In Phase 2 the drug candidate is given to patients, and now the test group also gets larger, usually 100–300 persons. Phase 2 studies are usually placebo-controlled, which means that one group of patients receives placebo treatment without active substance. The main purpose of a Phase 2 study is to demonstrate so-called Proof of Concept, that the drug has the intended medical effect, and to determine the optimal dose. Further, the studies of side effects and the drug's performance in the body are continued in Phase 2. The Phase 2 studies are some-

times divided into Phase 2a studies, focusing on the drug's safety profile, and Phase 2b studies, focusing on the effect of the drug. A Phase 2 study normally takes about two years to carry out.

Phase 3 is started only if the results from Phase 2 are sufficiently good to motivate continued studies. The main purpose of Phase 3 programs is to confirm the drug's efficacy and safety profile in patients with the specific disease. Health economic benefits should also be shown. If there are previously approved treatments the Phase 3 study should demonstrate that the new drug is equally good or better than existing treatments. In Phase 3 the drug candidate is compared to placebo or a previously approved drug for the same condition. In Phase 3 studies a large number of patients are included, sometime thousands. This great number is necessary in order to get an adequate basis for statistical analyses. Data from these studies is the basis for a later application for marketing approval of the drug. A Phase 3 program normally takes three to four years to complete and usually comprises 1,000 - 3,000 study subjects.

A clinical study program can be discontinued at any time due to adverse side effects or lack of effect. Only a minority of the drug candidates for which clinical studies are initiated reach marketing approval phase.

BioArctic has two projects in clinical phase; BAN2401 in late Phase 2b with patients with early Alzheimer's disease and SC0806 in combined Phase 1/2 with patients with complete spinal cord injury.

### The approval process

A drug can be marketed and sold only if marketing approval has been received from the regulatory authorities concerned on the relevant market. This means that it is necessary to apply for marketing approval from different authorities if the product is to be marketed in more than one market.

In order for a drug to gain marketing approval comprehensive documentation is required from preclinical and clinical studies confirming that the drug is sufficiently safe and effective. A central part of the assessment is the so-called benefit-risk evaluation, where the authority weighs the balance between the drug's positive effects and the risks that the use brings, primarily in the form of side effects. The approval process generally takes from six to 18 months.

In the EU and the EEA drugs can be approved through three different procedures. The evaluation criteria and the requirements for documentation are in all essentials the same in all procedures. One of these procedures (the central procedure) is mandatory for certain types of drugs, e.g. biotechnological products, orphan drugs, and new drugs for the treatment of cancer, HIV, neurodegenerative diseases, diabetes and autoimmune diseases. Within the framework of the central procedure the final decision of approval is made by the European Commission and applies to all countries within the EU and the EEA.

In the US applications for marketing approval (*New Drug Application*, NDA, and for biologic drugs *Biologics License Application*, BLA) are reviewed by the American regulatory authority FDA (United States Food and Drug Administration).

For the treatment of diseases where a particularly great medical need exist there are opportunities for some easements in the regulatory procedures, for example conditional approval or a prioritized or accelerated review process (see further under "*Orphan drugs*" below).

### Follow-up studies and requirements after market introduction

Knowledge concerning a drug is generated throughout its entire life cycle and complete knowledge of rare side effects or side effects emerging after long use is not available at the time of approval of the drug. There are therefore requirements implying that the drug must be followed-up continuously after its market introduction. Adverse event reporting, but also results from trials after the approval, so-called Phase 4 studies, are monitored and reported to the relevant authority at regular intervals.

Marketing approval must normally be renewed after five years. In connection with this a new risk-benefit evaluation is made. Then the approval normally is in effect until further notice. The authorities can also decide to recall an already approved and introduced product for safety reasons.

### Data and market exclusivity

Biologics in the US are granted four years of data exclusivity and eight years of market exclusivity i.e. a biosimilar cannot enter the market until 12 years post approval. In Europe, the situation is similar with ten years of data exclusivity, hence a biosimilar can enter the market in Europe 11 years post approval of the reference drug. All of BioArctic's products are biologic products.

### ORPHAN DRUGS

On several important markets, including the EU/EEA and the US, there is a special regulation concerning drugs intended for rare or life-threatening or seriously disabling diseases where satisfactory treatment is lacking, so-called orphan drugs. A drug can obtain orphan drug status after application to the concerned regulatory authority, which brings a number of advantages, for example a simplified route to marketing approval, exclusive rights and some financial incitements. The purpose of the regulation is to further the development to drugs in areas that are not considered sufficiently profitable to motivate the investments otherwise needed.

BioArctic's treatment for complete spinal cord injury (SC0806) has obtained orphan drug status in the EU/EEA as well as in the US.



### Conditional approval

In the EU and EEA a drug for the treatment of rare and serious diseases can in certain cases get a so-called conditional approval, which means that the product can be introduced before all clinical studies are completed. A condition for this is that the drug has shown good results in early studies and that other treatments are lacking or that the new drug brings considerable advantages compared to already existing treatments. Certain types of drugs, such as medicines classified as orphan drugs, may be eligible for conditional approval. The approval is typically contingent on the completion of relevant clinical studies by the applicant. A conditional approval is temporary and reviewed annually. The intent is that the contingent approval should be converted into a common approval if the follow-up studies confirm the positive properties of the drug. If the follow-up studies fail the drug can be withdrawn from the market.

In the US there are also several opportunities for a prioritized or accelerated review procedure for orphan drugs.

### Exclusive rights

In the EU/EEA orphan drugs can obtain market exclusivity (independent of patent protection) for ten years from the time of marketing approval. Market exclusivity is granted by the European Commission.

The corresponding regulation also exists in the US, where the FDA can grant market exclusivity for orphan drugs during seven years from marketing approval.

During the market exclusivity period the drug is protected for the approved indication, which means that similar drugs cannot be approved for the same indication during this period. Exceptions can be made if the company with market exclusivity cannot supply the market with sufficient amounts of the drug, or if the new product is safer or has demonstrated better effect, and thereby brings a major advantage for the patient.

### MEDICAL DEVICES

BioArctic's product candidate SC0806 is a combination of a medical device (the implant) and a drug (the growth factor FGF1). The product candidate is therefore subject also to the regulatory procedure for medical devices. BioArctic follows the rules for medical devices and the approval of SC0806 will take place through CE conformity marking and Notified Body. This approval procedure is carried out in parallel with the approval of the drug.









# Company description

## INTRODUCTION TO BIOARCTIC

BioArctic is a Swedish research-based biopharma company with the aim to develop new treatments for diseases affecting the central nervous system. BioArctic's proprietary technology, dedicated personnel and collaborations with academic research groups and global pharma companies have made it possible to develop new innovative treatments based on antibodies (immunotherapy) for neurodegenerative diseases and a new treatment for complete spinal cord injury. The Company focuses on Alzheimer's disease, Parkinson's disease and complete spinal cord injury, areas where there are large unmet medical needs today.

The Company was founded in 2003 by Professor Lars Lannfelt and Associate Professor Pär Gellerfors to develop significant discoveries made by Professor Lannfelt and his research group at Uppsala University regarding Alzheimer's disease. These discoveries – the Swedish mutation and the Arctic mutation<sup>1)</sup> – have attracted much attention internationally and explain the central role of A $\beta$  in Alzheimer's disease, which has enabled the development of new treatment strategies for the disease. Lannfelt and Gellerfors still own, through wholly-owned companies, 94.30% of the shares, representing 98.13% of the votes in the Company before the execution of the Offering. Lannfelt and Gellerfors are also still active in the Company.

Research collaborations and partnerships are important parts of BioArctic's business and over the years the Company has entered into a number of successful strategic collaborations for further development of the Company's product candidates. BioArctic has research collaborations with research groups at Uppsala University, Karolinska Institutet, Karolinska University Hospital, Gothenburg University, Linköping University and Lund University. Research and development work concerning Alzheimer's disease is conducted in partnership with the Japanese global pharma company Eisai Co. Ltd. ("**Eisai**"), since 2005, but also in-house. Since September 2016, research concerning Parkinson's disease is being conducted in partnership with the American global biopharma company AbbVie Ireland Unlimited Company ("**AbbVie**"). BioArctic conducts the clinical development in the area of complete spinal cord injury in-house. The treatment concept was in-licensed in 2008 from Swenora Biotech AB. Several of the Company's projects have also received grant funding from Vinnova and the EU's research and development program Horizon2020.

1) Mullan et al. 1992, Nilsberth et al. 2001.

## HISTORY

- 1992** The Swedish mutation, which leads to early development of Alzheimer's disease, was discovered in a Swedish family.
- 2001** The Arctic mutation, which leads to an increase of oligomers/protofibrils of A $\beta$ , was published. Individuals with the Arctic mutation develop Alzheimer's disease at an early age.
- 2003** BioArctic AB was founded by Lars Lannfelt and Pär Gellerfors.
- 2004** Karolinska Institutet Innovations AB invested in BioArctic (the holding was later transferred to Karolinska Development AB) and the Company filed two important patent applications concerning a concept patent for antibody treatment of Alzheimer's disease and a transgenic mouse model.
- 2005** BioArctic and Eisai entered into a research collaboration agreement regarding a disease modifying treatment of Alzheimer's disease.  
BioArctic started research on Parkinson's disease in collaboration with Uppsala University. Uppsala Universitet Holding AB invested in BioArctic.
- 2006** The Company was located in its own premises in Stockholm.
- 2007** BioArctic and Eisai signed a license agreement regarding the antibody BAN2401, a disease modifying treatment for Alzheimer's disease, as a result of the research collaboration agreement of 2005. BioArctic filed a patent application regarding the antibody BAN2401.
- 2008** BioArctic and Eisai entered into a research collaboration agreement regarding the development of a back-up antibody to BAN 2401.  
BioArctic and Swenora Biotech AB signed a license agreement regarding Swenora's technology for the treatment of complete spinal cord injury. BioArctic started the development of a treatment for complete spinal cord injury (SC0806) in collaboration with the neurology clinic at Karolinska University Hospital.
- 2010** The clinical development of BAN2401 was started and SC0806 obtained orphan drug status in the EU.
- 2011** SC0806 obtained orphan drug status in the US.
- 2012** BioArctic received funding from Vinnova for the clinical development of SC0806.
- 2013** The Company's partner Eisai started a clinical Phase 2b study in the US concerning the product candidate BAN2401 and clinical development of BAN2401 was started in Japan.  
The Company's European patent in the patent family AD III (BAN2401 patent) was subject to a complaint. BioArctic had complete success in the complaint proceedings and the validity of the patent was maintained without changes in the patent claims.
- 2014** Clinical development of BAN2401 was started in Europe.  
BioArctic received a 6.4 MEUR grant from the EU's research and development program Horizon2020 as co-financing of a clinical study concerning the Company's treatment of complete spinal cord injury (Grant Agreement No. 643853).  
The Company's partner Eisai entered into a collaboration agreement with Biogen regarding the continued development and commercialization of BAN2401.
- 2015** BioArctic and Eisai entered into a license agreement regarding BAN2401 back-up, a follow-up project to BAN2401, and a research collaboration agreement regarding a new disease modifying treatment of Alzheimer's disease. The revenues from this research collaboration was, however, lower than from previous collaborations, which made the Company implement a cost-savings program through decreased area of facilities and not going through with planned recruitments.  
BioArctic's research program for Parkinson's disease received grants from Vinnova and the EU's research and development program Horizon2020 (Grant Agreement No. 697790).  
BioArctic started a clinical study concerning SC0806.
- 2016** BioArctic entered into a collaboration agreement with AbbVie concerning research in Parkinson's disease. Through the agreement AbbVie obtained an option for a license of BioArctic's Parkinson program.
- 2017** A patent for BAN2401 back-up was approved in the USA.  
BioArctic obtained further grants from Vinnova. The European Patent Office has announced that they intend to grant a patent within the patent family PD VII (BAN0805 patent).  
European Patent Office (EPO) has made a decision at Oral Proceedings held on 26 September 2017, with the conclusion to revoke the Company's European patent in the patent family AD II (concept patent) in Europe. Even if this concept patent currently is revoked, BioArctic importantly holds specific substance patent protection in US, Japan and EU for BAN2401, an antibody in Phase 2b clinical trial. The concept patent is granted in the US, Canada and Australia and is not affected by the EPO's decision.

## MISSION AND VISION

BioArctic's mission is to improve quality of life for patients with diseases which affects the central nervous system. BioArctic's vision is to make BioArctic a world leading Swedish biopharma company within research, development and sales of innovative and effective biological drugs for patients with neurodegenerative diseases, such as Alzheimer's disease and Parkinson's disease and innovative and efficient treatments of complete spinal cord injuries.

To achieve the vision, BioArctic will maintain a focus on its core business and encourage a strong culture of curiosity and innovation among its staff and partners. In addition, BioArctic aims to be the preferred and leading collaborator for our colleagues in the research field, the pharmaceutical industry and the health care sector.

## STRENGTHS AND COMPETITIVE ADVANTAGES

BioArctic believes that the Company has several strengths and competitive advantages that have contributed to its success and that will enable BioArctic to maintain and improve its strong position in the development of drug candidates in the area of neurodegenerative diseases, such as Alzheimer's disease and Parkinson's disease, related diagnostics and technology, and the treatment of complete spinal cord injury. BioArctic's strengths and competitive advantages include the following:

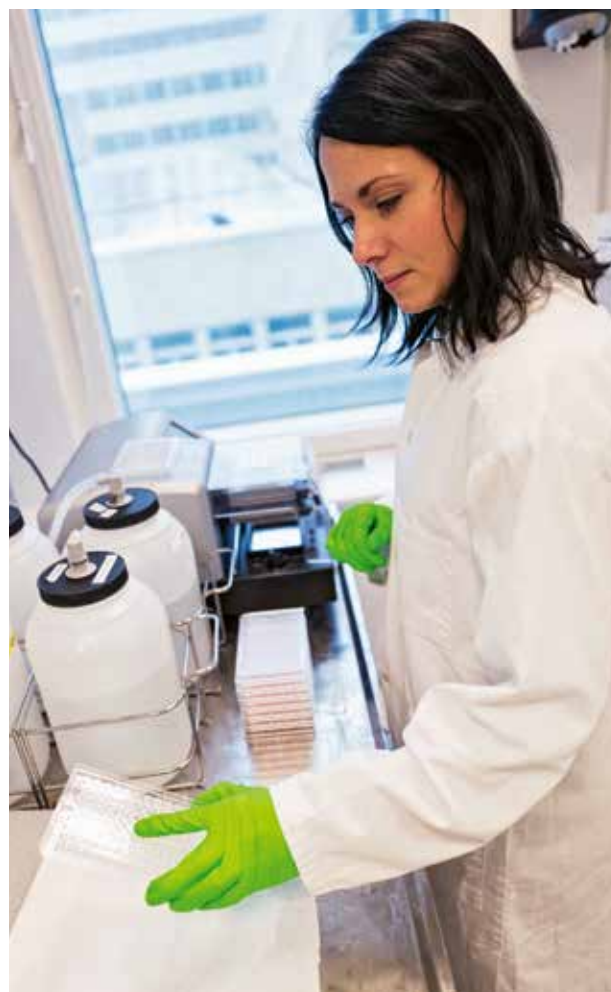
- ▲ Highly qualified staff with proven ability to develop drugs.
- ▲ An innovative project portfolio consisting of differentiated first generation disease modifying drug candidates for neurodegenerative diseases, related diagnostics and technology and a new treatment concept for complete spinal cord injury.
- ▲ Strategic collaborations and partnerships with Eisai and AbbVie and funding from the EU's Horizon2020 and Swedish Vinnova that validate the ability of the research organization and the potential of the drug candidates.
- ▲ An attractive combination of fully financed partner projects with significant market potential and innovative proprietary projects with significant outlicensing potential.
- ▲ A strong intellectual property rights portfolio.

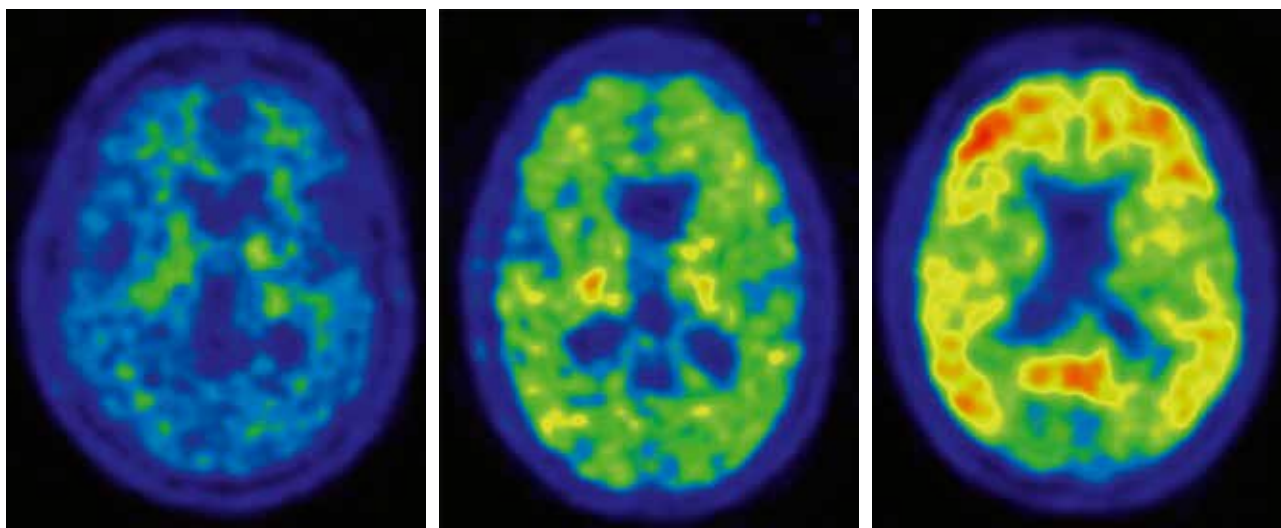
### Highly qualified staff with proven ability to develop drugs

BioArctic's organization, including the management team as well as the research and development teams, has long experience of drug development. The management team has more than 200 years of combined experience, mostly from R&D at big pharma companies such as AstraZeneca, Astra Arcus and KabiVitrum/Pharmacia, where they had overall responsibility for areas, units and projects related to i.a. neurology, clinical development, pharmacology, biochemistry and process development. The manage-

ment team also has a natural strong connection to the academy and clinical research. The discoveries of the Arctic and Swedish mutations in patients with Alzheimer's disease by Professor Lars Lannfelt form the basis, to a large extent, of the founding of the Company. The management team consists of four PhDs, two associate professors and one professor. Also the R&D team at BioArctic is highly qualified and consists of 25 PhDs, which means that approx. 90% has a doctoral degree in relevant research areas. The staff has been trained at renowned universities, such as Uppsala University, Karolinska Institutet, KTH Royal Institute of Technology, Stockholm University, Harvard Medical School and Health Science Centre San Antonio, USA.

Through its management and R&D teams BioArctic has the internal knowledge base that is necessary to conduct cutting edge research in neurodegenerative diseases, such as Alzheimer's disease and Parkinson's disease, and in complete spinal cord injury. In addition the Company has extensive collaborations with outstanding external research groups, academic institutions and health care institutions, and very experienced consultants and contract manufacturers. Through internal as well as external expertise BioArctic thus has the knowledge required for bringing a drug from an idea to the market.





The images from PET-centre at University Hospital of Uppsala, shows a normal brain (left image) and a brain with Alzheimer's disease (right image). The image in the middle shows an Alzheimer's patient with only mildly pathological changes.

**An innovative project portfolio consisting of differentiated first generation disease modifying drug candidates for neurodegenerative diseases, related diagnostics and technology and a new treatment concept for complete spinal cord injury**

BioArctic has an innovative and well positioned project portfolio consisting of a number of antibody-based drug candidates for the treatment of neurodegenerative diseases, diagnostics and technology to improve the opportunities for accurate diagnosis and treatment of Alzheimer's disease and Parkinson's disease, and a product candidate for the treatment of complete spinal cord injury – areas where there are currently great unmet medical needs.

The Company's antibody-based drug candidates belong to the first generation of disease modifying drugs for the treatment of neurodegenerative diseases and are among the first of their kind as to the target proteins to which they bind. The binding profiles are furthermore differentiated from similar competing candidates. This is due partly to the genetic and pathologic discoveries that have been made regarding the diseases that the Company focuses on, partly to the discoveries made during the development of competing drug candidates. All BioArctic's antibody-based drug candidates primarily bind to aggregated but soluble forms of misfolded proteins, so-called oligomers or protofibrils. These forms have lately gained much attention as being the neurotoxic forms that are present only in the brain and are believed to cause Alzheimer's disease and Parkinson's disease. They constitute a general disease mechanism for these diseases.

As Alzheimer's disease and Parkinson's disease have a slow progression and the clinical symptoms only appear years after the emergence of pathological changes in the brain it is essential that a preventive and chronic treatment can be started early. This requires development of

reliable methods for diagnosis and for monitoring of the disease progression. BioArctic's diagnostics projects are closely linked to the development of the drug candidates and are thus also important complements to improve the opportunities for a correct diagnosis, monitoring of the disease progression and a more effective treatment of the diseases that the Company is focusing on. The diagnostics projects also fulfil an important function as they later can demonstrate the effect of BioArctic's drug candidates in clinical trials and monitor the treatment effect. The Company's technology for increasing the passage of antibodies across the blood-brain barrier is believed to be able to contribute to better diagnoses. Long-term it may be possible to apply the technology to therapeutic antibody-based treatment of diseases with brain pathology. The PET technique (Positron Emission Tomography) with antibody-based PET ligands can become an important research tool for future studies of the diseases of the brain.

The Company's product candidate for treatment of complete spinal cord injury, SC0806, is based on innovative research on how neural pathways are guided from white to grey matter in the spinal cord, which is a prerequisite for nerve regeneration (growth) across the injury area in the spinal cord. By using a biodegradable device containing the growth factor FGF1 and transplanted peripheral nerves the Company has demonstrated in preclinical studies the regeneration of nerves, transfer of electrical impulses and some restoration of motor function in animals. The project has orphan drug status, which at a future market introduction would mean seven and ten year's market exclusivity in the US and the EU, respectively.

Finally, BioArctic has a number of still not publicly announced drug candidates in early research phase. The Company thus has a solid basis for continued development of the project portfolio.



### **Strategic collaborations and partnerships with Eisai and AbbVie and funding from the EU's Horizon2020 and Vinnova validates the ability of the research organization and the potential of the drug candidates**

Due to BioArctic's outstanding research the Company has since 2005 entered into three strategic research collaborations with the Japanese global pharma company Eisai concerning the development of disease modifying antibodies for the treatment of Alzheimer's disease. So far the research collaborations have resulted in outlicensing and partnership concerning two A $\beta$  oligomer/protofibril antibodies, the product candidates BAN2401 and BAN2401 back-up. The total aggregated value of the research collaborations and license agreements can amount to a maximum of 218 MEUR, in the form of initial payments and milestone payments, and in addition high single digit royalties on future sales of BAN2401 and BAN2401 back-up. BioArctic has furthermore retained the sales rights for BAN2401 and BAN2401 back-up in the Nordic countries. BioArctic considers Eisai to be an excellent partner for further development and commercialization of BAN2401 and BAN2401 back-up, as Eisai has great knowledge of Alzheimer's disease from the development and commercialization of Aricept<sup>®</sup> for symptomatic treatment of Alzheimer's disease. Eisai has in its turn entered into a collaboration regarding BAN2401 with the American pharma company Biogen Inc. (formerly Biogen Idec).

In September 2016 BioArctic also entered into a broad research collaboration with the global biopharma company AbbVie regarding treatment and diagnostics for Parkinson's disease and other potential indications. The collaboration includes the development of BioArctic's disease modifying  $\alpha$ -synuclein antibodies. As a part of the research collaboration BioArctic will develop the product candidate BAN0805 up to clinical phase. Thereafter AbbVie has an option on licensing BioArctic's antibody portfolio against  $\alpha$ -synuclein for further clinical development. The option can be exercised during the term of the research cooperation up until the application for a permit to start a clinical trial in the United States (a so-called Investigational New Drug Application, IND). If AbbVie exercises the option AbbVie shall pay an option redemption payment. The total value of the research collaboration and the potential outlicensing of the antibody portfolio can amount to a maximum of 755 MUSD, in the form of an upfront payment, option exercise payment and milestone payments, and in addition tiered royalties on future sales of BAN0805. As of the day of the Offering Circular, BioArctic has received an initial payment of 80 MUSD. The Company has also retained sales rights (co-promotion rights) in certain selected geographic areas. BioArctic considers AbbVie to be a very strong partner in Parkinson's disease as AbbVie has successfully developed and commercialized first line symptomatic treatment for advanced stage Parkinson's disease with severe motor fluctuations, the dopamine treatment Duodopa<sup>®</sup>.

For more information on the Company's collaboration and outlicensing agreements with Eisai and AbbVie, see the sections "*Partnerships and collaborations*" and "*Legal considerations and supplementary information – Material agreements*" below.

In 2014 BioArctic received a grant from the EU's research and development program Horizon2020 amounting to a total of approx. 6.4 MEUR. The grant is intended to be used for BioArctic's ongoing clinical Phase 1/2 study concerning the product candidate SC0806 for the treatment of complete spinal cord injury (Grant Agreement No. 643853). BioArctic has also received a grant amounting to 50 TEUR from Horizon2020 for the development of biomarkers for Parkinson's disease, payed during 2015 and 2016 (Grant Agreement No. 697790).

BioArctic's strategic research collaborations with Eisai and AbbVie point to a significant potential for BioArctic's product candidates and enable BioArctic to utilize the competencies and resources of the partners in the later stages of development and commercialization, at the same time allowing BioArctic to focus on the core competencies in the early research and development stages. As the Company, in addition to outlicensed product candidates, also has a number of wholly owned product candidates in the project portfolio there are good possibilities for future outlicensing and partnerships aimed at maximizing shareholder value. The fact that BioArctic has received significant amounts in grant funding also serves as a validation of the research organization's ability and the potential of the drug candidates.

### **An attractive combination of fully financed partner projects with significant market potential and innovative proprietary projects with significant outlicensing potential**

As the result of strong collaborations and partnerships an investment in BioArctic offers an opportunity to take advantage of fully financed projects, where the Company's partners are responsible for the development costs, while BioArctic take part of milestone payments and royalties on any future sales. Furthermore, the Company has in-house projects, including clinical projects such as dementia and cognitive impairment in patients with Down's syndrome and traumatic brain injury (TBI), that the Company can develop internally or together with partners. Alternatively the Company can decide to outlicense projects to appropriate partners in exchange for initial payments, cost sharing, milestone payments and royalties. BioArctic believes that the combination of fully financed partnership projects and in-house projects gives the Company's total project portfolio an attractive risk-reward profile.

As BioArctic is in the front line of research in all indication areas where the Company is active, with the aim of meeting great unmet needs, the market potential of all research projects is very large. This is reflected in the value of the collaboration and licensing deals that the Company today has with its partners. For example, the

annual market for treatment of Alzheimer's disease, where BioArctic has financed partnership projects as well as in-house projects, is expected to grow from 4.9 BUSD to 13.3 BUSD between 2013 and 2023<sup>1)</sup>. The expected growth is attributable to disease modifying drug candidates like those developed by BioArctic.

Also in Parkinson's disease the first generation of disease modifying drug candidates is expected to lead to a substantial market growth. The Company believes that there is also a significant market potential in the area of complete spinal cord injury, based on the Company's assumptions of the number of patients, price and penetration. For a description of the markets for the Company's product candidates, see the section "*Market overview*". With a large market potential in Alzheimer's disease, Parkinson's disease and complete spinal cord injury the Company therefore believes that there are continued good opportunities for outlicensing of in-house projects in all these indication areas.

The Company is also developing projects concerning diagnostics and biomarkers for Alzheimer's disease and Parkinson's disease, and an innovative technology for increased passage across the blood-brain barrier. The technology has potential for application with the Company's antibodies for diagnostic and therapeutic use, as well as with other therapeutic antibodies intended to act in the brain. The technology thus has a wide range of applications and according to the Company a very large commercial potential.

#### **A strong intellectual property rights portfolio**

BioArctic has an active patent strategy covering all major geographic markets, including the US, EU, Japan and China. The Company has 11 patent families consisting of more than 80 approved patents and more than 50 patent applications covering properties, molecular structures and areas of use for the Company's drug and product candidates and technology related to the research and development of the drug and product candidates. For example, patents related to the Company's leading candidates in the three major indications, BAN2401, BAN0805 and SC0806, provide patent protection with expected expiry dates in 2032, 2036 and 2032, respectively, including customary patent time extensions for BAN2401 and BAN0805. Furthermore, BioArctic has a strong portfolio of patents regarding diagnostic methods and the Company's blood-brain barrier technology. BioArctic also has extensive know-how relating to the development of antibodies binding to oligomer/protofibril-forms of misfolded proteins.

1) GlobalData.

#### **STRATEGY**

BioArctic's goal is to build an innovative and competitive portfolio of product candidates, diagnostics and technology for the indications in which the Company is active, partly through in-house research and development, partly through research collaborations with strategic partners. Important elements of BioArctic's strategy are:

- ▲ Further develop and expand the Company's portfolio of innovative product candidates in attractive indication areas with great medical needs
- ▲ Accelerate the development of the Company's portfolio of diagnostic methods and technologies related to the drug development
- ▲ Evaluate opportunities for further strategic collaborations and partnerships for the development and commercialization of product candidates
- ▲ Build a sales organization in selected markets for own marketing and sales of approved products
- ▲ Promote an attractive environment for research and development and human capital.

As described in the section "*Strengths and competitive advantages*" above, BioArctic has several in-house projects in drug development and diagnostics that the Company believes to have great future potential. As the research within the framework of the Company's in-house projects is not financed by the Company's partners, the development work has so far been conducted with relatively limited resources. An important part of the Company's strategy is to increase the pace and efficiency in the further development of the Company's in-house projects, which requires increased resources. With the proceeds that the Company gains through the Offering the Company has the opportunity to provide additional resources to in-house projects and thus pursue the continued development work in a more focused and efficient manner in line with the strategy described above.

#### **Further develop and expand the Company's portfolio of innovative product candidates in attractive indication areas with great medical needs**

BioArctic's main goal is to, alone and together with the Company's partners, complete the preclinical and clinical development of the Company's product candidates, and to continue to broaden the portfolio of product candidates for the treatment of indication areas with great medical needs.

- ▲ **Alzheimer's disease:** Eisai, the Company's collaboration partner for the drug candidate BAN2401 in Alzheimer's disease, will continue the clinical development of BAN2401 in the ongoing global Phase 2b study. In the case of positive results regarding safety and efficacy Eisai will continue the development

through Phase 3 and then apply for marketing approval. BioArctic is of the opinion that the effect in combination with the safety profile of BAN2401 has the potential to be “*first-in class*” as well as “*best-in class*” regarding disease modifying treatment of Alzheimer’s disease.

Eisai is also responsible for the continued clinical development of the follow-up drug candidate BAN2401 back-up, which was outlicensed to Eisai in 2015. The drug candidate AE1501, which since 2015 is covered by a research agreement with Eisai, will be taken through preclinical development by BioArctic together with Eisai. For more information on the collaboration and outlicensing agreements, see the sections “*Legal considerations and supplementary information – Partnerships and collaborations*” and “*Legal considerations and supplementary information – Material agreements*” below.

BioArctic’s in-house drug candidates for Alzheimer’s disease, AD1502 and AD1503, among others, will be further developed preclinically, and thereafter decisions will be made on further clinical development and possible outlicensing. The Company also works continuously on finding new innovative drug candidates for the treatment of Alzheimer’s disease. As mentioned in the section “*Background and rationale*” above, BioArctic intends to use some of the proceeds brought in through the Offering to increase that development pace and efficiency in the further development of AD1502 and AD1503.

- ▲ **Down’s syndrome with dementia/traumatic brain injury:** In case of positive results from the ongoing Phase 2b study of BAN2401 for the treatment of Alzheimer’s disease, BioArctic will start its own clinical studies of BAN2401 for the treatment of dementia and cognitive impairment in connection with Down’s syndrome/traumatic brain injury. BioArctic is of the opinion that, based on the pathology of the disease and the documented properties of the drug candidate, BAN2401 has good possibilities to be “*first-in-class*” as well as “*best-in-class*” regarding disease modifying treatment of dementia and cognitive impairment in connection with Down’s syndrome/traumatic brain injury. The Company’s partner Eisai has a so-called first right of negotiation and a right to match an offer from a third party (a so-called right of first refusal) if BioArctic chooses to commercialize BAN2401 for these indications. As mentioned in the section “*Background and rationale*” above, BioArctic intends to use some of the proceeds brought in through the Offering to investigate the possibilities to widen the indication for BAN2401 to include the treatment of dementia and cognitive impairment in connection with Down’s syndrome/traumatic brain injury.

- ▲ **Parkinson’s disease:** In the case of Parkinson’s disease BioArctic will work according to the collaboration and license agreement entered into with AbbVie concerning the development of drug candidates, among them BAN0805, to clinical trials. If the drug candidates are found suitable for clinical trials AbbVie can exercise an exclusive option to license the drug candidates. For more information on the agreement and the option, see the sections “*Partnerships and collaborations*” and “*Legal considerations and supplementary information – Material agreements*” below.

- ▲ **Complete spinal cord injury:** BioArctic will complete the ongoing Phase 1/2 study of the Company’s product candidate SC0806 for the treatment of complete spinal cord injury that is carried out in Sweden, Finland, Estonia and Norway. If the treatment demonstrates effect in the ongoing study the Company will start discussions with regulatory authorities in the EU (the EMA) concerning conditional marketing authorization. Preparations for Phase 3 studies in the EU and the US will be initiated contingent on demonstrated effect in the ongoing study. As mentioned in the section “*Background and rationale*” above, BioArctic intends to use some of the proceeds brought in through the Offering to complete the ongoing study and prepare future studies.

#### Accelerate the development of the Company’s portfolio of diagnostic methods and technologies related to the drug development

One of the great challenges in the development of disease modifying treatments for neurodegenerative diseases is the lack of reliable diagnostics and suitable biomarkers. These are needed in order to make an early and correct diagnosis and for continuously monitoring the disease progression and the effect of the treatment on the underlying disease pathology. Disease modifying treatments are expected to have the best effect if they are initiated at an early stage. Reliable diagnostics and suitable biomarkers are also of great importance in order to measure the effect of the Company’s drug candidates during development in clinical studies. Against this background BioArctic has been, and will continue to be, a driving force in the development of diagnostics and biomarkers for Alzheimer’s disease and Parkinson’s disease. The research concerning diagnostics and biomarkers in Alzheimer’s disease will be financed by BioArctic, while research concerning diagnostics and biomarkers in Parkinson’s disease is covered by the research agreement with AbbVie.

BioArctic will also continue the development of the Company’s technology for increasing the passage of antibodies across the blood-brain barrier. The applications of the technology include improving diagnostics by imaging

of the brain (PET) and increasing the therapeutic effect and improving the tolerability of antibody-based treatment in the brain. The technology, that has been shown to centuple the passage of antibodies through the blood-brain barrier, has potential for application with the Company's antibodies for diagnostic and therapeutic use, as well as other therapeutic antibodies intended to act in the brain. The technology thus has a wide area of use and according to the Company a very big commercial potential. As mentioned in the section "*Background and rationale*" above, BioArctic intends to use some of the proceeds brought in through the Offering to increase that development pace and efficiency in the further development of PET diagnostics and biomarkers for Alzheimer's disease and the Company's technology for increasing the passage of antibodies across the blood-brain barrier.

#### **Evaluate opportunities for further strategic collaborations and partnerships for the development and commercialization of product candidates**

Historically BioArctic has to a large extent relied on collaboration and outlicensing agreements with leading pharma and biopharma companies in order to utilize their competence in drug development, manufacturing and commercialization and other resources in order to speed up the development of the Company's product candidates. BioArctic has entered into a number of collaboration agreements with leading global pharma and biopharma companies, including three research collaborations with Eisai and one research collaboration with AbbVie. So far two of the collaboration agreements with Eisai have also resulted in commercial licensing agreements. The Company is of the opinion that these strategic collaborations and partnerships confirm that the Company's research concerning diseases which affects the central nervous system is of a very high quality.

In the future BioArctic may selectively enter into collaboration agreements and commercial licensing agreements with leading companies that the Company considers to be able to contribute research and development competence in the preclinical and clinical phases, as well as competence in manufacturing and marketing, geographical reach and other resources and knowledge that can contribute to increasing the value of the Company's approved products.

#### **Build a sales organization in selected markets for own marketing and sales of approved products**

As part of the strategy to develop BioArctic to a leading biopharma company, the Company aims, in connection with possible marketing approvals of the Company's antibody-based drug candidates, to build a small sales organization for handling marketing and distribution in selected European markets. These markets will primarily be linked to the markets that BioArctic has retained in the outlicensing agreements concerning BAN2401 and BAN2401 backup with Eisai and concerning BAN0805 with AbbVie, but long-term they may be expanded to include larger parts of Europe.

For BioArctic's product candidate SC0806 for the treatment of complete spinal cord injury the commercial strategy will be developed and evaluated in parallel with the clinical studies. Tentatively the Company believes that there are three different ways to commercialize the product: By outlicensing to a collaboration partner; by establishing own specialist centers for surgery and rehabilitation; and by certification and sales of the product to external specialist centers.

#### **Promote an attractive environment for research and development and human capital**

BioArctic aims to be an attractive employer and partner for leading scientists in the area of diseases and injuries affecting the central nervous system. Human capital is the Company's most important asset and crucial in order to realize BioArctic's vision of becoming a leading player in research, development and sales of innovative and effective biological drugs for patients with neurodegenerative diseases and treatment of patients with complete spinal cord injury. The Company will thus act in order to attract and retain the most qualified employees by offering them a stimulating work environment and an opportunity to be in the forefront of research and development. The Company will also continue to build on its established contacts with universities and university hospitals, which have been and will continue to be of importance to the Company's research and development.












## BIOARCTIC'S PROJECT PORTFOLIO

### Introductory overview

BioArctic develops disease modifying treatments for neurodegenerative diseases like Alzheimer's disease and Parkinson's disease, diagnostic methods for neurodegenerative diseases and related technology and a treatment

concept for complete spinal cord injury which is in clinical phase. The figure below gives an overview of BioArctic's project portfolio.

### Overview of BioArctic's project portfolio

	Product candidate	Indication	Partner	Discovery	Pre-clinical	Phase 1	Phase 2	Phase 3
Neurodegenerative diseases	<b>BAN2401</b> (anti-Aβ antibody)	Alzheimer's Disease		[Progress bar from Discovery to Phase 2]				
	<b>BAN2401</b> (anti-Aβ antibody)	Down's syndrom <sup>2)</sup> Traumatic Brain Injury		[Progress bar from Discovery to Pre-clinical]				
	<b>BAN2401 Back-up</b> (anti-Aβ antibody)	Alzheimer's Disease		[Progress bar from Discovery to Pre-clinical]				
	<b>AE1501</b> (undisclosed)	Alzheimer's Disease		[Progress bar from Discovery to Pre-clinical]				
	<b>AE1502</b> (undisclosed)	Alzheimer's Disease		[Progress bar from Discovery to Pre-clinical]				
	<b>AE1503</b> (undisclosed)	Alzheimer's Disease		[Progress bar from Discovery to Pre-clinical]				
	<b>BAN0805</b> (anti-alpha-synuclein antibody)	Parkinson's Disease		[Progress bar from Discovery to Pre-clinical]				
Diagnostics & technology	<b>Biomarkers and diagnostics</b> (Aβ)	Alzheimer's Disease		[Progress bar from Discovery to Pre-clinical]				
	<b>Biomarkers and diagnostics</b> (alpha-synuclein)	Parkinson's Disease		[Progress bar from Discovery to Pre-clinical]				
	<b>BBB<sup>3)</sup>-technology</b> (blood-brain barrier)	Multiple application areas		[Progress bar from Discovery to Pre-clinical]				
Spine	<b>SC0806</b> (FGF1/device)	Complete spinal cord injury		[Progress bar from Discovery to Phase 1]				

1) Partner with Eisai on BAN2401 for treatment of Alzheimer's disease.  
 2) Dementia and cognitive impairment associated with Down's syndrome.  
 3) Blood-brain barrier

Source: Company data

### Disease modifying treatments of neurodegenerative diseases such as Alzheimer's disease and Parkinson's disease

BioArctic's strategy is to develop disease modifying treatments which reduce the levels of the toxic forms of certain misfolded proteins in the brain which are believed to cause the cell death and cerebral atrophy associated with several neurodegenerative diseases, including Alzheimer's disease and Parkinson's disease. A disease modifying treatment is a treatment that changes the disease pathology, thereby slowing or delaying the disease progression. BioArctic has developed antibodies

that bind selectively to the neurotoxic aggregated forms of amyloid beta (Aβ) which is believed to cause Alzheimer's disease, and alpha synuclein (α-synuclein), which is believed to cause Parkinson's disease. BioArctic is also investigating the possibilities to use its antibodies to treat other indications, such as dementia and cognitive impairment in patients with Down's syndrome or traumatic brain injury. Further, BioArctic has a number of ongoing projects for treatment of neurodegenerative diseases in early development or preclinical phase where research is carried out in-house or in collaboration with the Company's partners.

### Development of diagnostic methods for neurodegenerative diseases and related technology

Alzheimer's disease and Parkinson's disease are currently primarily diagnosed through clinical investigations. There are no biomarkers that can mirror disease progression in a satisfying manner. The development and clinical validation of sensitive and specific biomarkers that also could monitor the treatment effect would constitute a great advantage. These biomarkers are developed in parallel with the development of new disease modifying therapeutics. BioArctic is developing new diagnostic methods and ligands for PET imaging based on the Company's antibodies and biochemical detection methods, as well as a technology to more effectively transfer drugs across the blood brain barrier (BBB).

### Nerve-regenerative treatment of complete spinal cord injury

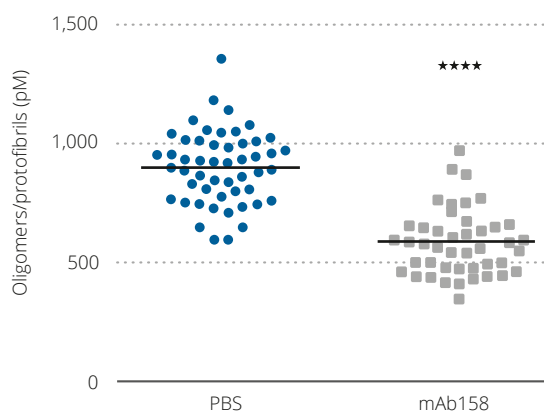
BioArctic is developing a regenerative treatment for complete spinal cord injury based on technology which has been licensed from the company Swenora Biotech AB (a company formed to develop and commercialize research at Karolinska Institutet). The treatment is believed to enable nerve regeneration in the injured part of the spinal cord, which is crucial for restoring electrophysiology and improving motor function in paralyzed patients.

### Alzheimer's disease

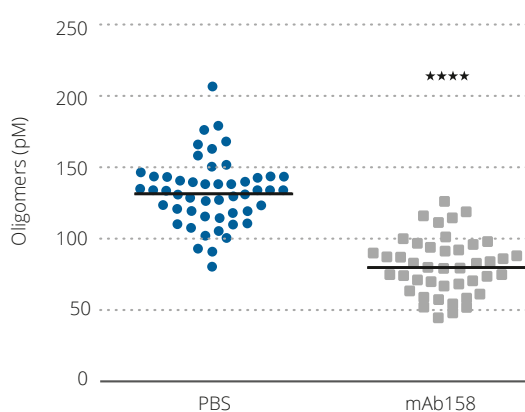
BioArctic's drug candidate BAN2401 aims to halt or slow down the progression of the continuous cognitive decline in Alzheimer patients. BAN2401 is a monoclonal antibody that selectively binds and eliminates oligomers/ protofibrils of A $\beta$ , which are considered to be the toxic forms in Alzheimer's disease. The murine equivalent of BAN2401, mAb158, has been shown to significantly reduce oligomer/protofibril levels both in the brain and the cerebrospinal fluid in transgenic mice.<sup>1)</sup>

### Oligomer/protofibril reductions in brain after long-term mAb158 treatment

Protofibrils and small oligomers 16,000 x g brain extracts



Small oligomers 100,000 x g brain extracts



The levels of oligomers/protofibrils in the brains of transgenic Alzheimer mice after treatment with mAb158 (the murine predecessor of BAN2401) compared with mice treated with placebo (PBS). The brain extracts were centrifuged, at 16,000 x g or 100,000 x g, and investigated concerning the levels of oligomers/protofibrils. In the brain extracts centrifuged at 16,000 x g the reduction was 40% and after 100,000 x g centrifugation the reduction was 45%. In the 16,000 x g supernatant both small and large oligomers were present. After centrifugation at 100,000 x g only small oligomers remained in the supernatant. The reduction of protofibrils and oligomers was about the same degree, which indicates that mAb158 targets both small oligomers and larger protofibrils of A $\beta$ .

Source: The Company's own data, Logovinsky et al. 2016.

1) Tucker et al. 2015.






The Japanese global pharmaceutical company Eisai has obtained the global rights to develop, manufacture and market BAN2401 for the treatment of Alzheimer's disease. BioArctic has also developed a new antibody that selectively binds oligomers/protofibrils of A $\beta$  (BAN2401 back-up). BioArctic and Eisai entered into a license agreement regarding BAN2401 back-up in January 2015. BioArctic retains the rights to market BAN2401 and BAN2401 back-up in the Nordic countries (subject to certain conditions) and for other indications. The collaboration with Eisai is further described under "*Partnerships and collaborations*" below.

BioArctic's partner Eisai is responsible for the clinical development of BAN2401, which is currently studied in a clinical phase 2b study with 856 early stage Alzheimer patients in the US, Canada, EU and Asia. The purpose of the study is to evaluate the effect of BAN2401 on cognition and biomarkers reflecting the progression of the disease. Each patient is treated for 18 months and patient inclusion was completed in November 2016. The study

has a primary efficacy endpoint which is measured after twelve months' treatment and secondary efficacy endpoints which are measured after 18 months' treatment. A full read-out of the results from the study is expected during the first half of 2019.

BAN2401 is considered to have a benign safety profile with for example low cardiovascular risk and low amyloid related side effects (so-called ARIA-E, Amyloid Related Imaging Abnormalities Edema), as shown in a previous clinical study.<sup>1)</sup> Further, important learnings from previous clinical trials have been incorporated in the design of the study. The study is focused on patients in the early stages of Alzheimer's disease (prodromal and mild Alzheimer's disease) and biomarkers e.g. PET imaging have been used to identify a correct patient population. The study has an adaptive design which improves the possibility to identify the right dose and exposure. More sensitive cognition scales are used to measure the effect and biomarkers are used to monitor disease progression and disease modification.

#### IMPORTANT PARAMETERS

<b>Right target</b> 	<ul style="list-style-type: none"> <li>▲ Address the soluble protofibrils – a toxic form of A<math>\beta</math></li> </ul>
<b>Right patient population</b> 	<ul style="list-style-type: none"> <li>▲ Early Alzheimer's disease – MCI due to Alzheimer's disease &amp; mild Alzheimer's disease</li> <li>▲ Identify right patients – biomarkers</li> </ul>
<b>Right dose &amp; exposure</b> 	<ul style="list-style-type: none"> <li>▲ Selecting doses with exposures above preclinical IC50</li> <li>▲ Adaptive design testing several doses and dose regimens</li> </ul>
<b>Right measurements</b> 	<ul style="list-style-type: none"> <li>▲ More sensitive cognition scales</li> <li>▲ Biomarkers for disease progression and disease modification</li> </ul>
<b>Right safety</b> 	<ul style="list-style-type: none"> <li>▲ Well tolerated with a benign safety profile</li> <li>▲ Low cardiovascular risks and amyloid related imaging abnormalities (ARIA)</li> </ul>

1) Logovinsky et al. 2016.

## Phase 2b study design

## Patient inclusion

## Multinational recruitment:

- ▲ 100 clinical centers included
- ▲ Inclusion criteria: MMSE >22–30
- ▲ Stable concomitant medication
- ▲ Positive amyloid PET/CSF



Inclusion  
completed with  
856 patients

## Treatment 12 months

Double-blind,  
placebo controlled,  
parallel-group study  
with Bayesian  
adaptive design

Placebo

2.5 mg/kg bi-weekly

5 mg/kg bi-weekly

10 mg/kg bi-weekly

5 mg/kg once every four weeks

10 mg/kg once every four weeks

## Primary endpoints:

- ▲  $\Delta$  from baseline in ADCOMS at 12 months
- ▲ Safety and tolerability

## Treatment 18 months

## Secondary endpoints:

- ▲  $\Delta$  from baseline in ADCOMS at 18 months
- ▲  $\Delta$  from baseline in total hippocampal volume at 6, 12 and 18 months
- ▲  $\Delta$  from baseline in brain amyloid as measured by amyloid PET at 12 and 18 months



The second generation antibody BAN2401 back-up is in late preclinical phase and BioArctic's partner Eisai continues the development in order to prepare BAN2401 back-up for clinical studies.

In 2015 BioArctic entered into a third research collaboration agreement with Eisai concerning a new treatment strategy for disease modifying treatment of Alzheimer's disease. The project (AE1501) is in early preclinical phase and the development work is conducted together with Eisai.

BioArctic also has two innovative proprietary research projects, AD1502 and AD1503. These projects concern new treatment strategies for disease modifying treatment of Alzheimer's disease. Both projects are in research phase.

#### *Dementia in connection with Down's syndrome and traumatic brain injury*

As further described under "*Partnerships and collaborations*" below, the license agreement with Eisai entails that BioArctic retains the rights to BAN2401 and BAN2401 back-up for dementia indications regarding other neurodegeneration than Alzheimer's disease (AD related diseases) and for other indications in addition to Alzheimer's disease and Alzheimer's related diseases. However, Eisai has a so-called first right of negotiation concerning other indications than Alzheimer's disease, and a right to match an offer from a third party, a so-called right of first refusal, concerning AD related diseases. See the section "*Partnerships and collaborations*" below for more information. Subject to Eisai's rights as described above, BioArctic thus has the opportunity to commercialize BAN2401 and BAN 2401 back-up for other indications than Alzheimer's disease.

A $\beta$  plaques can be found in patients who suffer from certain other types of dementia, such as dementia and cognitive impairment in patients with Down's syndrome and dementia in patients who have suffered from traumatic brain injuries. BioArctic considers such indications to be interesting indications to treat with BAN2401 or BAN2401 back-up which may result in attractive business opportunities for the Company in the future.

Down's syndrome affects approx. 6 million people worldwide and is the most common genetic cause of learning difficulties in young persons under the age of 50. Individuals with this condition represent the largest group of people with dementia under the age of 50. People with Down's syndrome live significantly longer today than before, which results in an increase of individuals who develop A $\beta$ -related dementia. The amyloid precursor protein (APP) is the molecule that generates A $\beta$ . The APP gene is located on chromosome 21. Patients

with Down's syndrome have three copies of chromosome 21, instead of normally two, thus producing 50% more A $\beta$  which leads to dementia when these patients get older. By the age of 40 almost all individuals with Down's syndrome have developed pathological protein deposits such as A $\beta$  plaques. Hence, dementia and cognitive impairment in these patients may be interesting indications to treat with BAN2401 and BAN2401 back-up and BioArctic considers this to be a natural next step in the clinical development of BAN2401 and BAN2401 back-up.

Another potential indication for BAN2401 and BAN2401 back-up is traumatic brain injury (TBI). A traumatic brain injury is an injury that disrupts the normal function of the brain. It can be caused by a trauma to the head. Such trauma can result in abnormal protein deposits such as A $\beta$  plaques and an increased risk of developing dementia.

Provided that positive results can be shown in the ongoing Phase 2b study of BAN2401 in Alzheimer patients, BioArctic intends to proceed with preclinical and clinical development of BAN2401 for other potential indications such as dementia and cognitive impairment in patients with Down's syndrome and patients with traumatic brain injury. BioArctic intends to evaluate the regulatory pathway for dementia in connection with Down's syndrome and traumatic brain injury, especially in terms of the design of possible future clinical trials. BAN2401 has been tested in clinical studies in Alzheimer patients and has demonstrated a favorable safety profile,<sup>1)</sup> which will be an advantage in the further development of BAN2401 for other indications. Even if dementia in patients with Down's syndrome exhibits some important similarities with Alzheimer's disease in terms of pathological findings the indication is considered to be a separate indication. Patients with Down's syndrome exhibit a number of other clinical characteristics linked to the extra copy of chromosome 21, such as life-long learning difficulties and health problems. An early disease modifying treatment of dementia symptoms in patients with Down's syndrome could slow down the neurodegenerative process and reduce the cognitive symptoms in this patient group. It is obvious that clinical studies regarding patients with Down's syndrome require other evaluation scales and safety considerations. The design of the clinical studies thus needs to be discussed with relevant regulatory authorities.

BioArctic has an option to obtain BAN2401 material and regulatory documentation from Eisai and Eisai has undertaken to ensure delivery of product should BioArctic decide to commercialize pharmaceutical products using BAN2401 within the retained indication areas.

1) Logovinsky et al. 2016..

**BioArctic's other candidates in preclinical development for treatment of AD**

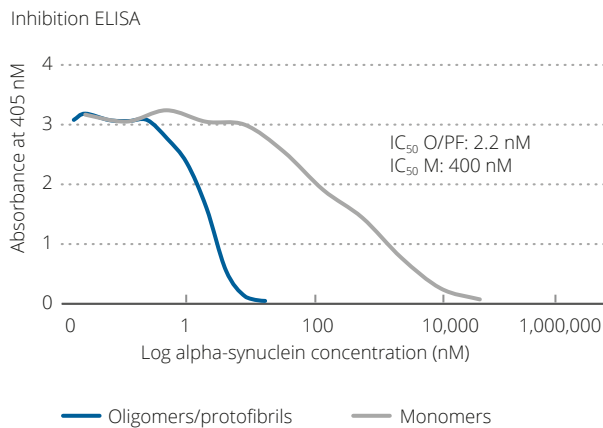
BAN2401 Back-up	AE1501	AD1502	AD1503
<ul style="list-style-type: none"> <li>▲ A back-up antibody with improved convenience in administration compared to BAN2401, collaboration with Eisai</li> <li>▲ Same target, same binding properties and same mechanism of action as BAN2401</li> <li>▲ Further development dependent on the ongoing Phase 2b study with BAN2401</li> <li>▲ Outlicensed to Eisai for the treatment of Alzheimer's disease</li> </ul>	<ul style="list-style-type: none"> <li>▲ Indication: Alzheimer's disease</li> <li>▲ Disease modifying antibody</li> <li>▲ Novel target</li> <li>▲ Collaboration with Eisai, with joint ownership between BioArctic and Eisai</li> <li>▲ Early preclinical Phase</li> </ul>	<ul style="list-style-type: none"> <li>▲ Indication: Alzheimer's disease</li> <li>▲ Disease modifying antibody</li> <li>▲ Novel multi-functional target for Aβ</li> <li>▲ Fully owned by BioArctic</li> <li>▲ Early preclinical Phase</li> </ul>	<ul style="list-style-type: none"> <li>▲ Indication: Alzheimer's disease</li> <li>▲ Disease modifying antibody</li> <li>▲ Novel target for Aβ</li> <li>▲ Fully owned by BioArctic</li> <li>▲ Early preclinical Phase</li> </ul>

**Parkinson's disease**

BioArctic's product candidate BAN0805 is a monoclonal antibody that selectively binds and eliminates oligomers and protofibrils of  $\alpha$ -synuclein. BAN0805 aims to halt or slow down the progression of the disease in Parkinson patients. Encouraging preclinical results show reduced levels of  $\alpha$ -synuclein oligomers/protofibrils in the central nervous system, less severe motor abnormalities and a

doubled life-span of Parkinson mice after antibody treatment. A therapeutically important aspect of BAN0805 is the high selectivity for soluble oligomer/protofibril forms of  $\alpha$ -synuclein, thus minimizing interference with the normal physiological monomeric form of  $\alpha$ -synuclein. BAN0805 has the potential to become one of the first disease modifying treatments for Parkinson's disease.

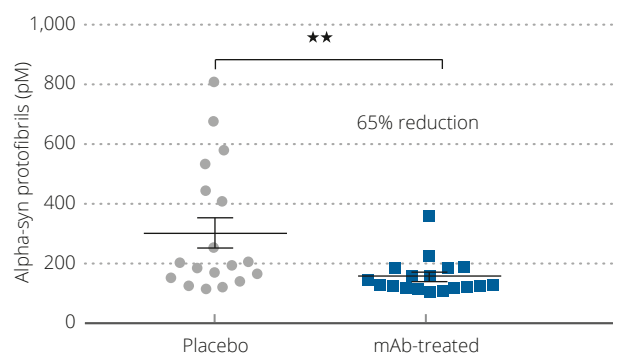
**Oligomer/protofibril selective antibody**



Inhibition ELISA demonstrating one of BioArctic's antibodies' selectivity for  $\alpha$ -synuclein.

Source: The Company's own data.

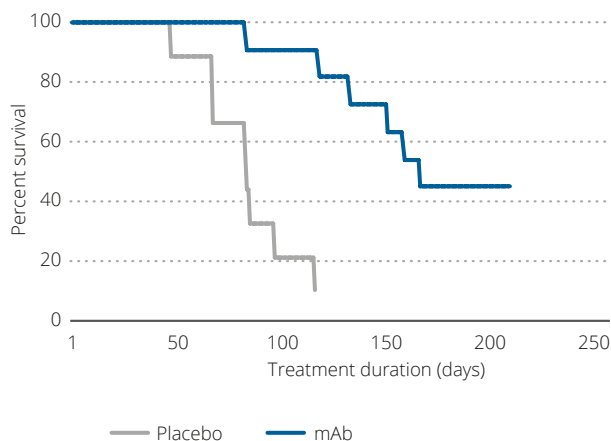
**Reduction of neurotoxic alpha-synuclein oligomers/protofibrils**



Decreased amount of protofibrils (PF) of  $\alpha$ -synuclein in the central nervous system in  $\alpha$ -synuclein transgenic mice treated with mBAN0805 compared to mice treated with placebo.

Source: The Company's own data.

### Increases lifespan



Improved survival in mice treated with mBAN0805 compared with mice treated with placebo.

Source: The Company's own data.

The treatment concept is based on innovative research at Uppsala University carried out in collaboration with BioArctic. In September 2016 BioArctic entered into a strategic collaboration with AbbVie concerning the continued development of BioArctic's Parkinson program. A follow-up program with additional antibodies and new diagnostic methods is also ongoing in collaboration with AbbVie. The collaboration with AbbVie is further described under "*Partnerships and collaborations*" below.

Other potential indications for BAN0805 include dementia with Lewy Bodies and multiple system atrophy which, like Parkinson's disease, have an  $\alpha$ -synuclein pathology.

### Diagnosics and technology

#### *Biomarkers and diagnostics for Alzheimer's disease and Parkinson's disease*

Alzheimer's disease is currently diagnosed through clinical investigation, in combination with tests of cognitive function and brain imaging. The diagnostic procedure also includes the exclusion of other dement-

ing diseases.  $A\beta$  is a secreted protein and the main constituent of the plaques in brains from Alzheimer patients. The level of  $A\beta_{42}$  in cerebrospinal fluid from Alzheimer patients is typically lower compared to healthy controls or individuals with other dementing illnesses. Tau is a microtubule-associated protein that is phosphorylated in Alzheimer's disease. Both total tau and phosphorylated tau levels in cerebrospinal fluid are elevated in Alzheimer patients.  $A\beta_{42}$ , phosphorylated tau and total tau in cerebrospinal fluid are currently used as biomarkers and give important information in the diagnostic process. However, there is a lack of biomarkers that can mirror disease progression or treatment effect.

Parkinson's disease is currently diagnosed by clinical investigation, sometimes in combination with imaging of striatum. There are still no approved biomarkers that can monitor the treatment effect.

The development and clinical validation of sensitive and specific biomarkers that also could monitor the disease progression and the treatment effect would constitute a great advantage and need to be developed in parallel with the development of new disease modifying therapeutics. BioArctic develops methods to improve the clinical diagnosis of Alzheimer's disease as well as Parkinson's disease, in order to achieve an earlier and more accurate diagnosis, monitor the progression of the disease, and to follow the response to treatment and objectively measure the effect of drug treatment.

BioArctic develops biochemical methods within the Alzheimer field in collaboration with Gothenburg University and PET ligands selectively targeting  $A\beta$  protofibrils in collaboration with Uppsala University. The latter project is partly funded by Vinnova.

Within the Parkinson field, the development of diagnostic methods is part of the collaboration with AbbVie. BioArctic is developing an  $\alpha$ -synuclein biomarker assay in collaboration with researchers at Gothenburg University. The assay is based on biochemical analysis of human cerebrospinal fluid with respect to  $\alpha$ -synuclein. Further, BioArctic has initiated a brain imaging program (PET) in collaboration with Uppsala University to detect  $\alpha$ -synuclein in the brains of Parkinson patients.

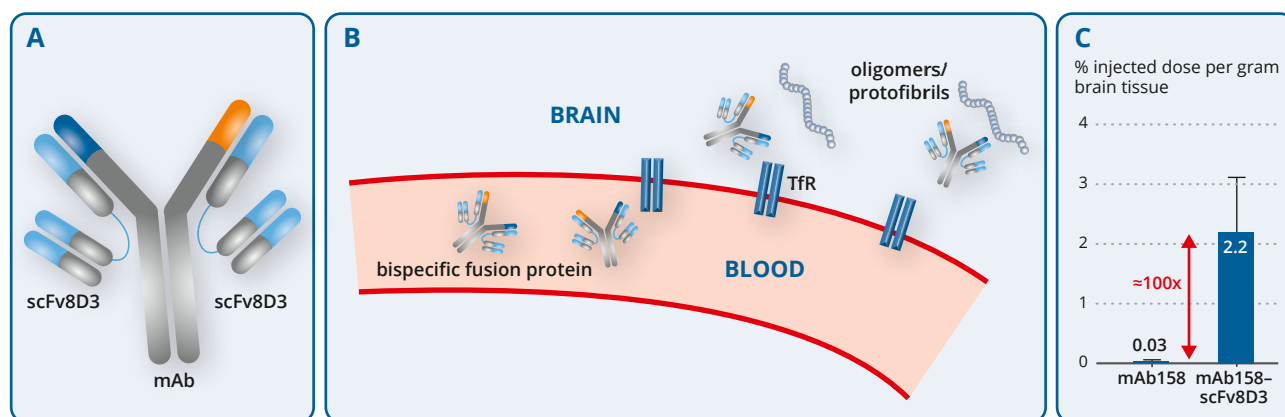
### Technology for increased passage across the blood-brain barrier

The blood-brain barrier, BBB, is a selective membrane which controls the exchange of substances between the blood and the brain. BBB protects the brain from toxins and pathogens, but it also makes it difficult to deliver therapeutic agents to the brain. It has been estimated that only 0.1 – 0.4% of antibodies reach the brain and this is regarded as a major challenge in the treatment of most diseases affecting the brain. Increasing the brain's uptake of antibodies is very important in immunotherapy in order to minimize side effects and reduce treatment costs as antibodies are relatively costly to produce.

BioArctic is developing a new technology in collaboration with researchers at Uppsala University that facilitates the passage of antibodies across the blood-brain barrier. The project is in development phase. These anti-

bodies consist of one part binding to the therapeutic target in the brain (e.g. A $\beta$ ) and one part binding to the transferrin receptor (TfR) or other molecules that facilitate the passage across the blood-brain barrier. Such bispecific antibodies utilize the body's natural process for transporting certain substances across the blood-brain barrier. BioArctic's research data show that the uptake of antibodies in brain tissue increases by up to 100 times when the technology is used.<sup>1)</sup>

An advantage compared with the competing technologies is that BioArctic's molecule is symmetrical, which facilitates the production, and can be used with all antibodies. Thus, it is a stand-alone technology and has, in the long term, potential to be generally applicable to immunotherapeutic treatments of various diseases in the brain.



- A.** Modification of a therapeutic antibody (mAb) with variable fragments and with single chains (scFv8D3) binding to the transferrin receptor (TfR).
- B.** Schematic figure of TfR-mediated transcytosis of a modified mAb conjugated to a TfR antibody. The bispecific transfusion protein, bound to TfR, undergoes transcytosis and is released in the brain. In the brain the antibody can bind to its primary target, e.g. oligomers/protofibrils of A $\beta$  or  $\alpha$ -synuclein.
- C.** A modified oligomer/protofibril-binding antibody (mAb158-scFv8D3) display up to 100 times higher concentration in the brain than unmodified mAb158<sup>1)</sup>.

1) Hultqvist et al. 2017.



## Nerve-regenerating treatment of complete spinal cord injury

Spinal cord injury is usually caused by traumatic events resulting in partial or complete paralysis. The level of paralysis depends on where the damage occurs, i.e. in the neck, thoracic spine or lumbar spine. A complete spinal cord injury is defined as an injury where the patient can make no voluntary movements or has no sensory feedback below the injury. A spinal cord injury causes degeneration of the nerve fibers (axons) below the site of injury as neurons do not regenerate. Besides paralysis patients with complete spinal cord injury suffer from other serious symptoms, such as neuropathic pain, bowel and bladder incontinence, sensory loss, pressure sores, infertility and sexual dysfunction. To restore bowel and bladder function, reduce pain or enable sexual function would constitute a major life quality improvement for patients with spinal cord injuries. A treatment that could reduce the paralysis or even restore functions would be a significant step forward, not only for the patients and their families, but also for society from a cost perspective. Currently there is no treatment available for complete spinal cord injury and the unmet need is great.

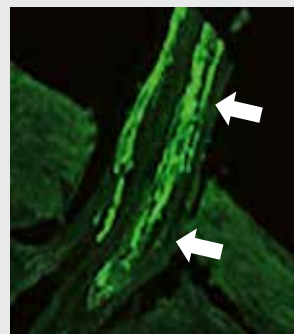
SC0806 is BioArctic's treatment concept for patients with complete spinal cord injury. The project is in-licensed from Swenora Biotech AB and is based on innovative research at Karolinska Institutet and Karolinska University Hospital. The license agreement entered in 2008 grants BioArctic a global, exclusive license to further develop and sell future products based on the technology. Board director Pär Gellerfors is part owner, board member and CEO of Swenora Biotech AB. Pär Gellerfors' ownership in Swenora Biotech amounts to 13% of the shares and 15.6% of the votes in the company.

SC0806 is a biodegradable implant with channels for nerve grafts and the growth factor FGF1. The product is a combination of a medical device (the implant) and a drug (FGF1). The channels in the implant are designed to guide the outgrowth of axon from white to grey matter in the spinal cord, which is a prerequisite for nerve regeneration. The treatment is based on a surgical procedure, where the scar tissue in the injured part of the spinal cord is removed and replaced with nerve grafts from the patient's leg (the sural nerve), which are positioned at the site of injury with the aid of the implant. The nerve grafts placed in the implant have the function to stimulate regeneration (growth) of axon. The growth factor FGF1 has two functions, to stimulate the outgrowth of axon, and to decrease gliosis (a process leading to scar tissue). The surgery is followed by 18 months of rehabilitation through intensive training in a robotic system to support muscle rebuilding in the part of the body affected by paralysis. Since August 2017, the patients receiving SC0806 treatment are given the option of a 12 month additional rehabilitation in an extension study.

In preclinical studies the Company has demonstrated nerve regeneration, transfer of electrical impulses and

## Nerve regeneration

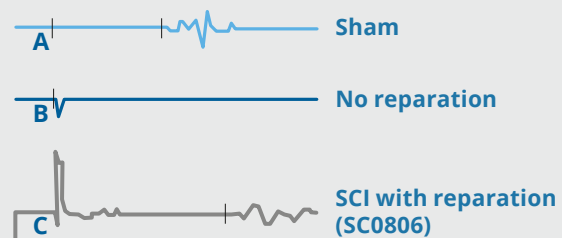
### Neurofilament staining



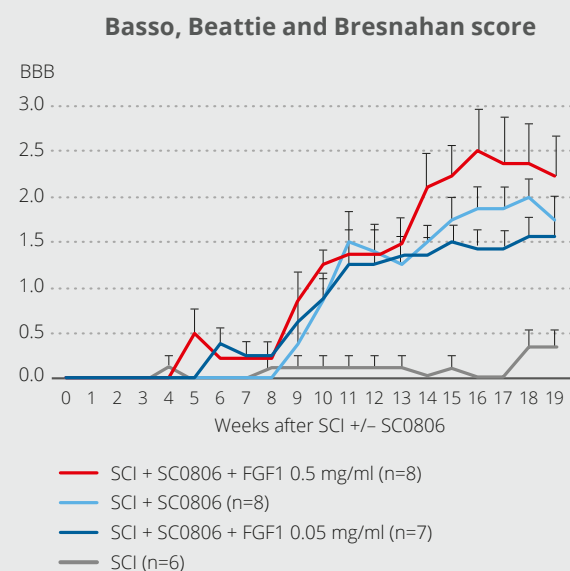
Device start

Device end

## Electrophysiology restored



## Motor function improved



Source: The Company's own pre-clinical data.

some restoration of motor function in animals. The project is in clinical phase and a Phase 1/2 study is ongoing.

From a regulatory perspective SC0806 is regarded as both a medical device and a drug. SC0806 received Orphan Drug Designation in the in EU 2010 and in the US in 2011, which gives BioArctic market exclusivity for 10 and 7 years, respectively. The project has received financial support from Horizon2020 as further described under “*Grant funding*” below.

BioArctic is currently conducting a clinical phase 1/2 study with SC0806, with a possibility for conditional marketing approval upon completion of the study. The procedures are performed at the Neurosurgery Department at Karolinska University Hospital, Sweden and the rehabilitation program is carried out at specialized clinics in Sweden, Finland, Estonia and Norway.

A total of 27 subjects will be enrolled in the study. 18 subjects will undergo both surgery and rehabilitation and 9 subjects will serve as control patients only participating in the rehabilitation. The first patient was operated in January 2016 and to date eight subjects have been enrolled in the study, five of them have had surgery and three are recruited as control patients. Preparations for a Phase 3 study in the US and the EU will be initiated if and when positive results have been achieved in the ongoing study.

Generally, marketing approval and approval for selling a drug product require extensive studies to ensure that the product has a beneficial risk/benefit profile. Within the EU, however, certain categories of pharmaceutical products, including orphan drugs, can under certain circumstances receive a conditional marketing authorization which makes it possible to market a product before all clinical studies are completed. If a conditional approval is granted, the applicant is required to complete the necessary clinical studies for the purpose of converting the conditional marketing authorization into an ordinary marketing authorization. For more information, see the section “*Market overview – orphan drugs*”.

If the treatment shows a significant effect in the ongoing Phase 1/2 study, it will be investigated whether it is possible to obtain a conditional approval due to the high unmet medical need of the affected patients. If the ongoing Phase 1/2 study is successful, BioArctic intends to contact the EU regulatory authorities in order to discuss a potential conditional marketing approval of SC0806 as a treatment for complete spinal cord injury.

## PARTNERSHIPS AND COLLABORATIONS

### Eisai

Since 2005 BioArctic and the Japanese global pharma company Eisai have a successful long-term collaboration concerning development and commercialization of drugs for the treatment of Alzheimer’s disease. The parties’ collaboration mainly comprises three projects: the humanized antibodies BAN2401 and BAN2401 back-up and a research project concerning a new drug target for disease modifying treatment of Alzheimer’s disease. The treatments aim to influence the pathology of the disease, halt or slow down the disease progression, and give the patients a better quality of life.

Within the framework of the collaboration BioArctic and Eisai have entered into several agreements, the most important ones being the development and commercialization agreement regarding BAN2401 entered into in 2007 and the development and commercialization agreement regarding BAN2401 back-up entered into in 2015. Pursuant to these agreements, BioArctic has granted Eisai a global and exclusive license (including sublicensing rights) concerning research, development and commercialization of drugs using BAN2401 and/or BAN2401 back-up for the treatment of Alzheimer’s disease. Eisai is responsible for the clinical development, application for market approval and commercialization of the products.

BioArctic retains the rights to market the licensed products in the Nordic countries, provided that BioArctic is deemed to have the appropriate resources to market the products in the retained territory. This assessment shall be made together with Eisai.

BioArctic also retains the rights with respect to BAN2401 and BAN2401 backup for other indications than Alzheimer’s disease, including dementia indications with neurodegeneration not caused by Alzheimer’s disease (AD-related diseases). Eisai has, however, a first right of negotiation for other indications than Alzheimer’s disease, which means that BioArctic must offer Eisai a license before turning to a third party. Further, concerning Alzheimer’s related diseases, Eisai has a right to match an offer from a third party (right of first refusal) even if the company has not exercised its right to negotiate according to the above. Eisai is responsible for commercial supply of the licensed products and has also undertaken to assist BioArctic in sourcing products should BioArctic decide to commercialize drug products using BAN2401 within the retained indication areas.

In connection with the signing of the agreements, BioArctic received upfront license fees which, up to June 30, 2017, amount to 8.9 MEUR. BioArctic is entitled to development-related milestone payments in connection with certain study phases, regulatory filings and approvals, sales-related milestone payments calculated on annual worldwide sales of licensed products, and patent-related milestone payments on the issuance of certain patents relevant to the agreements. BioArctic is furthermore entitled to royalties calculated on a country-by-country basis on net sales of licensed products, starting with a high one-digit percentage for the first 10 years following launch of a licensed product in a country and a mid-level one digit percentage for the following five years. In addition to the development and commercialization agreements described above, the parties have entered into three research collaboration agreements, under which BioArctic has received compensation for research work performed. The third research collaboration agreement was entered into in 2015 and this collaboration is still ongoing.

The total amount of potential compensation for research collaborations, initial license fees and milestone payments under the agreements with Eisai amount to approx. 218 MEUR, of which BioArctic as of the day for the Offering Circular has received approx. 47 MEUR. Of the total amount of 218 MEUR, research funding represents approx. 19 MEUR, initial license fees of 8.9 MEUR, development related milestones approx. 122 MEUR, sales related milestones approx. 60 MEUR and patent related milestones approx. 8 MEUR.

BioArctic's agreement with Eisai is further described in the section "*Legal considerations and supplementary information – Material agreements*" below.

In March 2014, Eisai entered into an agreement with Biogen to jointly develop and commercialize BAN2401. Eisai will serve as the operational and regulatory lead in the co-development of BAN2401 and will be responsible for the applications for marketing approval. On major markets, such as the US and the EU, Eisai and Biogen will also co-promote the products following marketing approval. Both companies will share overall costs, including research and development expenses, and split profits. The agreement between Eisai and Biogen also provides Eisai with an option to jointly develop and commercialize Biogen's anti-A $\beta$  antibody aducanumab (BIIB037).

### **AbbVie**

In September 2016, BioArctic and AbbVie entered into a strategically important collaboration and license agreement to develop and commercialize BioArctic's portfolio of antibodies directed against  $\alpha$ -synuclein for the treatment of Parkinson's disease and other potential indications and related diagnostics. BioArctic has granted AbbVie a research license and an exclusive option to obtain certain exclusive licenses under certain of BioArctic's patents and know-how for further development and global commercialization of licensed products containing BioArctic's proprietary antibody BAN0805 and certain other antibodies discovered or developed within the framework of the agreement.

AbbVie is a global, research-based biopharma company formed in 2013 following spin-off from Abbott Laboratories. AbbVie is active on the global market within several therapeutic areas with successful products like Duodopa™, a symptomatic treatment for severe Parkinson's disease. Duodopa™ was developed at Uppsala University.

BioArctic has the main responsibility for the pre-clinical development work and is responsible for development costs within an agreed budget. The preclinical development is financed through AbbVie's up-front payment in connection with the signing of the agreement (see below). BioArctic's cost responsibility for the preclinical development is limited to certain defined amounts. If the costs exceed the planned budget, the parties will share excess costs at predetermined rates. New inventions and results generated within the framework of the research collaboration are owned jointly by the parties in equal parts. Each party may exploit such joint results, although subject to AbbVie's exclusive rights under the agreement.

AbbVie has an exclusive option to obtain certain exclusive licenses for further development and global commercialization of products containing BioArctic's antibody BAN0805 and certain other antibodies that are discovered or developed within the framework of the research collaboration. The option thus includes BioArctic's entire product portfolio in Parkinson's disease. AbbVie can choose to exercise the option during the duration of the research collaboration up to the filing of an application to start clinical trials in the US (a so-called Investigational New Drug Application, IND).

In connection with entering into the agreement, BioArctic received an up-front payment of 80 MUSD, comprising financing of the preclinical development work to be performed by BioArctic and an option premium, the amount of which is not specified in the agreement. If AbbVie chooses to exercise its option BioArctic has the right to an option exercise payment and the possibility to obtain development related and sales related milestone payments. The up-front payment of 80 MUSD, the option exercise payment and the milestone payments total a maximum of 755 MUSD. In addition BioArctic has the right to tiered royalties on the net sales of products containing BioArctic's antibodies.

BioArctic has the right to take part in the marketing of the products (co-promotion rights) on certain defined markets. If BioArctic exercises this option, the parties will share costs and profits from the commercialization of the products in the territory in question in a certain defined way. If this happens, profit-sharing replaces AbbVie's obligation to pay royalties on the sales in the specified area.

## ORGANIZATION AND OPERATIONS

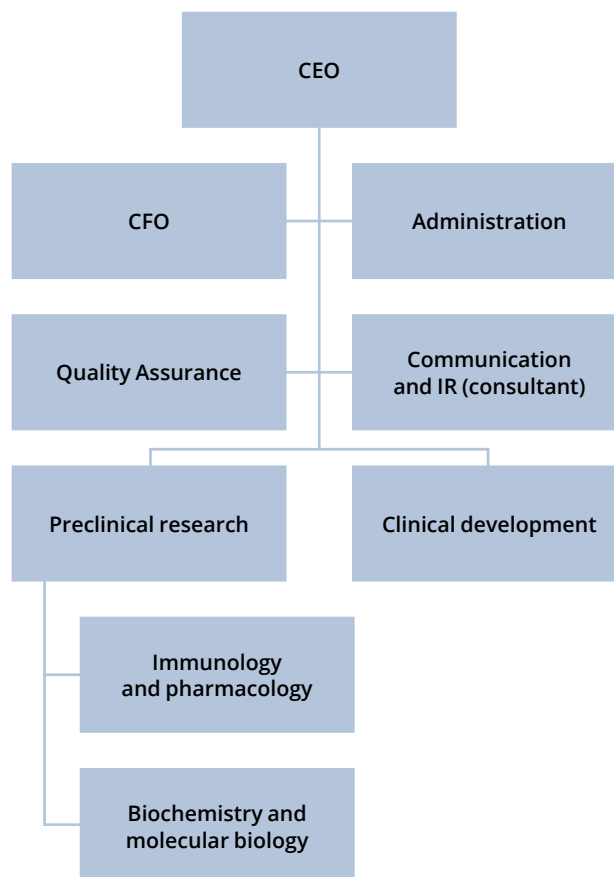
### Employees and consultants

As per 30 June 2017, BioArctic had 27 employees, most of them working in research and development. Other employees are working in administration and in the company's management team.

In 2016 the Group had an average of 22 employees, a decrease by 3 persons compared to 2015. BioArctic had 25 employees at the end of 2016, compared to 23 at the end of 2015.

BioArctic's management team consists of eight persons: Chief Executive Officer, Chief Financial Officer, Chief Scientific Officer, Chief Medical Officer, Head of Immunology & Pharmacology, Head of Biochemistry & Molecular Biology, Head of QA and Head of Communications. In addition to these eight persons Pär Gellerfors is co-opted in the management team as senior advisor in business development.

To conduct efficient operations with a relatively small organization BioArctic engages key consultants for specific tasks and for tasks in competence areas that the Company lacks or only needs periodically.



## Research and development

BioArctic is a research based biopharma company focused on the development of new, innovative drugs. Research and development, especially in immunotherapy and diseases of the central nervous system, thus constitutes the Company's core business and BioArctic's organization has long experience of drug development. BioArctic's research and development work is partly conducted by employees and consultants in modern, well-equipped laboratories at the Company's premises in Stockholm, partly in collaboration with universities and hospitals and commercial partners as well as strategic partners such as Eisai and AbbVie.

BioArctic was founded to develop and commercialize innovations and research results from Uppsala University and the Company's research has since then been conducted in close collaboration with leading universities and hospitals in Sweden as well as abroad. BioArctic has research collaborations with research groups at Uppsala University, Karolinska Institutet, Karolinska University Hospital, University of Gothenburg, Linköping University and Lund University, among others.

A number of BioArctic's current projects are based on discoveries made in such research collaborations. The Company's collaborations with universities and hospitals are important for the development of the Company's treatment for complete spinal cord injury and biomarkers for Alzheimer's disease and Parkinson's disease, among others.

BioArctic's own research and development organization works with own innovative research as well as with application and development of discoveries made in the external research collaborations. The R&D organization consists of two units: the Preclinical Development unit, responsible for the departments Biochemistry & Molecular Biology and Immunology & Pharmacology; and the Clinical Development unit, which is also responsible for Regulatory Affairs. The staff has a very high competence level and some 90% of the employees have doctorates, one is a professor and two are associate professors. In addition to the scientists employed by the Company, the Company also engages a number of consultants, primarily for research and development work within the framework of the collaboration of AbbVie.

BioArctic to a large extent uses external companies for the performance of *in vivo* studies, the production of drug substances, and clinical trials. BioArctic has for example commissioned contract research organizations for toxicology studies of the Company's product candidates and for the coordination of the Company's ongoing clinical studies.

BioArctic has established three scientific advisory boards, consisting of experts in the Company's indication areas. The function of the scientific advisory boards is to facilitate discussions on scientific issues and to assist the Company with advice on matters concerning the Company's indications and research areas and on technological matters. The members of the scientific advisory boards receive compensation in the form a fixed amount per

meeting (which also includes compensation for preparations etc). The Company has a general scientific advisory board discussing issues in all of the Company's research areas. BioArctic has also set up specific scientific advisory boards for the Company's projects in the areas of complete spinal cord injury and Parkinson's disease. The composition of the company's scientific advisory boards is shown below.

### General scientific advisory board

Professor Hans Wigzell, former Vice-Chancellor of Karolinska Institutet

Professor Martin Ingelsson, Uppsala University

Dr. Staffan Pauli, CEO of Mabtech AB

Professor Gösta Jonsson, former research director and CEO of Astra Arcus

### Scientific advisory board – Parkinson's disease

Professor Ken Marek, Yale University

Professor Kaj Blennow, University of Gothenburg

Professor Martin Ingelsson, Uppsala University

### Scientific advisory board – Complete spinal cord injury

Professor Lars Olson, Karolinska Institutet

Professor Mikael Svensson, Karolinska Institutet

Dr. Claes Hultling, Karolinska Institutet

Associate Professor Elisabeth Åkesson, Karolinska Institutet

Associate Professor Per Mattson, Karolinska Institutet

## Manufacturing and subcontractors

BioArctic has no in-house manufacturing but uses a number of external suppliers for the production of drug substances and medical devices, and for production for projects in preclinical and clinical development. BioArctic has for example commissioned the contract manufacturer Lonza for producing the amounts of the antibody BAN0805 to be used in BioArctic's collaboration with AbbVie. The biodegradable implant and the growth factor FGFI, which are both used in the Company's product candidate SC0806, are manufactured by the Swedish company Elos Medtech Timmersdala AB and the American company Protein Sciences Corporation, respectively.

## Grant funding

BioArctic participates in a number of projects that are financed partly by grants from Swedish Vinnova and the EU's research and development program Horizon2020.

In 2016 BioArctic together with Uppsala University received a 5 MSEK grant from Vinnova for a research collaboration concerning reduced costs and improved safety in connection with immunotherapy treatment of brain diseases. The grant related to the research group's work at Uppsala University. BioArctic has also received a contribution from Vinnova financing a part of BioArctic's research aimed at developing a disease modifying drug



for the treatment of Parkinson's disease, BAN0805. The contribution amounted to 5 MSEK and the project ran for two years starting in June 2015.

In 2017 BioArctic has received two further Vinnova grants, a 200 TSEK grant for updating the Company's quality management system, and a 500 TSEK grant for the project "Commercial potential of antibody-based PET imaging" which is carried out in collaboration with Uppsala University.

In 2014 BioArctic received a Horizon2020 grant from the EU totaling approx. 6.4 MEUR to be used for the implementation of BioArctic's ongoing clinical study concerning the treatment of spinal cord injuries (Grant Agreement No. 643853). Within the framework of the Horizon2020 project BioArctic has entered into a consortium agreement with a number of care providers taking part in the clinical study concerning SC0806. The consortium agreement is based on a traditional so-called DESCA model and regulates the rights and obligations of the parties within the framework of the project. BioArctic is the coordinator of the project and responsible party in relation to Horizon2020. BioArctic has also received a 50 TEUR grant from Horizon2020 for the development of biomarkers for Parkinson's disease, paid in 2015 and 2016 (Grant Agreement No. 697790).

The grant conditions are described in more detail in the section "*Legal considerations and supplementary information – Material agreements*".

### INTELLECTUAL PROPERTY RIGHTS

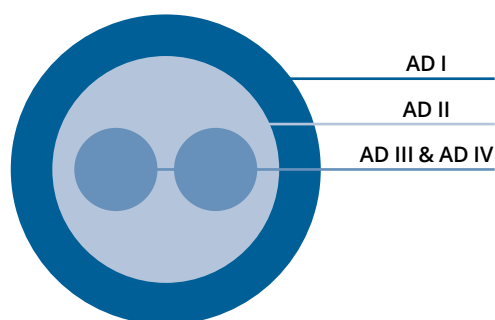
Intellectual property rights, and patents in particular, are very important to the Company's operations and the Company's value is to a large degree dependent on the Company's ability to obtain and retain intellectual property protection of the technology behind the Company's product candidates. An important part of BioArctic's strategy is to enter into collaboration and license agreements with big pharma companies and a strong intellectual property protection in the form of patents and patent applications is generally a requirement for this. BioArctic's strategy is therefore to as far as possible obtain patents rights for its inventions and to defend the patent portfolio against any infringement of the patents. BioArctic also strives to obtain a wide geographical protection for its inventions and product candidates by applying for patents on important markets like the US, Europa, Canada, Australia, Japan and China. The principles for the Company's handling of inventions

are regulated by a written patent policy. The Company also has the support of renowned consultants in intellectual property and patent matters.

BioArctic's intellectual property rights primarily consist of a number of patents, patent applications and know-how relating to the Company's inventions. BioArctic has a patent portfolio including more than 80 approved patents and more than 50 applications in 11 different patent families (a patent family is a group of patents and patent applications in different countries with the same origin). Several of the patents give wide geographic protection and include important markets such as the US, Europe, Japan and China. BioArctic's patents and patent applications are related to the Company's research and development of drugs and diagnostics for neurodegenerative diseases such as Alzheimer's disease and Parkinson's disease and the Company's treatment for complete spinal cord injury, including the Company's product candidates and new projects in early development phase.

BioArctic's product candidates are covered by so-called substance patents that prevent competitors from developing generics/biosimilars. In Alzheimer's disease and Parkinson's disease BioArctic's patent strategy has been to initially obtain a broad protection for the Company's product candidates by achieving a conceptual protection for the treatment strategy as such (concept patent). The patent families AD I and AD II for Alzheimer's disease and PD V for Parkinson's disease, respectively, are broad concept patents preventing BioArctic's competitors from using the same treatment strategy as BioArctic. The figure below illustrates the above described patent strategy for Alzheimer's disease.

Illustration of patent layers



Patent families and concepts covered		Geographies	Expiration
AD I	Protofibril concept	US and Japan	2021
AD II	General mechanism in selective binding to protofibrils vs. monomers	US	2025
AD III	BAN2401 product candidate	US, EU, Japan	2027 + 5 year patent term extension
AD IV	BAN2401 back-up product candidate	US, EU, Japan	2035 + 5 year patent term extension

The table below gives a summary of the Company's major published patent families.

Family	Area	Status and market	Protection to
AD I	Alzheimer's disease – concept 1	Granted: US, Canada, Japan, Australia	July 2021
AD II	Alzheimer's disease – concept 2	Granted: US, Canada, Australia	June 2025
AD III	Alzheimer's disease – substance 1 Specific protection for BAN2401	Granted: US, Canada, Europe, Japan, China and others countries	March 2027 (2032 with patent extension) <sup>1)</sup>
AD IV	Alzheimer's disease – substance 2 Specific protection for BAN2401 back-up	Granted: US Pending: Europe, Japan, China and other countries	July 2035 (2040 with patent extension) <sup>1)</sup>
PD V	Parkinson's disease – concept	Granted: US, Japan Pending: Europe	July 2029
PD VII	Parkinson's disease – substance Specific protection for BAN0805	Granted: US, Japan, China, Australia and others countries Pending: Europe, Canada	March 2031 (2036 with patent extension) <sup>1)</sup>
SP X	Spinal cord – method and mold The patents in this patent family have been licensed from Swenora Biotech AB	Granted: Australia, Canada, Japan Pending: Europe, US	March 2027
SP XI	Spinal cord – specific – device	Pending: Europe, US, Japan, Canada, Australia, China	December 2032

1) Assuming that a 5 year patent extension is granted.

A third party unknown to the Company has raised objections to BioArctic's patent EP1781703 in Europe in the patent family AD II (which is a concept patent) and claims that the patent should not have been granted. European Patent Office (EPO) has made its decision at Oral Proceedings held on 26 September 2017, with the conclusion that the patent (EP1781703) is revoked in Europe. The Company considers to appeal the decision. Even if this concept patent currently is revoked, BioArctic importantly holds specific substance patent protection in US, Japan and EU for BAN2401, an antibody in Phase 2b clinical trial. The concept patent is granted in the US, Canada and Australia and is not affected by the EPO's decision. The proceedings are further described in the section "*Legal considerations and supplementary information – Disputes and litigation*".

A third part unknown to the Company has submitted observations (Third Party Observations) to the European Patent Office, EPO, in connection with the processing of

BioArctic's European patent application EP09738534.8 in the patent family PD V (which is a concept patent). The proceedings are further described in the section "*Legal considerations and supplementary information – Disputes and litigation*".

In addition to BioArctic's own patents relating to SC0806 the basic technology behind BioArctic's treatment for complete spinal cord injury has been licensed from Swenora Biotech AB (patent family SP X). BioArctic is also in other cases dependent on certain technologies licensed from third parties. The company's material license agreements are further described in the section "*Legal considerations and supplementary information – Material agreements*".

In addition to patents BioArctic's intellectual property rights include rights to trademarks registered in the EU and the US and registered domain names.

## Selected historical financial information

The selected historical financial information below derives from BioArctic's consolidated financial reports as per and for the financial years ending on December 31 2016 and 2015, which have been prepared in accordance with both International Financial Reporting Standards ("IFRS") as adopted by the EU and RFR 1 Supplementary Accounting Rules for Groups and audited by BioArctic's auditor pursuant to RevR5 Examination of Financial Information in Prospectuses. The information regarding the periods January – June 2017 and January – June 2016 derives from BioArctic's interim report for the period January – June 2017 which has been prepared in accordance with IAS 34 Interim Financial Reporting and reviewed by BioArctic's auditor. No other information in the Offering Circular has been reviewed or audited by the BioArctic's auditor. For further information on the accounting principles applied, please refer to Note 2 ("Summary of important accounting principles") in the section "Historical financial information".

The information below should be read together with the sections "Operational and financial overview", "Shareholders' equity, debt and other financial information" and the Company's complete financial information for the financial years 2016 and 2015, together with the accompanying notes, and the interim report for the period January – June 2017 with comparative financial information for the corresponding period the previous financial year (see the section "Historical financial information").

### CONSOLIDATED FINANCIAL INFORMATION

All amounts in TSEK	Unaudited		Audited	
	Jan–Jun 2017	Jan–Jun 2016	Jan–Dec 2016	Jan–Dec 2015
Net sales	58,192	9,991	105,613	41,573
Cost of goods sold	-266	-	-238	-
<b>Gross profit</b>	<b>57,926</b>	<b>9,991</b>	<b>105,375</b>	<b>41,573</b>
Other operating income	5,914	5,367	39,073	7,594
Selling expenses	-696	-689	-1,370	-1,453
Administrative expenses	-10,648	-4,362	-14,544	-4,558
Research and development costs	-43,324	-22,715	-53,665	-38,238
Other operating expenses	-5,229	-100	-238	-74
<b>Operating profit</b>	<b>3,943</b>	<b>-12,508</b>	<b>74,631</b>	<b>4,844</b>
Result from participations in Group companies	-	-	-	-11
Financial income	539	256	8	266
Financial expenses	-12	-1	-503	-308
<b>Result before tax</b>	<b>4,470</b>	<b>-12,253</b>	<b>74,136</b>	<b>4,791</b>
Tax on profit for the period	-1,034	2,626	-16,556	-1,081
<b>Result for the period<sup>1)</sup></b>	<b>3,436</b>	<b>-9,627</b>	<b>57,580</b>	<b>3,710</b>

1) The result for the period is attributable in its entirety to the parent company's shareholders.

## BALANCE SHEET

All amounts in TSEK	Unaudited		Audited	
	Jun 30, 2017	Jun 30, 2016	Dec 31, 2016	Dec 31, 2015
<b>ASSETS</b>				
<b>Non-current assets</b>				
<b>Property, plant and equipment</b>				
Leasehold improvements	1,091	1,435	1,275	1,680
Equipment	4,214	2,046	4,369	2,554
<b>Financial assets</b>				
Deferred tax assets	201	130	172	88
Other financial assets	2,675	8,345	2,675	8,345
<b>Total non-current assets</b>	<b>8,181</b>	<b>11,956</b>	<b>8,491</b>	<b>12,667</b>
<b>Current assets</b>				
Accounts receivable	–	760	634	646
Other receivables	2,665	3,988	1,764	2,068
Prepaid expenses and accrued income	5,888	1,728	4,557	1,899
Cash and cash equivalents	622,063	93,411	692,530	113,831
<b>Total current assets</b>	<b>630,616</b>	<b>99,887</b>	<b>699,485</b>	<b>118,444</b>
<b>TOTAL ASSETS</b>	<b>638,797</b>	<b>111,843</b>	<b>707,976</b>	<b>131,111</b>
<b>SHAREHOLDERS' EQUITY AND LIABILITIES</b>				
<b>Shareholders' equity</b>				
Share capital	105	105	105	105
Other capital contributed	958	958	958	958
Accumulated profit including result for the year	63,133	97,595	59,697	107,217
<b>Parent Company shareholders</b>	<b>64,196</b>	<b>98,658</b>	<b>60,760</b>	<b>108,280</b>
Non-controlling interests	–	–	–	5
<b>Total shareholders' equity</b>	<b>64,196</b>	<b>98,658</b>	<b>60,760</b>	<b>108,285</b>
<b>Long-term liabilities</b>				
Deferred tax liabilities	4,136	–	4,136	–
<b>Total long-term liabilities</b>	<b>4,136</b>	<b>–</b>	<b>4,136</b>	<b>–</b>
<b>Current liabilities</b>				
Accounts payable	8,249	1,919	11,736	1,155
Tax liabilities	1,217	–	6,917	1,122
Other current liabilities	1,000	1,968	1,091	835
Accrued expenses and deferred income	559,999	9,298	623,336	19,714
<b>Total current liabilities</b>	<b>570,465</b>	<b>13,185</b>	<b>643,080</b>	<b>22,826</b>
<b>TOTAL SHAREHOLDERS' EQUITY AND LIABILITIES</b>	<b>638,797</b>	<b>111,843</b>	<b>707,976</b>	<b>131,111</b>

## CONSOLIDATED STATEMENT OF CASH FLOW

All amounts in TSEK	Unaudited		Audited	
	Jan-Jun 2017	Jan-Jun 2016	Jan-Dec 2016	Jan-Dec 2015
<b>Operating activities</b>				
<b>Operating profit</b>	<b>3,943</b>	<b>-12,508</b>	<b>74,631</b>	<b>4,844</b>
Adjustment for items not generating cash flow				
Prepaid revenues	-57,678	-11,917	-9,502	-22,729
Depreciation	892	753	1,556	1,536
Unrealized exchange-rate differences	4,424	29	-12,139	-
Capital gain/loss	-	-	-	9
Interest received	-	-	7	233
Interest paid	-1	-1	-5	-9
Tax paid	-7,190	-339	-519	-606
<b>Cash flow from operating activities before changes in working capital</b>	<b>-55,610</b>	<b>-23,983</b>	<b>54,029</b>	<b>-16,722</b>
Changes in working capital	-10,407	3,336	621,102	288
<b>Cash flow from operating activities</b>	<b>-66,017</b>	<b>-20,647</b>	<b>675,131</b>	<b>-16,434</b>
<b>Investing activities</b>				
Acquisition of tangible assets	-553	-	-2,967	-2,291
Acquisition of Group companies	-	-	-5	-
Sale of Group companies	-	-	-	-11
Sale of tangible assets	-	-	-	20
<b>Cash flow from investing activities</b>	<b>-553</b>	<b>-</b>	<b>-2,972</b>	<b>-2,282</b>
<b>Financing activities</b>				
Transactions with non-controlling interests	-	-	-	5
Paid dividend	-	-	-105,100	-
<b>Cash flow from financing activities</b>	<b>-</b>	<b>-</b>	<b>-105,100</b>	<b>5</b>
<b>Cash flow for the period</b>	<b>-66,570</b>	<b>-20,647</b>	<b>567,059</b>	<b>-18,711</b>
Cash and cash equivalents at beginning of period	692,530	113,831	113,831	132,808
Exchange rate differences in cash and cash equivalents	-3,897	227	11,640	-266
<b>Cash and cash equivalents at end of period</b>	<b>622,063</b>	<b>93,411</b>	<b>692,530</b>	<b>113,831</b>



## KEY FIGURES

### IFRS key figures

The key figures below have been calculated in accordance with IFRS.

TSEK (unless otherwise stated)	Jan-Jun 2017	Jan-Jun 2016	Jan-Dec 2016	Jan-Dec 2015
Net sales	58,192	9,991	105,613	41,573
Result for the period	3,436	-9,627	57,580	3,710
Earnings per share, SEK <sup>1)</sup>	0.82	-2.29	13.70	0.88
Cash flow from operating activities	-66,017	-20,647	675,131	-16,434

1) Calculated on 4,203,999 outstanding shares. After June 30, 2017, a 1:15 share-split has been registered. The total number of shares after the split amounts to 63,059,985 shares. There are no potential shares hence there is no dilution effect.

### Alternative key figures not defined in accordance with IFRS

The key figure Equity/assets ratio derives from BioArctic's audited consolidated financial information for the financial years ended at December 31, 2015 and 2016. The key figures Cash flow from operating activities per share, Return on equity per share and Equity per share, for the full years 2015 and 2016, are based on

information from BioArctic's audited consolidated financial reports for the financial years ended at December 31, 2015 and 2016, as further specified below. As regards the periods January 1 – June 30, 2016 and January 1 – June 30, 2017, all key figures derive from BioArctic's review of the interim report for the period January 1 – June 30, 2017.

TSEK (unless otherwise stated)	Jan-Jun 2017	Jan-Jun 2016	Jan-Dec 2016	Jan-Dec 2015
Operating profit <sup>1)</sup>	3,943	-12,508	74,631	4,844
Cash flow from operating activities per share <sup>2)</sup>	-15.7	-4.91	160.59	-3.91
Equity/assets ratio	10.0%	88.2%	8.6%	82.6%
Return on equity	5.5%	-9.3%	68.1%	3.5%
Equity per share, SEK <sup>2)</sup>	15.27	23.47	14.45	25.76

1) As regards the full year 2015 and 2016, the post is derived from BioArctic's revised financial information. As regards the periods January 1 - June 30, 2016 and 2017, the post is derived from non-revised information from BioArctic's reviewed quarterly report for the period January 1 – June 30, 2017.

2) Calculated on 4,203,999 outstanding shares. After June 30, 2017 a 1:15 share-split has been registered. The total number of shares after the split amounts to 63,059,985. There are no potential shares hence there is no dilution effect.

### Use of metrics not calculated in accordance with IFRS

The Company applies ESMA's guidelines for alternative key figures. An alternative key figure is a financial metric that is not defined or stated in applicable rules for financial reporting (for example IFRS and the Swedish Annual Accounts Act). The alternative key figures shall therefore be explained in financial reports and prospectuses. In accordance with these guidelines, the Company's alternative key figures are defined on page 71 of the Offering Circular, together with key figures defined in accordance with IFRS. The Company considers these alternative key figures to be an important addition, as they enable investors, securities analysts, the Company management, stakeholders and others to better analyze and evaluate the Company's business and economic trends. These alternative financial key figures should not be assessed independently or be considered to replace key figures of

performance which have been calculated in accordance with IFRS. Moreover, such key figures, as defined by BioArctic, should not be compared with other key figures with similar names used by other companies. This is due to the fact that the above-mentioned key figures are not always defined in the same way and other companies may calculate them in a different way than BioArctic. For a definition of financial and operational metrics not defined as IFRS key figures, see the section "*Definitions of key figures not defined in accordance with IFRS*".

The Company's business is such that it does not have an even flow of revenues but rather these come irregularly in conjunction with the signing of research collaboration agreements, licensing agreements and milestones achieved. The Company therefore follows key figures such as the "Equity/Assets ratio" and "Equity per share" in order to be able to assess the Company's solidity and financial stability.

	Jan 1, 2017 June 30, 2017	Jan 1, 2016 June 30, 2016	Jan 1, 2016 Dec 31, 2016	Jan 1, 2015 Dec 31, 2015
<b>Calculation of Cash flow from operating activities per share, SEK<sup>3)</sup></b>				
Cash flow from operating activities <sup>1)</sup>	-66,017	-20,647	675,131	-16,434
Number of share at the end of the period <sup>2)</sup>	4,203,999	4,203,999	4,203,999	4,203,999
<b>Cash flow from operating activities per share, SEK</b>	<b>-15.70</b>	<b>-4.91</b>	<b>160.59</b>	<b>-3.91</b>
<b>Calculation of Equity/assets ratio</b>				
Equity <sup>1)</sup> , TSEK	64,196	98,658	60,760	108,285
Total assets <sup>1)</sup> , TSEK	638,797	111,843	707,976	131,111
<b>Equity/assets ratio<sup>1)</sup></b>	<b>10%</b>	<b>88.2%</b>	<b>8.6%</b>	<b>82.6%</b>
<b>Calculation of Return on Equity</b>				
Result for the period <sup>1)</sup> , TSEK	3,436	-9,627	57,580	3,710
Average equity, TSEK <sup>4)</sup>	62,478	103,471	84,523	106,428
<b>Return on equity</b>	<b>5.5%</b>	<b>-9.3%</b>	<b>68.1%</b>	<b>3.5%</b>
<b>Calculation of Equity per share<sup>3)</sup></b>				
Equity <sup>1)</sup> , TSEK	64,196	98,658	60,760	108,285
Average number of shares before dilution <sup>2)</sup>	4,203,999	4,203,999	4,203,999	4,203,999
<b>Equity per share before dilution<sup>1)</sup>, SEK</b>	<b>15.27</b>	<b>23.47</b>	<b>14.45</b>	<b>25.76</b>

1) For the full years 2015 and 2016, this item derives from BioArctic's audited financial information, and for the periods January 1 – June 30, 2016 and 2017 from unaudited information from BioArctic's auditor-reviewed interim report for the period January 1 – June 30, 2017.

2) After June 30, 2017 a 1:15 share-split has been registered. The total number of shares after the split amounts to 63,059,985 shares.

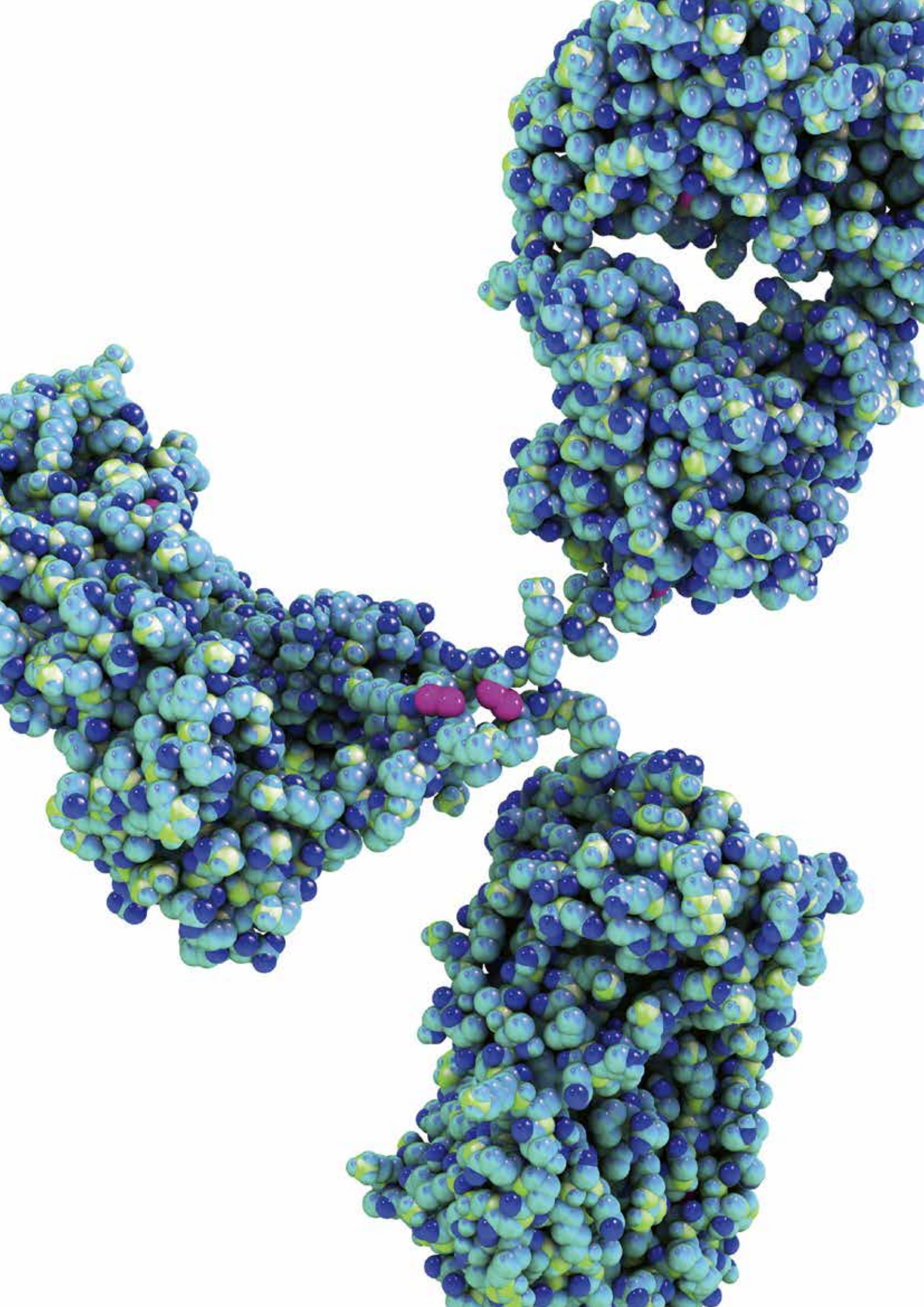
3) There are no potential shares hence there is no dilution effect.

4) Average equity is defined as equity at the beginning of the period plus equity at the end of the period divided by two.

## Definitions of key figures not defined in accordance with IFRS

Key figure	Definition	Reason for use of financial key figure not defined in accordance with IFRS
Operating profit	Result before financial items	The key figure show earning ability without regard to the Company's financing.
Cash flow per share from operating activities, SEK	Cash flow for the period from the operating activities divided by the number of shares at the end of the period	The key figure shows the business generated cash flow per share before investments and before financing
Equity/assets ratio	Equity divided by total assets, expressed as a percentage	This key figure shows how large a part of the balance sheet total has been financed by equity and is used to measure the Company's financial position
Return on equity	Net income divided by equity as a percentage	This key figure shows the return on invested capital as a percentage
Equity per share, SEK	Equity divided by the number of shares at the end of the period <sup>1)</sup>	This key figure shows how large a part of the company's equity can be attributed to a share. This key figure thus shows the development of the book value for the shareholders

1) BioArctic's interim report for the period January 1, 2017 – June 30, 2017, incorrectly states that the current key figure is calculated as equity divided by the average number of shares. However, this has not affected the calculation.





# Operational and financial overview

*The information below should be read together with the sections “Selected historical financial information” and “Capital structure and other information”, as well as the Company’s complete financial information for the financial years 2016 and 2015, together with the accompanying notes, and the interim report for the period January – June 2017 together with the comparative financial information for the corresponding period the previous financial year (see the section “Selected historical financial information”).*

*The information below contains forward-looking statements associated with various risks and uncertainties. The Company’s actual results may differ considerably from those predicted in these forward-looking statements due to many different factors, including but not limited to those described in the section “Risk factors”.*

## OVERVIEW

BioArctic is a Swedish research-based biopharma company focusing on disease modifying treatments for neurodegenerative diseases such as Alzheimer’s disease and Parkinson’s disease, as well as biomarkers and diagnostics. The Company is also developing a treatment concept for complete spinal cord injury which is in clinical phase. The Company’s core business focuses solely on research and development, which is conducted from its premises in Stockholm and through collaborative research with research groups at a number of Swedish universities. If BioArctic is to continue to be successful, innovation and development must always have the highest priority.

Since it was formed, and up to June 30, 2017, the Company has financed its business activities through payments for research collaboration and initial payments, licensing revenues and milestone payments from the Company’s collaboration partners of 47 MEUR (Eisai) respective 80 MUSD (AbbVie) as well as grants of 4.2 MEUR from EU’s Horizon 2020 and 12 MSEK from Swedish Vinnova. At June 30, 2017 the Company had cash and cash equivalents of 622 MSEK available. The financing has essentially been used to conduct research and development. With the exception of the financial years 2005, 2008 and 2012 BioArctic has been profitable since the formation of the Company.

As the Company’s business has been financed through grants and licensing revenues, on the date of publication of the Offering Circular, the Company’s founders, Lars Lannfelt and Pär Gellerfors, still control through their own companies 94.30% of the shares, representing 98.13% of the votes in the Company.

Today, BioArctic has two projects in clinical phase, BAN2401 for Alzheimer’s disease and SC0806 for patients with complete spinal cord injury; two projects in preclinical phase, BAN0805 for Parkinson’s disease and BAN2401 back-up for Alzheimer’s disease; three Alzheimer projects and two Parkinson projects in research phase and two biomarker/diagnostic projects. See the section “Description of the business – BioArctic’s project portfolio” for more information.

## SIGNIFICANT FACTORS IMPACTING THE COMPANY’S RESULTS

BioArctic’s results have been impacted, and will be impacted, by a number of factors, some of which are beyond BioArctic’s control. The main factors which BioArctic assesses have impacted the results of the business in the period covered by the Offering Circular and which can be expected to continue to have an impact on BioArctic’s results is described below.

Successful development of pharmaceutical and product candidates involves great uncertainty and high costs. Great patience is necessary, as well as an ability to create opportunities and a breeding ground for conducting effective and successful research. The Company cannot calculate the cost, the time spent or the resources required to achieve the objective of approved pharmaceuticals or products.

In order to reduce the risk of failure, the Company has entered into and implemented research collaboration agreements with large international pharmaceutical companies, so-called “Big Pharma”, and thereby financed the research. This has been a conscious strategic choice. At the same time as the risk in the business has been lowered, the potential has also been reduced as the agreements entail that certain rights have been transferred to the other parties involved in the agreements. BioArctic’s revenues have historically stemmed from these agreements with collaboration partners and from funding and grants from authorities.

### Collaboration agreements and financing from grants

The Company’s product candidates are still in the development phase and there has not been any commercialization of pharmaceuticals. The revenues that the Company has received so far consist of payments pursuant to agreements with collaboration partners and financing through grants from Swedish and EU authorities. The Company’s business is thus at present of such a nature that it does not have a steady inflow of revenues, but rather these come irregularly in connection with the signing of research collaboration agreements and licensing agreements and when milestones are reached, as well as when grants are received.

### Payments pursuant to agreements with collaboration partners

Most of the Company's revenues have stemmed from research agreements and licensing and collaboration agreements with the Japanese company Eisai regarding Alzheimer's disease, where the first agreement was entered into in 2005, and with the American company AbbVie regarding Parkinson's disease, where an agreement was entered into in 2016. Pursuant to these agreements, BioArctic receives financing for research through research collaboration payments and initial payments, milestone payments and licensing and royalty payments.

Up until the date of publication of this Offering Circular, five different agreements with Eisai have resulted in payments of approximately 47 MEUR. The agreement with AbbVie generated an up-front payment of 80 MUSD during 2016. This sum of 80 MUSD includes payment for the preclinical development work that the Company will perform under the agreement and an option premium the size of which has not been specified in the agreement. Of the initial payment, an amount of 8 MUSD was immediately recorded as revenue. The remainder of the payment will be set off continuously on the basis of expenses incurred up until December 2019. For more information about the Company's agreements with collaboration partners, please see the sections "Description of the business – Partnerships and Collaboration" and "Legal considerations and additional information – Material agreements".

The Company intends to continue to seek out new research collaborations similar to the agreements with Eisai and AbbVie, but on a very selective basis, with predetermined objectives and selected collaboration partners. The Company will also continue to strive to generate revenues from research agreements in the form of research financing and from licensing and collaboration agreements through a combination of initial payments, milestone payments and licensing and royalty payments.

### Financing from grants

Apart from the above-mentioned agreements, the Company's revenues have mainly consisted of funding and grants from Swedish and EU authorities. The largest and most important grant was obtained in 2015 from EU's Horizon2020 (Grant Agreement No. 643853). In total the grant amounts to 6.4 MEUR, of which 4.2 MEUR has so far been paid out. The grant has been given to partly finance the clinical development of SC0806. Furthermore, BioArctic has received a number of grants from the Swedish agency Vinnova over the years.

The Company will continue to apply for funding and grants. These enable the financing of parts of the research activities and also give legitimacy to the Company and its activities.

The table below presents BioArctic's net sales and other income during the financial years 2015 and 2016 and during the period January to June 2016 and 2017.

TSEK	Jan-Jun 2017	Jan-Jun 2016	Jan-Dec 2016	Jan-Dec 2015
Net sales	58,192	9,991	105,613	41,573
Other income	5,914	5,367	39,073	7,594

### Research and development

Research and development is an important strategic priority for BioArctic. The Company's long-term success is largely dependent on continued innovation and development of the Company's portfolio of diagnostic methods and technologies related to the development of pharmaceuticals.

The Company's costs for research and development are attributable to the development of its pharmaceutical and product candidates and other research projects and include costs for salaries to research personnel, rent for premises, laboratory equipment and outsourced services such as the production of antibodies and the carrying out of certain preclinical and clinical studies. The costs also include expenses attributable to the management and monitoring of the Company's patent portfolio, including costs for legal representation and application and maintenance fees. Pursuant to IAS 38 all expenditure related to research and development work attributable to development of the Company's pharmaceutical and product candidates is expensed. The Company's research and development costs will only be capitalized as intangible assets in accordance with the IFRS regulations.

The table below presents BioArctic's research and development costs during the financial years 2015 and 2016 and during the period January to June 2016 and 2017. Research and development costs in relation to total costs is defined as the Company's costs for research and development divided by total costs.

TSEK (unless otherwise stated)	Jan-Jun 2017	Jan-Jun 2016	Jan-Dec 2016	Jan-Dec 2015
Research and development costs	43,324	22,715	53,665	38,238
Research and development costs in relation to total costs	72.0%	81.5%	76.9%	86.3%

The Company's research and development costs during 2016 and during the first half of 2017 increased as a result of the research collaboration with AbbVie and the ongoing clinical trial for product candidate SC0806, both of which were initiated in 2016. However, in relation to the Company's total costs, BioArctic's research and development costs decreased. This is primarily due to the increased general expenses as a result of the expansion of the Company's administrative functions to manage larger collaboration agreements and preparations for the listing on Nasdaq Stockholm. See the sections "Operational and financial overview – Other expenses" and "Legal considerations and supplementary information – Material agreements".

The Company expects that the costs for research projects and the costs for the continued development of existing product candidates will continue to increase as



the Company's preclinical and clinical studies proceed to subsequent phases. The total cost for running BioArctic's ongoing development programme up until licensing to another party is expected to be considerable and will largely be dependent on BioArctic's ability to complete different project activities successfully and at the right time.

As mentioned above, BioArctic's strategy is to reduce risk by entering into research collaboration agreements and licensing agreements with relevant parties and by applying for funding and grants in Sweden and the EU.

### Strengthening of administrative functions

As BioArctic's operations are growing with new projects and research collaborations, the Company's need for administrative resources and functions is also growing, which leads to increased administrative costs.

The Company's administration is expected to grow at a similar rate as the Company's operations. During the period covered by the financial information included in this Offering Circular, the Company has entered into a new collaboration agreement with AbbVie and begun to prepare the Company for a listing on Nasdaq Stockholm, which has entailed a greater need for personnel resources and increased costs for external advisors.

The table below presents BioArctic's selling expenses and administrative expenses during the financial years 2015 and 2016 and during the period January to June 2016 and 2017. Of the administrative costs in the period January – June 2017 approx. 2.8 MSEK were non-recurring costs related to the forthcoming listing.

TSEK	Jan-Jun 2017	Jan-Jun 2016	Jan-Dec 2016	Jan-Dec 2015
Selling expenses	696	689	1,370	1,453
Administrative expenses	10,648	4,362	14,544	4,558

### Fluctuations in currencies

BioArctic has its registered office in Sweden and reports its financial position and its results in SEK. BioArctic's revenues at present essentially consist of payments in accordance with collaboration and licensing agreements with Eisai and AbbVie, for which payments are received in EUR and USD, respectively. BioArctic continually pays for services in other currencies than SEK, above all in GBP, USD, CHF and EUR. Currency flows in connection with the purchasing and selling of goods and services in other currencies than SEK are subject to transaction exposure. BioArctic balances this exposure by purchasing and selling currencies corresponding to the Company's commitments.

Cash and cash equivalents in foreign currency (TSEK)	June 30, 2017
Total foreign currency	227,294
of which GBP	157,488
of which USD	18,716
of which CHF	22,199
of which EUR	28,891

The table below illustrates how changes in the currencies above impact BioArctic. The estimated effects are based on the period January – June 2017 and shall be regarded as an estimate of the effects of an isolated change in a given variable. This sensitivity analysis does not constitute a forecast.

Sensitivity analysis for the period Jan – Jun 2017	Change (%)	Change in operating profit (TSEK)
Exchange rate SEK/GBP	10	+/- 15,749
Exchange rate SEK/USD	10	+/- 1,872
Exchange rate SEK/CHF	10	+/- 2,220
Exchange rate SEK/EUR	10	+/- 2,889

### Tendencies

In the current financial year the following tendencies, uncertainty factors, potential receivables or other claims, commitments or events are expected to have a significant influence on the Company's business prospects:

- ▲ The Company's research and development costs are expected to grow as a consequence of the research collaboration agreement with AbbVie and the ongoing clinical trial concerning the product candidate SC0806, which were both started in 2016.
- ▲ The Company's administrative costs are expected to grow as a result of a growing administrative burden linked to the new research collaboration agreements and the demands on the Company in a listed environment.
- ▲ The Company receives revenue and buys services in foreign currencies. Exchange rate fluctuations may affect the Company's revenue and costs.

### LIQUIDITY POLICY

The Company receives cash and cash equivalents mainly through milestone payments and compensation for research collaborations from the Company's partners as well as grants. The company's cash and cash equivalents amounted to 622,063 TSEK as of June 30, 2017. Since the Company's revenues are irregular, the Company has a policy of maintaining a reserve of cash and cash equivalents which are sufficient for the Company's operations during approximately two years.

### SEGMENTS

A business segment is part of a Group that conducts business activities from which revenues can be generated and costs incurred and for which there is separate financial information available. The Board treats all the Company's business activities as one business segment and there is thus no separate segment reporting.

### KEY ITEMS IN THE INCOME STATEMENT

#### Net sales

Net sales comprise the Company's revenues in the form of payments in connection with research collaboration, initial payments when entering into licensing and collaboration agreements, milestone payments, licensing revenues and royalties.

### Other operating income

Other operating income comprises grants from the Swedish state, EU contributions, other contributions received and realized and non-realized exchange rate gains attributable to operating activities.

### Operating expenses

The Company's income statement is classified by function and operating expenses consist of selling expenses, administrative expenses, research and development costs and other expenses. Expenses are classified by function according to where they belong and joint expenses are classified according to the number of employees. This means, for example, that the majority of rental expenses are charged to research and development costs as the majority of employees belong to research and development.

Realized and non-realized exchange rate losses are included in other expenses.

### Operating profit

Operating profit is calculated by subtracting selling expenses, administrative expenses, research and development costs and other expenses from the sum of net sales and other operating income.

### Net financial income

Net financial income mainly consists of interest income from the Company's bank balances and gross exchange rate gains and losses which are not attributable to operating activities.

### Result for the period

The result for the period is the result for the period after tax.

## COMPARISON OF THE INTERIM PERIODS JANUARY 1 – JUNE 30 2017 AND JANUARY 1 – JUNE 30 2016

### Net sales

BioArctic's net sales increased by 48,201 TSEK, or 482.4%, from 9,991 TSEK during the period January 1 – June 30 2016 to 58,192 TSEK during the same period in 2017. The increase in net sales was mainly attributable to the collaboration and license agreement entered into with AbbVie.

### Other income

The Company's other operating income increased by 547 TSEK, or 10.2%, from 5,367 TSEK during the period January 1 – June 30, 2016 to 5,914 TSEK during the same period in 2017. The net increase was mainly attributable to increased unrealized exchange profits and a lump sum payment received by the Company in connection with the termination of a sublease agreement, but also to lower grants from Vinnova.

### Operating expenses

Operating expenses including the cost of goods sold increased by 32,297 TSEK or 115.9% from 27,866 TSEK during the period January 1– June 30, 2016 to

60,163 TSEK during the same period in 2017. The increase was primarily attributable to increased administrative expenses of 6,286 TSEK, which were related to an increase of the administrative expenses due to new research collaboration agreements and the requirements the Company must meet in a listed environment, and due to an increase of the Company's research and development cost of 20,609 TSEK, which was primarily due to the collaboration and license agreement entered into with AbbVie.

### Operating profit

BioArctic's operating profit increased by 16,451 TSEK from –12,508 TSEK during the period January 1 – June 30, 2016 to 3,943 TSEK during the same period in 2017.

The increase in the operating profit was primarily due to the increase in net sales of 48,201 TSEK and the increase in other income of 547 TSEK. The operating profit was also impacted by an increase in operating expenses of 32,297 TSEK.

### Tax

The Company's tax on the result for the year increased by 3,660 TSEK from –2,626 TSEK during the period January 1 – June 30, 2016 to 1,034 TSEK during the same period in 2017.

### Result for the period

The result for the period increased by 13,063 TSEK from –9,627 TSEK during the period January 1 – June 30, 2016 to 3,436 TSEK during the same period in 2017. The increase was attributable to the changes described under "Net sales", "Operating expenses" and "Operating profit".

### Cash flow

#### *Cash flow from operating activities*

The Company's cash flow after the change in working capital from operating activities decreased by 45,370 TSEK, or 219.7%, from –20,647 TSEK during the period January 1 – June 30, 2016 to –66,017 TSEK during the same period in 2017. The decrease in the cash flow from operating activities was primarily due to an increase of research costs in connection of the collaboration and license agreement with AbbVie.

#### *Cash flow from investing activities*

The Company's cash flow from investing activities decreased by 553 TSEK, from 0 TSEK during the period January 1 – June 30, 2016 to 553 TSEK during the same period in 2017. The decrease in the cash flow from investing activities was mainly due to lack of investments during the period January – June 2016.

#### *Cash flow from financing activities*

No cash flow was available during the period January – June, 2016 or during the same period 2017.

### Investments

The Company's investments increased by 553 TSEK, from 0 TSEK during the period January 1 – June 30, 2016 to 553 TSEK during the same period in 2017. The increase in investments consisted of tangible assets amounting to 553 TSEK, which consisted of investments in laboratory equipment and furniture.

### Liquidity and financial position

At June 30, 2017 the balance sheet total amounted to 638,797 TSEK, compared to 111,843 TSEK at June 30, 2016. The increase by 526,954 TSEK, or 471.2%, is attributable to the payment from AbbVie of 80 MUSD which was obtained in the autumn of 2016. At June 30, 2017 shareholders' equity amounted to 64,196 TSEK, compared to 98,658 TSEK at June 30, 2016. The decrease of 34,462 TSEK, or 34.9%, was mainly due to dividend of 105,100 TSEK in November 2016 and a net profit of 67,207 TSEK during the second half of 2016. At June 30, 2017, the Company's cash and cash equivalents amounted to TSEK 622,063 TSEK, compared to 93,411 TSEK at June 30, 2016. The increase of 528,652 TSEK, or 565.9%, is primarily attributable to payment from AbbVie of 80 MUSD which was obtained in the autumn of 2016.

## COMPARISON OF THE FINANCIAL YEARS 2016 AND 2015

### Net sales

BioArctic's net sales increased by 64,040 TSEK, or 154.0%, from 41,573 TSEK in 2015 to 105,613 TSEK in 2016. The increase in net sales was mainly attributable to the collaboration and licensing agreement entered into with AbbVie during the autumn of 2016 that partly resulted in a lump sum payment and partly as compensation for the research collaboration.

### Other operating income

The Company's other operating income increased by 31,479 TSEK, or 414.5%, from 7,594 TSEK in 2015 to 39,073 TSEK in 2016. The increase was mainly attributable to the grant from Horizon2020 (EU) and exchange rate gains.

### Operating expenses

Operating expenses including the cost of goods sold increased by 25,732 TSEK, or 58.1%, from 44,323 TSEK in 2015 to 70,055 TSEK in 2016. The increase was primarily attributable to an increase in administrative expenses of 9,986 TSEK, which was related to a bonus payment, to increased consultancy costs as a result of the preparations for listing, and to an increase in the Company's research and development costs of 15,427 TSEK, which was mainly due to the collaboration and license agreement entered into with AbbVie.

### Operating profit

BioArctic's operating profit increased by 69,787 TSEK, or 1,440.1%, from 4,844 TSEK in 2015 to 74,631 TSEK in 2016.

The increase in the operating profit was primarily attributable to the increase in net sales of 64,040 TSEK

and the increase in other income of 31,479 TSEK. The operating profit was also impacted by an increase in operating expenses of 25,732 TSEK.

### Tax

The Company's tax on the result for the year increased by 15,475 TSEK, or 1,431.5%, from 1,081 TSEK in 2015 to 16,556 TSEK in 2016.

### Result for the period

The result for the period increased by 53,870 TSEK, or 1,452%, from 3,710 TSEK in 2015 to 57,580 TSEK in 2016. The increase was attributable to the changes described under "Net sales", "Cost of goods sold", "Operating profit" and "Tax".

### Cash flow

#### Cash flow from operating activities

The Company's cash flow after the change in working capital from operating activities increased by 691,565 TSEK from -16,434 TSEK in 2015 to 675,131 TSEK in 2016. The increase in the cash flow from operating activities was primarily due to the payment from AbbVie of 80 MUSD that was received in autumn 2016.

#### Cash flow from investing activities

The Company's cash flow from investing activities decreased by 690 TSEK, or 30.2%, from -2,282 TSEK in 2015 to -2,972 TSEK in 2016. The decrease in the cash flow from investing activities was primarily due to increased investments in laboratory equipment.

#### Cash flow from financing activities

The Company's cash flow from financing activities decreased by 105,105 TSEK, from 5 TSEK in 2015 to -105,100 TSEK in 2016. The decrease in the cash flow from financing activities was due to dividend to the shareholders.

### Investments

The Company's investments increased by 690 TSEK, or 30.2%, from 2,282 TSEK in 2015 to 2,972 TSEK in 2016. The increase in investments consisted of tangible assets amounting to 2,967 TSEK, which mainly consisted of investments in laboratory equipment.

### Liquidity and financial position

At December 31, 2016 the balance sheet total amounted to 707,976 TSEK, compared to 131,111 TSEK at December 31, 2015. The increase by 576,865 TSEK, or 440%, is attributable to the payment from AbbVie as described under "Cash flow" above. At December 31, 2016 shareholders' equity amounted to 60,760 TSEK compared to 108,285 TSEK at December 31, 2015. The decrease of 47,525 TSEK, or 43.9%, was due to dividend to the shareholders and the result for the year. At December 31, 2016 the Company's cash and cash equivalents amounted to 692,530 TSEK, compared to 113,831 TSEK at December 31, 2015. The increase of 578,699 TSEK, or 508.4%, is attributable to the payment from AbbVie, as described under "Cash flow" above.

# Capital structure and other financial information

The tables in this section present BioArctic's capitalization and debt at Group level at June 30, 2017. See the section "Share capital and ownership" for further information on BioArctic's share capital and shares. The tables in this section should be read together with the sections "Selected historical financial information", "Operational and financial overview" and the Company's complete financial information for the financial years 2016 and 2015, along with the accompanying notes, as well as the interim report for the period January – June 2017, together with comparative financial information for the corresponding period the previous financial year (see the section "Historical financial information").

## SHAREHOLDERS' EQUITY AND LIABILITIES

The table below gives information on the Company's equity and liabilities at June 30, 2017. At the date of publication of the Offering Circular, the Company has no interest-bearing liabilities or receivables.

TSEK	Jun 30, 2017
<b>Current liabilities:</b>	
Against guarantee or surety	
Against security	
Without guarantee/surety or security	570,465
<b>Total current liabilities</b>	<b>570,465</b>
<b>Long-term liabilities:</b>	
Against guarantee or surety	
Against security	
Without guarantee/surety or security	4,136
<b>Total long-term liabilities</b>	<b>4,136</b>
<b>Shareholders' equity:</b>	
Share capital	105
Other capital provided	958
Accumulated result including result for the year	63,133
<b>Total shareholders' equity</b>	<b>64,196</b>

Current liabilities of 570,465 TSEK refers in its entirety to operating debts which are not subject to interest. The amount is mainly attributable to reservation of the one-time payment from AbbVie of 80 MUSD, which is continuously set off as costs are incurred within the research cooperation. After the balance sheet date, the share capital has increased by 1,156 TSEK, from 105 TSEK to 1,261 TSEK and balanced profits has decreased by 1,156 TSEK, from 63,133 TSEK to 61,977 TSEK. The change is a result of a bonus issue resolved by the annual general meeting of 2017 which was registered by the Swedish Companies Registration Office after June 30, 2017.

The Company has identified contingent liabilities as follows:

– The Company has, according to entered EU research cooperation, a repayment obligation vis-à-vis the contracting party in cases where the projects are canceled and the advances received exceed the costs incurred. The Company also has an obligation to pay care needs for patients participating in these studies.

– The Company has a repayment obligation, within the framework of received Swedish public contributions, if the projects is canceled or not implement according to guidelines, and the incurred project costs do not amount to the received public contributions.

The Company's entire projects are according to plan and the Company has no indications that repayment obligations or other obligations would be actualized.

## NET DEBT

BioArctic's net debt at June 30, 2017 is stated below.

TSEK	Jun 30, 2017
(A) Cash balances	9
(B) Cash and cash equivalents	622,054
(C) Easily realizable securities	
<b>(D) Total liquidity (A)+(B)+(C)</b>	<b>622,063</b>
<b>(E) Current financial receivables</b>	
(F) Current bank debt	
(G) Current portion of long-term liabilities	
(H) Other current liabilities (non-interest-bearing)	570,465
<b>(I) Total current liabilities (F)+(G)+(H)</b>	<b>570,465</b>
<b>(J) Net financial debt (I)–(E)–(D)</b>	<b>–51,598</b>
(K) Long-term bank loan	
(L) Bonds issued	
(M) Other long-term liabilities	4,136
<b>(N) Long-term financial debt (K)+(L)+(M)</b>	<b>4,136</b>
<b>(O) Financial net debt (J)+(N)</b>	<b>–47,462</b>

**NON-CURRENT ASSETS**

BioArctic's tangible assets amounted to 5,305 TSEK at June 30, 2017 and mainly consist of laboratory equipment and leasehold improvements. The Company's financial assets amounted to 2,876 TSEK at June 30, 2017 and consist mainly of a rental deposit. The Company has no intangible assets.

**INVESTMENTS**

The table below summarizes BioArctic's total investments in the financial years 2015 and 2016 and during the periods January to June 2016 and January to June 2017. Investments in tangible assets are mainly laboratory equipment and leasehold improvements. The investments have been financed through cash and cash equivalents.

TSEK	Jan 1, 2017 Jun 30, 2017	Jan 1, 2016 Jun 30, 2016	Jan 1, 2016 Dec 31, 2016	Jan 1, 2015 Dec 31, 2015
Tangible assets	553	0	2,966	2,291
Intangible assets	0	0	0	0
<b>Total</b>	<b>553</b>	<b>0</b>	<b>2,966</b>	<b>2,291</b>

At the date of publication of the Offering Circular, the Company has ongoing investments in laboratory equipment amounting to approximately 2 MSEK. The investments will be financed through cash and cash equivalents.

Apart from this, the Company has no significant ongoing investments and has not made any commitments regarding significant future investments.

**DIVIDEND**

Since 2015 dividend has been paid on one occasion, when the Company in November 2016 paid a dividend of 25 SEK per share or 105.1 MSEK in total. At the time of the dividend there were a total of 4,203,999 outstanding shares. Thereafter, there a 1:15 share-split has been registered. The total number of shares is 63,059,985.

**STATEMENT REGARDING WORKING CAPITAL**

BioArctic assesses that the existing working capital is sufficient for current needs during the coming twelve-month period. This means that the Company can meet its payment obligations as and when they fall due for payment.

**SIGNIFICANT EVENTS**

No significant events which affect the Company's financial situation or position on the market have occurred after June 30, 2017.



# Share capital and ownership structure

## SHARES AND SHARE CAPITAL

The Company's shares have been issued in accordance with Swedish law (the Swedish Companies Act (2005:551)) and are denominated in SEK. The Company has two classes of shares, A-shares and B-shares. Both A-shares and B-shares can be issued to a number corresponding to 100% of the total share capital.

According to the registered articles of association the share capital shall be no less than 1,000,000 SEK and no more than 4,000,000 SEK, divided between no less than 50,000,000 and no more than 200,000,000 shares. The Company's registered share capital as of the date of the Offering Circular is 1,261,199.70 SEK represented by 63,059,985 shares, 14,399,996 of which are A-shares and 48,659,989 are B-shares, each share with a quota value of 0.02 SEK. As of the date of the Offering Circular the A-shares represent a total of about 75% and the B-shares a total of about 25% of the votes in the Company. All shares are fully paid.

The articles of association contain a so-called conversion provision which means that A-shares can be converted to B-shares at the written request of the holder to the Company's board of directors. The conversion shall be reported for registration immediately and is effected when the registration is completed and noted in the control register.

In addition what is stated above the articles of association contain no special provisions regarding redemption or conversion. All shares are freely negotiable.

BioArctic's shares are not and have not been subject to offers made due to mandatory bids, redemption rights or redemption obligations. There have been any public takeover bids regarding BioArctic's shares.

## CERTAIN RIGHTS LINKED TO THE SHARES

In the following certain rights linked to the shares are described. These rights can be changed through an amendment of the articles of association.

### Right to participate and vote at general meetings

To participate in the general meeting shareholders must be included in a print-out or other representation of the entire share register showing the status five days prior to the meeting, and also register their participation to the Company no later than the day specified in the notice. This day may not be a Sunday, other public holiday, Saturday, Midsummer's Eve, Christmas Eve or New Year's Eve, and may not fall earlier than the fifth weekday before the meeting.

A-shares entitle the holder to ten votes per share and B-shares entitle to one vote per share. Everyone who is qualified to vote is entitled to vote with the full number of shares owned and represented by him or her without limitation in voting rights.

### Preferential rights in connection with new share issues

In BioArctic's articles of association the preferential rights to new shares is regulated in accordance with the following:

If the Company decides to issue new A-shares and B-shares by means of a cash issue or offset issue, holders of A-shares and B-shares shall have preferential subscription rights to new shares of the same class of shares in proportion to the number of shares they already own (primary preferential rights). Shares not subscribed for with primary preferential rights shall be offered for subscription to all shareholders for subscription (subsidiary preferential rights). If the number of shares offered is not sufficient for the subscription with subsidiary preferential rights, the shares shall be distributed among the subscribers in proportion to the number of shares they already own, and to the extent this is not possible by drawing lots.

If the Company decides to issue only A-shares or B-shares through a cash issue or a set-off issue, all shareholders, regardless of whether their shares are A-shares or B-shares, shall have preferential rights to subscribe for new shares in proportion to the number of shares they already own.

If the Company decides to issue warrants or convertibles through a cash issue or a set-off issue, the shareholders shall have preferential rights to subscribe for warrants as if the issue were of the shares that may be subscribed for on the basis of the warrants, and preferential rights to subscribe for convertibles as if the issue were of the shares for which the convertibles may be exchanged.

The above does not imply any restriction on the possibility to decide on a cash issue or a set-off issue with deviation from the shareholders' preferential right.

When increasing the share capital through a bonus issue, new shares of each class of shares shall be issued in proportion to the previous number of shares of the same class. Old shares of a certain class shall carry the right to new shares of the same class. This shall not entail any restriction on the possibility, after the necessary amendments to the articles of association, to issue shares of a new class.

### Right to receive dividend payments and any surplus on liquidation

The right to receive dividend payment belongs to the person who, on the record date decided by the general meeting, is registered as a holder of shares in the share register kept by Euroclear. All shares carry equal rights to the company's assets and earnings as well as to any surplus on liquidation.

### EUROCLEAR ACCESSION

BioArctic's articles of association contain a record day provision and the Company's shares are connected to the electronic securities system with Euroclear as central securities depository (Euroclear Sweden AB, Box 191, SE-101 23 Stockholm, Sweden), which means that the

company's share register is kept by Euroclear.

The Company's B-shares have ISIN code SE0010323311. The shareholders in the Company do not receive any physical share certificates, but all transactions with the shares take place electronically through authorized banks and other investment managers.

### SHARE CAPITAL DEVELOPMENT

The table below describes the development of the share capital. The amounts in the table below are stated in SEK and have been rounded to full SEKs.

Year	Event	Number of new shares	Number of A-shares	Number of B-shares	Total number of shares	Change in share capital, SEK	Total share capital, SEK
2000	The company's formation	1,000	1,000		1,000	100,000	100,000
2002	Split 1000:1	999,000	1,000,000		1,000,000		
2002	Split 4:1	3,000,000	4,000,000		4,000,000		
2002	Reclassification of A-shares to B-shares		3,000,000	1,000,000	4,000,000		
2004	New share issue	133,333	3,133,333	1,000,000	4,133,333	3,333	103,333
2005	New share issue	66,666	3,199,999	1,000,000	4,199,999	1,667	105,000
2011	Subscription through warrants	4,000	3,199,999	1,004,000	4,203,999	100	105,100
2017	Bonus issue	-	3,199,999	1,004,000	4,203,999	1,156,100	1,261,200
2017	Split 15:1	58,855,986	47,999,985	15,060,000	63,059,985	-	1,261,200
2017	Reclassification of A-shares to B-shares	-	14,399,996	48,659,989	63,059,985	-	1,261,200
2017	Forthcoming issue of new shares under the Offering	25,000,000	14,339,996	73,659,989	88,059,985	500,000	1,761,200

### DILUTION IF THE OFFERING IS FULLY SUBSCRIBED

At full subscription of the Offering, the number of B-shares will increase by no more than 25,000,000 B-shares, which means that the number of shares in the Company after the Offering will be no more than 88,059,985, of which 14,399,996 A-shares and 73,659,989 B-shares. If the Offering is fully subscribed the A-shares will represent a total of 66.2% and the B-shares will represent a total of 33.8% of the votes of the votes in the Company.

The Offering implies a dilution of a maximum of 28.4% of the total number of shares and a maximum of 11.5% of the total number of votes in the Company.

The dilution effect for the shares has been calculated by the maximum number of shares issued in the Offering divided by the maximum total number of shares which the Company may have after the Offering. The dilution effect for the votes in the Company has been calculated by the total number of votes that the maximum number of shares in the Offering entitles to divided by the highest total number of votes in the Company after the Offering.

### OWNERSHIP AND REPORTING DUTY

The Swedish Financial Instruments Trading Act (LHF) (1991:980) has rules on reporting obligations with regard to certain changes in shareholdings in companies whose shares are admitted to trading on a regulated market (so called flagging). According to Chapter 4 section 5 LHF a change of ownership shall be notified if the change means that the percentage of all shares of the company or of the voting rights of all shares in the company that the holding represents reaches, exceeds or falls below any of the limits 5, 10, 15, 20, 25, 30, 50, 66 2/3 and 90%.

Below the four largest shareholders in BioArctic according to Euroclear as of September 26, 2017, with known changes thereafter accounted for, are shown.

Owner	Number of A-shares (10 votes per share)	Number of B-shares (1 vote per share)	Number of votes	Share of capital (%)	Share of votes (%)
Demban AB <sup>1)</sup>	8,639,998	27,038,088	113,438,068	56.58	58.88
Ackelsta AB <sup>2)</sup>	5,759,998	18,026,393	75,626,373	37.72	39.25
Karolinska Development AB	–	1,999,995	1,999,995	3.17	1.04
Uppsala universitet Holding AB	–	999,990	999,990	1.59	0.52
<b>Largest shareholders</b>	<b>14,399,996</b>	<b>48,064,466</b>	<b>192,064,426</b>	<b>99.06</b>	<b>99.69</b>
Other shareholders (31)	–	595,523	595,523	0.94	0.31
<b>Total</b>	<b>14,399,996</b>	<b>48,659,989</b>	<b>192,659,949</b>	<b>100.00</b>	<b>100.00</b>

1) Demban AB is controlled by board director Lars Lannfelt

2) Ackelsta AB is controlled by board director Pär Gellerfors

The Company's Main Shareholders, Demban AB and Ackelsta AB, will, if the Offering is fully extended and the Over-allotment option is fully utilized, own a total of 14,399,996 A-shares and 38,081,148 B-shares after the Offering, corresponding to 59.6% of the shares and 83.7% of the votes in the Company. Demban AB is controlled by board director Lars Lannfelt and Ackelsta AB is controlled by board director Pär Gellerfors. The Main Shareholders have issued a total of 24,453 call options to certain board directors and senior executives in the Company, including the CEO, concerning in total 366,795 of the Main Shareholders' B-shares in the Company, see under "*Share related incentive programs and acquisition of shares by board directors and senior executives*" for more information. If the call options are fully exercised Demban AB will own 8,639,998 A-shares and 22,628,082 B-shares in the Company, corresponding to 35.51% of the shares and 50.09% of the votes in the Company and Ackelsta AB will own 5,759,998 A-shares and 15,086,271 B-shares in the Company, corresponding to 23.68% of the shares and 33.39% of the votes in the Company. The Main Shareholders have, through their ownership, the possibility to exercise a significant influence in matters requiring the approval of the shareholders at the general meeting, including the appointment and removal of board directors, decisions on new share issues and amendment of the articles of association. The Swedish Companies Act and other applicable regulations and recommendations for corporate governance, such as the Swedish Code of Corporate Governance and good stock market practice, contain rules and principles that prevent the abuse of such a significant influence.

#### APPLICATION FOR LISTING AND ADMISSION TO TRADING

The Company's board of directors has applied for listing of the Company's B-shares on Nasdaq Stockholm. On September 6, 2017 the Nasdaq Stockholm Listing Committee decided to admit the Company's B-shares for trading with customary provisions, among other things that customary distribution requirements are met not later than the first day of trading, which is expected to be October 12, 2017.

#### SHAREHOLDERS' AGREEMENTS

As far as BioArctic's board of directors is aware no shareholders' agreements or similar agreements in order to create a common influence in BioArctic exist.

#### LOCK UP-AGREEMENTS

Before listing on Nasdaq Stockholm the Main Shareholders, the board directors and the senior executives holding shares in the Company and certain selected shareholders have entered into an agreement with Carnegie, under which these persons commit for a certain period from the first day of trading on Nasdaq Stockholm not to sell, lend, pledge or otherwise transfer shares or other securities entitling to subscription or exchange for shares in the Company without written consent from Carnegie. Carnegie decides when such consent can be given considering the purpose of the lock-up agreement. The lock-up commitments apply during twelve months from the first day of trading, except for the Main Shareholders, whose lock-up commitments apply during 18 months from first day of trading and Karolinska Development AB and Uppsala universitet Holding AB, whose lock-up commitments apply for six months from the first day of trading.

Notwithstanding the above, however, shares may be sold under the terms of a public offer for the purchase of shares.

Furthermore the Company has made a commitment to Carnegie not to issue new shares or other securities in the Company without Carnegie's consent for a period of twelve months from the first day of trading on Nasdaq Stockholm. See the section "*Legal considerations and supplementary information – Placing Agreement*".

#### DIVIDENDS AND DIVIDEND POLICY

Decisions to pay dividends are made by the general meeting. The payment is arranged by Euroclear. The right to receive dividend payment belongs to the person who on the record date determined by the general meeting is registered as a holder of shares in the share register kept by Euroclear. If a shareholder cannot be reached by Euroclear the shareholder's claim on the Company for the dividend amount will remain in force and will only be limited in time by statutes of limitation. In the event of

statutory limitation the amount will revert to the Company. There are no restrictions on the right to receive dividends or any special procedure for shareholders outside Sweden. However, shareholders not fiscally resident in Sweden are subject to normal Swedish withholding tax. For more information, see the section “*Certain tax considerations in Sweden*”.

BioArctic develops drug candidates for Alzheimer’s disease and Parkinson’s disease in collaboration with pharma companies. The Company enters into license agreements and research agreements with the partners and receives compensation in the form of milestone payments and royalties, which the Company uses to finance new projects. Milestone payments are normally received when the project achieves certain predefined development goals, e.g. the start of clinical trials or when clinical trials proceed from one phase to the next. Due to the nature of BioArctic’s income these revenue streams occur irregularly in time and are difficult to predict.

BioArctic’s revenue and profit are today based mainly on income of non-recurring character under the license and collaboration agreements the Company has entered into. BioArctic will continue to focus on the further development and expansion of the Company’s project portfolio. Available financial resources and the reported result shall therefore be reinvested in the operations to finance the Company’s long-term strategy. The Board’s intention is therefore not to propose any dividends to the shareholders until the Company generates long-term sustainable profitability. Any future dividends and the size thereof will be determined on the basis of the Company’s long-term growth, earnings trend and capital requirements, taking into account the objectives and strategies applicable from time to time. Dividends shall, in so far as dividends are proposed, be well-balanced with respect to the goals, scope and risks of the operations. See the section “*Capital structure and other financial information – Dividends*” for more information on the dividends paid during the period covered by the historical financial information.

## SHARE RELATED INCENTIVE PROGRAMS AND ACQUISITION OF SHARES BY BOARD DIRECTORS AND SENIOR EXECUTIVES

The Company does not have any outstanding securities-backed incentive programs or any other outstanding warrants. The Company has, however, two incentive programs for employees (including the CEO and senior executives) as described in more detail in the section “*Corporate governance – Remuneration to the CEO and senior executives*” below.

The Main Shareholders have issued a total of 24,453 call options to certain board directors and senior executives in the Company, including the CEO, concerning a total of 366,795 of the Main Shareholders’ B-shares in the Company. Pursuant to the option agreement the exercise period (i.e. the period during which the option can be exercised) runs up to and including June 30, 2020. The exercise price for the warrants is approximately 26.70 SEK per share. Each call option entitles to the acquisition of 15 B-shares in the Company. In connection with the issue of the options the option holders have paid an option premium corresponding to the market value of the option calculated according to the Black & Scholes model to the Main Shareholders. The options are freely negotiable. The agreement, however, includes a right of the Main Shareholders to repurchase the warrants if the option holder terminates his/her employment or assignment in the Company during the term of the options or if the impending listing of the company’s B-shares should not be completed. If the call options are fully exercised Demban AB will own 8,639,998 A-shares and 22,628,082 B-shares in the Company, corresponding to 35.51% of the shares and 50.09% of the votes in the Company and Ackelsta AB will own 5,759,998 A-shares and 15,086,271 B-shares in the Company, corresponding to 23.67% of the shares and 33.39% of the votes in the Company.

The table below shows the number of options that certain board directors and senior executives have acquired from the Main Shareholders.

Name	Number of call options	Acquired shares (if the call options are fully exercised)
<i>Board directors</i>		
Wenche Rolfsen	1,818	27,270
Hans Ekelund (through the company Ekarna Invest AB)	1,818	27,270
Mikael Smedeby (board director until June 21, 2017)	1,818	27,270
Ivar Verner	1,818	27,270
Eugen Steiner	1,818	27,270
<i>Senior executives</i>		
Gunilla Osswald	5,818	87,270
Jan Mattsson	1,818	27,270
Johanna Fåltling	1,818	27,270
Christer Möller	1,818	27,270
Hans Basun	1,818	27,270
Mikael Moge	455	6,825
Mats Holmquist	1,818	27,270
<b>In total</b>	<b>24,453</b>	<b>366,795</b>

On September 21, 2016 board director Wenche Rolfsen acquired a total of 1,000 existing B-shares (15,000 B-shares after the split resolved by the annual general meeting on May 31, 2017) at a price of 100 SEK per share (about 6.67 SEK per share after the split resolved by the annual general meeting on May 31, 2017).

Except the transactions mentioned above, no board directors or senior executives have acquired shares or a right to acquire shares in the Company at a price that substantially deviates from the price in the Offering during the last year counted from the date of the Offering Circular. The price in the Offering amounts to 24 SEK per share.

## AUTHORIZATIONS

### **New share issue in order to increase the number of shareholders in the Company**

At the annual general meeting on May 31, 2017 it was resolved to authorize the board of the Company to, on one or more occasions during the time until the next annual general meeting, decide to increase the Company's share capital by a new share issue. The board can decide on an issue of new shares with deviation from the shareholders' preferential rights and/or with conditions for payment in kind, set-off or other conditions in accordance with Chapter 2, section 5, second paragraph 1–3 and 5 of the Swedish Companies Act. This authorization will remain valid until the date when the Company's shares have been admitted to trading on a market, but no later than the next annual general meeting.

Issues in accordance with the authorization shall be made on market conditions. The board of directors may determine the terms for issues in other respects according to the authorization, and who should have the right to subscribe for the shares. The reason why the board of directors shall be able to decide on issues with deviation from the shareholders' preferential rights and/or with conditions for payment in kind, set-off or with the conditions above is primarily to broaden the ownership in the Company in preparation for and in connection with a listing of the Company's shares. If the board finds it appropriate in order to facilitate the delivery of shares in connection with a listing of the Company's shares and/or diversification of ownership new issues can also be made at a subscription price corresponding to the quota value of the share.

### **Other authorizations**

At the annual general meeting on May 31, 2017 it was resolved to authorize the board of the Company to, on one or more occasions during the time until the next annual general meeting, decide to increase the Company's share capital. The board can decide on an issue of new shares with deviation from the shareholders' preferential rights and/or with conditions for payment in kind, set-off or other conditions in accordance with Chapter 2, section 5, second paragraph 1–3 and 5 of the Swedish Companies Act. This authorization is valid from the date when the Company's shares have been admitted to trading on a market and until the next annual general meeting. The board shall not, however, be able to make decisions which mean that the share capital is increased by more than ten (10)% in relation to the share capital that exists when the authorization for issuing is first used.

Issues in accordance with the authorization shall be made on market conditions. The board of directors may determine the terms for issues in other respects according to the authorization, and who should have the right to subscribe for the shares, warrants and/or convertible bonds. The reason why the board of directors shall be able to decide on issues with deviation from the shareholders' preferential rights and/or with conditions for payment in kind, set-off or with the conditions above is to make it possible for the Company to issue shares, warrants and/or convertibles in order to acquire new capital and to enable the board to direct issues to investors that the board considers to be strategically important for the Company and/or acquire property by issuing shares, warrants or convertible bonds. If the board finds it appropriate in order to facilitate the delivery of shares in connection with a new share issue as described above this can also be made at a subscription price corresponding to the quota value of the share.



# Board of directors, senior management and auditors

## BOARD MEMBERS

The board consists of six ordinary members: Wenche Rolfsen (chairman), Ivar Verner (deputy chairman), Lars Lannfelt, Pär Gellerfors, Hans Ekelund and Eugen Steiner. All board members are elected for the period until the end of the next annual general meeting, which will be held in the first half of 2018. However, each of the

board members can at any time withdraw from their assignment.

The board members, their position, when they were initially elected and whether or not they are considered to be independent in relation to the Company and its management and in relation to major shareholders is described in the table below.

Name	Position	Board member since	Independent in relation to	
			The Company and its management	Major shareholders
Wenche Rolfsen	Chairman	2016	Yes	Yes
Ivar Verner	Deputy chairman	2010	Yes	Yes
Lars Lannfelt	Board member	2006 (deputy board member 2003–2006)	No	No
Pär Gellerfors	Board member	2003	No	No
Hans Ekelund	Board member	2014	Yes	Yes
Eugen Steiner	Board member	2017	Yes	Yes



### Wenche Rolfsen

#### Chairman

Wenche Rolfsen has 30 years of experience in senior positions in preclinical research and development at Pharmacia. She was responsible for the early clinical organization at Quintiles Europe and CEO of Quintiles Scandinavia for a

total of 11 years. She also has extensive experience from board positions in listed companies and is a member of the board of Swedish Match AB and Recipharm AB, among others. Wenche Rolfsen is also a partner of Serendipity Partners.

**Born:** 1952

**Education:** Pharmacist, Doctor of Pharmacology, Adjunct Professor at Uppsala University.

**Other current assignments:** Wenche Rolfsen is chairman of the board of Sarsia Seed Fund, InDex Pharmaceuticals AB, InDex Pharmaceuticals Holding AB and board member of Swedish Match AB, Recipharm AB and InDex Diagnostics AB. Rolfsen is also CEO and board member of Rolfsen Consulting AB and partner in Serendipity Partners.

**Prior assignments (past five years):** During the last five years Wenche Rolfsen has been CEO of InDex Pharmaceuticals AB, chairman of the board of Aprea Therapeutics AB, Denator AB, Aprea Personal AB, Smartfish AB and board member of Moberg Pharma AB, TFS Trial Form Support International AB and Apotek Produktion & Laboratorier AB.

**Holdings in the Company:** Wenche Rolfsen owns 19,200 B-shares in the Company. She has also acquired 1,818 call options from the Main Shareholders. The

options entitle to the acquisition of 27,270 B-shares in the Company. For more information on the terms of the options, see the section “*Share capital and ownership structure – Share-based incentive programs and acquisition of shares by Board members and senior executives*”.



### Ivar Verner

#### Deputy chairman

Ivar Verner is chairman of the board of Rejlers AB (publ) and former certified public auditor, partner and chairman of the board of Grant Thornton Sweden AB.

**Born:** 1947

**Education:** Master of Business Administration, Stockholm School of Economics.

**Other current assignments:** Ivar Verner is chairman of the board of Rejlers AB (publ), Welcome Hotel i Sverige AB, Erlandssons Brygga AB, Erlandssons Brygga Sickla AB, Centrum Fastigheter i Norrtälje AB, Norrländska Gruppboväder AB, Norrländska Gruppboväder Holding AB, Tegnér & Son AB, EB Finans AB, Konditori Solsidan AB, Firren AB, Valsättra Exploaterings AB and Valsättra Villan AB. Ivar Verner is also board member of Förvaltningsaktiebolaget Kanalen, Sambo Fastigheter 2 AB, Svenska Vårdfastigheter AB, Verner & Partners Förvaltning AB, Verner & Partners AB, Casa Firmus AB, Valsättra Tomter AB and Bostadsrättsföreningen Hamnhus 1 i Norrtälje and deputy board member of Birgitta Verner Förvaltning AB and Bostadsrättsföreningen Ripan Jungfrugatan. Ivar Verner is also general partner in the limited liability partnership Verner & Partners i Stockholm KB.

**Prior assignments (past five years):** During the past five years Ivar Verner has been chairman of the board of SpineMedical Sverige AB, SpineMedical AB, Ljungström & Andersson Invest AB, Constrera AB, Constrera Projektutveckling AB, Dinami värme & vatten AB, Fastighets AB Kassaskåpet 4, Framtidsbolaget i Norrtälje AB and Norrforsen Kolartorp 1:84 AB. Ivar Verner has also been board member of Bostadsrättsföreningen Ripan Jungfrugatan, Riksmalmen i Norrtälje AB, Centrumutveckling Sverige AB, Riksmalmen i Stockholm AB, Forex Bank AB, Svenska Vårdfastigheter AB and Sambo Fastigheter AB. Ivar Verner has also been board member and liquidator of Ivar Verner Förvaltning AB and liquidator of Georg Helenius Construction AB, Restaurang Den Svarta Foten AB, Hollytree Förvaltning AB and Grönhögen Förvaltning AB.

**Holdings in the Company:** Ivar Verner owns, through the related company Förvaltningsaktiebolaget Kanalen AB, 72,500 B-shares in the Company. Ivar Verner has acquired 1,818 call options from the Main Shareholders. The options entitle to the acquisition of 27,270 B-shares in the Company. For more information on the terms of the options, see the section “*Share capital and ownership structure – Share-based incentive programs and acquisition of shares by Board members and senior executives*”.



#### Lars Lannfelt

##### Board member

Lars Lannfelt is together with Pär Gellerfors the founder of BioArctic. Lars Lannfelt is Senior Professor at Uppsala University and also a member of the Royal Swedish Academy of Sciences.

**Born:** 1949

**Education:** Medical degree 1978; specialist in psychiatry 1987; doctoral thesis at Karolinska Institutet 1990; Associate Professor of Neurogenetics at Karolinska Institutet 1993; specialist in geriatrics 2000; Professor of Geriatrics at Uppsala University 2001; Senior Professor at Uppsala University 2016.

**Other current assignments:** Lars Lannfelt is chairman of the board of LPB Sweden AB, LPB Sweden Holding AB and board member of Demban AB.

**Prior assignments (past five years):** During the past five years Lars Lannfelt has been board member of Demban Förvaltning AB, SpineMedical Sverige AB and SpineMedical AB. Lars Lannfelt has also been partner in Bild & Forskning L & L handelsbolag.

**Holdings in the Company:** Lars Lannfelt owns, through the wholly-owned company Demban AB, a total of 8,639,998 A-shares and 27,038,088 B-shares in the Company.



#### Pär Gellerfors

##### Board member and Senior Vice President Business strategy

Pär Gellerfors is together with Lars Lannfelt the founder of BioArctic. Gellerfors is Associate Professor of Biochemistry at Stockholm University. He is also

co-founder of HemeBiotech/Zymenex A/S and has held several directorships. Gellerfors is employed by the Company and responsible for strategic issues. He is also a co-opted member of the Company's management team.

**Born:** 1947

**Education:** Bachelor in chemistry at Stockholm University 1967; PhD in chemistry at Stockholm University 1977; Associate Professor of Biochemistry at Stockholm University 1983.

**Other current assignments:** Pär Gellerfors is CEO and board member of Swenora Biotech AB, board member of Ackelsta AB, LPB Sweden AB and LPB Sweden Holding AB and deputy board member of Otowmed AB.

**Prior assignments (past five years):** During the past five years Pär Gellerfors has been CEO of BioArctic AB, CEO and board member of GPM Medical AB, SpineMedical Sverige AB and SpineMedical AB, board member of Hogholmen Förvaltning AB, Hogholmen AB and deputy board member of MILIDA AB.

**Holdings in the Company:** Pär Gellerfors owns, through the wholly-owned company Ackelsta AB, a total of 5,759,998 A-shares and 18,026,393 B-shares in the Company.



#### Hans Ekelund

##### Board member

Hans Ekelund has an MBA from Stockholm School of Economics. He has had a number of assignments as board member and has previously been CFO of Ratos.

**Born:** 1948

**Education:** Master of Business Administration, Stockholm School of Economics.

**Other current assignments:** Hans Ekelund is chairman of the board Connect Öst (non-profit association) and board member of Ekarna Invest AB.

**Prior assignments (past five years):** During the past five years Hans Ekelund has been chairman of the board of Minimarket Stockholm AB and chairman of the board and deputy board member of Wave Impact Heat Management AB. Ekelund has also been board member of SpineMedical Sverige AB and SpineMedical AB.

**Holdings in the Company:** Hans Ekelund owns, through the related company Ekarna Invest AB, 42,500 B-shares in the Company. Hans Ekelund has, through Ekarna Invest AB, acquired 1,818 call options from the

Main Shareholders. The options entitle to the acquisition of 27,270 B-shares in the Company. For more information on the terms of the options, see the section “*Share capital and ownership structure – Share-based incentive programs and acquisition of shares by Board members and senior executives*”.



### Eugen Steiner

#### Board member

Eugen Steiner has 30 years of experience in leading life science companies. Before that he was active as a physician at Karolinska University Hospital (Huddinge) and as a researcher at Karolinska Institutet. He has been a

venture partner in Health Cap since 1997 and has been CEO in several companies in which HealthCap has invested. He has comprehensive experience from board positions in Sweden, Norway, United Kingdom and the US.

**Born:** 1954

**Education:** Medical degree and PhD in clinical pharmacology at Karolinska Institutet.

**Other current assignments:** Eugen Steiner is CEO and chairman of the board of NVC Holding AB and CEO of Glionova AB. Eugen Steiner is also board member of Apotek Produktion & Laboratorier AB, Inbox Capital AB, Stiftelsen Forska!Sverige, Stockholm School of Entrepreneurship and Setraco AB.

**Previous assignments (past five years):** During the past five years, Eugen Steiner has been CEO and deputy member of the board of Optivy Sweden AB, CEO of Nordic Vision Clinics AS and chairman of the board of LTB4 Sweden AB, CC10 Sweden AB and PanSyn Sweden AB. Eugen Steiner has also been member of the board of HANZA Holding AB, Alba Therapeutics Inc., Biostratum Inc., Nephrogenex Inc., Globen Ögonklinik AB, Praktikertjänst Aktiefbolag, MD International AB, Bostadsrättsföreningen Kattung 1 and Setraco Aktiefbolag.

**Holdings in the Company:** Eugen Steiner owns, through Setraco AB, 40,000 B-shares in the Company.

## SENIOR MANAGEMENT

Gunilla Osswald is the Company’s CEO. Other senior executives in the Company are Chief Financial Officer Jan Mattsson, Communications Director Christina Astrén Eriksson, Chief Scientific Officer Christer Möller, Chief Medical Officer Hans Basun, Head of the Department for Immunology and Pharmacology Johanna Fälting, Head of the Department for Biochemistry and Molecular Biology Mikael Moge and responsible for Quality Assurance Mats Holmquist.

In addition to the above persons board member Pär Gellerfors is also a co-opted member of the management team. For more information on Pär Gellerfors, see the section “*Board members*” above.



### Gunilla Osswald

#### Chief Executive Officer since 2014

Gunilla Osswald has 30 years of experience in drug development and has successfully brought projects from pre-clinical development all the way to regulatory approval and market introduction. She

has also successfully managed in- and outlicensing of drug projects. Gunilla Osswald was for many years active in leading positions at AstraZeneca, among other things as Vice President responsible for developing AstraZeneca’s product portfolio in neurodegenerative diseases.

**Born:** 1961

**Education:** Pharmacist and Doctor in biopharmacy and pharmacokinetics at Uppsala University.

**Other current assignments:** Gunilla Osswald is board member of PledPharma AB (publ) and SpineMedical AB and deputy board member of LPB Sweden AB and LPB Sweden Holding AB.

**Prior assignments (past five years):** During the past five years Gunilla Osswald has been board member of SP Process Development AB and SpineMedical Sverige AB.

**Holdings in the Company:** Gunilla Osswald owns 12,800 B-shares in the Company. She has also acquired 5,818 call options from the Main Shareholders. The options entitle to the acquisition of 87,270 B-shares in the Company. For more information on the terms of the options, see the section “*Share capital and ownership structure – Incentive programs*”.



### Jan Mattsson

#### Chief Financial Officer since 2017

Jan Mattsson is an MBA and has experience as CFO in listed as well as unlisted companies. Jan Mattsson has been CFO in Sefina Finance AB, Allenex AB, Argnor Wireless Ventures AB, Logital AB

and Investment Kinnevik AB, among others.

**Born:** 1960

**Education:** MBA, University of Örebro, 1984.

**Other current assignments:** Jan Mattsson is CEO and member of the board of Almsäter Interim Management AB.

**Prior assignments (past five years):** During the past five years Jan Mattsson has been member of the board of Sefina Finance AB, Sefina Svensk Pantbelåning AB and Humidus AB.

**Holdings in the Company:** Jan Mattsson owns, privately and through Almsäter Interim Management AB, a total of 15,000 B-shares in the Company. Jan Mattsson has also acquired 1,818 call options from the Main Shareholders. The options entitle to the acquisition of 27,270 B-shares in the Company. For more information on the terms of the options, see the section “*Share capital and ownership structure – Incentive programs*”.





**Christina Astrén Eriksson**  
*Communications Director since 2017*

Christina Astrén Eriksson has long experience of communication issues in pharma companies, as interim responsible for communications at Orexo and as Communications Director at Pfizer, Astra

Zeneca, Wyeth and Pharmacia. Christina Astrén Eriksson is active in the Company as a consultant.

**Born:** 1959

**Education:** Degree in journalism, Stockholm University, 1984; Diploma from IHR (Institutet för Högre Kommunikations- och Reklamutbildning), Stockholm University, 1988.

**Other current assignments:** Christina Astrén Eriksson is CEO and chairman of the board of C Astrén AB, board member of Lötsberga kultur- och museistiftelse, Lötsberga AB and deputy board member of Lötsberga Förvaltning AB.

**Prior assignments (past five years):** –

**Holdings in the Company:** Christina Astrén Eriksson owns, through C Astrén AB, 25,000 B-shares in the Company.



**Christer Möller**  
*Chief Scientific Officer since 2006*

Christer Möller has a comprehensive academic experience, having pursued research projects concerning growth factors and preclinical research in diabetes. He also has close to 20 years of experience from smaller biotech/pharma companies, from a leading position in Zymenex A/S developing protein drugs from idea to clinical trials, among other things.

experience from smaller biotech/pharma companies, from a leading position in Zymenex A/S developing protein drugs from idea to clinical trials, among other things.

**Born:** 1959

**Education:** B. Sc in Biology at Stockholm University, 1983; PhD in Medical Science, Karolinska Institutet, 1992.

**Other current assignments:** -

**Prior assignments (past five years):** -

**Holdings in the Company:** Christer Möller owns 16,500 B-shares in the Company. Christer Möller has also acquired 1,818 call options from the Main Shareholders. The options entitle to the acquisition of 27,270 B-shares in the Company. For more information on the terms of the options, see the section “*Share capital and ownership structure – Incentive programs.*”



**Hans Basun**  
*Chief Medical Officer since 2007*

Hans Basun has a background as chief physician at Huddinge University Hospital and Uppsala University Hospital. Hans Basun has been active in the pharma industry for 20 years in

positions at Astra Arcus, AstraZeneca and now BioArctic.

**Born:** 1949

**Education:** Medical degree and specialist training in psychiatry and geriatrics, Associate Professor at Karolinska Institutet and Adjunct Professor at Uppsala University.

**Other current assignments:** Hans Basun is a board member of Hans Basun AB and Bostadsrättsföreningen Stridstuppen and deputy board member of Spine-Medical AB.

**Prior assignments (last five years):** During the last five years Hans Basun has been the owner of the sole proprietorship Hans Basun konsultfirma.

**Holdings in the Company:** Hans Basun owns 20,823 B-shares in the Company. He has also acquired 1,818 call options from the Main Shareholders. The options entitle to the acquisition of 27,270 B-shares in the Company. For more information on the terms of the options, see the section “*Share capital and ownership structure – Incentive programs.*”



**Johanna Fälting**  
*Head of the Department for Immunology and Pharmacology since 2012*

Johanna Fälting has a PhD in Physiology and 15 years of experience of neuroscience/ pharmacology, pharmaceutical research, translational science and development in

the global pharma and biotech industry.

**Born:** 1972

**Education:** PhD in Physiology, Stockholm University 2001; Licentiate degree in physiology, Stockholm University 1997; Master's degree in biology, Stockholm University, 1995.

**Other current assignments:** Johanna Fälting is deputy board member of Biozoul AB.

**Prior assignments (last five years):** –

**Holdings in the Company:** Johanna Fälting owns 10,000 B-shares in the Company. Johanna Fälting has also acquired 1,818 call options from the Main Shareholders. The options entitle to the acquisition of 27,270 B-shares in the Company. For more information on the terms of the options, see the section “*Share capital and ownership structure – Incentive programs.*”



### Mikael Moge

*Head of the Department for Biochemistry and Molecular Biology since 2012*

Mikael Moge has previously been section manager in process development at Astra Zeneca and has 20 years of experience from drug development and 15 years of

experience as research and development manager in development and GMP manufacturing of drug candidates.

**Born:** 1967

**Education:** Master of Engineering in chemical engineering at KTH Royal Institute of Technology, Doctor of Science in organic chemistry at KTH Royal Institute of Technology.

**Other current assignments:** -

**Prior assignments (last five years):** During the last five years Mikael Moge has been board member of Bostadsrättsförening Körsbärsbacken i Bällstalund.

**Holdings in the Company:** Mikael Moge has acquired 455 call options from the Main Shareholders. The options entitle to the acquisition of 6,825 B-shares in the Company. For more information on the terms of the options, see the section “*Share capital and ownership structure – Incentive programs.*”



### Mats Holmquist

*Responsible for Quality Assurance since 2008*

Mats Holmquist is Doctor of Science in biochemistry and has a Master of Engineering in chemical engineering and has more than 20 years of leadership competence from roles in the academy and the interna-

tional biotech and pharma industries such as Gyros AB and AstraZeneca. He received the title of Associate Professor in Biochemistry at KTH Royal Institute of Technology in 2000.

**Born:** 1967

**Education:** Master of Engineering in chemical engineering at KTH Royal Institute of Technology 1990, Doctor of Science in biochemistry at KTH Royal Institute of Technology 1995, Associate Professor in Biochemistry, KTH Royal Institute of Technology 2000.

**Other current assignments:** -

**Prior assignments (last five years):** -

**Holdings in the Company:** Mats Holmquist has acquired 1,818 call options from the Main Shareholders. The options entitle to the acquisition of 27,270 B-shares in the Company. For more information on the terms of the options, see the section “*Share capital and ownership structure – Incentive programs.*”

## EXTERNAL AUDITORS

At the annual general meeting held on May 31, 2017 the accounting firm Grant Thornton Sweden AB, (Sveavägen 20, Box 7623, SE-103 94 Stockholm) was elected as the Company's auditors until the end of the annual general meeting held in 2018. Auditor in charge is authorized public auditor Mia Rutenius. Mia Rutenius is a member of the Swedish Institute of Authorized Public Auditors (FAR).

Grant Thornton Sweden AB has been the Company's auditors also for the financial years 2015, 2016 and up to the annual general meeting in 2017. Authorized public auditor Rutger Nordström was the auditor in charge up to the annual general meeting 2017. Mia Rutenius was appointed new auditor in charge at the annual general meeting in 2017 in order to meet the requirements of experience applicable to auditors of listed companies.

## FURTHER INFORMATION ABOUT BOARD MEMBERS AND SENIOR EXECUTIVES

None of the board members or senior executives of the Company has been convicted in fraud-related cases, been subject to accusations or sanctions by a Government agency or an organization representing an occupational group that is regulated by public law, or been imposed trade prohibition during the five last years.

Since September 2017, board member Lars Lannfelt provides consultancy services to the Company. The consultancy services consist of scientific advice as well as having contacts and maintaining relations with the Company's partners, mainly within the academic sector. Compensation is paid in the form of a market level hourly consultancy fee.

In 2008 the Company entered into a license agreement with Swenora Biotech AB, where the board member Pär Gellerfors is co-owner, board member and CEO. The agreement is described in more detail in the section “*Legal considerations and supplementary information – Material agreements.*” The board considers that there is currently no conflict of interest for Pär Gellerfors as a result of the agreement with Swenora. Such a conflict may, however, arise in the future, for example as a result of a dispute between the Company and Swenora concerning the agreement. If such a situation should occur, Pär Gellerfors will be prevented from taking part in the management of the issue according to the conflict of interest rules for board members in the Swedish Companies Act.

With exception for what is set forth above and the fact that the board members as well as the senior executives have other assignments in other companies, no potential conflict of interest exists for board members or senior executives in the Company in relation to their assignment for the Company. However, a number of the board members and senior executives have financial interests in the Company in the form of holdings of shares and/or options.



The board members are not entitled to any compensation after the assignment as board member has ended. See the section “*Corporate governance – remuneration to the CEO and senior executives*” for more information on the CEO’s and the senior executives’ rights to pension benefits and severance pay upon termination.

Hans Ekelund is a cousin of Lars Lannfelt’s wife. Except for this there are no family relationships between the executives.

The board members and senior executives who own shares in the Company have signed agreements that limit their right to dispose of securities in the Company during a limited time after the listing at Nasdaq Stockholm, see the section “*Share capital and ownership structure – Lock-up agreement*” for more information. Other than this no agreements have been made that limit the possibilities for executives to dispose of securities in the Company.

Ivar Verner was a board member of Centrumutveckling Sverige AB when this company was declared bankrupt and when the bankruptcy was terminated. Other than this none of the board members or senior executives has been involved in bankruptcy, compulsory liquidation or receivership during the last five years.

No special arrangements between major shareholders, customers, suppliers or other parties according to which an executive has been elected to the board or assumed a position as senior executive have been made.

All board members and senior executives can be contacted through the Company’s address, Warfvinges väg 35, SE-112 51 Stockholm, Sweden.

# Corporate governance

## GENERAL INFORMATION ON CORPORATE GOVERNANCE

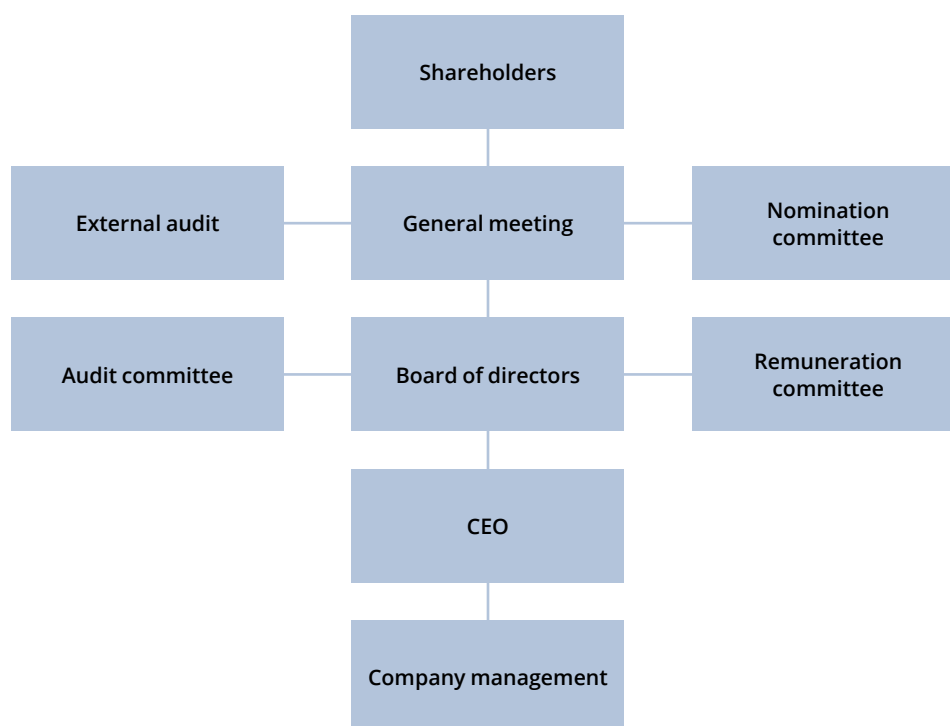
BioArctic's corporate governance has, prior to the listing on Nasdaq Stockholm, been governed by the Swedish Companies Act and other applicable laws and regulations, the Company's articles of association and internal policy documents. The internal policy documents primarily include the rules of procedure for the board of directors, instructions for the CEO and instructions for financial reporting. Furthermore, BioArctic also has a number of policy documents and manuals containing rules and recommendations which contain principles and provide guidance in the Company's operations and for its employees.

Following the listing on Nasdaq Stockholm corporate governance will also be based on Nasdaq's rules for issuers, the Swedish Corporate Governance Code

(the "Code"), good practice in the stock market and other applicable rules and recommendations.

Companies applying the Code are not required to comply with every rule in the Code at all times. If the Company finds that a certain rule is inappropriate with respect to the Company's specific circumstances, the Company may choose an alternative solution, provided that the Company clearly describes the deviation and the alternative solution as well as provides the reasons for choosing the alternative solution (all in accordance with the principle of "comply or explain"). Any deviations from the Code will be reported in the Company's corporate governance report. At the date of the Offering Circular there are no expected deviations from the Code.

The figure below provides an overview of BioArctic's corporate governance structure.



## GENERAL MEETING

The shareholders' influence over the Company is exercised at the general meeting, which is the Company's highest decision-making body. Every shareholder who at the record date for the general meeting is registered in the share register kept by Euroclear Sweden AB and recorded in a securities register or in reconciliation account has the right to participate, in person or by proxy. The general meeting can resolve on all matters

relating to the Company that does not explicitly fall under another corporate body's exclusive competence according to the Swedish Companies Act or the articles of association. The general meeting resolves, for example, on increase or decrease of share capital, changes to the articles of association, and that the company shall enter into liquidation. With regard to the issuance of new shares, convertible bonds or warrants, the general meeting has, in addition to the possibility to decide on this

itself, the opportunity to provide authorization for the board to make such decisions. Every shareholder has, regardless of the size of the holding, the right to have a specified matter brought before the general meeting. Shareholders who wish to exercise this right must submit a written request to the Company's board of directors. In general, such a request must be submitted to the board at such time that the matter can be included in the notice to attend the general meeting.

The annual general meeting is held annually within six months after the end of the financial year. The Code stipulates that the Chairman of the Board together with a quorum of the board and the CEO shall attend the general meeting. The chairman of the meeting shall be nominated by the Nomination Committee and elected by the general meeting. The tasks of the general meeting include the election of the Company's board of directors and auditors, the adoption of the Company's balance sheet and income statement, the appropriation of profit or loss according to the adopted balance sheet and the discharge from liability for the board of directors and the CEO. The general meeting also decides on the remuneration for the board directors and the Company's auditors.

An extraordinary general meeting may be convened by the board of directors when the board considers that there are grounds to hold a meeting prior to the next annual general meeting. The board shall also convene an extraordinary general meeting when an auditor or shareholders holding more than ten (10)% of the shares in the company request in writing that a meeting be held to treat a specific matter. The notice to attend a general meeting shall be published in the Swedish National Gazette (*Sw. Post- och Inrikes Tidningar*) and on the Company's website. At the time of the notice, information relating to the notice shall be advertised in Svenska Dagbladet. Notice of an annual general meeting or extraordinary general meeting where amendment of the articles of association will be processed shall be issued not earlier than six (6) and not later than four (4) weeks prior to the meeting. Notice of other extraordinary general meeting shall be issued not earlier than six (6) and not later than three (3) weeks prior to the meeting. The minutes of the meeting shall be available on the Company's website no later than two weeks after the meeting.

### NOMINATION COMMITTEE

According to the Code, the Company shall have a nomination committee, the duties of which shall include the preparation and drafting of proposals regarding the election of board directors, the chairman of the board, the chairman of the general meeting and the auditors. The nomination committee shall also propose remuneration to board directors and auditors. The annual general meeting held on May 31, 2017 resolved to adopt instructions and rules of procedure for the nomination committee according to which the nomination committee shall consist of three members.

The nomination committee shall be appointed by the chairman of the board, on behalf of the general meeting, by contacting the three largest shareholders according to

Euroclear's transcription of the share register as of September 30, 2017, each of which appoints a member of the nomination committee. In the event that any of the three largest shareholders does not wish to appoint a member of the nomination committee, the fourth largest shareholder is asked, and so on until the nomination committee consists of three members.

The composition of the nomination committee shall be announced on the Company's website no later than six months prior to the annual general meeting. The nomination committee shall appoint the chairman of the nomination committee. The chairman of the board or other board directors shall not be the chairman of the nomination committee. The term of office of the appointed nomination committee shall run until a new nomination committee has been appointed. No fees shall be paid to the members for their work in the nomination committee.

The nomination committee shall submit proposals for decisions on the following matters for the annual general meeting 2018:

- a) Election of the chairman of the meeting,
- b) Determination of the number of board directors,
- c) Determination of fees and other remuneration to the board and its committees, with separation between the chairman and the other members,
- d) Determination of fees to auditors,
- e) Election of board directors and chairman of the board,
- f) Election of auditors, and
- g) Proposal for the principles for the composition and tasks of the nomination committee for the annual general meeting in 2019.

### BOARD OF DIRECTORS

#### Role of the board of directors

The board of directors is ultimately responsible for the Company's organization and management of the Company's operations, which shall be conducted in the best interest of the Company and all shareholders. The main tasks of the board include managing strategic issues concerning operations, financing, establishments, growth, and result and continuously monitoring the Company's financial position. The board shall also ensure that there are effective systems for monitoring and control of the Company's operations and ensure that the information given by the Company is characterized by transparency and is accurate, relevant and reliable.

#### Composition of the board of directors

According to BioArctic's articles of association the board shall consist of no less than three and no more than eight members with no deputies. The members are normally elected at the annual general meeting for the time up until the next annual general meeting, but additional board members can be elected during the year at an extraordinary general meeting.

According to the Code, the majority of the board members elected by the general meeting shall be independent of the Company and its management. At least

two of the members that are independent to the Company and its management shall also be independent to the Company's major shareholders. In addition, no more than one board member may work in the Company's management or in the management of the Company's subsidiaries.

The board has determined that Wenche Rolfsen, Ivar Verner, Hans Ekelund and Eugen Steiner are independent to the Company and its management as well as to major shareholders. The composition of the board thus meets the Code's requirements as regards of independence.

Hans Ekelund is a cousin of Lars Lannfelt's wife. The board considers that this circumstance does not mean that he should not be considered to be independent to the Company, its management and major shareholders.

Lars Lannfelt and Pär Gellerfors are the Company's Main Shareholders and together own, through their own companies, a total of 94.30% of the shares, representing 98.13% of the shares in the Company before the Offering. Pär Gellerfors is also employed by the Company. Pär Gellerfors is co-opted in the Company's management team and is responsible for business development and patent issues and is the Company's main contact towards several of the Company's important commercial partners. Lars Lannfelt was previously employed by the Company and co-opted in the Company's management team and was responsible for the Company's collaborations with scientists and universities. Lars Lannfelt and Pär Gellerfors are thus not considered to be independent to the Company, its management and major shareholders.

### **Chairman of the board of directors**

The role of the chairman is to lead the board of directors' work and to ensure that the work is carried out efficiently, and that the board fulfils its obligations. The chairman shall, through contact with the CEO, continuously receive the information needed to be able to monitor the Company's position, financial planning and development. The chairman shall also consult with the CEO on strategic matters and verify that the board's decisions are implemented in an effective manner.

The chairman is responsible for contacts with the shareholders in ownership matters and for communicating the views of the owners to the board.

The chairman of the board is elected by the general meeting.

### **Working practices of the board of directors**

The board of directors adheres to written rules of procedure which are revised annually and adopted at the inaugural board meeting, which is held in connection with the annual general meeting. The rules of procedure govern, among other things, the practice of the board of directors, tasks, decision making within the Company, the board's meeting agenda, the chairman's duties and allocation of responsibilities between the board of directors and the CEO. Instructions for financial reporting and instructions for the CEO are also determined in connection with the inaugural board meeting.

### **Committees of the board of directors**

#### *Audit committee*

The board of directors' audit committee shall consist of at least three members, one of whom shall be the chairman, and works according to rules of procedure adopted by the board. The audit committee's role is mainly to monitor the Company's financial position, to monitor the effectiveness of the Company's internal control, internal audit and risk management, to be informed about the audit of the annual report and consolidated financial statements, and to review and monitor the auditor's impartiality and independence. The audit committee shall also assist the nomination committee in proposals for resolutions on the election and remuneration of the auditor and continuously meet the Company's auditor. Minutes shall be kept at all meetings of the audit committee and the minutes shall be presented to the board together with an oral report in connection with the board's decision making. The audit committee is comprised of Ivar Verner (chairman), Hans Ekelund and Eugen Steiner.

#### *Remuneration committee*

The board of directors' remuneration committee shall consist of at least three members, one of whom shall be the chairman. The committee works according to rules of procedure adopted by the board. The remuneration committee's role is primarily to prepare matters regarding remuneration and other terms of employment for the CEO and other senior executives. The remuneration committee shall also monitor and evaluate ongoing and during the year completed programs for variable remuneration to the Company's management and monitor and evaluate the implementation of the guidelines for remuneration to senior executives adopted by the annual general meeting. Minutes shall be kept at all meetings of the remuneration committee and the minutes shall be presented to the board together with an oral report in connection with the board's decision making. The remuneration committee is comprised of Wenche Rolfsen (chairman), Hans Ekelund and Eugen Steiner.

### **Remuneration to the board of directors**

Remunerations to board members elected by the general meeting are resolved by the general meeting. At the extraordinary general meeting on September 4, 2017 it was resolved that the remuneration for the current term should be 425 TSEK to the chairman of the board, 237,5 TSEK to the deputy chairman of the board and 200 TSEK to each of the other board members not employed by the Company. The annual general meeting further resolved that a remuneration of 40 TSEK is to be paid to each of the members of the remuneration committee and that a remuneration of 60 TSEK is to be paid to each of the members of the audit committee. For the financial year 2016 the members of the board of directors received remuneration as set out in the table below. All amounts are stated in TSEK.

Name	Position	Basic salary	Board remuneration	Pension	Total
Lars Lannfelt <sup>1)</sup>	Chairman	886	–	187	1,073
Pär Gellerfors <sup>2)</sup>	Member	1,620	–	356	1,976
Wenche Rolfsen <sup>3) 4)</sup>	Member	–	66	–	66
Ivar Verner <sup>4)</sup>	Member	–	99	–	99
Hans Ekelund <sup>4)</sup>	Member	–	116	–	116
Mikael Smedeby <sup>4) 5)</sup>	Member	–	112	–	112
<b>Total</b>		<b>2,506</b>	<b>393</b>	<b>543</b>	<b>3,442</b>

1) Lars Lannfelt, active in the Company and employed at approx. 50% duty rate in 2016. At the end of the year the duty rate was 90%

2) Pär Gellerfors, active in the Company and employed at 100% duty rate

3) Wenche Rolfsen, board member since July 2016

4) Board member, has invoiced his/her board fee including social fees via company

5) Mikael Smedeby resigned from his duties as board member at his own request on June 21, 2017 in order to meet Nasdaq's requirements regarding the number of independent members of the board.

## THE CEO AND OTHER SENIOR EXECUTIVES

### The tasks of the CEO and other senior executives

The CEO is appointed by the board of directors and handles the Group's daily management according to the board's guidelines and instructions. The CEO is responsible for keeping the board informed about the Group's development and for reporting significant deviations from established business plans and events that have great impact on the Group's development and operations, and for preparing relevant reports and information for the board's decisions on e.g. establishments, invest-

ments and other strategic issues. The Group's management team is led by the Company's CEO Gunilla Osswald and consists of persons with responsibility for significant areas of operations at BioArctic.

### Remuneration to the CEO and senior management

Remuneration to senior management consists of basic salary, variable remuneration, pension provisions and other benefits. For the financial year 2016 the CEO and senior executives received remuneration as set out in the table below. All amounts in TSEK.

Name	Basic salary	Pension	Variable remuneration	Total
CEO Gunilla Osswald	2,365	938 <sup>1)</sup>	2,640 <sup>1)</sup>	5,943
Other senior executives (6) <sup>2)</sup>	6,665	793	856	8,314
<b>Total</b>	<b>9,030</b>	<b>1,731</b>	<b>3,496</b>	<b>14,257</b>

1) The amounts include corrections of salaries to the amount of 480 TSEK and pensions to the amount of 168 TSEK relating to the previous year.

2) The amount includes invoiced fees including fees via companies to the amount of 2 028 TSEK.

The Company's CEO Gunilla Osswald receives a fixed salary amounting to 185.4 TSEK per month. Gunilla Osswald is further entitled to pension contributions corresponding to 35% of the fixed salary. The CEO is covered by the bonus programs which targets all employees in the Company (see below). In addition, the CEO is entitled to a variable remuneration (which is not subject to pension contributions) amounting to a maximum of 25% of the total fixed salary during 2017. 75% of the variable remuneration is to be paid in connection with the completion of the ongoing listing and the remaining 25% is to be paid upon fulfillment of certain business-related goals.

Between the Company and the CEO there is a notice period of 12 months if the Company gives notice of termination and 6 months if the CEO gives notice of termination. If the Company gives notice of termination there is no working obligation during the notice period, but the CEO shall be available to the Company when needed. In the event that the CEO enters into a new employment the new salary will be set off against the remuneration from the Company. For other senior executives the notice period is mutually three months, alternatively the notice period set out in the Employment Protection Act (LAS). Severance pay is not applied.

BioArctic has two bonus programs linked to the Company's Alzheimer and Parkinson projects, covering all permanent employees (including the CEO). Bonus is paid when the Company achieves certain goals linked to the clinical research programs for BAN2401 for Alzheimer's disease and BAN0805 for Parkinson's disease. As the bonus programs are linked to the clinical research programs, the bonus payments may occur irregularly as these goals are reached. Some of these goals are also far in the future. One condition for receiving bonus is that the employee has been employed for at least six months at the time when the goal that is the basis for payment of bonus is reached. The potential bonus for the employee amounts to one monthly salary. The bonus is not subject to pension contributions. In 2016 one bonus payment was made within the framework of the development program for Parkinson's disease in connection with the signing of the collaboration and license agreement with AbbVie. For 2016 has, in addition to variable remuneration to the CEO, variable remunerations been paid with one to three monthly salaries. For 2015 no variable remuneration was paid.

The Company's CFO Jan Mattsson previously worked under a consultancy agreement entered into between the Company and Meritmind AB. Since August 1, 2017



Jan Mattsson is employed by the Company and the consultancy agreement has been terminated.

The Company's communications director Christina Astrén Eriksson works under a consultancy agreement between the Company and C Astrén AB. Compensation is paid in the form of a market level hourly consultancy fee.

#### **Guidelines for remuneration to senior executives**

According to the Swedish Companies Act, the general meeting shall resolve on guidelines for remuneration to the CEO and other senior executives. At the annual general meeting on May 31, 2017 guidelines were adopted with the following main content.

The Company shall offer company management market level compensation that makes it possible to recruit and retain senior executives. The compensation to company management shall consist of fixed salary, customary employment benefits and pension. Variable remuneration can also be paid.

The fixed salary shall take into account the individual's responsibilities and experience, and be reviewed annually. The division between fixed salary and variable remuneration shall be proportional to the executive's responsibility and authority. The variable remuneration shall always be limited to a predetermined maximum amount and be linked to predetermined and measurable criteria and designed to achieve greater community of interest between the executive and the Company's shareholders. The earning period or alternatively the time from entering into the agreement until a share may be acquired shall not be less than three years in share and share price related incentive programs. The terms for variable remuneration shall be designed so that the board, under particularly difficult economic circumstances, has the possibility to restrict or refuse to give out variable remuneration if this is deemed to be unreasonable and inconsistent with the Company's responsibility to the shareholders. For annual bonuses, it should be possible to restrict or refuse to pay variable remuneration if the board considers that this is justified for other reasons.

Pension terms shall be in accordance with market practice for corresponding positions and be based on defined contribution solutions.

Fixed salary during the period of notice and severance pay shall together not exceed an amount corresponding to the fixed salary for two years.

Executives who hold a position as board member or deputy board member in a Group company shall not receive a special board fee for this.

The board is allowed to deviate from these guidelines in individual cases should there be special reasons for doing so.

## **AUDIT AND CONTROL**

### **External audit**

The Company's auditor is appointed by the general meeting. The auditor shall examine the Company's annual report and accounts as well as the management performed by the board of directors and the CEO. This normally occurs at least twice a year, as at least one quarterly report, in addition to the annual report, shall be examined by the auditor.

### **Remuneration to the auditor**

The general meeting resolves on the remuneration to the auditor, after proposal from the nomination committee. At the annual general meeting on May 31, 2017 it was decided that auditor's fees should be paid according to approved current account.

### **Internal audit and control**

The overall purpose of the internal control is to ensure, to a reasonable degree, that the Company's operating strategies and targets are monitored and that the owners' investments are protected. Furthermore, the internal control shall ensure, with reasonable certainty, that the external financial reporting is reliable and prepared in accordance with good accounting practice, that applicable laws and regulations are followed, and that the requirements imposed on listed companies are complied with. The board of directors has the overall responsibility for the internal control.

The Swedish Companies Act and Annual Accounts Act contain requirements which mean that information about the main features of BioArctic's system for internal control and risk management should be part of the company's corporate governance report. The board's responsibility for the internal control is also regulated in the Code. The board shall among other things ensure that BioArctic has good internal control and that formal procedures ensuring that established principles for financial reporting and internal control are observed and that there are adequate systems for monitoring and control of the Company's operations and the risks associated with the Company and its operations.

In order to maintain a good internal control the board has adopted a number of governing documents, e.g. rules of procedure for the board, instructions for the CEO, instructions for financial reporting, a financial policy and an information policy.

The board has also established an audit committee whose main tasks among other things include monitoring and quality assurance of the Company's financial reporting, continuous contacts with the Company's auditor, to monitor the effectiveness of the Company's internal control concerning financial reporting, and to review and monitor the auditor's impartiality and independence. Within the board the audit committee also has the main responsibility for monitoring and managing risks that may affect the Company's operations negatively.

The responsibility for ongoing internal control and risk management has been delegated to the Company's CEO who regularly reports to the board in accordance with the established instructions.

The internal control and risk management are controlled and evaluated on an ongoing basis through internal and external audits and evaluations of the Company's governing documents.

In addition to the above described internal control there is also internal operations specific control of data regarding research and development and quality control including a systematic monitoring and evaluation of the Company's research and development work and products.

# Articles of association

A translated version of the Company's Articles of Association is set out below.

## 1. COMPANY NAME

The name of the company is BioArctic AB. The company is a public company (publ).

## 2. REGISTERED OFFICE

The registered office of the board of directors shall be in the municipality of Stockholm.

## 3. BUSINESS ACTIVITY

The Company shall conduct research and development of pharmaceuticals and related activities.

## 4. SHARE CAPITAL

The share capital shall be no less than 1,000, 000 SEK and no more than 4,000,000 SEK.

## 5. NUMBER OF SHARES

The number of shares shall be no less than 50,000,000 and no more than 200,000,000.

Shares of class A and shares of class B can be issued in each series to no more than the number corresponding to 100 percent of the total share capital. The voting power for each A-share shall be 10 and the voting power for each B- share shall be 1.

If the Company decides to issue new A-shares and B-shares by means of a cash issue or offset issue, holders of A-shares and B-shares shall have preferential subscription rights to new shares of the same class in proportion to the number of shares they already own (primary preferential rights). Shares not subscribed for with primary preferential rights shall be offered for subscription to all shareholders for subscription (subsidiary preferential rights). If the number of shares offered is not sufficient for the subscription with subsidiary preferential rights, the shares shall be distributed among the subscribers in proportion to the number of shares they already own, and to the extent this is not possible by drawing lots.

If the Company decides to issue only A-shares or B-shares through a cash issue or a set-off issue, all shareholders, regardless of whether their shares are A-shares or B-shares, shall have preferential rights to subscribe for new shares in proportion to the number of shares they already own.

If the Company decides to issue warrants or convertibles through a cash issue or a set-off issue, the shareholders shall have preferential rights to subscribe for warrants as if the issue were of the shares that may be subscribed for on the basis of the warrants, and

preferential rights to subscribe for convertibles as if the issue were of the shares for which the convertibles may be exchanged.

The above does not imply any restriction on the possibility to decide on a cash issue or a set-off issue with deviation from the shareholders' preferential right.

When increasing the share capital through a bonus issue, new shares of each class of shares shall be issued in proportion to the previous number of shares of the same class. Old shares of a certain class shall carry the right to new shares of the same class. This shall not entail any restriction on the possibility, after the necessary amendments to the articles of association, to issue shares of a new class.

## 6. CONVERSION PROVISION

Class A shares can be converted into class B shares according to following procedure.

A written request shall be made to the Company's board of directors. The request shall specify how many shares that should be converted, and, if the conversion does not include the holder's entire holding of class A shares, which shares the conversion concerns. The Company's board of directors is obliged to process the matter at the next board meeting after the request. The conversion shall immediately be reported for registration and is effected when the registration is completed and noted in the control register.

## 7. BOARD OF DIRECTORS AND AUDITORS

The board of directors shall consist of not less than three (3) and not more than eight (8) members without deputies. The board members are elected annually at the annual general meeting for the time up to the end of the next annual general meeting.

The Company shall have one (1) or two (2) auditors with or without deputies.

## 8. NOTICE TO GENERAL MEETING

Notice convening a general meeting shall be published in the Swedish National Gazette (Sw. *Post- och Inrikes Tidningar*) and on the Company's website. At the time of the notice, information relating to the notice shall be advertised in Svenska Dagbladet. The notice shall immediately and at no cost to the recipient be sent by post to those shareholders who request it and provide their mailing address.

## 9. REGISTRATION

To participate in the general meeting shareholders must be included in a print-out or other representation of the entire share register showing the status five days prior to the meeting, and also register their participation to the Company no later than the day specified in the notice. This day may not be a Sunday, other public holiday, Saturday, Midsummer's Eve, Christmas Eve or New Year's Eve, and may not fall earlier than the fifth weekday before the meeting.

Shareholders or representatives may have no more than two (2) assistants at the general meeting and only if the shareholder registers the number of assistants to the Company as described above.

## 10. ANNUAL GENERAL MEETING

At the annual general meeting the following matters shall be dealt with:

1. Election of the chairman of the meeting
2. Preparation and approval of the voting list
3. Election of one (1) or two (2) persons to verify the minutes
4. Approval of the agenda
5. Determination as to whether the meeting has been duly convened
6. Presentation of the annual report and the auditor's report and, if applicable, the consolidated financial statements and the auditor's report on the consolidated financial statements
7. Resolutions regarding:
  - a) the adoption of the profit and loss statement and the balance sheet and, if applicable, the consolidated profit and loss statement and the consolidated balance sheet
  - b) the allocation of the Company's profits or losses as set forth in the adopted balance sheet
  - c) discharge from liability for the board members and the CEO.
8. Determination of the number of board members, auditors and, if applicable, deputy auditors
9. Determination of fees for the board of directors and the auditors
10. Election of board of directors, auditors and, if applicable, deputy auditors
11. Any other matter that shall be processed by the general meeting in accordance with the Swedish Companies Act (2005:551) or the articles of association.

## 11. FINANCIAL YEAR

The Company's financial year shall be January 1 – December 31.

## 12. RECORD DAY PROVISION

The Company's shares shall be registered in a record day register according to the Swedish Financial Instruments Accounts Act (1998:1479).

*These articles of association were approved at the general meeting held on May 31, 2017.*

# Legal considerations and supplementary information

## GENERAL CORPORATE INFORMATION

The Company's corporate name and trade name is BioArctic AB and its corporate registration number is 556601-2679. The Company was formed in Sweden as a shelf company on October 2, 2000 and was registered at the Swedish Companies Registration Office on November 22, 2000. The operations were started in January 2003. The Company is a Swedish public limited company and is governed by the Swedish Companies Act (2005:551). The Company has its corporate domicile in the municipality of Stockholm, Sweden.

The Company is the parent company of the wholly-owned Swedish subsidiaries SpineMedical AB, company registration number 559003-7080, and LPB Sweden AB, company registration number 559035-9112.

## MATERIAL AGREEMENTS

### Eisai

Since 2005 BioArctic has a collaboration with the Japanese global pharma company Eisai regarding the development and commercialization of drugs for the treatment of Alzheimer's disease. The collaboration of the partners primarily concerns three projects: the humanized antibodies BAN2401 and BAN2401 back-up and a research project regarding a new drug target for disease modifying treatment of Alzheimer's disease. The parties have entered into several research and development agreements and two major commercial license agreements within the framework of the collaboration. The total potential compensation for research collaborations, initial license fees and milestone payments under the agreements with Eisai amounts to approx. 218 MEUR. As of the day of the Offering Circular BioArctic has received approx. 47 MEUR. Of the total amount of 218 MEUR research funding represents approx. 19 MEUR, initial license fees of 8.9 MEUR, development related milestones approx. 122 MEUR, sales related milestones approx. 60 MEUR and patent related milestones 8 MEUR.

The major agreements within the framework of the collaboration with Eisai are described in more detail below.

#### *Development and commercialization agreement concerning BAN2401*

In December 2007, BioArctic and Eisai entered into a development and commercialization agreement under which BioArctic granted Eisai a global and exclusive license (including sublicensing rights) to research, develop and commercialize pharmaceutical products using the antibody BAN2401 for the treatment of Alzheimer's disease. The agreement was a result of the

first research collaboration agreement with Eisai from 2005 under which BAN2401 was developed. Eisai is responsible for the clinical development, applications for marketing approval and commercialization of the products.

BioArctic retains the rights to market the licensed products in the Nordic countries, provided that BioArctic is deemed to have the appropriate resources to market the products in the retained territory. Such assessment shall be made together with Eisai.

BioArctic also retains the rights to BAN2401 for other indications than Alzheimer's disease, including indications for dementia with neurodegeneration other than Alzheimer's disease (AD-related diseases). However, Eisai has a so-called first right of negotiation concerning other indications than Alzheimer's disease, which means that BioArctic must first offer Eisai a license before turning to a third party. Further, as regards to AD-related diseases, Eisai has a right to match an offer from a third party (a so-called right of first refusal) even if Eisai has chosen not to exercise its right to negotiate as described above. Eisai is responsible for the commercial production of the licensed products and has also undertaken to assist BioArctic in sourcing products should BioArctic decide to commercialize drug products using BAN2401 within the retained field of indications.

In connection with entering into the agreement in December 2007, BioArctic received a license fee (lump sum payment) of 8.3 MEUR. BioArctic is entitled to development related milestone payments in connection with certain study phases and regulatory filings and approvals, sales related milestone payments calculated on annual worldwide sales of licensed products and patent related milestone payments on the issuance of certain patents relating to the agreements. BioArctic is further entitled to royalties calculated on a country-by-country basis on net sales of licensed products in such country, starting with a high one-digit percentage for the first 10 years following the launch of a licensed product in a country and a mid-level one digit percentage for the following five years. The agreement contains customary provisions on royalty reductions in the event of so called royalty stacking (i.e. if the licensee is forced to pay royalty to several licensors in order to use the product) or competition by biosimilar products in a specific country.

The term of the agreement is determined on a country by country basis and the agreement expires a specified number of years after the commercial launch of the drug using BAN2401/BAN2401 back-up for the treatment of Alzheimer's disease. Eisai has the right to extend the

agreement period (royalty will be paid during the extension period). The agreement contains customary termination terms which include, inter alia, termination in case of breach of contract and insolvency. In addition, Eisai has a unilateral right to terminate the agreement if specific circumstances specified in the agreement occur.

*Development and commercialization agreement concerning BAN2401 back-up*

In September 2015, BioArctic and Eisai entered into a development and commercialization agreement under which BioArctic granted Eisai global and exclusive license rights for the antibody BAN2401 back-up on terms substantially equivalent to those of the development and commercialization agreement for BAN2401. The agreement was a result of the second research agreement with Eisai from 2008, which concerned the development of a second generation antibody for the treatment of Alzheimer's disease, among other things. This means that Eisai has substantially equivalent rights to research, develop and commercialize drug products using BAN2401 and/or BAN2401 back-up for the treatment of Alzheimer's disease. The agreement in all essentials gives BioArctic the same rights to market the back-up product in the Nordic countries and for other indications as provided for BAN2401.

In connection with entering into the agreement, BioArctic received a license fee of 0.6 MEUR. BioArctic is entitled to milestone payments and royalties on terms and amounts substantially equivalent to those in the development and commercialization agreement for BAN2401. The parties have agreed that development related milestones are only payable for either BAN2401 or BAN2401 back-up. This means that if a certain development related milestone is reached under the BAN2401 agreement, such a milestone will not be due and payable under the BAN2401 back-up product agreement and vice versa. Sales related milestone and royalty payments shall be calculated on combined sales amounts of both BAN2401 products and BAN2401 back-up products. The agreement contains customary provisions on royalty reductions in the event of so called royalty stacking (i.e. if the licensee is forced to pay royalty to several licensors in order to use the product) or competition by biosimilar products in a specific country.

The term of the agreement is determined on a country by country basis and the agreement expires a specified number of years after the commercial launch of the drug using BAN2401/BAN2401 back-up for the treatment of Alzheimer's disease. Eisai has the right to extend the agreement period (royalty will be paid during the extension period). The agreement contains customary termination terms which include, inter alia, termination in case of breach of contract and insolvency. In addition, Eisai has a unilateral right to terminate the agreement if specific circumstances specified in the agreement occur.

*Research collaboration agreements*

BioArctic and Eisai have entered into three research collaboration agreements since the collaboration started in 2005. The latest agreement was signed in 2015 and concerns a research collaboration aimed at identifying a new target for a future drug for disease modifying treatment of Alzheimer's disease. The agreement runs for three years and the parties will conduct different parts of the research collaboration according to a predetermined division of responsibility. BioArctic's costs within the framework of the collaboration are covered by Eisai. Project results and new intellectual property rights generated within the framework of the collaboration are own jointly and in equal parts in a territory covering major markets as the US, Japan, Canada, Australia and most European countries.

**AbbVie**

In September 2016, BioArctic and AbbVie entered into a strategically important collaboration and license agreement to develop and commercialize BioArctic's portfolio of antibodies directed against  $\alpha$ -synuclein for the treatment of Parkinson's disease and other potential indications and related diagnostics. BioArctic has granted AbbVie a non-exclusive research license and an exclusive option to obtain certain exclusive licenses to certain of BioArctic's patents and know-how for further development and global commercialization of licensed products containing BioArctic's antibody BAN0805 and certain other antibodies discovered or developed within the framework of the research collaboration.

AbbVie is a global research-based biopharma company founded in 2013 after a spin-off from Abbott Laboratories. AbbVie operates on the global market in several treatment areas with successful products like Duodopa, a symptomatic treatment for Parkinson's disease.

BioArctic has the main responsibility for the preclinical development work and is responsible for development costs within an agreed budget. The preclinical development is financed through AbbVie's up-front payment (see below). BioArctic's cost responsibility for the preclinical development is limited to certain defined amounts. If the costs exceed the planned budget, the parties will allocate the excess costs between themselves in a manner specified in the agreement. New inventions and results generated within the framework of the research collaboration are jointly owned by the parties in equal parts. Each party can utilize such common results, with exception for AbbVie's exclusive rights under the agreement.

AbbVie has an exclusive option to obtain certain exclusive licenses for further development and global commercialization of products containing BioArctic's antibody BAN0805 and certain other antibodies discovered or developed within the framework of the research collaboration. The option thus covers BioArctic's whole



product portfolio in the field of Parkinson's disease. AbbVie can choose to exercise the option during the course of the research collaboration up to an application for starting clinical trials in the US (Investigational New Drug Application, IND).

In connection with entering into the agreements BioArctic received an up-front payment of 80 MUSD, including financing of the preclinical development works to be performed by BioArctic and an option premium, the amount of which is not specified in the agreement. If AbbVie exercises the option, BioArctic is entitled to an option exercise payment and the opportunity to obtain development related and sales related milestone payments. The up-front payment of 80 MUSD, the option exercise payment and the milestone payments amount to a maximum total of 755 MUSD. In addition BioArctic is entitled to tiered royalties on the net sales of products containing BioArctic's antibodies.

BioArctic has an exclusive right to take part in the marketing of the products in a certain defined territory (co-promotion rights). If BioArctic exercises this right the parties will share costs and profits from the commercialization of the products in the co-promotion territory in a defined way. If this happens, the profit sharing will replace AbbVie's obligation to pay royalties for sales in the co-promotion territory.

The agreement expires at the end of the option period if AbbVie does not exercise its option beforehand. If AbbVie exercises the exclusive option, the agreement remains in force until BioArctic's right to royalty ceases, if not earlier terminated for cause by either party. AbbVie may, inter alia, terminate the agreement without cause.

### Lonza

BioArctic has entered into two agreements with Lonza Sales AG ("**Lonza**"), concerning licensing of Lonza's GS Xceed® gene expression system, and, secondly, development and manufacturing of the antibody BAN0805 on behalf of BioArctic. The agreements with Lonza are essential for BioArctic's ability to meet its commitments under the agreement with AbbVie. Both agreements with Lonza were entered into in October 2016.

The license agreement concerning the GS Xceed® gene expression system means that BioArctic gets a license to use the system and utilize related patents for development, manufacturing and commercialization of BAN0805. Lonza is entitled to royalties based on the net sales of a future product. The royalty rates are tiered and amount to low single-digit percentages, depending on whether there is a valid patent and where the commercial manufacturing of the antibody takes place. Further, Lonza is entitled to receive certain annual payments from BioArctic if the commercial manufacturing of BAN0805 is not carried out by Lonza.

BioArctic has the right to terminate the agreement with a notice period specified in the agreement. The agreement contains customary termination terms, which include, inter alia, termination in case of breach of contract and insolvency.

BioArctic has also commissioned Lonza to perform services related to the development and manufacturing of BAN0805. BioArctic has a firm commitment to buy a certain amount of BAN0805, and any cancellations of such orders are subject to cancellation fees. The development and manufacturing agreement has a specified fixed term, which may be extended by agreement between the parties. BioArctic has the right to terminate the agreement with a notice period specified in the agreement. The agreement contains customary termination terms, which include, inter alia, termination in case of breach of contract and insolvency.

### Swenora

In 2008 the Company entered into an agreement with Swenora Biotech AB ("**Swenora**") regulating the commercialization of BioArctic's project for surgery and treatment of patients with complete spinal cord injury (SC0806). Through the agreement BioArctic has obtained a global exclusive license to develop the technology originally invented by Swenora and to market and sell future products based on the technology. BioArctic has financed the preclinical development and finances the clinical development of the project, which is partly funded by a Horizon2020 grant as described in the following.

BioArctic has made a one-time payment in connection with the signing of the agreement and a milestone payment when a regulatory milestone was met. The maximum total sum of the license fee and the milestone payments that Swenora is entitled to amounts to approx. 58 MSEK. So far BioArctic has paid approx. 0.7 MSEK of this sum. Further, Swenora is entitled to royalty on future sales. The royalty amounts to a single digit percentage in the middle segment during the first ten years after the start of sales in the respective country and a lower single digit percentage in the following five years. The term of the agreement is determined on a country by country basis and the agreement expires a specified number of years after the commercial launch of the product. BioArctic has the right to extend the agreement period (royalty will be paid during the extension period). The agreement contains customary termination terms which include, inter alia, termination in case of breach of contract and insolvency. In addition, BioArctic has the right to terminate the agreement if specific circumstances specified in the agreement occur.

### Medical Research Council Technology

BioArctic has entered into two research collaboration agreements (concerning Alzheimer's disease and Parkinson's disease, respectively) with Medical Research Council Technology ("**MRCT**"). Through the agreements BioArctic commissions MRCT to develop humanized antibodies based on BioArctic's material.

BioArctic holds all intellectual property rights relating to the developed modified antibodies while MRCT holds all intellectual property rights relating to the method and technology for humanization of the antibodies. MRCT grants BioArctic a global non-exclusive license to use the

inventions in licensed patents concerning recombinant DNA-products and methods for research and commercialization purposes. MRCT further grants BioArctic a global exclusive license to use MRCT's intellectual property to develop and use the antibodies covered by the agreements for research and commercialization purposes.

MRCT is entitled to compensation, in the form of compensation for performed services and in the form of regulatory milestone payments. In the case of the agreement concerning Alzheimer's disease MRCT also has the right to royalty amounting to a low single digit percentage on future sales.

The term of the agreement is linked to BioArctic's obligation to pay royalties and milestone payments to MRCT. MRCT has the right to terminate the agreement in case BioArctic does not pay the agreed compensation to MRCT within the agreed period, and BioArctic has the right to terminate the agreement at any given time with a notice period specified in the agreement. In addition, the agreement contains customary provisions for termination in case of breach of contract and insolvency.

#### Agreements with contract manufacturers

BioArctic has no in-house manufacturing but hires several external suppliers for the production of drug substances and medical devices, and for production for projects in preclinical and clinical development. The Company has thus entered into agreements with a number of contract manufacturers (CDMOs).

In addition to the agreement with Lonza (described above) the agreements with Elos Medtech Timmersdala AB ("**Elos**") and Protein Sciences Corporation ("**PSC**"), both relating to the Company's treatment of complete spinal cord injury (SC0806), are of special importance to the Company.

The agreement with Elos was entered into in 2010 and concerns the development of manufacturing processes and manufacturing and supply of the biodegradable implant intended to be surgically inserted in patients with complete cord injury. Elos has an exclusive right to manufacture such products for the European market during four years from the signing of a specific supply agreement between the parties. Thereafter Elos has the right to extend exclusivity with two three-year periods provided that Elos can match the prices and conditions of other suppliers. However, BioArctic has the right to take over the production processes if Elos does not wish or is incapable of manufacturing the products. The agreement was concluded in 2010 and contains customary termination terms, including termination of breach of contract.

The agreement with PSC was originally signed between Swenora and PSC in 2015 and was transferred to BioArctic in 2008. It concerns the development of manufacturing processes and manufacturing of the growth factor FGF1 (to be used with the implant described above). BioArctic has an option to obtain a

license for commercialization of products using the material and PSC's intellectual property rights. BioArctic shall then pay a royalty, either a defined fixed amount or a low one digit percentage of the net sales of the product, whichever amount is the highest. The obligation to pay royalty is valid during either the period of validity of the patents or ten years from the first commercial sales of the product, whichever period is the longest. The agreement was originally concluded between Swenora and PSC 2005 and transferred to BioArctic in 2008. The agreement has a specified fixed term and contains customary termination terms, including termination of breach of contract.

#### Grants from the EU's Horizon2020

In 2014 BioArctic received a Horizon2020 grant from the EU amounting to a total of 6.4 MEUR (Grant Agreement No. 643853). The grant will finance a part of BioArctic's project for surgery and treatment of patients with complete spinal cord injury (SC0806) and is paid during a four year period. Within the framework of the Horizon2020 project BioArctic has entered into a consortium agreement with a number of care providers taking part in the clinical study concerning SC0806. The consortium agreement is based on a traditional so-called DESCAs model and regulates the rights and obligations of the parties within the framework of the project. BioArctic is the coordinator of the project and responsible party in relation to Horizon2020. The grant is paid in four instalments, one of which is an advance payment of approx. 30% of the total grant, paid in January 2015. The three remaining payments correspond to the costs for each payment period that are reported by BioArctic and approved by the responsible Horizon2020 coordinator. Approved costs include externally purchased products and services and personnel costs at BioArctic and other partners allocated to the project, and an administrative mark-up for these costs. In the second half of 2016 BioArctic received a payment concerning costs incurred during the reporting period up to June 30, 2016. Up to June 30, 2017, BioArctic has received 4.2 MEUR of the total 6.4 MEUR grant.

BioArctic has also received a 50 TEUR grant from Horizon2020 for the development of biomarkers for Parkinson's disease, which was paid in 2015 and 2016 (Grant Agreement No. 697790).

There is a repayment obligation if a project is terminated or the accumulated costs are less than the amount paid by Horizon2020.

#### Grants from Vinnova

BioArctic participates in a number of projects partly financed by grants from Vinnova.

In 2016 BioArctic together with Uppsala University received a 5 MSEK grant from Vinnova for a research collaboration concerning reduced costs and improved safety in connection with immunotherapy treatment of brain diseases. The grant related to the research group's work at Uppsala University. BioArctic has also received a

contribution from Vinnova financing a part of BioArctic's research aimed at developing a disease modifying drug for the treatment of Parkinson's disease, BAN0805. The contribution amounted to 5 MSEK and the project ran for two years starting in June 2015.

In 2017 BioArctic has received two additional Vinnova grants, a 200 TSEK grant for updating the Company's quality management system, and a 500 TSEK grant for the project "Commercial potential of antibody-based PET imaging" which is carried out in collaboration with Uppsala University.

BioArctic has entered into customary agreements with Vinnova regulating BioArctic's use of the grants. Vinnova's general terms for grants are applied. Repayment of advance payments may be demanded if the costs qualifying for support are less than what has been paid in advance. Further, BioArctic can be obliged to make repayment to Vinnova if the information given in the application should prove to be incorrect, if a grant has been approved incorrectly, or if the terms for the grant have not been met in any other way. BioArctic cannot transfer or grant someone the use of project results or in any other way take any action that causes the matter to become unauthorized indirect governmental support – if this should happen BioArctic may be faced with a repayment obligation.

#### Other agreements

The Company has several ongoing research collaborations and hires consultants for specific missions and for tasks in areas of competence that the Company lacks or only requires from time to time. Parts of the Company's research are also performed by contract research organizations, CROs. The Company has thus entered into a relatively large number of confidentiality agreements, consultancy agreements, agreements concerning the transfer of research material (so-called material transfer agreements, MTAs) and research collaborations agreements. The Company has also entered into an agreement concerning the Company's ongoing clinical trial.

### INTELLECTUAL PROPERTY RIGHTS

Intellectual property rights, and patents in particular, are very important to the Company's operations. An important part of BioArctic's strategy is to enter into collaboration and license agreements with big pharma companies and a strong intellectual property protection in the form of patents and patent applications is generally a requirement for this. BioArctic's strategy is therefore to as far as possible obtain patents rights for its inventions and to defend the patent portfolio against any infringement of the patents. The principles for the Company's handling of inventions are regulated by a written patent policy. The Company also has the support of renowned consultants in intellectual property and patent matters.

BioArctic's intellectual property rights primarily consist of a number of patents, patent applications and know-how relating to the Company's inventions. BioArctic has a patent portfolio including more than 80 approved patents and more than 50 patent applications in 11 different patent families (a patent family is a group of patents and patent applications in different countries with the same origin). A summary of the Company's patent strategy and most important patents is found in the section "*Company description – Intellectual property rights*".

The Company has no specific formal monitoring of the patent families of third parties. However, BioArctic follows up patent families of third parties in connection with considerations regarding patenting of BioArctic's own inventions in order to clarify the patentability of new innovations. BioArctic performs market investigations concerning the activities of competitors in order to evaluate if third parties are possibly infringing on BioArctic's patent rights.

The Company's European patent in the patent family AD III (a substance patent protecting the antibody BAN2401) was also subject to a complaint in 2013. BioArctic had complete success in the complaint proceedings and the validity of the patent was maintained without changes in the patent claims. The decision of the patent office has not been appealed.

Ongoing objections and observations against the Company's patent and patent applications are further described in the section "*Legal considerations and supplementary information – Disputes and litigation*".

As far as the Company is aware, no further objections have been filed against any of the patents or patent applications in the patent portfolio. Nor have any demands or threats of action against alleged infringement been made to the Company.

In addition to BioArctic's own patents concerning SC0806 the basic technology for BioArctic's treatment for complete spinal cord injury has been licensed from Swenora Biotech AB. Also in other cases BioArctic is dependent on certain technology licensed from third parties. The Company's material license agreements are further described under "*Material agreements*" above.

In addition to patents, BioArctic's intellectual property rights include rights to trademarks registered in the EU and the US and registered domain names.

### DISPUTES AND LITIGATION

Except for the litigation proceedings described below BioArctic is not, and has not during the past twelve months been, a party in any judicial or arbitration proceedings, including pending issues or such issues that the Company is aware that may occur, that recently have had or could have significant impact on the Company's operations and financial position or result. Nor is the Company aware of anything that could cause any damage claims or result in future legal proceedings.

### Ongoing administrative proceedings before the European Patent Office

A third party unknown to the Company has raised objections to BioArctic's patent EP1781703 in Europe (in the patent family AD II) and claims that the patent should not have been granted. The patent is a concept patent concerning the Company's treatment strategy for Alzheimer's disease which covers a general mechanism for the antibody's selective binding to oligomers and protofibrils, but not monomers, of the peptide A $\beta$ . The complaining party claims that the prerequisites for patentability have not been met. European Patent Office (EPO) has made its decision at Oral Proceedings held on 26 September 2017, with the conclusion that the patent (EP1781703) is revoked in Europe. Even if this concept patent currently is revoked, BioArctic importantly holds specific substance patent protection in US, Japan and EU for BAN2401, an antibody in Phase 2b clinical trial. The concept patent is granted in the US, Canada and Australia and is not affected by the EPO's decision. The decision from EPO may be appealed within two months from when the written decision is issued by EPO. BioArctic will consider appealing the decision, when the written decision is issued.

### Observations during the processing of the Company's patent application

A third party unknown to the Company has submitted observations (Third Party Observations) to the European Patent Office, EPO, in connection with the processing of BioArctic's European patent application EP09738534.8 (in the patent family PD V). The patent is a concept patent regarding the Company's treatment strategy of Parkinson's disease which includes a general mechanism for the antibody's selective binding of oligomers/protofibrils but not monomers of the peptide  $\alpha$ -synuclein. This is a two party procedure where a third party has the opportunity to submit observations they consider that the patent office should take into consideration in the processing of the patent application. In this case it refers to what the third party considers to be further known technology ("prior art") in relation to the invention. The applicant (BioArctic) has the opportunity to comment on this and will do so in a response to the patent office. However, the Company's product candidates are also covered by substance patents preventing others from developing biosimilars.

### INSURANCE

The Board considers that the company has insurance coverage that is customary in the industry and satisfactory with regard to the nature and extent of the operations. The Company has also signed up to the standardized insurance solutions for clinical studies worked out by the pharma industry.

### AUTHORIZATION AND REGULATORY COMPLIANCE

Parts of the Company's operations require that the Company obtains permits and approval from relevant authorities in Sweden and abroad. The conduct of clinical studies furthermore requires approval from regulatory authorities and ethics review boards. The Board considers that the Company has the relevant permits and approvals for the Company's operations.

### TRANSACTIONS WITH RELATED PARTIES

Since September 2017, board member Lars Lannfelt provides consultancy services to the Company. Lars Lannfelt has received consultancy fees of 83 TSEK as of day for approval of the Offering Circular. The consultancy services consist of scientific advice as well as having contacts and maintaining relations with the Company's partners, mainly within the academic sector. Compensation is paid in the form of a market level hourly consultancy fee.

Former board director Mikael Smedeby is active as a lawyer and partner in Advokatfirman Lindahl and has previously also been a board director of Advokatfirman Lindahl, which provides day-to-day business legal advice to the Company against compensation on market terms. In 2015 Lindahl's invoiced fees amounted to approx. 250 TSEK, in 2016 to approx. 934 TSEK and in 2017 up to the day of approval of the Offering Circular to approx. 2.2 MSEK.

In addition to salaries and directors' fees (see the section "*Corporate governance*" for more information) and the transactions described above no related party transactions have taken place during the financial years 2015 and 2016, nor during the period from January 1, 2017 to the date for the approval and publication of the Offering Circular.

In 2008 the Company entered into a license agreement with Swenora Biotech AB, where the board director Pär Gellerfors is a part owner, board director and CEO. Pär Gellerfors' ownership share in Swenora Biotech amounts to 13% of the shares and 15.6% of the votes in the company. The agreement is described above under "*Material agreements*". Under the agreement Swenora is entitled to milestone payments and royalty on products developed by BioArctic within the framework of the license agreement. No payments have been made during the financial years 2015 and 2016.

### INTERESTS AND CONFLICTS OF INTEREST

Carnegie and DNB are financial advisors to the Company in connection with the Offering. Carnegie is also the issuing agent. Carnegie and DNB receive a pre-arranged compensation in connection with the Offering.

Advokatfirman Lindahl KB is the legal advisor to the Company in connection with the Offering and receives compensation on current account for services rendered according to contract. Other than this, Advokatfirman



Lindhahl KB has no financial or other interests in the Offering.

No conflicts of interest are expected to exist between the Company and the parties that according to the above have financial or other interests in the Offering.

Advokatfirman Lindahl KB also provides other business legal services to the Company and receives compensation on current account for such services under contract. The former board director Mikael Smedeby is

active as a lawyer and partner in Advokatfirman Lindahl and has previously also been a board director of Advokatfirman Lindahl.

### SELLING SHAREHOLDERS

Within the Offering included a full extension of the Offering and the Over-allotment option, the selling shareholders will offer a total of 8,541,666 B-share for sale.

Name	Number of shares sold in the Offering	Relation to the Company
Demban AB <sup>1)</sup> (Lars Lannfelt)	2,499,958 B-shares and a total of 1,689,971 B-shares within the Over-allotment option	Demban AB is owned by Lars Lannfelt who is a board director of the Company.
Ackelsta AB <sup>2)</sup> (Pär Gellerfors)	1,666,708 B-shares and a total of 1,126,696 B-shares within the Over-allotment option	Ackelsta AB is owned by Pär Gellerfors who is a board director of the Company and active in the Company's management team.
Karolinska Development AB <sup>3)</sup>	33% of the Over-allotment option (equal to maximum 1,458,334 B-shares)	-
Uppsala universitet Holding AB <sup>4)</sup>	Maximum 99,999 B-shares within the Over-allotment option	-

1) Vintertullstorget 28, 116 43 Stockholm

2) Lagmansvägen 13, 181 63 Lidingö

3) Tomtebodavägen 23A, 171 65 Solna

4) c/o Uppsala Science Park, 751 83 Uppsala

### SUBSCRIPTION COMMITMENTS

Cornerstone Investors have in September 2017 undertaken to acquire or subscribe for shares in the Offering corresponding to a total of 265 MSEK. Provided that the Offering is fully subscribed, included a full extension of the Offer and the Over-allotment option these commitments correspond to 32.9% of the total number of shares subject to the Offering. The Cornerstone Investors receive no compensation for their commitments.

However, the Cornerstone Investors are guaranteed allocation consistent with their respective commitments. Global Coordinator, the Main Shareholders and BioArctic's board assess that the Cornerstone Investors have good credit ratings and thus will be able to fulfil their respective commitments. The Cornerstone Investors'

commitments are, however, not covered by a bank guarantee, blocked funds or pledges or similar arrangement, therefore there is a risk that the Cornerstone Investors will not be able to fulfil their commitments. Further, the commitments of the Cornerstone Investors are subject to certain conditions. e.g. that the planned listing is conducted and that the first day of trading of the Company's B-share on Nasdaq Stockholm does not occur later than October 31, 2017, that the distribution requirement is met and that no significant adverse events occur which imposes an obligation to draft an amendment to the Offering. In the event that any of these conditions are not met there is a risk that the Cornerstone Investors do not fulfill their commitments.

Name	Subscription commitment (MSEK)	Number of shares	Share in the Offering <sup>1)</sup>
The Third AP Fund	100	4,166,667	12%
HBM Healthcare Investments Cayman Limited	65	2,708,333	8%
Handelsbanken Fonder AB	50	2,083,334	6%
The Second AP Fund	25	1,041,667	3%
John Wattin/Inbox Capital	25	1,041,667	3%

1) Based on full subscription of the Offering and that the over-allotment option is fully exercised.

### Description of the Cornerstone Investors

#### *The Third AP Fund*

The Third Swedish National Pension Fund is one of five buffer funds that manage capital on behalf of the Swedish state pension system. The Fund had 324.4 BSEK of assets under management as of December 31, 2016.

The Third AP Fund has the mission from the Swedish parliament to manage fund capital in order to maximize

the benefit of the pension system by creating a high investment return at a low level of risk.

#### *HBM Healthcare Investments*

HBM Healthcare Investments is a Swiss investment company focused on the healthcare sector. HBM Healthcare Investments holds and manages an international portfolio of promising companies in the human medicine,



biotechnology, medical technology, diagnostics sectors and related areas. Many of these companies have their lead products already available on the market or at an advanced stage of development. HBM Healthcare Investments has an international shareholder base and is listed on SIX Swiss Exchange.

#### *Handelsbanken Fonder AB*

Handelsbanken Fonder AB is a wholly owned subsidiary of Svenska Handelsbanken and is a significant fund manager in Scandinavia. Handelsbanken Fonder AB offers funds that are targeted towards private individuals as well as institutional clients.

#### *The Second AP Fund*

With about 335 BSEK under management in virtually every asset class and all parts of the world, The Second AP Fund is one of northern Europe's largest pension funds. The Second AP Fund is one of five buffer funds within the Swedish pension system. The Second AP Fund shall maximise long term return at low risk.

#### *John Wattin/Inbox Capital*

John Wattin/Inbox Capital has been an active investor since 1997. John Wattin is the chairman of the board of Inbox Capital AB, which makes long-term investments in listed and unlisted assets.

### ISSUE EXPENSES

If the Offering is fully subscribed the Company will receive 600 MSEK before expenses for the Offering and listing on Nasdaq Stockholm. These expenses are calculated to amount to a maximum of 50 MSEK and primarily consist of remuneration to the Joint Bookrunners and costs for auditors, legal advisors, translation and printing of the Offering Circular and costs for presentation material, etc. The Company is thus estimated to receive net 550 MSEK after costs for the Offer and the listing at Nasdaq Stockholm.

### PLACING AGREEMENT

Under the terms of an agreement on the placing of shares intended to be signed around October 11, 2017 between the Company, the Main Shareholders and the Joint Bookrunners ("**The Placing Agreement**") the Main Shareholders commit to dispose of and the Company commits to issue a maximum of approx. 33,1% of the shares in the Company after the Offering to buyers as directed by the Joint Bookrunners. In the event that the Joint Bookrunners fail to assign buyers the Joint Bookrunners have committed to acquire the shares included in the Offering, provided that the Offering is not cancelled prior to this (see below). The selling shareholders also intend to leave an over-allotment option, which involves a commitment, at the request of Joint Bookrunners not later than 30 days after the first day of trading the Company's share at Nasdaq Stockholm, to dispose of up to 4,375,000 further shares, corresponding

to a maximum of 15% of the number of shares in the Offering at a price corresponding to the price in the Offering. The over-allotment option may only be exercised in order to cover a possible over-allotment for the Offering.

Through the Placing Agreement the Company and the Main Shareholders give the Joint Bookrunners customary guarantees, primarily relating to the information in the Offering Circular being correct, that the Offering Circular and the Offering meet relevant demands in laws and regulations, and that no legal barriers or other obstacles exist for the Company or the Main Shareholders to enter into the agreement or for the execution of the Offering. The Placing Agreement provides that the commitment of the Joint Bookrunners to mediate buyers, or in the case that the Joint Bookrunners should fail to do so, itself acquire the shares included in the Offering, is conditional upon that no events occur that have such a negative impact on the Company or the execution of the Offering that it according to Global Coordinators' fair assessment would be inappropriate or practically impossible to execute the Offering according to the description in the Offering Circular ("significant adverse events"), and upon certain customary conditions.

The Joint Bookrunners may terminate the Placing Agreement until the settlement date October 16, 2017 if any major negative events occur, if the guarantees that the Company or the Main Shareholders have given the Joint Bookrunners should be broken or if any other conditions of completion following from the Placing Agreement are not met. In such case neither delivery nor payment for shares will be carried out under the Offering. Under the Placing Agreement the Company will, with customary provisos, commit to indemnify the Joint Bookrunners for certain claims under certain circumstances. Further the Company will compensate the Joint Bookrunners for certain costs that the Joint Bookrunners have incurred in connection with the Offering.

According to the Placing Agreement the Company will undertake in relation to the Joint Bookrunners for a period of 365 days following directly upon the first day of trading the shares at Nasdaq Stockholm not to (i) issue, offer, pledge, sell, enter into agreements to sell or in any other way handle shares or other securities in the Company, and not make any proposal to the Company's general meeting that would make it possible for the Company to carry out any of the above mentioned actions; or (ii) buy or sell any such option or similar security or enter into swap deals or other arrangements that have similar economic effect as the actions listed under (i). The commitment does not prevent the Company from issuing the shares in the Offering or from issuing shares or other securities within the framework of incentive programs. Global Coordinator can furthermore grant exceptions from the commitment.

## STABILIZATION

In connection with the Offering Carnegie may carry out transactions with the aim of keeping the market price of the shares at a higher level than what otherwise might have been the case in the market. Such stabilization measures will be carried out in compliance with the terms of the EU's market abuse regulation (596/2014) and the Commission's delegated regulation relating to technical standards for buy-back programs and stabilization measures (2016/1052).

Stabilization transactions may be carried out on Nasdaq Stockholm, the OTC market or otherwise, and may be carried out at any time during the period beginning on the first day when the shares are traded on Nasdaq Stockholm and ending no later than 30 calendar days thereafter. However, Carnegie is under no obligation to carry out stabilization and there is no guarantee that stabilization will be carried out. If stabilization is undertaken, it can also be discontinued at any time without prior notice. Stabilization transactions will under no circumstances be carried out at a higher price than the price in the Offering.

During the stabilization period Carnegie, through the Company, will provide information regarding implemented stabilization measures no later than at the end of the seventh trading day after the day when the transactions were made.

Within a week after the end of the stabilization period according to the above Carnegie will, through the Company, inform whether stabilization measures have been taken, and as applicable, inform about the date when the stabilization was initiated, the date when stabilization was last performed, the price range within which stabilization was undertaken for all of the dates when stabilization transactions were carried out, and the trading venue where the stabilization transactions were conducted.

The Joint Bookrunners has received an over-allotment option to enable a possible over-allotment in the Offering. The over-allotment will be covered by sales of up to 4,375,000 additional B-shares in the Company by the selling shareholders. For more information see the section "*Terms and conditions*".

## INFORMATION FROM THIRD PARTIES

Some of the information in the Offering Circular has been gathered from external sources. Such external sources have been referred to in connection with the relevant information. Market and industry data has primarily been gathered from market reports bought by the Company from the market analysis company GlobalData. Other sources primarily include articles from scientific journals and information from public data bases concerning clinical studies.

In the cases where information has been gathered from a third party this information has been reproduced exactly and no data has – as far as the Company is aware and has been able to ascertain through comparison with other information published by the relevant third party – been omitted in a way which could render the information given by the Company inaccurate or misleading in relation to the original sources. However, the Company has not made any independent verification of the information given by third parties, wherefore the completeness or accuracy of the information cannot be guaranteed.

## DOCUMENTS AVAILABLE FOR INSPECTION

The Company's deed of incorporation and articles of association and the historical financial information presented for the Company and all its subsidiaries for the last two financial years prior to the publication of the Offering Circular are available in paper form at the Company's head office, address Warfvings väg 35, SE-112 51 Stockholm, Sweden. Copies of the documents can be obtained throughout the period of validity of the Offering Circular from or be examined at BioArctic's main office during regular office hours on weekdays.

# Certain tax considerations in Sweden

## GENERAL INFORMATION

Below follows a summary of the Swedish tax consequences that may occur in connection with the Offering. The summary is based on current legislation at the time of preparation of the Offering Circular and is only intended as general information. The summary applies only to fully taxable individuals and Swedish limited liability companies unless otherwise stated. The summary is not intended to comprehensively treat all tax issues that may arise. It does for example not cover (i) the special rules for securities held by partnerships or held as current assets in business operations, (ii) the special rules for tax-free capital gains (including prohibition of deduction for capital losses) or corporate dividends which may become applicable should shareholders' shares be considered business related, (iii) the special rules that may apply to holdings in companies that are or have been so-called close companies or to shares purchased on the basis of so-called qualified shares in close companies, (iv) shares held via capital insurance, or (v) shares held in a so-called investment savings account that are subject to special rules for standardized taxation.

Special tax rules which are not described may apply also to other categories of shareholders, for example investment companies and insurance companies. The taxation of each individual shareholder depends on his or her unique circumstances. Each shareholder is therefore recommended to consult a tax advisor to get information regarding the specific consequences that can occur in the individual case, including the applicability and effect of foreign rules and tax treaties.

## SHAREHOLDERS THAT ARE FULLY TAXABLE IN SWEDEN

### Individuals

#### *Capital gains taxation*

For individuals fully taxable in Sweden capital gains are taxed as income from capital at a rate of 30%.

The capital gain or capital loss is calculated as the difference between the sales proceeds, less selling expenses, and the divested shares' acquisition cost. The acquisition cost for all shares of the same type and class is calculated as an aggregate using the averaging method. When applying the averaging method shares of different series in the same company do not constitute shares of the same type and class. Furthermore, paid subscribed

shares are not considered to be of the same type as newly issued shares until a new issue has been registered by the Swedish Companies Registration Office. For listed shares the standardized method can be used. The rule states that the acquisition cost is calculated as 20% of the sales proceeds after deduction of sales costs.

If the acquisition cost is higher than the sales price a capital loss occurs. Capital losses on listed shares and other securities (except shares in mutual funds or special funds containing only Swedish rights to recover debts, so-called bond funds) can be offset against capital gains on other listed securities the same year. Capital losses that cannot be offset in this way are deductible to 70% against other capital income.

If there is a loss in the capital income category a reduction of tax on income from employment and from business operations and of municipal real estate fee and property tax is allowed. A tax reduction of 30% is allowed on loss not exceeding 100 000 SEK and a tax reduction of 21% is allowed on any remaining loss. Losses cannot be carried forward to later fiscal years.

### *Dividends*

Dividends on listed shares are taxed in the capital income category at a rate of 30%. For individuals fully taxable in Sweden a preliminary tax of 30% is generally withheld by Euroclear or in the case of nominee-registered shares by the nominee.

## Limited companies

### *Tax on capital gains and dividends*

Limited liability companies are normally taxed for all income including capital gains in the category business income at a rate of 22%. For information on the calculation of capital gain and capital loss, see above under "*Individuals*".

Deductible capital losses on shares may only be deducted against capital gains on shares and other ownership interests. Provided that certain conditions are fulfilled, such capital losses may also be deducted against capital gains on shares and other ownership interests in other companies in the same group, provided that a right to make group contributions exists. Capital losses that cannot be utilized in a given fiscal year may be carried forward and offset against capital gains on shares and other ownership interests in future fiscal years, without limitation in time.

## SHAREHOLDERS WHO HAVE LIMITED TAX LIABILITY IN SWEDEN

### Tax on capital gains

Shareholders in the Company who have limited tax liability in Sweden and whose holdings are not attributable to a permanent establishment in Sweden are normally not taxed in Sweden for capital gains in connection with the sale of shares in the Company. These shareholders may, however, be subject to income taxation in their country of residence.

According to a special rule individuals with limited tax liability in Sweden may be subject to Swedish capitals gain tax at the sale of ownership rights (e.g. shares, subscription rights, convertible redemption rights and sales rights concerning shares or shares in investment funds) if they at any time during the year of disposal or any of the ten preceding calendar years have been residents or lived permanently in Sweden. The rule is also applicable to estates after Swedes living abroad. The right to taxation may, however, be limited by tax treaties between Sweden and other countries.

### Withholding tax

Shareholders who have limited tax liability in Sweden and who receive dividends on shares in a Swedish limited liability company are normally subject to Swedish withholding tax at a rate of 30%. The tax rate is however generally reduced through tax treaties that Sweden has entered into with other countries. Most of Sweden's tax treaties enable a reduction of the Swedish tax to the treaty rate directly at the time of dividend payment if the necessary information about the dividend recipient is provided. In Sweden the deduction of withholding tax is normally made by Euroclear, or for nominee-registered shares by the nominee.

If a 30% withholding tax is withheld from a dividend payment to a person who has the right to be taxed at a lower rate, or if too much withholding tax has otherwise been withheld, repayment can be requested from the Swedish Tax Agency before the end of the fifth calendar year after the dividend payment.

# Certain U.S. federal tax considerations and transfer restrictions

The reader is asked to note the following.

The following section *Certain U.S. federal Tax Considerations* on pages 147–152 is only applicable to U.S. citizens and persons resident in the United States, and to U.S. companies and some non-US companies that have a connection to the United States. This section is not applicable to persons not resident in the United States or not related to the United States.

The subsequent section *Transfer restrictions* on pages 153–154 is applicable to Rule 144A-shares and is only relevant to investors acquiring shares in the United States according to Rule 144A in the Securities Act. The transfer restrictions applicable to Regulation S shares are relevant to all other investors in shares.



# Certain U.S. Federal tax considerations

*Investors are hereby notified that (a) any information in the Offering Circular concerning U.S. federal tax issues is not intended or written to be relied upon, and cannot be relied upon, by holders for the purpose of avoiding penalties that may be imposed on holders under the U.S. Internal Revenue Code of 1986, as amended (the “Code”); (b) such information is included by the Company in connection with its promotion or marketing of the Offering or matters addressed herein; and (c) investors should seek advice based on their particular circumstances from an independent tax advisor.*

## INTRODUCTION

The following is a general description of certain U.S. federal income tax consequences that may be relevant with respect to the acquisition, ownership and disposition of shares by a U.S. Holder (as defined below). This summary deals only with initial purchasers of shares in the Offering who use USD as their functional currency and will hold the shares as capital assets (within the meaning of Section 1221 of the Code).

This description does not purport to address all material U.S. tax consequences of the acquisition, ownership and disposition of shares and it does not address aspects of U.S. federal taxation that may be applicable to investors that are subject to special tax rules, including without limitation:

- ▲ certain financial institutions;
- ▲ dealers or certain traders in securities;
- ▲ real estate investment trusts, regulated investment entities or grantor trusts;
- ▲ persons holding shares as part of a straddle, wash sale, conversion transaction or integrated transaction, or persons entering into a constructive sale with respect to the shares;
- ▲ persons not using USD as their functional currency for U.S. federal income tax purposes;
- ▲ persons who receive shares as compensation for the performance of services;
- ▲ persons who are resident in or have a permanent establishment in Sweden;
- ▲ tax-exempt entities;
- ▲ certain U.S. expatriates;
- ▲ “double resident” corporations;
- ▲ persons that own or are deemed to own 10% or more of the Company’s voting stock; or
- ▲ persons holding shares in connection with a trade or business outside the United States.

Further, this description does not address state, local, non-U.S. or other tax laws, the U.S. alternative minimum tax, the 3,8% U.S. federal Medicare tax on net investment income, or the U.S. federal gift and estate tax consequences of the acquisition, ownership and disposition of shares.

This description is based on the Code, its legislative history, existing and proposed regulations promulgated thereunder, published rulings and court decisions, as well as on the Income Tax Convention between the United States and Sweden for avoidance of double taxation (the “**Treaty**”), in each case as in effect on the date of this Offering Circular, all of which are subject to change (or to changes in interpretation), possibly with retroactive effect. The Company has not requested, and does not intend to request, a ruling from the U.S. Internal Revenue Service (the “**IRS**”) with respect to matters addressed herein.

## U.S. HOLDERS

You are a “U.S. Holder” for purposes of this discussion if for U.S. federal income tax purposes you are a beneficial owner of the Company’s shares and are:

- ▲ a citizen or individual resident of the United States;
- ▲ a corporation created or organized in or under the laws of the United States, any state therein or the District of Columbia;
- ▲ an estate the income of which is subject to U.S. federal income taxation regardless of its source; or
- ▲ a trust if (i) a court within the United States is able to exercise primary supervision over its administration and one or more U.S. persons have the authority to control all of the substantial decisions of such a trust, or (ii) the trust has a valid election in effect to be treated as a U.S. person for U.S. federal income tax purposes.

If a partnership (or any other entity treated as a partnership for U.S. federal income tax purposes) holds shares, the tax treatment of the partnership and its partners will generally be dependent on the status of the partner and the activities of the partnership. Such a partner or partnership should consult its advisor as to the U.S. federal tax consequences of acquiring, owning or disposing of the shares.

THE FOLLOWING SUMMARY OF U.S. FEDERAL INCOME TAX CONSEQUENCES IS FOR GENERAL INFORMATION ONLY. ALL POTENTIAL BUYERS ARE RECOMMENDED TO CONSULT THEIR TAX ADVISORS AS TO THE PARTICULAR TAX CONSEQUENCES APPLICABLE WHEN THEY HOLD THE SHARES, INCLUDING THE APPLICABILITY AND EFFECT OF STATE, LOCAL, NON-U.S. AND OTHER TAX LAWS AND POSSIBLE CHANGES IN TAX LAWS.

THE COMPANY BELIEVES THAT IT WAS NOT A “PASSIVE FOREIGN INVESTMENT COMPANY” OR “PFIC” IN 2016. HOWEVER, AS THE DETERMINATION OF PFIC STATUS MUST BE MADE AT THE END OF EACH TAXABLE YEAR, THERE CAN BE NO ASSURANCE THAT THE COMPANY WILL NOT BE CONSIDERED A PFIC FOR ITS CURRENT TAXABLE YEAR OR ANY FUTURE TAXABLE YEAR. POTENTIAL U.S. INVESTORS SHOULD REVIEW THE INFORMATION UNDER “PASSIVE FOREIGN INVESTMENT COMPANY” BELOW.

### TAXATION OF DISTRIBUTIONS

Subject to the PFIC rules discussed below, distributions paid on the shares (including the amount of any Swedish tax withheld) other than certain pro rata distributions of shares to all shareholders, will be treated as dividends to the extent they are paid out of the Company’s current or accumulated earnings and profits, as determined under U.S. federal income tax principles. As the Company does not maintain calculations of its earnings and profits under U.S. federal income tax principles, it is expected that distributions generally will be reported to you as dividends.

Subject to applicable limitations, if you are a non-corporate U.S. Holder, dividends paid to you may be eligible for taxation as “qualified dividend income” and therefore may be taxable at favorable rates. Dividends will be treated as qualified dividends (a) if certain holding period requirements are satisfied, (b) if the Company is eligible for benefits according to the Treaty that the IRS has approved for purposes of the qualified dividend rules, and (c) provided that the Company was not a PFIC in the year prior to the year in which the dividend was paid, and is not a PFIC in the year in which the dividend is paid. The Treaty has been approved for the purposes of the qualified dividend rules. Whether we are eligible for benefits under the Treaty may depend upon whether there is substantial and regular trading in our stock on a recognized stock exchange. Thus, each potential non-corporate investor should consult with its tax advisor regarding whether the Company will be eligible for benefits under the Treaty for purposes of the qualified dividend rules. In addition, as discussed below under “*Passive Foreign Investment Company*”, the Company does not believe that it was a PFIC in 2016. However, as the determination of PFIC status must be made annually at the end of each taxable year, there can be no assurance that the Company will not be considered a PFIC for its 2017 taxable year or any future taxable year. See the

information below under “*Passive foreign investment companies*”. Accordingly, the Company strongly urges potential non-corporate investors to consult with their tax advisors regarding the availability of the reduced tax rate on qualified dividends.

Dividends will generally be included in your income on the date of receipt. Dividends will not be eligible for the dividends-received deductions generally available to U.S. corporations under the Code. The amount of any dividend income paid in SEK will be the USD amount calculated by reference to the spot rate in effect on the date of receipt, regardless of whether the payment is in fact converted into USD. If the dividend is converted into USD on the date of receipt, you should not be required to recognize foreign currency gain or loss in respect to the amount received. You may have foreign currency gain or loss if the dividend is converted into USD after the date of receipt, and any such gain or loss will be U.S.-source ordinary income or loss.

Dividends will be treated as foreign-source dividend income for foreign tax credit purposes. Subject to applicable limitations, some of which may vary depending on your circumstances, Swedish income taxes withheld from dividend payments on shares at a rate not exceeding and the applicable Treaty rate will be creditable against your U.S. federal income tax liability. Swedish income taxes withheld in excess of the applicable Treaty rate will not ordinarily be eligible for credit against your U.S. federal income tax liability. The rules governing foreign tax credits are complex and you should consult your tax advisor regarding the creditability of foreign taxes in your particular circumstances. Instead of claiming a foreign tax credit you may, subject to applicable restrictions, elect to deduct foreign taxes, including any Swedish taxes, when computing your taxable income. An election to deduct foreign taxes instead of claiming foreign tax credits applies to all foreign taxes paid or accrued in the relevant taxable year.

### SALE OR OTHER TAXABLE DISPOSITION OF SHARES

Subject to the PFIC rules discussed below, you generally will recognize taxable gain or loss on a sale or other taxable disposition of the shares equal to the difference between the amount realized on the sale or disposition and your tax basis in the shares, each as determined in USD. This gain or loss will generally be capital gain or loss, and will be long-term capital gain or loss if at the time of the sale or disposition the shares have been held for more than one year. Any gain or loss will generally be U.S.-source for foreign tax credit purposes. The deductibility of capital losses is subject to limitations.

If you receive SEK (or a currency other than USD) upon a sale, exchange or other taxable disposition of the shares, the amount realized generally will be the USD value of the payment received, determined on (a) the date of receipt of payment in the case of a cash basis U.S. Holder and (b) the date of disposition in the case of an accrual basis U.S. Holder. If the shares are traded on an

“established securities market” a cash basis taxpayer, or if it so elects, an accrual basis taxpayer, will determine the USD value of the amount realized by translating the amount received at the spot rate of exchange on the settlement date of the sale. A U.S. Holder will have a tax basis in the foreign currency received equal to the USD amount realized. Any foreign currency exchange gain or loss realized on a subsequent conversion of the foreign currency into USD for a different amount will generally be treated as ordinary income or loss from sources within the United States. However, if such foreign currency is converted into USD on the date received by the U.S. Holder, a cash basis or electing accrual basis U.S. Holder should not recognize any foreign currency gain or loss on such conversion.

### PASSIVE FOREIGN INVESTMENT COMPANY

A non-U.S. corporation will be classified as a “passive foreign investment company” or PFIC, for U.S. federal income tax purposes in any taxable year in which, after applying certain look-through rules, either:

- ▲ at least 75.0% or more of its gross income is “passive income”; or
- ▲ at least 50.0% or more of the quarterly average value of its gross assets is attributable to assets that produce “passive income” or are held for the production of passive income.

Passive income for this purpose generally includes, among other things, dividends, interest, royalties, rents and gains from commodities and securities transactions and from the sale or exchange of property that gives rise to passive income. However, royalties and gains derived in the active conduct of a trade or business in certain circumstances are considered active income. In determining whether a non-U.S. corporation is a PFIC a proportional share of the income and assets of each corporation in which it owns, directly or indirectly, at least 25.0% (by value) is taken into account. Based upon the Company’s financial statements and its existing operations and assets, the Company believes that it was not a PFIC for the tax year ended December 31, 2016. Since PFIC status depends upon the composition of the Company’s income and assets and the market value of the Company’s assets from time to time (which will be measured by the Company’s stock price) and as the determination of PFIC status must be made annually at the close of each taxable year, there can be no assurance as to the Company’s status in this respect for 2017 or any future taxable year. The Company’s PFIC status may be affected by changes in the nature of the Company’s income or assets, the rate at which the Company utilizes the proceeds of the Offering, or a decrease in the trading price of the Company’s shares. If the Company were a PFIC in any year during a U.S. investor’s holding period for the shares, the Company would ordinarily continue to be treated as a PFIC for each subsequent year during which the U.S. investor owns the shares, and similar rules could apply to

the Company’s subsidiaries that are or become PFICs.

If the Company is a PFIC for any taxable year, a direct (and in some cases indirect, a U.S. Holder generally would be subject to special rules with respect to (i) any gains realized on the sale or other disposition of the shares, and (ii) any “excess distribution” received from the Company in respect of the shares (generally any distributions to the holder in respect of the shares during a single taxable year that total more than 125% of the average annual distributions received by the U.S. Holder in respect of the shares during the three preceding taxable years (or, if shorter, the U.S. Holder’s holding period for the shares)). Under these rules, (a) the gain or excess distribution is allocated ratably over the U.S. Holder’s holding period for the shares, (b) the amount allocated to the taxable year in which the gain or excess distribution is realized or to any year before the Company became a PFIC would be taxable as ordinary income during the current fiscal year, (c) the amount allocated to each other taxable year would be subject to tax at the highest rate in effect for ordinary income for that year, and (d) an interest charge, at the rate generally applicable to an underpayment of tax, would be imposed in respect of the tax attributable to each prior year described in (c). These rules effectively prevent a U.S. Holder from treating gain on the shares as capital gain. For these purposes, gifts, exchanges pursuant to a corporate reorganization and use of the shares as security for a loan may be treated as dispositions.

The above adverse U.S. tax results may be minimized if a U.S. Holder in a PFIC is eligible for and timely makes a valid qualified electing fund (“**QEF election**”). If a QEF election is made, such a U.S. Holder generally will be required to include in income on a current basis its pro rata share of the Company’s ordinary income and net capital gains. In order for a U.S. Holder to be able to make a QEF election the Company is required to provide the U.S. Holder with certain information. As the Company does not expect to provide U.S. Holders with the required information, prospective investors should assume that a QEF election will not be available.

Another way a U.S. Holder may minimize adverse PFIC tax consequences is by making a “mark-to-market” election. A mark-to-market election is available to a U.S. Holder only if the shares are considered “marketable stock”. Generally, stock will be considered marketable stock if it is “regularly traded” on a “qualified exchange” within the meaning of applicable U.S. Treasury regulations. A class of stock is regularly traded during any calendar year during which such class of stock is traded, other than in de minimis quantities, on at least 15 days during each calendar quarter. A qualified exchange includes a non-U.S. securities exchange that is regulated or supervised by a governmental authority of the country in which the securities exchange is located and meets certain trading, listing, financial disclosure and other requirements set forth in U.S. Treasury regulations. It is unclear whether Nasdaq Stockholm would be treated as

a “qualified exchange” for these purposes. If the Company’s stock qualifies as “marketable stock” a U.S. Holder who makes the mark-to-market election, for each year in which the Company is a PFIC, will generally include as ordinary income the excess, if any, of the fair market value of the shares at the end of the taxable year over their adjusted tax basis, and will be permitted an ordinary loss in respect of the excess, if any, of the adjusted tax basis of the shares, over their fair market value at the end of the taxable year (but only to the extent of the net amount of previously included income as a result of the mark-to-market election). If a U.S. Holder makes the election, the holder’s tax basis in the shares will be adjusted to reflect the amount of any such income or loss. Any gain or loss recognized on the sale or other disposition of shares in a year in which the Company is a PFIC will be treated as ordinary income or ordinary loss. The mark-to-market election, however, is inapplicable to any subsidiaries of the Company that are PFICs since their shares are not “marketable stock”. Any excess distribution from a subsidiary of the Company or gain or loss on a disposition of stock in such a subsidiary will be subject to the adverse U.S. tax rules initially discussed above. U.S. Holders should consult their tax advisors regarding the availability or advisability of the mark-to-market election.

If the Company were regarded as a PFIC, a U.S. Holder of the shares generally would be required to file an information return on IRS Form 8621 for any year in which it receives a direct or indirect distribution with respect to the shares, recognizes gain on direct or indirect disposition of the shares, or makes an election with respect to the shares, reporting distributions received and gains realized with respect to the shares. In addition, if the Company were regarded as a PFIC, a U.S. Holder of the shares would be required to file an annual information return (also on IRS Form 8621) relating to the holder’s ownership of the shares. This requirement would be in addition to other reporting requirements applicable to ownership in a PFIC.

U.S. Holders should consult their tax advisors concerning the U.S. federal income tax consequences of holding the shares if the Company were considered to be a PFIC.

## BACKUP WITHHOLDING AND INFORMATION REPORTING

Payments of dividends and sales proceeds that are made within the United States or through U.S. or certain U.S.-related financial intermediaries will generally be subject to information reporting and backup withholding, unless (i) you are an exempt recipient or (ii) in the case of backup withholding, you provide a correct taxpayer indication number and certify that you are not subject to backup withholding. Any amounts withheld under the backup withholding rules will be allowed as a refund or a credit against your U.S. federal income tax liability, provided that the required information is timely furnished to the IRS.

Certain individual U.S. Holders (and under proposed Treasury regulations, certain entities) may be required to report to the IRS information with respect to their investment in the shares not held through an account with a U.S. financial institution. U.S. Holders who fail to report required information could become subject to substantial penalties. U.S. Holders are encouraged to consult with their own tax advisors regarding foreign financial asset reporting requirements with respect to their investment in the shares.

U.S. Holders who acquire any of the shares for cash may be required to file an IRS Form 926 (Return by a U.S. Transferor of Property to a Foreign Corporation) with the IRS and to supply certain additional information to the IRS if (i) immediately after the transfer, the U.S. Holder owns directly or indirectly (or by attribution) at least 10% of the Company’s total voting power or value, or (ii) the amount of cash transferred to the Company in exchange for the shares when aggregated with all related transfers under applicable regulations exceeds 100 TUSD. Substantial penalties may be imposed on a U.S. Holder who fails to comply with this reporting requirement. Each U.S. Holder is urged to consult with its own tax advisor regarding these reporting obligations.



# Transfer restrictions

*The Shares in the Offering have not been, and will not be, registered under the United States Securities Act of 1933, as amended, or with any securities regulatory authority of any state of the United States, and may not be offered or sold, except in a transaction not subject to, or pursuant to an exemption from, the registration requirements of the Securities Act. In addition, until the end of the 40th calendar day after the closing of the Offering, an offer or sale of Shares within the United States by a dealer (whether or not participating in the Offering) may violate the registration requirements of the Securities Act if such offer or sale is made otherwise than in accordance with Rule 144A under the Securities Act.*

## **RULE 144A SHARES**

Each purchaser of Shares in the Offering within the United States purchasing pursuant to Rule 144A under the Securities Act or another exemption from the registration requirements of the Securities Act will be deemed to have represented, agreed and acknowledged that:

- ▲ it has received a copy of the Offering and such information as it deems necessary to make an informed investment decision;
- ▲ the Shares in the Offering have not been, and will not be, registered under the Securities Act or with any securities regulatory authority of any state of the United States, and may not be offered or sold, except in a transaction not subject to, or pursuant to an exemption from, the registration requirements of the Securities Act and are subject to significant restrictions on transfer;
- ▲ it (a) is a QIB as that term is defined in Rule 144A under the Securities Act, (b) is aware that, and each beneficial owner of such Shares has been advised that, the sale to it is being made in reliance on Rule 144A under the Securities Act or pursuant to another exemption from, or in a transaction not subject to, the registration requirements of the Securities Act, (c) is acquiring such Shares in the Offering for its own account or for the account of a QIB and (d) if it is acquiring such Shares for the account of one or more QIBs, has sole investment discretion with respect to each such account and has full power to make the representations, agreements and acknowledgements herein on behalf of each such account;
- ▲ the Shares in the Offering are being offered in the United States in a transaction not involving any public offering in the United States within the meaning of the Securities Act;
- ▲ if, in the future, it decides to offer, resell, pledge or otherwise transfer Shares sold in the Offering, such Shares may be offered, sold, pledged or otherwise

transferred only (a) to a person whom the beneficial owner or any other person acting on its behalf reasonably believes is a QIB in a transaction meeting the requirements of Rule 144A, (b) in an offshore transaction in accordance with Rule 903 or Rule 904 of Regulation S under the Securities Act, or (c) in accordance with Rule 144 under the Securities Act (if available), in each case in accordance with any applicable securities laws of any state of the United States or any other jurisdiction;

- ▲ the Shares in the Offering are “restricted securities” within the meaning of Rule 144(a)(3) under the Securities Act and no representation is made as to the availability of the exemption provided by Rule 144 for the resale of any Shares;
- ▲ it will not deposit or cause to be deposited the Shares in the Offering into any depository receipt facility established or maintained by a depository bank other than a Rule 144A restricted depository receipt facility, for so long as such Shares are “restricted securities” within the meaning of Rule 144(a)(3) under the Securities Act;
- ▲ The Company, Joint Bookrunners and their respective affiliates and others relies upon the truth and the accuracy of the foregoing representations, agreements and acknowledgements are true and correct; and;
- ▲ The Company shall not recognize any offer, sale, pledge or other transfer of the Shares made otherwise than in compliance with the above stated restrictions.

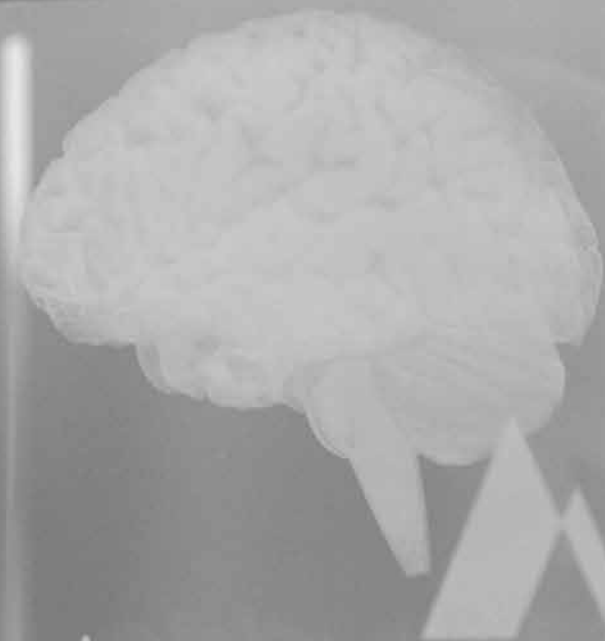
PROSPECTIVE PURCHASERS ARE HEREBY NOTIFIED THAT SELLERS OF SHARES PURCHASED WITHIN THE UNITED STATES PURSUANT TO RULE 144A MAY BE RELYING ON THE EXEMPTION FROM THE PROVISIONS OF SECTION 5 OF THE SECURITIES ACT PROVIDED BY RULE 144A UNDER THE SECURITIES ACT.



**REGULATION S SHARES**

Each purchaser of the Shares in the Offering purchasing pursuant to Regulation S will be deemed to have represented, agreed and acknowledged that (terms used in this paragraph that are defined in Regulation S are used herein as defined therein):

- ▲ it has received a copy of the Offering and such other information as it deems necessary to make an informed investment decision;
- ▲ the Shares in the Offering have not been, and will not be, registered under the Securities Act, or with any securities regulatory authority of any state of the United States;
- ▲ it and the person, if any, for whose account or benefit it is acquiring the Shares in the Offering was located outside the United States at the time that the buy order for the shares was originated for the purposes of Rule 903 of Regulation S under the Securities Act;
- ▲ if it is acquiring Shares as a fiduciary or agent for one or more investor accounts, it has sole investment discretion with respect to each such account and it has full power to make the representations, agreements and acknowledgements herein on behalf of each such account;
- ▲ the Shares in the Offering are being offered outside the United States pursuant to Regulation S and, subject to certain exceptions, such Shares may not be offered or sold within the United States;
- ▲ it is aware of the restrictions on the offer and sale of the Shares in the Offering pursuant to Regulation S described in this Offering Circular.
- ▲ the Company, the Joint Bookmakers and their respective affiliates and others relies upon the truth and accuracy of the foregoing representations, agreements and acknowledgements; and
- ▲ the Company shall not recognize any offer, sale, pledge or other transfer of the Shares made otherwise than in compliance with the above stated restrictions.



abbvie BIOARCTIC

AbbVie enters into  
Collaboration with BioArctic  
for Parkinson's Disease Research

September 2016

# Historical financial information

## Interim report January – June 2017



### Interim Report January - June 2017

*Unless otherwise stated in this report, all data refers to the Group. Figures in parentheses relate to the corresponding period in 2016.*



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#### Financial Calendar

Interim Report Jan – Sep, Nov 8, 2017
Full Year Report 2017, Feb 20, 2018

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## The projects progressed well during the period and BioArctic prepares IPO

### April - June 2017

- Net sales for the period amounted to SEK 32.0 million (1.0)
- Earnings before interest and taxes (EBIT) amounted to SEK 2.5 million (-11.2)
- Net result amounted to SEK 2.3 million (-8.7)
- Result after tax per share SEK 0.55 SEK (-2.07)
- Cash flow from operating activities amounted to SEK -27.6 million (-11.3)

### January - June 2017

- Net sales for the period amounted to SEK 58.2 million (10.0)
- Earnings before interest and taxes (EBIT) amounted to SEK 3.9 million (-12.5)
- Net result amounted to SEK 3.4 million (-9.6)
- Result after tax per share SEK 0.82 (-2.29)
- Cash flow from operating activities amounted to SEK -66.0 million (-20.6)

### Key events during the period April – June 2017

- Alzheimer's disease: An Independent Monitoring Committee has conducted an additional interim analysis and recommended continuing the clinical Phase 2b study with BAN2401 for patients with early Alzheimer's disease.
- Parkinson's disease: The European Patent Office announced its intention to approve BioArctic's patent application for the BAN0805 antibody for Parkinson's disease in the EU.
- Complete Spinal Cord Injury:
  - An independent expert committee (Data Monitoring Committee) has performed an interim analysis evaluating safety and tolerability. The result of the analysis supports continuing the clinical study with SC0806.
  - Submitted amendments to the study protocol regarding the clinical study with SC0806 were approved by the ethics committee and the Swedish Medical Products Agency.
  - EU's Horizon2020 has accepted the inclusion of rehabilitation clinics in Estonia and Norway as new beneficiaries in the SC0806 clinical Phase 1/2 study.
- The Annual General Meeting was held on May 31, 2017. See "Other information" for more information on the decisions taken at the Annual General Meeting.
- Mikael Smedeby left his position as Director of the Board in order to meet the Stock Exchange's requirements concerning the number of independent board members.
- Jan Mattsson was employed as CFO effective August 1. He has been working as CFO in the company as a consultant since February 2017.

### Key events after the period

- There are no significant events to report after the period.

## Financial summary

SEKm	Apr-Jun 2017	Apr-Jun 2016	Jan-Jun 2017	Jan-Jun 2016	Jan-Dec 2016
Net sales	32.0	1.0	58.2	10.0	105.6
Other operating income	5.2	3.2	5.9	5.4	39.1
Earnings before interest and tax (EBIT)	2.5	-11.3	3.9	-12.5	74.6
Net financial items	0.5	0.2	0.5	0.3	-0.5
Net result	2.3	-8.7	3.4	-9.6	57.6
Earnings after tax per share, SEK <sup>1) 2)</sup>	0.55	-2.07	0.82	-2.29	13.70
Cash flow from operating activities	-27.6	-11.3	-66.0	-20.6	675.1
Cash flow from operating activities per share, SEK <sup>1)</sup>	-6.57	-2.68	-15.70	-4.91	160.59
Equity/assets ratio	10.0%	88.2%	10.0%	88.2%	8.6%
Return on shareholders' equity, %	3.7%	-8.4%	5.5%	-9.3%	68.1%
Equity per share, SEK <sup>1)</sup>	15.27	23.47	15.27	23.47	14.45
Number of shares, before and after dilution <sup>1)</sup>	4 203 999	4 203 999	4 203 999	4 203 999	4 203 999
Average number of shares <sup>1)</sup>	4 203 999	4 203 999	4 203 999	4 203 999	4 203 999

Definitions, see page 17.

<sup>1</sup> There are no potential shares and thus there is no dilutive effect.

## About BioArctic

BioArctic is a research based biopharmaceutical company focusing on disease modifying treatments and reliable biomarkers and diagnostics for neurodegenerative diseases, such as Alzheimer's disease and Parkinson's disease. The company also develops an innovative treatment for Complete Spinal Cord Injury. The company focuses on innovative treatments in areas with high unmet medical needs.

The company has high scientific competence and experience in developing drugs from idea to market through employees and key consultants. Collaborations with universities are of great importance to the company together with the strategically important global partners in the Alzheimer and Parkinson projects. BioArctic conducts its own clinical development in the field of complete spinal cord injury. Through long-term collaboration agreements with global pharmaceutical companies, BioArctic has demonstrated high skills and good ability to deliver innovative pharmaceutical projects.

In Alzheimer's disease, BioArctic has collaborated with Eisai since 2005. The company has entered into a total of three research collaboration agreements and two license agreements relating to the antibodies BAN2401 and BAN2401 Back-up. The total aggregated value of these agreements may amount to EUR 218 million as well as royalties. So far, EUR 50 million has been received. In Parkinson's disease, BioArctic has collaborated with AbbVie since 2016 when a research collaboration agreement was concluded including, among other things, the antibody BAN0805. AbbVie is entitled to acquire a license to develop and commercialize the antibodies. The total aggregated value of the agreement may amount to USD 755 million as well as royalty payments of which USD 80 million has so far been received.

The project portfolio is a combination of fully funded projects run in partnership with global pharmaceutical companies and innovative in-house projects with significant market- and out-licensing potential. An IPO is being prepared in order to enable efficient progression of the in-house projects. For information about the projects, see the section Project portfolio.



## Comments on the period by the CEO

With patients in focus, BioArctic develops disease modifying drugs with the aim of stopping or slowing down the progression of Alzheimer's disease and Parkinson's disease, based on the company's antibodies (immunotherapy). BioArctic also develops an innovative treatment for Complete Spinal Cord Injury. The goal is to develop effective treatments that substantially improve the patients' quality of life.

BioArctic's strategy is to build a research portfolio with a number of innovative projects successively reaching a suitable point for entering into partnerships with global pharma companies. Our research and development work is proceeding in line with this strategy.

All BioArctic's projects have developed well during the period. The company has scientifically leading and financially strong partners in both Alzheimer's disease and Parkinson's disease, which is a quality mark. I can thus note that BioArctic is developing strongly with an increased number of employees and consultants.

Among our five projects for treatment of patients with early stage Alzheimer's disease, BAN2401 is the most advanced, in collaboration with Eisai. The clinical Phase 2b study continues and includes 856 patients being treated for 18 months. Patients in the US, Canada, Europe, Japan and South Korea are included. The analyzed results from the Phase 2b study are expected to be available in the first half of 2019 at the latest.

Together with research groups at Uppsala University, we are developing a completely new type of PET tracer (positron emission tomography) for imaging of the brain in connection with Alzheimer's disease by using BioArctic's antibodies. This will create a tool

that enables better diagnosis of Alzheimer's disease, monitoring of progression of the disease and objective measuring of the effect of drug treatment. Our ambition is to create a tool that can be used in research and drug development as well as in commercial applications.

As a result of the research collaboration with AbbVie in Parkinson's disease, we have recruited more employees, gained increased resources and are able to drive the BAN0805 project considerably faster towards clinical studies. In the second quarter, the European Patent Office announced its intention to approve BioArctic's patent application for the BAN0805 antibody for Parkinson's disease in the EU.

In the Spinal Cord Injury project, an Independent Monitoring Committee has performed an interim analysis evaluating safety and tolerability. The result of the analysis supports the continuation of the clinical study with SC0806 for patients with Complete Spinal Cord Injury. We are also pleased that EU's Horizon2020 has accepted the inclusion of rehabilitation clinics in Estonia and Norway as new beneficiaries in the SC0806 clinical Phase 1/2 study.

So far the year has been characterized by high expectations and great enthusiasm for the continued positive development of the company. Intensive work is ongoing in order to prepare for an IPO. We are looking forward to the important activities ahead of us during the rest of the year.



**Gunilla Osswald**  
CEO, BioArctic AB

## Project portfolio

Overview of BioArctic's project portfolio

	Product candidate	Indication	Partner	Discovery	Pre-clinical	Phase 1	Phase 2	Phase 3
Neurodegenerative diseases	BAN2401 (anti-Aβ antibody)	Alzheimer's Disease		█	█	█	█	█
	BAN2401 (anti-Aβ antibody)	Down's syndrom <sup>2)</sup> Traumatic Brain Injury		█	█	█	█	█
	BAN2401 Back-up (anti-Aβ antibody)	Alzheimer's Disease		█	█	█	█	█
	AE1501 (undisclosed)	Alzheimer's Disease		█	█	█	█	█
	AE1502 (undisclosed)	Alzheimer's Disease		█	█	█	█	█
	AE1503 (undisclosed)	Alzheimer's Disease		█	█	█	█	█
	BAN0805 (anti-alpha-synuclein antibody)	Parkinson's Disease		█	█	█	█	█
Diagnostics & technology	Biomarkers and diagnostics (Aβ)	Alzheimer's Disease		█	█	█	█	█
	Biomarkers and diagnostics (alpha-synuclein)	Parkinson's Disease		█	█	█	█	█
	BBB <sup>3)</sup> -technology (blood-brain barrier)	Multiple application areas		█	█	█	█	█
Spine	SC0806 (FGF1/device)	Complete spinal cord injury		█	█	█	█	█

1) Partner with Eisai on BAN2401 for treatment of Alzheimer's disease.  
 2) Dementia and cognitive impairment associated with Down's syndrome.  
 3) Blood-brain barrier

Source: Company data

BioArctic's project portfolio at June 30, 2017:

BioArctic has two projects in clinical phase: BAN2401 for Alzheimer's disease and SC0806 for patients with Complete Spinal Cord Injury.

The company has four projects in preclinical development: BAN2401 for Down's Syndrome with dementia and Traumatic Brain Injury (TBI), BAN2401 Back-up for Alzheimer's disease, BAN0805 for Parkinson's disease and biomarker and diagnostics projects for Alzheimer's disease.

In research phase there are three projects for Alzheimer's disease (AE1501, AD1502, AD1503), Parkinson's disease follow-up projects, biomarker and diagnostics projects for Parkinson's disease, as well as a blood-brain barrier technology project.

### Neurodegenerative diseases

The key molecular event in Alzheimer's disease and Parkinson's disease is believed to be protein misfolding and aggregation. The spreading of soluble aggregates leads to neuronal dysfunction, cell death, brain damage and symptoms of disease. Each neurodegenerative disease is characterized by its unique aggregated protein. The hallmark of Alzheimer's disease is amyloid beta, whereas alpha-synuclein is the signature protein of Parkinson's disease. Our disease modifying treatment strategy is to eliminate the aggregates of the toxic misfolded proteins using the company's oligomer/protofibril selective antibodies in the brain.

The goal is to increase the effect of the treatment without increasing the risks for side effects.

### BAN2401

**Alzheimer's disease:** BAN2401 is a drug candidate (an antibody) for the treatment of early stage Alzheimer's disease. The aim is to develop a disease modifying treatment. A Phase 2b clinical study is ongoing in the United States, Canada, Europe, Japan and South Korea. The study includes 856 patients who are treated for 18 months. An Independent Monitoring Committee has conducted an additional interim analysis and in the quarter recommended continuing the clinical Phase 2b study with BAN2401 for

patients with early Alzheimer's disease. Eisai is responsible for the clinical development. The project is based on innovative research at Uppsala University, Sweden.

*Down's syndrome with dementia:* BAN2401, which is now being clinically evaluated for the treatment of Alzheimer's disease, can potentially also be used for other indications such as Down's syndrome with dementia, as these patients develop dementia at around 40 years of age.

*Traumatic brain injury (TBI):* In 2015, BioArctic submitted a patent application for the antibodies BAN2401/BAN2401 Back-up for the treatment of Traumatic brain injury. Some of these patients develop dementia after the injury.

#### **BAN2401 Back-up**

The antibody is a further developed version of BAN2401 for the treatment of Alzheimer's disease. The antibody was developed by BioArctic in collaboration with Eisai which led to a new license agreement in 2015. The project is in late preclinical phase.

#### **AE1501**

In 2015 the collaboration with Eisai was extended to also include a project jointly owned by BioArctic and Eisai. The aim is to develop a future disease modifying treatment of Alzheimer's disease with a different target than those targeted in the projects BAN2401 and BAN2401 Back-up.

#### **AD1502 and AD1503**

At BioArctic innovative research is in progress to develop new antibodies for the treatment of Alzheimer's disease aimed at slowing down or stopping disease progression by addressing two new targets.

#### **BAN0805**

BAN0805 is a drug candidate (an antibody) for the treatment of Parkinson's disease. The aim is to develop a disease modifying treatment that stops or slows down disease progression. A collaboration with AbbVie was started in 2016 regarding the continued development of

the company's Parkinson program concerning BAN0805 with follow-up projects and diagnostics. The project is based on innovative research at Uppsala University.

#### **Diagnostics and technology**

*Alzheimer's disease diagnostics:* In collaboration with Uppsala University, BioArctic is developing a new type of PET tracer for imaging of the brain in Alzheimer's disease by using BioArctic's antibodies. The goal is to create tools to better diagnose the disease, follow the disease progression and objectively measure the effect of drug treatment.

*Improved biochemical methods:* BioArctic develops improved biochemical methods for the identification and precise measurement of responses to treatment of Alzheimer's disease and Parkinson's disease, and for the measurement of disease progression in the individual patient. This is done in collaboration with the University of Gothenburg, Sweden.

*Blood-brain barrier technique:* Together with Uppsala University BioArctic is developing a technique that enables better passage of antibodies and other substances into the brain via the blood brain barrier. This technique has potential and could become a general method for immunotherapy in brain diseases.

#### **Complete Spinal Cord Injury**

##### **SC0806**

SC0806 is an innovative potential treatment for patients with traumatic Complete Spinal Cord Injury. The product is a combination of a biodegradable medical device and a drug substance (FGF1). The first patient was treated in 2016 at Karolinska University Hospital, Sweden, with subsequent rehabilitation for 18 months. The product obtained orphan drug status in 2010 in the EU and in 2011 in the US, which can give the company 10 and 7 years exclusive rights on the European market and in the US, respectively.

## Comments on the report

The Group is referred to unless otherwise stated in this interim report. Figures in parentheses refer to the corresponding period last year. Amounts are expressed in kSEK (SEK thousands) unless otherwise stated. All amounts stated are rounded up or down, which may lead to some totals not matching exactly.

## Revenue, expenses and results

Because of the nature of the business operations, there may be large fluctuations between revenue for different periods.

Net sales in the second quarter amounted to SEK 32.0 million (1.0), an increase of SEK 31.0 million compared with the same period the previous year. First six months' net sales amounted to SEK 58.2 million (10.0), which was SEK 48.2 million higher than those of last year. The net sales increase referred mainly to revenues from the research collaboration with AbbVie in Parkinson's disease.

Other operating income relates to rental revenues, research grants and one-time payment for subleasing and amounted to SEK 5.2 million (3.2) for the quarter and SEK 5.9 million (5.4) for the period January – June.

Operating costs amounted to SEK 34.7 million (15.5) for the second quarter and to SEK 60.2 million (27.8) for the period. The increase is primarily explained by the increased research costs related to the collaboration agreement with AbbVie, but also by increased administrative costs due to a planned IPO and exchange-rate losses. The R&D costs have not been capitalized but are expensed in their entirety.

Operating profit before financial items (EBIT) was SEK 2.5 million (-11.2) for the second quarter and SEK 3.9 million (-12.5) for the period January – June.

The increase in profits is mainly attributable to the AbbVie research agreement entered into

in 2016, which affected net sales, R&D costs and administrative costs.

Net financial items totaled SEK 0.5 million (0.2) for the second quarter and SEK 0.5 million (0.3) for the first six months.

Profit after tax amounted to SEK 2.3 million (-8.7) for the second quarter and SEK 3.4 million (-9.6) for the period January – June.

Earnings per share before and after dilution amounted to SEK 0.55 (-2.07) for the second quarter and to SEK 0.82 (-2.29) for the period January – June 2017.

## Financial position

Equity amounted to SEK 64.2 million (98.7) at June 30, 2017. This corresponds to an equity per outstanding share of SEK 15.27 (23.47) before and after dilution. The reason for the decline is explained by a dividend of SEK 105.1 million at the end of 2016. The equity/assets ratio has declined from 88.2 % at June 30, 2016, to 10.0 % at the same point of time in 2017. The decline relates to the dividend and an upfront payment of USD 80 million from AbbVie. Only a minor part of the upfront payment has been recognized as revenue to date, since a large part of the upfront payment relates to planned deliveries in the Parkinson project.

Consolidated cash and cash equivalents consist of bank balances and at the end of the period amounted to SEK 622.1 million (93.4). There were no borrowings as at June 30, 2017, and no loans have been taken since this date. The Group has no other loans or loan commitments.

The Group's liquid funds are intended to be used mainly for agreed commitments and for daily operating activities. In order to reduce foreign exchange exposure some liquid funds are invested in foreign currency. This has reporting effects in connection with the recalculation of currency to current rate.

### Investments and cash flow

Investments in the period April – June amounted to SEK 0.4 million (0.0) and in the first six months to SEK 0.6 million (0.0).

The investments related to laboratory equipment and furniture.

Cash flow from operating activities for the second quarter amounted to SEK -27.6 million (-11.3) and for the first six months to SEK -66.0 million (-20.6). The total cash flow for the full financial year 2016 amounted to SEK 567.1 million. The company has an uneven incoming cash flow. Towards the end of 2016, an upfront payment of USD 80 million was received according to the collaboration agreement with AbbVie. Similar one-time payments have not been received in 2017.

### Other information

#### Annual General Meeting 2017

In addition to customary annual general meeting decisions the AGM decided:

- To increase the number of shares through a 1:15 share split, and to increase the share capital by approximately SEK 1.1 million through a bonus issue that adds funds from the unrestricted equity.
- To change the company category from private to public limited company.
- To adopt new articles of association tailored to the requirements of public companies.
- To authorize the board of directors\* to implement a distribution issue by, on one or more occasions during the time until the next annual general meeting, deciding on increasing the company's share capital by a new issue of shares by way of derogation from the shareholders' preferential rights and/or with provision for subscription in kind, set-off or other conditions. The authorization is valid until the date when the company's shares are admitted to trading on a market place, however, no later than the next annual general meeting.
- To authorize the board of directors\* to, on one or more occasions during the time until the next annual general meeting, decide on increasing the company's share capital by

issuing new shares, warrants or convertibles by way of derogation from the shareholders' preferential rights and/or with provision for subscription in kind, set-off or other conditions. The authorization is valid until the date when the company's shares are admitted to trading on a market place, however, no later than the next annual general meeting. The authorization is limited to an increase of the share capital by up to 10 percent.

- To set up a nomination committee and adopt guidelines for remuneration to senior executives.

*\* Comment: At the time of publication of this interim report, the board of directors has not exercised these authorizations.*

### Personnel

The number of employees in the Group was 27 (23) at the end of the period. Of these employees 11 (9) are men and 16 (14) are women.

Of the total employees about 95 percent are active in R & D. About 90 percent of the company's 27 employees are PhDs, and of those two are Associate Professors and two are Professors.

### Risks and uncertainties

The management makes assumptions, judgments and estimates that affect the content of the financial statements. Actual results may differ from these assumptions and estimates, as is also stated in the accounting principles. The objective of the Group's risk management is to identify, measure, control and limit the risks of the business. Significant risks are the same for the Parent Company and the Group. The risks can be divided into financial risks on the one hand and operational and external risks on the other. BioArctic's operational and external risks mainly consist of: risks related to research and development, clinical trials and dependence on key employees. A detailed description of exposure and risk management is presented in the Annual Report for 2016, pages 7-9.

### Parent Company

All the Group's business operations are conducted in the Parent Company.



## Consolidated income statement

All amounts in kSEK	Apr-Jun 2017	Apr-Jun 2016	Jan-Jun 2017	Jan-Jun 2016	Jan-Dec 2016
Net sales (Note 4)	32 018	1 001	58 192	9 991	105 613
Cost of goods sold	-	-	-266	-	-238
<b>Gross Profit</b>	<b>32 018</b>	<b>1 001</b>	<b>57 926</b>	<b>9 991</b>	<b>105 375</b>
Other operating income	5 176	3 232	5 914	5 367	39 073
Marketing expenses	-353	-344	-696	-689	-1 370
Administrative expenses	-6 887	-3 102	-10 648	-4 362	-14 544
Research and development costs	-25 968	-11 982	-43 324	-22 715	-53 665
Other operating expenses	-1 511	-48	-5 229	-100	-238
<b>Operating profit/loss</b>	<b>2 475</b>	<b>-11 243</b>	<b>3 943</b>	<b>-12 508</b>	<b>74 631</b>
Financial income	539	174	539	256	8
Financial expenses	-	-1	-12	-1	-503
<b>Result before tax</b>	<b>3 014</b>	<b>-11 070</b>	<b>4 470</b>	<b>-12 253</b>	<b>74 136</b>
Tax	-693	2 378	-1 034	2 626	-16 556
<b>Result for the period attributable to Parent Company shareholders</b>	<b>2 321</b>	<b>-8 692</b>	<b>3 436</b>	<b>-9 627</b>	<b>57 580</b>
Earnings per share, SEK	0.55	-2.07	0.82	-2.29	13.70
Total number of shares <sup>1)</sup>	4 203 999	4 203 999	4 203 999	4 203 999	4 203 999
Average number of shares <sup>1)</sup>	4 203 999	4 203 999	4 203 999	4 203 999	4 203 999

<sup>1)</sup> There are no potential shares and thus there is no dilutive effect.

## Consolidated statement of comprehensive income

All amounts in kSEK	Apr-Jun 2017	Apr-Jun 2016	Jan-Jun 2017	Jan-Jun 2016	Jan-Dec 2016
Net result for the period	2 321	-8 692	3 436	-9 627	57 580
Other comprehensive income	-	-	-	-	-
<b>Comprehensive income for the period</b>	<b>2 321</b>	<b>-8 692</b>	<b>3 436</b>	<b>-9 627</b>	<b>57 580</b>

## Consolidated balance sheet – summary

All amounts in kSEK	June 30, 2017	June 30, 2016	Dec 31, 2016
<b>ASSETS</b>			
Tangible fixed assets	5 305	3 481	5 644
Deferred tax assets	201	130	172
Other financial assets	2 675	8 345	2 675
Current assets excluding cash and cash equivalents	8 553	6 476	6 955
Cash and cash equivalents	622 063	93 411	692 530
<b>TOTAL ASSETS</b>	<b>638 797</b>	<b>111 843</b>	<b>707 976</b>
<b>SHAREHOLDERS' EQUITY AND LIABILITIES</b>			
Shareholders' equity	64 196	98 658	60 760
Deferred tax liabilities	4 136	-	4 136
Other current liabilities	10 466	3 887	19 744
Accrued expenses and deferred income	559 999	9 298	623 336
<b>TOTAL SHAREHOLDERS' EQUITY AND LIABILITIES</b>	<b>638 797</b>	<b>111 843</b>	<b>707 976</b>

## Consolidated statement of changes in equity – summary

All amounts in kSEK	Jan-Jun 2017	Jan-Jun 2016	Jan-Dec 2016
<b>Opening balance</b>	<b>60 760</b>	<b>108 285</b>	<b>108 285</b>
Total comprehensive income for the period	3 436	-9 627	57 580
Transactions with shareholders	-	-	-
Purchase of minority shares	-	-	-5
Paid dividend	-	-	-105 100
<b>Closing balance</b>	<b>64 196</b>	<b>98 658</b>	<b>60 760</b>

## Consolidated statement of cash flow

All amounts in kSEK	Apr-Jun 2017	Apr-Jun 2016	Jan-Jun 2017	Jan-Jun 2016	Jan-Dec 2016
<b>Operating activities</b>					
<b>Operating result</b>	<b>2 475</b>	<b>-11 243</b>	<b>3 943</b>	<b>-12 508</b>	<b>74 631</b>
Adjustments for items not generating cash flow					
Prepaid revenues	-33 007	-1 749	-57 678	-11 917	-9 502
Depreciation	451	365	892	753	1 556
Unrealized exchange-rate differences	706	6	4 424	29	-12 139
Interest received	-	-	-	-	7
Interest paid	-	-1	-1	-1	-5
Tax paid	-163	-163	-7 190	-339	-519
<b>Cash flow from operating activities before changes in working capital</b>	<b>-29 538</b>	<b>-12 785</b>	<b>-55 610</b>	<b>-23 983</b>	<b>54 029</b>
Changes in working capital	1 898	1 528	-10 407	3 336	621 102
<b>Cash flow from operating activities</b>	<b>-27 640</b>	<b>-11 257</b>	<b>-66 017</b>	<b>-20 647</b>	<b>675 131</b>
<b>Investing activities</b>					
Acquisition of tangible assets	-432	-	-553	-	-2 967
Acquisition of group companies	-	-	-	-	-5
<b>Cash flow from investing activities</b>	<b>-432</b>	<b>-</b>	<b>-553</b>	<b>-</b>	<b>-2 972</b>
<b>Financing activities</b>					
Paid dividend	-	-	-	-	-105 100
<b>Cash flow from financing activities</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-105 100</b>
<b>Cash flow for the period</b>	<b>-28 072</b>	<b>-11 257</b>	<b>-66 570</b>	<b>-20 647</b>	<b>567 059</b>
Cash and cash equivalents at beginning of period	650 302	104 500	692 530	113 831	113 831
Exchange rate differences in cash and cash equivalents	-167	168	-3 897	227	11 640
<b>Cash and cash equivalents at end of period</b>	<b>622 063</b>	<b>93 411</b>	<b>622 063</b>	<b>93 411</b>	<b>692 530</b>

## Parent Company income statement

All amounts in kSEK	Apr-Jun 2017	Apr-Jun 2016	Jan-Jun 2017	Jan-Jun 2016	Jan-Dec 2016
Net sales	32 018	1 001	58 192	9 991	105 613
Cost of goods sold	-	-	-266	-	-238
<b>Gross profit</b>	<b>32 018</b>	<b>1 001</b>	<b>57 926</b>	<b>9 991</b>	<b>105 375</b>
Other operating income	5 176	3 232	5 914	5 367	39 073
Selling expenses	-353	-344	-696	-689	-1 370
Administrative expenses	-6 886	-3 102	-10 647	-4 362	-14 544
Research and development costs	-25 968	-11 982	-43 324	-22 715	-53 665
Other operating expenses	-1 511	-48	-5 229	-100	-238
<b>Operating profit/loss</b>	<b>2 476</b>	<b>-11 243</b>	<b>3 944</b>	<b>-12 508</b>	<b>74 631</b>
Financial income	539	174	539	256	8
Financial expenses	-	-1	-12	-1	-503
<b>Result before tax and changes in tax allocation reserves</b>	<b>3 015</b>	<b>-11 070</b>	<b>4 471</b>	<b>-12 253</b>	<b>74 136</b>
Change in tax allocation reserves	-	-	-	-	-18 800
<b>Result before tax</b>	<b>3 015</b>	<b>-11 070</b>	<b>4 471</b>	<b>-12 253</b>	<b>55 336</b>
Tax on profit for the period	-693	2 378	-1 034	2 626	-12 420
<b>Net result for the period</b>	<b>2 322</b>	<b>-8 692</b>	<b>3 437</b>	<b>-9 627</b>	<b>42 916</b>

## Parent Company statement of comprehensive income

All amounts in kSEK	Apr-Jun 2017	Apr-Jun 2016	Jan-Jun 2017	Jan-Jun 2016	Jan-Dec 2016
Net result for the period	2 322	-8 692	3 437	-9 627	42 916
Other comprehensive income	-	-	-	-	-
<b>Net result for the period</b>	<b>2 322</b>	<b>-8 692</b>	<b>3 437</b>	<b>-9 627</b>	<b>42 916</b>

## Parent Company balance sheet – summary

All amounts in kSEK	June 30, 2017	June 30, 2016	Dec 31, 2016
<b>ASSETS</b>			
Tangible fixed assets	5 305	3 481	5 644
Deferred tax assets	201	130	172
Other financial assets	2 775	8 440	2 775
Current assets excluding cash and cash equivalents	8 552	6 476	6 955
Cash and cash equivalents	621 965	93 312	692 430
<b>TOTAL ASSETS</b>	<b>638 798</b>	<b>111 839</b>	<b>707 976</b>
<b>SHAREHOLDERS' EQUITY AND LIABILITIES</b>			
Shareholders' equity	49 553	98 653	46 096
Tax allocation reserve	18 800	-	18 800
Other current liabilities	10 446	3 887	19 744
Accrued expenses and deferred income	559 999	9 299	623 336
<b>TOTAL SHAREHOLDERS' EQUITY AND LIABILITIES</b>	<b>638 798</b>	<b>111 839</b>	<b>707 976</b>

## Notes

### Note 1 General information

This interim report covers the Swedish Parent Company BioArctic AB, Swedish corporate identity number 556601-2679 and the two fully owned subsidiaries SpineMedical AB, corporate identity number 559003-7080, and LPB Sweden AB, corporate identity number 559035-9112. All the Group's business operations are conducted in the Parent Company. The Parent Company is a Swedish limited liability company registered in and with its registered office in Stockholm. The head office is located at Warfvings väg 35, SE-112 51, Stockholm, Sweden.

The BioArctic Group's interim report for the period January – June 2017 was approved by the Board on August 10, 2017.

### Note 2 Accounting policies

The consolidated financial statements for BioArctic AB have been prepared in accordance with International Financial Reporting Standards (IFRS) as adopted by the EU, The Swedish Annual Accounts Act (ÅRL) and the Swedish Financial Reporting Board's recommendation RFR 1 Supplementary accounting rules for groups of companies. The Parent Company's financial reports are prepared in accordance with the Swedish Annual Accounts Act and the Swedish Financial Reporting Board's recommendation RFR 2 Reporting for legal entities.

The interim report is prepared in accordance with IAS 34 Interim Financial Reporting. Information in accordance with IAS 34 is provided both in notes and elsewhere in the interim report.

European Securities and Market Authority's (ESMA's) Guidelines on Alternative Performance Measures are applied and involve disclosure requirements related to financial metrics that are not defined under IFRS. For performance measures that are not defined under IFRS, see the section Calculations of key figures.



The accounting principles and methods of calculation applied are in all other respects in conformity with those described in the Annual Report for 2016. BioArctic has initiated an analysis of new standards and interpretations that came into force on January 1, 2017, or later. For IFRS 15 Revenues from Contracts with Customers, which comes into force on January 1, 2018, an analysis of the Group's revenue has been performed and an evaluation of its impact has been initiated. The initial conclusion is that the standard will not have any significant impact on the Group's financial situation. The initial conclusion regarding the new standards IFRS 9 Financial Instruments and IFRS 16 Leases is that these standards will have no significant impact on the Group's financial situation.

### Note 3 Segment information

The Group conducts research and development in immunotherapy for degenerative diseases such as Alzheimer's disease and Parkinson's disease. The company is also developing an innovative treatment with a combination of a biodegradable medical device and a drug substance (FGF1) for treatment of traumatic Complete Spinal Cord Injury. The Group's business is assessed to comprise one segment and thus no separate segment reporting is provided. The Board of Directors has been identified as the principal executive decision-maker within the Group.

### Note 4 Nets sales

A breakdown of the Group's net sales is shown below:

All amounts in kSEK	Apr-Jun 2017	Apr-Jun 2016	Jan-Jun 2017	Jan-Jun 2016	Jan-Dec 2016
One-time payment	-	-	-	-	70 400
Milestone payment	-	-	-	7 935	8 169
Income from research collaborations	32 018	999	57 761	2 050	26 676
Other items	-	2	431	6	368
<b>Net sales</b>	<b>32 018</b>	<b>1 001</b>	<b>58 192</b>	<b>9 991</b>	<b>105 613</b>

BioArctic's net sales in all essentials consist of income from the research collaborations concerning Parkinson's disease with AbbVie and Alzheimer's disease with Eisai.

Under the collaboration agreement with AbbVie BioArctic received an initial payment of SEK 704 million (USD 80 million). This payment related to compensation for the preclinical development work that BioArctic will carry out under the agreement and an option premium the amount of which is not specified in the agreement. Of the initial payment SEK 70.4 million was reported as one-time payment in 2016. The rest of the payment will be accrued based on the costs incurred up until December 2019. SEK 22.7 million was reported as income in 2016 and SEK 55.4 million in the period January - June 2017. SEK 555.5 million remains to be reported as income.

### Note 5 Transactions with affiliated parties

The former board member Mikael Smedeby is a lawyer and co-owner of Advokatfirman Lindahl KB, which provides ongoing business legal advice to the BioArctic against market compensation. During 2015, Advokatfirman Lindahl invoiced fees amounted to approximately SEK 0.2 million, in 2016 to approximately SEK 0.9 million and during the period January - June 2017 to approximately SEK 2.1 million. In addition to the compensation described above, salaries and director fees, no significant transactions have taken place between the Group and related parties. All transactions have been made on market terms.

## Calculations of key figures

BioArctic is in this financial report reporting financial key figures of which some are not defined by IFRS. The Company's assesses that these key figures are an important complement, since they enable investors, securities analysts, management of the company and other stake holders to better analyze and evaluate the company's business and financial trends. These key figures should not be analyzed separately or replace key figures that have been calculated in accordance with IFRS. These key figures should not be compared to other key figures with similar names applied by other companies. This due to the fact that key figures can't always be defined in the same way and other companies may calculate them in a different way than BioArctic.

Consolidated	Apr-Jun 2017	Apr-Jun 2016	Jan-Jun 2017	Jan-Jun 2016	Jan-Dec 2016
<b>Calculation of Equity/asset ratio</b>					
Equity, kSEK	64 196	98 658	64 196	98 658	60 760
Total assets, kSEK	638 797	111 843	638 797	111 843	707 976
<b>Equity/asset ratio, %</b>	<b>10.0%</b>	<b>88.2%</b>	<b>10.0%</b>	<b>88.2%</b>	<b>8.6%</b>
<b>Calculation of return on shareholders' equity, %</b>					
Net result, kSEK	2 321	-8 692	3 436	-9 627	57 580
Equity in average, kSEK	63 036	103 004	62 478	103 471	84 523
<b>Return on shareholders' equity, %</b>	<b>3.7%</b>	<b>-8.4%</b>	<b>5.5%</b>	<b>-9.3%</b>	<b>68.1%</b>
<b>Calculation of Equity per share</b>					
Equity, kSEK	64 196	98 658	64 196	98 658	60 760
Average number of shares	4 203 999	4 203 999	4 203 999	4 203 999	4 203 999
<b>Equity per share, SEK <sup>1)</sup></b>	<b>15.27</b>	<b>23.47</b>	<b>15.27</b>	<b>23.47</b>	<b>14.45</b>
<b>Calculation of cash flow from operating activities per share, SEK</b>					
Cash flow from operating activities	-27 640	-11 257	-66 017	-20 647	675 131
Number of shares	4 203 999	4 203 999	4 203 999	4 203 999	4 203 999
<b>Cash flow from operating activities per share, SEK <sup>1)</sup></b>	<b>-6.57</b>	<b>-2.68</b>	<b>-15.70</b>	<b>-4.91</b>	<b>160.59</b>

1) There are no potential shares and thus there is no dilutive effect.

The Board and the CEO confirm that the interim report provides a true and fair overview of the Company and the Group's operations, position and earnings and describes the material risks and uncertainly factors faced by the Parent Company and the companies within the Group.

Stockholm, Sweden, August 10, 2017

Lars Lannfelt  
Chairman

Hans Ekelund  
Director of the Board

Pär Gellerfors  
Director of the Board

Wenche Rolfsen  
Director of the Board

Ivar Verner  
Director of the Board

Gunilla Osswald  
CEO

## Definitions

### Earnings per share

Result after tax divided by average number of shares.

### Cash flow from operating activities per share

Cash flow from operating activities for the period divided by the number of shares at the end of the period.

### Equity/assets ratio

Shareholders' equity as a percentage of total assets.

### Return on equity

Result after tax as a percentage of average equity.

### Number of shares after dilution

Shares at the end of the period adjusted for the dilutive effect of potential shares.

**BioArctic AB**

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*This report has been prepared in a Swedish original version and translated into English. In the event of any inconsistency between the two versions, the Swedish language version should have precedence.*

## Auditor's report regarding the interim report

# Report on Review of Interim Financial Information

### Introduction

We have reviewed the accompanying balance sheet of BioArctic AB (publ) as of June 30, 2017 and the related statements of income, changes in equity and cash flows for the six-month period then ended, and a summary of significant accounting policies and other explanatory notes. Management is responsible for the preparation and fair presentation of this interim financial information in accordance with IFRS. Our responsibility is to express a conclusion on this interim financial information based on our review.

### Scope of Review

We conducted our review in accordance with International Standard on Review Engagements 2410, "Review of Interim Financial Information Performed by the Independent Auditor of the Entity." A review of interim financial information consists of making inquiries, primarily of persons responsible for financial and accounting matters, and applying analytical and other review procedures. A review is substantially less in scope than an audit conducted in accordance with International Standards on Auditing and consequently does not enable us to obtain assurance that we would become aware of all significant matters that might be identified in an audit. Accordingly, we do not express an audit opinion.

### Conclusion

Based on our review, nothing has come to our attention that causes us to believe that the accompanying interim financial information does not give a true and fair view of the financial position of the entity as at June 30, 2017, and of its financial performance and its cash flows for the six-month period then ended in accordance with IFRS.

Stockholm August 10, 2017

Grant Thornton Sweden AB

Rutger Nordström  
Authorized Public Accountant

Mia Rutenius  
Authorized Public Accountant



## Financial information for the financial years 2015 and 2016

### CONSOLIDATED INCOME STATEMENT (TSEK)

	Note	Jan-Dec 2016	Jan-Dec 2015
Net sales	5	105,613	41,573
Cost of goods sold	7	-238	-
<b>Gross Profit</b>		<b>105,375</b>	<b>41,573</b>
Other operating income	6	39,073	7,594
Selling expenses	7	-1,370	-1,453
Administrative expenses	7, 9	-14,544	-4,558
Research and development costs	7	-53,665	-38,238
Other operating expenses	11	-238	-74
<b>Operating profit/loss</b>	8, 10	<b>74,631</b>	<b>4,844</b>
Result from participations in Group companies	12	-	-11
Financial income	13	8	266
Financial costs	14	-503	-308
<b>Result before tax</b>		<b>74,136</b>	<b>4,791</b>
Tax	15	-16,556	-1,081
<b>PROFIT FOR THE YEAR</b>		<b>57,580</b>	<b>3,710</b>
<b>Result for the year attributable to:</b>			
Parent company shareholders		57,580	3,710
<b>Result for the year</b>		<b>57,580</b>	<b>3,710</b>
<b>Earnings per share and share data</b>	16		
Earnings per share attributable to Parent Company shareholders, SEK <sup>1)</sup>		13.70	0.88
Average number of shares <sup>1)</sup>		4,203,999	4,203,999

1) There are no potential shares and thus there is no dilutive effect.

### CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

Net result for the year	57,580	3,710
Other comprehensive income:	-	-
<b>COMPREHENSIVE INCOME FOR THE YEAR<sup>2)</sup></b>	<b>57,580</b>	<b>3,710</b>

2) No other comprehensive income is available for distribution between the Parent Company shareholders and non-controlling interests

## CONSOLIDATED BALANCE SHEET (TSEK)

	Note	Dec 31, 2016	Dec 31, 2015
<b>ASSETS</b>			
<b>Fixed assets</b>			
<b>Tangible fixed assets</b>			
Leasehold improvement expenditures	17	1,275	1,680
Fixtures and equipment	18	4,369	2,554
		<b>5,644</b>	<b>4,234</b>
<b>Financial assets</b>			
Other financial assets	20	2,675	8,345
Deferred tax assets	21	172	88
		<b>2,847</b>	<b>8,433</b>
<b>Total fixed assets</b>		<b>8,491</b>	<b>12,667</b>
<b>Current assets</b>			
<b>Current receivables</b>			
Accounts receivable	22	634	646
Other receivables	23	1,764	2,068
Prepaid expenses and accrued income	24	4,557	1,899
Cash and cash equivalents	25	692,530	113,831
<b>Total current assets</b>		<b>699,485</b>	<b>118,444</b>
<b>TOTAL ASSETS</b>		<b>707,976</b>	<b>131,111</b>
<b>EQUITY AND LIABILITIES</b>			
<b>Shareholders' equity</b>			
Share capital	26	105	105
Additional contributed capital		958	958
Profit/loss carried forward incl result for the year		59,697	107,217
<b>Parent company shareholders</b>		<b>60,760</b>	<b>108,280</b>
Non-controlling interests		-	5
<b>Total shareholders' equity</b>		<b>60,760</b>	<b>108,285</b>
<b>Long-term liabilities</b>			
Deferred tax liabilities	21	4,136	-
<b>Total long-term liabilities</b>		<b>4,136</b>	<b>-</b>
<b>Current liabilities</b>			
Accounts payable		11,736	1,155
Tax liabilities	28	6,917	1,122
Other current liabilities		1,091	835
Accrued expenses and deferred income	29	623,336	19,714
<b>Total current liabilities</b>		<b>643,080</b>	<b>22,826</b>
<b>TOTAL EQUITY AND LIABILITIES</b>		<b>707,976</b>	<b>131,111</b>

## CONSOLIDATED STATEMENT OF CHANGES IN EQUITY (TSEK)

### Attributable to parent company's shareholders

	Share capital	Additional contributed capital	Profit/loss carried forward including result for the year	Non-controlling interests	Total equity
<b>Opening equity at January 1, 2015</b>	105	958	103,507	-	104,570
Effects of transition to IFRS	-	-	-	-	-
<b>Opening equity at January 1, 2015</b>	105	958	103,507		104,570
<b>Total result for the year:</b>					
Net profit for the year			3,710	-	3,710
Other comprehensive income			-	-	-
<b>Total result for the year</b>			3,710	-	3,710
<b>Transactions with shareholders:</b>					
Invested capital				5	5
<b>Total transactions with shareholders</b>			-	5	5
<b>Closing equity at December 31, 2015</b>	105	958	107,217	5	108,285
<b>Opening equity at January 1, 2016</b>	105	958	107,217	5	108,285
<b>Total result for the year:</b>					
Net profit for the year			57,580	-	57,580
Other comprehensive income			-	-	-
<b>Total result for the year</b>			57,580	-	57,580
<b>Transactions with shareholders:</b>					
Dividend at extraordinary general meeting			-105,100		-105,100
Acquisition of minority interests				-5	-5
<b>Total transactions with shareholders</b>				-5	-105,105
<b>Closing equity at December 31, 2016</b>	105	958	59,697	0	60,760

## CONSOLIDATED CASH FLOW ANALYSIS (TSEK)

	Note	Jan-Dec 2016	Jan-Dec 2015
<b>Operating activities</b>			
Operating profit/loss		74,631	4,844
Adjustments for items not included in cash flow			
– Accrued revenue		–9,502	–22,729
– Depreciation and amortization		1,556	1,536
– Foreign exchange gains		–12,139	–
– Capital gains/losses		–	9
		<b>54,546</b>	<b>–16,340</b>
Interest received		7	233
Interest paid		–5	–9
Income tax paid		–519	–606
<b>Cash flow from operating activities before changes in working capital</b>		<b>54,029</b>	<b>–16,722</b>
<b>Cash flow from changes in working capital</b>			
Decrease (+)/increase (–) in current receivables		–3,525	–643
Decrease (–)/increase (+) in current liabilities		624,627	931
<b>Total change in working capital</b>		<b>621,102</b>	<b>288</b>
<b>Cash flow from operating activities</b>		<b>675,131</b>	<b>–16,434</b>
<b>Investing activities</b>			
Acquisition of tangible fixed assets		–2,967	–2,291
Acquisition of Group companies		–5	–
Sales of Group companies		–	–11
Sale of tangible fixed assets		–	20
<b>Cash flow from investing activities</b>		<b>–2,972</b>	<b>–2,282</b>
<b>Financing activities</b>			
Transactions with shareholders with non-controlling interest		–	5
Dividends paid		–105,100	–
<b>Cash flow from financing activities</b>		<b>–105,100</b>	<b>5</b>
<b>CASH FLOW FOR THE YEAR</b>		<b>567,059</b>	<b>–18,711</b>
Cash and cash equivalents at the beginning of the year		113,831	132,808
Exchange rate difference on liquid assets		11,640	–266
<b>Cash and cash equivalents at year-end</b>	25	<b>692,530</b>	<b>113,831</b>

# NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## NOTE 1 GENERAL INFORMATION

BioArctic AB, corp ID no. 556601-2679, is the parent company in a Group with focus on diseases in the central nervous system (CNS). The Company has leading competence in research and development of innovative biological drugs such as antibodies and growth factors that meet great medical needs.

The Group's business is conducted in the parent company. BioArctic is a limited liability company with its registered office in Stockholm. The Company's address is: BioArctic AB, Warfvings väg 35, SE-112 51 Stockholm, Sweden.

The annual accounts and the consolidated accounts have been approved by the Board of Directors and are submitted for determination at the annual general meeting on May 31, 2017.

## NOTE 2 SUMMARY OF SIGNIFICANT ACCOUNTING PRINCIPLES

The significant accounting principles applied in preparing these consolidated financial statements are described in the following. Unless otherwise stated, these principles have been applied consistently for all the years presented.

### 2.1 Basis of preparation of financial statements

The consolidated financial statements have been prepared in accordance with the Swedish Annual Accounts Act, RFR 1 Supplementary accounting rules for groups, and International Financial reporting Standards (IFRS) and IFRIC interpretations as adopted by the EU at December 31, 2016. The income statement is classified according to function.

The Group's financial reports have been prepared based on historical acquisition value, which means that all assets and liabilities are reported at these values and where appropriate certain financial instruments are measured at fair value. The functional currency for the parent company, including all its subsidiaries, and the Group's reporting currency is Swedish kronor (SEK). All amounts are presented in thousands of Swedish kronor (TSEK) unless otherwise stated. Amount in brackets refer to the previous year.

Preparing financial statements according to IFRS requires the use of some critical accounting estimates. Further, it is required that the board and management make some assessments in the application of the Company's accounting principles. The areas that involve a high degree of assessments, that are complex, or areas where assumptions and estimates are of major importance for the consolidated financial statements are described in Note 4.

### 2.2 New IFRS standards from 2017 and later

A number of new standards and changes to interpretations and existing standards that come into effect for financial years starting after January 1, 2017 have not been applied in the preparation of the Group's financial reports. The most important changes for the Group are:

#### IFRS 15 Revenue from Contracts with Customers

The standard regulates the accounting of revenue. The principles on which IFRS 15 is based are intended to give the users of financial information additional valuable information about the company's revenue. Under the expanded disclosure requirements information on the type of revenue, date of settlement, uncertainties associated with the recognition of revenue and cash flows attributable to the company's customer contracts must be disclosed. Under IFRS 15 revenue should be recognized when a customer receives control of the sold goods or service and is able to use or obtains a benefit from the goods or service.

IFRS 15 replaces IAS 18 Revenue and IAS 11 Construction Contracts and the related SIC and IFRIC interpretations. IFRS 15 comes into effect on January 1, 2018. Early application is permitted. As transition method companies can choose between full retroactivity and prospective application with additional information. During the year a survey of the Group's revenue flows has been carried out and an evaluation of the effects started. The initial assessment is that the application is not expected to have any material effect on the reporting of the Group's revenue. The evaluation of the effects is expected to be completed in 2017. The Group has not yet decided on the choice of transition method.

#### IFRS 9 Financial Instruments

The standard deals with the classification, measurement and reporting of financial assets and liabilities. The full version of IFRS 9 was issued in July 2014. It replaces the parts of IAS 39 that deals with the classification and measurement of financial instruments. The standard must be applied for financial years beginning January 1, 2018. Early application is permitted.

Even if the Group has not yet made a detailed evaluation of the effects of the new standard the application of IFRS 9 is not expected to have any material effect on the classification and measurement of the Group's financial assets and liabilities or financial position.

#### IFRS 16 Leases

In January 2016 IASB published a new leasing standard that will replace IAS 17 Leases and the related interpretations IFRIC 4, SIC-15 and SIC-27. The standard requires that assets and liabilities attributable to all leases, with a few exceptions, are reported in the balance sheet. This accounting is based on the view that an asset is used during a specific period of time and at the same time an obligation to pay for this right arises. The standard is applicable for financial years beginning January 1, 2019 or later. Early application is permitted provided that also IFRS 15 Revenue from Contracts with Customers is applied. The Group has still not evaluated the effects of the implementation of the standard. More information concerning leasing agreements is given in Note 10.

### 2.3 Consolidated financial statement

Subsidiaries are all companies in which the Group exercises a controlling interest. The Group controls a company when it is exposed to or has the right to a variable return on its interest in the company and is able to influence the return through its interest in the company. Subsidiaries are included in the consolidated financial statements as of the date on which the controlling interest is transferred to the Group. They are excluded from the consolidated financial statements as of the date on which the controlling interest ceases to exist. This financial report is the Group's first financial report including consolidated financial statements.

Acquisition accounting is used to report the Group's business acquisitions. The purchase sum for the acquisition of a subsidiary consists of the fair value of the transferred assets, liabilities that the Group incurs to previous owners of the acquired company, and the shares issued by the Group. The purchase sum also includes the fair value of all assets and liabilities resulting from an agreement on conditional consideration. Identifiable assets acquired and liabilities assumed in a business acquisition are initially measured at their fair values at the acquisition date.

Intercompany transactions, balances, income and expenses from transactions between Group companies are eliminated. Gains and losses resulting from intercompany transactions which have been recognized in assets are also eliminated.



**Note 2 cont.**

Where applicable the accounting principles for subsidiaries have been amended to guarantee a consistent application of the Group's principles.

**2.4 Segment reporting**

An operating segment is a part of the Group that conducts operations from which it can generate income and incur costs and for which independent financial information is available. Segment information is not presented as the operations only constitute one segment.

**2.5 Translation of foreign currency****2.5.1 Functional currency and reporting currency**

Items included in the financial statements for the different units in the Group are measured using the currency in the financial environment in which the unit mainly operates (functional currency). In the consolidated financial statements Swedish kronor (SEK) is used, as this is the parent company's functional currency and the reporting currency.

**2.5.2 Transactions and balances**

Transactions in foreign currency are translated to functional currency at transaction date exchange rates or at the date of revaluation. Foreign exchange gains and losses arising from the payment of such transactions and at the recalculation of monetary assets and liabilities in foreign currency at the transaction date exchange rate are reported in the income statement.

**2.6 Income**

Revenue is measured at the fair value of what has been received or will be received and corresponds to the amounts received for goods or services sold after deduction of discounts and VAT. The Group reports a revenue when its amount can be measured reliably and it is likely that future economic benefits will accrue to the Group and specific criteria have been met for each of the Group's operations as described below.

**2.6.1 License and collaboration agreements**

Revenue from agreements entered into with customers in research projects is reported based on the economic substance of the agreement. Revenue from license and collaboration agreements can consist of one-time payments, royalty and milestone payments, and remuneration for research services and products. In addition, BioArctic may under the agreement have the right to obtain compensation for costs incurred.

**Research collaborations**

The reporting of revenue reflects accrual according to the specific terms of agreement.

Revenue recognition criteria are applied to each transaction separately. BioArctic has a major collaboration agreement for which revenue relating to a one-time payment was reported in the current period. The remaining payments under this agreement are reported on the basis of completion over the contract term.

**One-time and license payments**

One-time payments in connection with the signing of an agreement generally come without repayment obligation. They generally concern the right to develop, register, market and sell BioArctic's proprietary products in a defined geographic and for a defined indication. One-time payments can also be remuneration for technology or knowledge transfer to the partner or remuneration for the option on a future license. In cases where one-time payments relate to more than one delivery the revenue is distributed according to the value of each partial delivery.

**Milestone payments**

Payments for milestones achieved are reported as revenue when it is likely that the economic benefits associated with the transaction will accrue to BioArctic and the revenue can be calculated in a satisfactory way. Related payments are obtained when the Group has achieved established goals under the agreement.

**Royalty payments**

Royalty income normally accrues continuously as distributors report sales. The reporting is made in the same period as the sales.

**Compensation for costs incurred and sales of products**

Compensation for costs incurred, i.e. costs that are re-invoiced to the customer, are reported in the period when they are incurred. Public funding, for which the principles of income reporting are described in Note 2.6.2. Other operating income, includes compensation for costs incurred. At the sale of products revenue is reported at delivery, as the ownership and economic risk passes to the customer at this point in time.

**2.6.2 Other operating income**

The Group has other operating income in the form of public funding, subleasing of premises and foreign exchange gains. Public funding amounts to significant sums and the accounting principles for this are described below.

**Public funding**

Revenue in the form of public funding is reported as other operating income. Income from public funding is reported as revenue when the terms for receiving the funding have been met and when it is likely that the economic benefits associated with the transaction will accrue to BioArctic and the revenue can be calculated reliably. Funds received before the requirements for reporting them as revenue have been met are reported as liability. In the management report the two major agreements concerning public funding, with Swedish Vinnova and the EU's Horizon2020, are described.

**Joint agreements**

BioArctic has received public funding for one joint agreement, Horizon2020. In the income statement the Group has reported its share of revenue under this agreement. All other transactions are reported as receivables or debts.

**2.7 Costs and financial items****2.7.1 Cost of goods sold**

Cost of goods sold is reported as cost of materials for the products sold by BioArctic.

**2.7.2 Function costs**

Common costs such as rent and other operating expenses are allocated to the respective function based on the number of employees in each function. Otherwise the costs are reported directly according to function. Amortization is reported under the function to which the asset has been reported, or alternatively is allocated in the same way as other common costs, based on the number of employees.

**Marketing and sales costs**

Personnel costs and operating costs concerning business development and commercialization of research projects and sales to collaboration partners have been reported to this function.

**Note 2 cont.****Administration costs**

Personnel costs and operating costs concerning the Company's administration, including costs for the CEO, the finance function, the board of directors, lawyers, accounting, accountants, etc have been reported to this function.

**Research and development costs**

This function consists of BioArctic's research and drug development in preclinical and clinical studies, and regulatory activities. To this function all personnel costs and external costs have been reported that are directly attributable to these operations and activities. Costs attributable to development projects can be reported as intangible assets in the balance sheet if these costs in the future are expected to generate economic benefits. Development costs recognized as expenses cannot be reported as assets in coming periods. BioArctic has no costs reported as assets.

**2.7.3 Remuneration to employees****Remuneration under agreement**

BioArctic has a rewards program covering all permanent employees consisting of a variable part in addition to the fixed remuneration which can be paid when objectives have been achieved. See further information under Note 8. The variable remuneration is not pensionable. BioArctic has no agreements including post-employment benefits.

**Defined contribution pension plans**

The Group's pension plans are defined contribution plans and concern the contributions the Company pays to the plan or an insurance company and the capital return that the contributions give. Consequently it is the employee who carries the actuarial risk (that the remuneration is lower than expected) and investment risk (that the invested assets will be insufficient to give the expected remunerations). The Group has no defined benefit pension plans.

**2.7.4 Financial income**

Financial income refers to interest on bank deposits and receivables and in applicable cases dividend income, interest subsidies and positive exchange rate differences on financial items. Financial income is reported in the period to which they relate.

**2.7.5 Financial expenses**

Financial expenses refer to expenses concerning interest and other costs incurred in connection with borrowing and are reported in the income statement in the period to which they relate. Further, negative exchange rate differences are included in financial expenses.

**2.7.6 Taxes**

The tax expense for the period comprises current and deferred tax. Taxes are reported in the income statement, except when the underlying transaction is reported in Other comprehensive income or directly against equity, then the related tax effect is also reported under this item.

Current tax is the tax calculated based on the taxable result for the period. The taxable result differs from the reported result in that it has been adjusted for non-taxable and non-deductible items. Current tax is the tax to be paid or received for the current year, possibly adjusted for current tax relating to previous periods.

Tax paid abroad is reflected in the balance sheet. This tax can be offset against Swedish income tax. The right to set-off against Swedish income tax is limited to the tax year 2020. As per

December 31, 2016 withheld foreign tax is reported as a deductible item for tax liability. As per December 31, 2015 the short-term part of this item is reported under Other current receivables. The comparative year has not been restated as the amount has been assessed as not significant.

Deferred tax is reported using the balance sheet method, which means that deferred tax liabilities are recognized in the balance sheet for all temporary differences arising between the book value and the written-down value of assets and liabilities. If the temporary difference arises on initial recognition of assets and liabilities that constitute an asset acquisition, deferred tax is however not recognized. Deferred tax assets relating to deductible temporary differences and loss carry-forwards are recognized only when it is likely that the amounts can be used against future taxable profit. Deferred tax is calculated according to the statutory tax rates decided or announced at the balance sheet day and are expected to be in effect when the deferred tax asset is realized or the deferred tax liability is settled.

**2.8 Research and development / Intangible assets**

An intangible asset is recognized in the balance sheet when it is likely that the economic benefits associated with the transaction will accrue to BioArctic and the value of the asset can be calculated reliably. Development costs are capitalized and recognized in the balance sheet as intangible assets if the criteria for recognition in the balance sheet according to IAS 38 Intangible assets are met. The Group has no expenditure that meets these criteria.

**2.9 Tangible fixed assets**

Tangible fixed assets are reported at acquisition value less accumulated depreciation and write-down. The acquisition value includes expenditures directly attributable to the acquisition of the asset. Subsequent expenditure is added to the reported value of the asset or reported as a separate asset only when it is likely that the economic benefits associated with the transaction will accrue to BioArctic and the acquisition value of the asset can be calculated reliably. The useful life has been assessed to five years for equipment and machinery. Improvement expenditures for leaseholds are written-off based on estimated usage period. The usage period has been assessed to 2019.

**2.10 Financial instruments**

A financial instrument is any contract that gives rise to a financial asset or financial liability. Financial assets in the balance sheet refer to other financial assets, accounts receivable, other receivables, and cash and cash equivalents. Financial liabilities relate to accounts payable and other current liabilities. The Group holds no derivatives. Reporting of financial instruments occurs when the company becomes a party to the contractual conditions. A financial asset is removed from the balance sheet when the contractual obligation is met, expires, or when the Company loses control over it. A liability is removed from the balance sheet when the contractual obligation is met or otherwise terminated. At each balance sheet date, the company assesses whether there are objective indications that a financial asset or group of financial assets is in need of write-down due to past events. For all financial assets and liabilities the reported amount is considered to be a good approximation of fair value.

Financial assets and liabilities are offset and the net amount reported in the balance sheet only when there is a legal right to set off the reported amounts and an intention to regulate them with a net amount or at the same time realize the asset and settle the liability.

*Note 2 cont.*

### 2.11 Accounts receivable

Accounts receivable are reported net after provision for doubtful debts. The expected life of the accounts receivable is short, therefore the value is reported at nominal amount without discounting according to the method of amortized cost. A provision for doubtful debts concerning trade receivables is made when there are objective grounds for assuming that the Group will not be able to receive all amounts that are overdue according to the original terms of the receivables. The size of the provision is the difference between the reported value of the asset and the value of estimated future cash flows. The reserved amount is recognized in the income statement.

### 2.12 Cash and cash equivalents

Cash and cash equivalents include cash, bank deposits and, where appropriate, other short-term investments with maturity date within three months. Cash and cash equivalents are reported at their nominal amounts.

### 2.13 Accounts payable

Accounts payable are obligations to pay for goods or services that have been acquired in the operating activities from suppliers. Accounts payable are categorized as other financial liabilities. As accounts payable are expected to have a short life the value is reported at nominal amount.

### 2.14 Share capital

Transaction costs directly attributable to the issue of new shares or warrants are reported, net after tax, in equity as a deduction from the issue proceeds.

### 2.15 Cash flow statement

The cash flow statement is prepared according to the indirect method. This means that the result is adjusted with transactions that do not involve receipts or payments, and for income and expenses relating to investing and/or financing activities.

## NOT 3 FINANCIAL RISK MANAGEMENT

### 3.1 Financial risk factors

Through its operations the Group is exposed to various types of financial risk. The overall objective of the financial risk management is to minimize the risks for negative impact on the Group's result.

#### 3.1.1 Currency risk

Currency risk is the risk for impact on the Group's result and financial position as a result of changes in exchange rates. The Group has no loans in foreign currency and is therefore not exposed to any currency risk associated with borrowing. Purchases and revenue in foreign currency give rise to transaction exposure. Purchases in foreign currency are primarily made in EUR, USD and GBP. In 2016 purchases amounted to 576 (793) TEUR, 551 (359) TUSD and 521 (20) TGBP. There are cash and cash equivalents in foreign currency (GBP, USD and EUR). Cash and cash equivalents in foreign currency amount to 292 013 (13 159) TSEK. Of this sum GBP accounts for 209 445 (454) TSEK, USD for 53 052 (2) TSEK and EUR 29 516 (12 704) TSEK. A currency change of 10% of the GBP against the Swedish krona would thus impact the result to the amount of 20 945 TSEK and the same change of USD and EUR against the Swedish krona

would impact the result to the amounts of 5 305 TSEK and 2 952 TSEK, respectively. On December 31, 2016 there are no significant balance sheet items in foreign currency in addition to cash and cash equivalents. The increase in cash and cash equivalents in foreign currency is due to the fact that the Group has made an estimate of the future cash requirements for each currency. Based on this calculation, the Group has retained cash and cash equivalents in each currency to meet estimated future cash requirements.

#### 3.1.2 Interest rate risk

The Group has significant bank balances which are affected by interest rates. Thus, the Group is exposed to interest rate risk. On December 31, 2016, the Group has cash and cash equivalents amounting to 692 430 TSEK. An interest rate change of 0.5% would mean an impact on the result to the amount of 3 462 TSEK. On December 31, 2016 the Group has no external loan financing and is thus not exposed to any interest risk for such commitments.

#### 3.1.3 Financing risk

Access to capital is affected by several factors, among others, the development of current research and development projects and collaboration and license agreements. The timing and size of additional funding is dependent on this, but also on whether the Group manages to enter into new collaboration agreements and on the market acceptance of products. The overall availability of credit and BioArctic's credit rating also affects the financial risk.

#### 3.1.4 Liquidity risk

The liquidity risk, i.e. ensuring that the Group has sufficient cash to meet the demands of the operating activities, is assessed as low as the Group has a good supply of cash and cash equivalents. In 2016 the cash flow was positive. The Group management actively follows the liquidity situation for timely attention to liquidity risks. The Group has no placements in addition to bank balances and the Group wants to minimize the risk exposure on cash and cash equivalents and financial assets.

#### 3.1.5 Credit risk

Credit risk arises through cash and cash equivalents and deposits with banks and credit institutions, and through credit exposure to customers, including outstanding receivables and agreed transactions. The Group has large amounts of cash at the Group's banks, Skandinaviska Enskilda Banken and Danske Bank. The Group considers the banks to be reliable. The Group is dependent on a few major partners and it is of the utmost importance that they fulfil their commitments under the agreements.

### 3.2 Operational and external risks

See the section on Risks and uncertainties in the management report (which is found in the Company's Annual Report for the fiscal year 2016) for the description of the significant operational and external risk. These risks relates to research and development, competition and commercial success, product liability and insurance, production, patent protection, cooperation risks, clinical trials and dependence on key individuals and partners.

### 3.3 Sensitivity analysis

No further analysis has been established in addition to the sensitivity analyses mentioned above.

1) Förvaltningsberättelsen återfinns i Bolagets årsredovisning för räkenskapsåret 2016

### 3.4 Management of capital

The Group's goal concerning the capital structure is to secure the Group's operations and business, in order to continue to generate a return for the shareholders and benefits for other stakeholders. An optimal capital structure keeps the costs for capital down. In order to maintain and adjust the capital structure the Group can issue new shares or sell assets to reduce debt. The dividends paid in 2016 were decided as the Group made the assessment that the Company's operations and business were not negatively affected by this decision, or that dividends would significantly impact the cost for capital.

## NOTE 4 SIGNIFICANT ACCOUNTING ESTIMATES AND JUDGEMENTS

In order to prepare the financial statements in accordance with generally accepted accounting principles the company management and board must make estimates and assumptions. These impact the reported assets, liabilities, income and costs and other information given. The judgements are based on experience and assumptions that the management and the board find to be reasonable during the present circumstances. The actual results can then differ from these judgements if other circumstances arise. In the following the most significant judgements made in the preparation of the Company's financial statements are described.

The accounting principles for revenue recognition, described in Note 2, stipulate that advance payments are reported as liability in the balance sheet until they can be recognized as revenue. In Note 2 it is also stated that no research or development costs are considered to meet the criteria for asset posting.

Foreign tax withheld is reported in the balance sheet to the extent that it is expected to be offset against Swedish corporate tax. The right to set-off against Swedish income tax is limited to the year 2020.

## NOTE 5 NET SALES

	Group	
	2016	2015
One-time payments	70,400	-
Milestone payments	8,169	32,677
Remuneration research agreements	26,676	8,892
Other items	368	4
<b>Total</b>	<b>105,613</b>	<b>41,573</b>

Two single customers accounted for more than 10% of the turnover in 2016. In 2015 one customer accounted for more than 10% of the turnover.

## NOTE 6 OTHER OPERATING INCOME

Other operating income	Group	
	2016	2015
Rental income	2,082	524
Foreign exchange gains	12,186	94
EU grants	21,090	5,042
Public grants	3,715	1,934
<b>Total</b>	<b>39,073</b>	<b>7,594</b>

## NOTE 7 COSTS PER COST TYPE

	Group	
	2016	2015
Project related costs for materials and services purchased	22,887	10,605
Other external costs	15,389	10,853
Personnel costs	29,985	21,255
Depreciation of tangible fixed assets	1,556	1,536
Other operating expenses	238	74
<b>Total</b>	<b>70,055</b>	<b>44,323</b>

Depreciation of tangible fixed assets per function:

	Group	
	2016	2015
Marketing and sales costs	18	14
Administrative costs	37	29
Research and development costs	1,501	1,493
<b>Total</b>	<b>1,556</b>	<b>1,536</b>

## NOTE 8 AVERAGE NUMBER OF EMPLOYEES, SALARIES, OTHER REMUNERATION AND SOCIAL COSTS

	Group	
	2016	2015
<b>Average number of employees (allocated between men and women)</b>		
Women	14	15
Men	8	10
<b>Total</b>	<b>22</b>	<b>25</b>
<b>Salaries and remuneration</b>		
Board of directors, CEO and senior management, 13 persons (12)	13,397	8,596
Other employees	7,403	6,870
<b>Total salaries and remuneration</b>	<b>20,800</b>	<b>15,466</b>
Social expenses according to the law and contracts	5,553	3,460
Pension costs:		
Board of directors, CEO and senior management, 13 persons (12)	2,274	1,449
Other employees	538	510
<b>Total salaries, other remuneration and social costs</b>	<b>29,165</b>	<b>20,885</b>

The company has no outstanding pension obligations.

Note 8 cont.

Remuneration and other benefits during 2016 and 2015:

2016	Basic salary	Board fee	Pension	Variable remuneration	Summa
<b>Board of directors</b>					
Lars Lannfelt, chairman <sup>1)</sup>	886	-	187	-	1,073
Pär Gellerfors, board member <sup>2)</sup>	1,620	-	356	-	1,976
Wenche Rolfsen, board member <sup>3,4)</sup>	-	66	-	-	66
Ivar Verner, board membr <sup>4)</sup>	-	99	-	-	99
Hans Ekelund, board member <sup>4)</sup>	-	116	-	-	116
Mikael Smedeby, board member <sup>4)</sup>	-	112	-	-	112
<b>Total Board of directors</b>	<b>2,506</b>	<b>393</b>	<b>543</b>	<b>-</b>	<b>3,442</b>
<b>CEO and senior executives</b>					
CEO Gunilla Osswald	2,365	-	938 <sup>5)</sup>	2,640 <sup>5)</sup>	5,943
Other senior executives, 6 persons <sup>6)</sup>	6,665	-	793	856	8,314
<b>CEO and senior executives</b>	<b>9,030</b>	<b>-</b>	<b>1,731</b>	<b>3,496</b>	<b>14,257</b>
<b>Total</b>	<b>11,536</b>	<b>393</b>	<b>2,274</b>	<b>3,496</b>	<b>17,699</b>

1) Lars Lannfelt, active in the company and employed at approx. 50% service level in 2016. At the end of the year the service level was 90%

2) Pär Gellerfors, active in the company and employed at 100% service level

3) Wenche Rolfsen, board member since July 2016

4) Board director has invoiced his board remuneration incl social contributions via company

5) The amounts include corrections to salaries and pensions relating to the previous year

6) The amount includes invoiced fees including fees via company amounting to 2 028 TSEK

2015	Basic salary	Board fee	Pension	Variable remuneration	Summa
<b>Board of directors</b>					
Lars Lannfelt, chairman <sup>1)</sup>	648	-	139	-	787
Gösta Jonsson, board member <sup>2)</sup>	-	85	-	-	85
Pär Gellerfors, board member <sup>3)</sup>	1,620	-	333	-	1,953
Ivar Verner, board member <sup>4)</sup>	-	94	-	-	94
Hans Ekelund, board member <sup>4)</sup>	-	94	-	-	94
Mikael Smedeby, board member <sup>4)</sup>	-	112	-	-	112
<b>Total Board of directors</b>	<b>2,268</b>	<b>385</b>	<b>472</b>	<b>-</b>	<b>3,125</b>
<b>CEO and senior executives</b>					
CEO Gunilla Osswald	1,756	-	588	-	2,344
Other senior executives, 5 persons	4,187	-	389	-	4,576
<b>CEO and senior executives</b>	<b>5,943</b>	<b>-</b>	<b>977</b>	<b>-</b>	<b>6,920</b>
<b>Total</b>	<b>8,211</b>	<b>385</b>	<b>1,449</b>	<b>-</b>	<b>10,045</b>

1) Lars Lannfelt, active in the company and employed at 40% service level

2) Gösta Jonsson left the Board at the annual general meeting in May 2015

3) Pär Gellerfors, active in the company and employed at 100% service level

4) Board director has invoiced his board remuneration incl social contributions via company

Comments to tables:

President and CEO Gunilla Osswald receives remuneration amounting to 2,365,182 SEK as fixed annual salary and in addition 35% thereof in pension contributions with retirement age 65 years. The CEO is covered by the bonus plan covering all employees, see below. Between the Company and the CEO there is a termination period of 12 months by the company and 6 months by the CEO. Upon termination by the Company there is no work obligation during the notice period, but the CEO should be available to the Company as needed. In the event that the CEO enters new employment there will be settlement of the new salary against the remuneration from the Company. As per 31 December 2017, the Group's management team consists of 9 persons, including the CEO and two board directors. Senior executives except for the CEO receive normal market remuneration and individually negotiated premiums for occupational pension, or premiums under the terms of the Company's pension policy. All other employees receive market salaries and premiums are allocated to the occupational pension in accordance with the terms of the Company's pension policy. All employees have a contractual mutual termination period of two or three months, or according to the Employment Protection Act. Severance pay is not applied. To the board members

who are not employees of the company fees have been paid pursuant to the annual general meeting's decision. BioArctic has two bonus programs, covering all permanent employees. One condition for receiving bonus is that the employee has been employed for at least six months at the time when the goal is achieved that is the basis for payment of bonus. The goals are linked to achieved milestone goals in the clinical research programs for product BAN 2401 for Alzheimer's disease and BAN0805 for Parkinson's disease. The potential bonus for the employee amounts to one monthly salary. The bonus is not pensionable. For 2016 has, in addition to variable remuneration to the CEO, variable remunerations been paid with one to three monthly salaries. For 2015 no variable remuneration was paid.

	Group	
	2016	2015
<b>Gender representation in the board of directors and management</b>		
Number of board directors	6	5
Of which women	1	0
Number of other executives incl the CEO	7	6
Of which women	2	2



**NOTE 9 REMUNERATION TO THE AUDITORS**

	Group	
	2016	2015
Grant Thornton Sweden AB		
– Audit assignment	156	225
– Tax advice	48	–
– Other services	184	29
<b>Total</b>	<b>388</b>	<b>254</b>

**NOTE 10 COMMITMENTS****Leasing**

The Group leases office premises under non-cancellable operational leases where the remaining leasing period is two years. The nominal value of future lease payments concerning non-cancellable leases is distributed as follows:

	Group	
	2016	2015
Leasing premises	6,216	6,318
<b>Total</b>	<b>6,216</b>	<b>6,318</b>
<b>Agreed future leasing costs</b>		
Within 1 year	6,390	6,321
Between 1 and 5 years	6,390	12,642
More than 5 years	–	–
<b>Total</b>	<b>12,780</b>	<b>18,963</b>

**Subleasing**

Future total minimum lease payments that are expected to be obtained for non-cancellable operating leases for items subleased:

	Group	
	2016	2015
<b>Agreed future subleasing</b>		
Within 1 year	1,972	2,098
Between 1 and 5 years	–	4,196
More than 5 years	–	–
<b>Total</b>	<b>1,972</b>	<b>6,294</b>

**Other commitments**

The Company has under research collaboration agreements entered into future commitments as follows:

- ▲ BioArctic has committed to conduct research activities over the contract period to achieve pre-defined milestones. BioArctic's commitment is estimated to 418 MSEK according to the current accounting course (2015: 0 MSEK). Pre-payment for the commitment has been obtained.
- ▲ BioArctic shall defray the expense for two research positions over the remaining contract time with partner up until March 2018.

**NOTE 11 OTHER OPERATING EXPENSES**

	Group	
	2016	2015
Capital loss equipment	–	–9
Foreign exchange losses	–238	–65
<b>Total</b>	<b>–238</b>	<b>–74</b>

**NOTE 12 RESULT FROM PARTICIPATIONS IN GROUP COMPANIES**

	Group	
	2016	2015
Reversal of write-down losses	–	–
Sales of shares in subsidiaries	–	–11
<b>Total</b>	<b>–</b>	<b>–11</b>

**NOTE 13 FINANCIAL INCOME**

	Group	
	2016	2015
Interest income	8	232
Foreign exchange gains	0	34
<b>Total</b>	<b>8</b>	<b>266</b>

**NOTE 14 FINANCIAL EXPENSES**

	Group	
	2016	2015
Interest expenses	–5	–8
Foreign exchange losses	–498	–300
<b>Total</b>	<b>–503</b>	<b>–308</b>

**NOTE 15 TAX**

	Group	
	2016	2015
<b>The following components are included in the tax expense:</b>		
Current tax	–12,441	–2,610
Adjustment of tax for previous years	–63	–
Deferred tax	–4,052	1,529
<b>Total</b>	<b>–16,556</b>	<b>–1,081</b>

The tax on the Group's profit before taxes differs from the theoretical amount that would have resulted at the weighted average tax rate regarding the results of the consolidated companies as follows:

	Group	
	2016	2015
<b>Reported profit before tax</b>	<b>74,136</b>	<b>4,791</b>
Tax, current tax rate: 22%	–16,310	–1,054
Tax effect of:		
Non-deductible expenses	–183	–29
Non-taxable income	0	11
Standard income tax allocation reserve	–	–9
<b>Reported tax</b>	<b>–16,556</b>	<b>–1,081</b>

**NOTE 16 EARNINGS PER SHARE AND SHARE DATA**

Earnings per share are calculated by dividing the profit attributable to the parent company's shareholders divided by the weighted average number of outstanding ordinary shares during the period.

	Group	
	2016	2015
Profit attributable to the parent company's shareholders, TSEK	57,580	3,710
Earnings per share attributable to the company's shareholders, SEK <sup>1)</sup>	13.70	0.88
Proposed dividend per share, SEK	None	None
Average number of shares <sup>1)</sup>	4,203,999	4,203,999
Number of shares outstanding at the balance sheet date <sup>1)</sup>	4,203,999	4,203,999

1) No instruments exist which can provide dilution effect.

**NOTE 17 LEASEHOLD IMPROVEMENT EXPENDITURES**

	Group	
	Dec 31, 2016	Dec 31, 2015
Opening acquisition values	2,128	175
Purchases	85	1,953
<b>Closing accumulated acquisition values</b>	<b>2,213</b>	<b>2,128</b>
Depreciation, opening balance	-448	-29
The year's depreciation	-490	-419
<b>Closing accumulated depreciations</b>	<b>-938</b>	<b>-448</b>
<b>Closing book value</b>	<b>1,275</b>	<b>1,680</b>

**NOTE 19 PARTICIPATION IN GROUP COMPANIES**

Directly owned companies	Company registration no	Registered office	Capital share %	Book value Dec 31, 2016	Book value Dec 31, 2015
SpineMedical AB	559003-7080	Stockholm	100.0%	50	45
LPB Sweden AB	559035-9112	Stockholm	100.0%	50	50
				<b>100</b>	<b>95</b>

**NOTE 20 OTHER FINANCIAL FIXED ASSETS**

	Group	
	Dec 13, 2016	Dec 13, 2015
Foreign withholding tax	-	5,670
Deposit	2,675	2,675
<b>Total</b>	<b>2,675</b>	<b>8,345</b>

**NOTE 18 EQUIPMENT AND FACILITIES**

	Group	
	Dec 31, 2016	Dec 31, 2015
Opening acquisition values	14,646	14,421
Purchases	2,881	338
Divestments and disposals	-605	-113
<b>Closing accumulated acquisition values</b>	<b>16,922</b>	<b>14,646</b>
Depreciation, opening balance	-12,092	-11,059
Divestments and disposals	605	84
The year's depreciation	-1,066	-1,117
<b>Closing accumulated depreciations</b>	<b>-12,553</b>	<b>-12,092</b>
<b>Closing book value</b>	<b>4,369</b>	<b>2,554</b>

**NOTE 21 DEFERRED TAX**

	Group	
	Dec 13, 2016	Dec 13, 2015
<b>Deferred tax recoverable</b>		
Temporary differences:		
- Tangible fixed assets	172	88
<b>Total</b>	<b>172</b>	<b>88</b>
<b>Deferred tax liabilities</b>		
Temporary differences:		
- Untaxed reserves	4,136	-
<b>Total</b>	<b>4,136</b>	<b>-</b>
<b>Gross change in deferred tax recoverable</b>		
At the beginning of the year	88	5
Reported in income statement	84	83
<b>Total</b>	<b>172</b>	<b>88</b>
<b>Gross change in deferred tax liabilities</b>		
At the beginning of the year	-	1,446
Reported in income statement	-4,136	-1,446
<b>Total</b>	<b>-4,136</b>	<b>-</b>

**NOTE 22** ACCOUNTS RECEIVABLE

	Group	
	Dec 31, 2016	Dec 31, 2015
Accounts receivable gross	634	646
Reserve accounts receivable	-	-
<b>Total</b>	<b>634</b>	<b>646</b>
<i>Ageing of non-reserved accounts receivable</i>		
Overdue 0–30 days	-	-
Overdue 30–60 days	-	-
Overdue > 60 days	-	-
<b>Total</b>	<b>-</b>	<b>-</b>

No anticipated or actual customer losses have been posted. The creditworthiness of customers with outstanding claims is judged as good.

**NOTE 23** OTHER RECEIVABLES

	Group	
	Dec 31, 2016	Dec 31, 2015
Withheld foreign tax <sup>1)</sup>	-	1,187
Value added tax	1,764	881
Tax account	0	0
<b>Total</b>	<b>1,764</b>	<b>2,068</b>

1) As per December 31, 2016 withheld foreign tax is reported as an outbound entry in the tax debt. The comparative year has not been restated as the amount has been assessed as not significant.

**NOTE 26** SHARE CAPITAL

Class of shares	Number of shares	Share capital (SEK)	Ratio value (SEK)	Votes per share	Total votes
A-shares	3,199,999	80,000	0.025	10	31,999,990
B-shares	1,004,000	25,100	0.025	1	1,004,000
<b>Total</b>	<b>4,203,999</b>	<b>105,100</b>			<b>33,003,990</b>

**Share capital development**

Year	Event	Number of new shares	A-shares	B-shares	Total number of shares	Change in share capital, SEK	Total share capital, SEK
2000	Company founded	1,000	1,000		1,000	100,000	100,000
2002	Split 1000:1	999,000	1,000,000		1,000,000		
2002	Split 4:1	3,000,000	4,000,000		4,000,000		
2002	Reclassification A- to B-shares		3,000,000	1,000,000	4,000,000		
2004	New issue	133,333	3,133,333	1,000,000	4,133,333	3,333	103,333
2005	New issue	66,666	3,199,999	1,000,000	4,199,999	1667	105,000
2011	Subscription through warrants	4,000	3,199,999	1,004,000	4,203,999	100	105,100
		<b>4,203,999</b>				<b>105,100</b>	

See further the specification Consolidated changes in equity.

**NOTE 24** PREPAID EXPENSES AND ACCRUED INCOME

	Group	
	Dec 31, 2016	Dec 31, 2015
Prepaid rental costs	1,598	1,580
Other prepaid expenses	2,959	319
<b>Total</b>	<b>4,557</b>	<b>1,899</b>

**NOTE 25** CASH AND CASH EQUIVALENTS

	Group	
	Dec 31, 2016	Dec 31, 2015
Cash and bank balances	692,530	113,831
<b>Total</b>	<b>692,530</b>	<b>113,831</b>

**NOTE 27** PROPOSED PARENT COMPANY  
PROFIT DISPOSITION

The following funds (SEK) are available to the AGM:

Profit/loss carried forward	2,116,901
Net profit for the year	42,916,151
<b>Total</b>	<b>45,033,052</b>

The Board proposes that available funds be disposed of as follows:

Carried forward in new account	45,033,052
<b>Total</b>	<b>45,033,052</b>

**NOTE 28** TAX LIABILITIES

	Group	
	Dec 31, 2016	Dec 31, 2015
Tax liabilities	12,524	1,122
Withheld foreign tax <sup>1)</sup>	-5,607	-
<b>Total</b>	<b>6,917</b>	<b>1,122</b>

1) As at December 31, withheld foreign tax is reported under other receivables. The comparative year has not been restated as the amount has been assessed as not significant.

**NOTE 29** ACCRUED EXPENSES AND  
DEFERRED INCOME

	Group	
	Dec 31, 2016	Dec 31, 2015
Accrued personnel costs	2,967	2,784
Other accrued expenses	5,204	789
Prepaid income	608,813	8,187
Prepaid EU grants	5,845	7,425
Prepaid rental income	507	529
<b>Total</b>	<b>623,336</b>	<b>19,714</b>

**NOTE 31** SUPPLEMENTARY INFORMATION ON FINANCIAL ASSETS AND LIABILITIES**Calculation of fair value**

The Group's financial assets and liabilities are entirely related to means of payment, current receivables and liabilities (e.g. accounts receivable and accounts payable). For these assets and liabilities fair value has been equated with book value. The Group

**NOTE 30** PLEDGED ASSETS AND  
CONTINGENT LIABILITIES

	Group	
	Dec 31, 2016	Dec 31, 2015
<b>Pledged assets</b>		
Restricted cash	2,675	2,675
<b>Total</b>	<b>2,675</b>	<b>2,675</b>

**Contingent liabilities**

BioArctic has identified contingent liabilities as follows:

- ▲ BioArctic has under existing EU research collaborations a repayment obligation towards contracting party in case of termination of the projects and advance payments received are exceeding the costs incurred. BioArctic also has an obligation to pay for health care needs of patients included in these studies.
- ▲ Within the framework of received Swedish public grants the Company has a repayment obligation if the projects are terminated, or the Company does not carry out the projects according to instructions, and the accumulated project costs are less than what has been paid.

All the Company's projects are running according to plan and the Company has no indications that repayment obligations or other obligations could arise. The same assessment was made in 2015.

**Classification of financial instruments of the Group – by valuation category**

	Loan and trade receivables	Other financial liabilities	Total book value	Fair value
<b>Dec 31, 2016</b>				
<b>Financial assets</b>				
Accounts receivable	634		634	634
Other current receivables	1,764		1,764	1,764
Cash and cash equivalents	692,530		692,530	692,530
<b>Total</b>	<b>694,928</b>		<b>694,928</b>	<b>694,928</b>
<b>Financial liabilities</b>				
Accounts payable		11,736	11,736	11,736
Other current liabilities		1,091	1,091	1,091
<b>Total</b>		<b>12,827</b>	<b>12,827</b>	<b>12,827</b>

has no foreign exchange contracts or listed securities. The fair value of financial assets and liabilities is reported in the table below.

*Note 31 cont.*

	Loan and trade receivables	Other financial liabilities	Total book value	Fair value
<b>Dec 31, 2015</b>				
<b>Financial assets</b>				
Accounts receivable	646		646	646
Other current receivables	2,068		2,068	2,068
Cash and cash equivalents	113,831		113,831	113,831
<b>Total</b>	<b>116,545</b>		<b>116,545</b>	<b>116,545</b>
<b>Financial liabilities</b>				
Accounts payable		1,155	1,155	1,155
Other current liabilities		835	835	835
<b>Total</b>		<b>1,990</b>	<b>1,990</b>	<b>1,990</b>

**The Group's maturity structure concerning undiscounted cash flows of financial**

Nominal amounts	2017	2018	2019	2020	2021	>2022
Accounts payable	11,736	-	-	-	-	-
Other current liabilities	1,091	-	-	-	-	-
<b>Total</b>	<b>12,827</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>

**NOTE 32 TRANSACTIONS WITH RELATED PARTIES**

Former board director Mikael Smedeby is active as a lawyer and partner in Advokatfirman Lindahl and has previously also been a board director of Advokatfirman Lindahl, which provides day-to-day business legal advice to the Company against compensation on market terms. In 2015 Lindahl's invoiced fees amounted to approx. 250 TSEK, in 2016 to approx. 934 TSEK.

None of the shareholders, board directors, senior executives, auditors or related parties has taken direct or indirect part in any business transactions with the Group that is or was unusual in

character or with respect to the terms. Nor has the Group given loans, set guarantees or given surety to or for the benefit of any of the shareholders, board directors, senior executives, auditors or related parties. Agreement on services with related parties are carried out at market conditions. No transactions that substantially affected the Group's financial position and result have been taking place between the Company and related parties.

**NOTE 33 EVENTS AFTER THE BALANCE SHEET DATE**

- ▲ Clinics in Estonia and Norway have become involved in the spinal cord study, SC0806, while the clinics in Denmark have been excluded.
- ▲ A fifth patient with complete spinal cord injury has been treated with the product SC0806. Eight out of nine patients (three of which are control patients) have thus been included in the first panel of the study.
- ▲ Approved patent in the US for the second generation drug candidate (BAN2401 backup) for Alzheimer's disease.
- ▲ BioArctic has received a 0.2 MSEK grant from Vinnova/Medtech4Health for quality management system work.
- ▲ BioArctic has received a 0.5 MSEK grant from Vinnova for the research project Commercial potential of antibody-based PET imaging.

**NOTE 34 INFORMATION ON PURCHASES AND SALES WITHIN THE GROUP**

No purchases or sales have taken place within the Group.

**NOTE 35 DEFINITION AND DEVELOPMENT OF KEY RATIOS****Definitions of key ratios**

*Earnings per share* Profit divided by average number of outstanding shares.  
*Solidity* Equity in relation to the balance sheet total.

**Development of key ratios**

Group, MSEK	2016	2015	2014	2013	2012
<b>Earnings per share</b>					
Net profit for the year	58	4	7	9	-1
Number of shares	4,203,999	4,203,999	4,203,999	4,203,999	4,203,999
Earnings per share, SEK	13.70	0.88	1.61	2.19	-0.13
<b>Solidity</b>					
Equity	61	108	105	98	85
Balance sheet total	708	131	154	185	106
<b>Solidity, %</b>	<b>9%</b>	<b>83%</b>	<b>68%</b>	<b>53%</b>	<b>8%</b>



## Auditor's report regarding financial reports over historical financial information

### The Auditor's Report on historical financial statements

**To the Board of Directors in BioArctic AB (publ), corporate identity number 556601-2679**

We have audited the financial statements for BioArctic AB (publ) on pages F19-F33, which comprise the balance sheet as of 31 December 2016 and 31 December 2015 and the income statement, cash flow statement and statement of changes in equity for the years then ended, and a description of significant accounting policies and other explanatory notes.

#### **The Board of Directors' and the Managing Director's responsibility for the financial statements**

The Board of Directors and the Managing Director are responsible for the preparation and the fair presentation of the financial statements in accordance with International Financial Reporting Standards as adopted by the EU and the Annual Accounts Act and additional applicable framework. This responsibility includes designing, implementing and maintaining internal control relevant to preparing and appropriately presenting financial statements that are free from material misstatement, whether due to fraud or error. The Board is also responsible for the preparation and fair presentation in accordance with the requirements in the Prospectus Regulation (EC) No 809/2004.

#### **The auditor's responsibility**

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with FAR's Recommendation RevR 5 Examination of Prospectuses. This recommendation requires that we comply with FAR's ethical requirements and have planned and performed the audit to obtain reasonable assurance that the financial statements are free from material misstatements. The firm applies ISQC 1 (International Standard on Quality Control) and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

We are independent of the xx AB in accordance with professional ethics for accountants in Sweden and have otherwise fulfilled our ethical responsibilities in accordance with these requirements.

An audit in accordance with FAR's Recommendation RevR 5 Examination of Prospectuses involves performing procedures to obtain audit evidence corroborating the amounts and disclosures in the financial statements. The audit procedures selected depend on our assessment of the risks of material misstatements in the financial statements, whether due to fraud or error. In making those risk assessments, we consider internal control relevant to the company's preparation and fair presentation of the financial statements as a basis for designing audit procedures that are applicable under those circumstances but not for the purpose of expressing an opinion on the effectiveness of the company's internal control. An audit also involves evaluating the accounting policies applied and the reasonableness of the significant accounting estimates made by the Board of Directors and the Managing Director and evaluating the overall presentation of the financial statements.

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

#### **Opinion**

In our opinion the financial statements give a true and fair view in accordance with International Financial Reporting Standards as adopted by the EU/Annual Accounts Act and additional applicable framework of the financial position of BioArctic AB (publ) as of 31 December 2016 and 31 December 2015 and its financial performance, statement of changes in equity and cash flows for these years.

Stockholm September 27, 2017

Grant Thornton Sweden AB

Mia Rutenius  
Authorized auditor

Rutger Nordström  
Authorized auditor

# Glossary and definitions

<b>ADCOMS</b>	Alzheimer's Disease Composite Score – A cognition scale consisting of parts from three different scales
<b>Alpha-synuclein (a-synuclein)</b>	A protein in the nervous system, present in Lewy bodies in some structures of the brain in Parkinson's disease
<b>Amyloid-beta (Ab)</b>	A 40–42 amino acids long peptide, split from the parent protein APP, amyloid precursor protein. A $\beta$ is the main constituent of the plaques found in the brain of Alzheimer patients
<b>Antibody</b>	Protein used by the body's immune system to detect and destroy foreign substances
<b>ARIA-E (Amyloid Related Imaging Abnormality-Edema)</b>	Amyloid-related imaging abnormalities (ARIA) are abnormal alterations seen in neuroimaging of patients with Alzheimer's disease in connection with immunotherapies against A $\beta$ . ARIA-E consists of cerebral edema, a swelling of the brain caused by increased leakage of fluid from blood vessels into the brain. This is a relatively mild side effect.
<b>Arctic mutation</b>	A mutation in the amyloid precursor protein (APP) leading to an increase of oligomers/protofibrils of A $\beta$ . Individuals with the Arctic mutation develop Alzheimer's disease at an early age. The Arctic mutation was discovered by Professor Lars Lannfelt's research group and has given name to the Company.
<b>Axon</b>	Nerve fibers that are outgrowths from nerve cells (neurons)
<b>BACE1 inhibitors</b>	An alternative to passive immunotherapy based on enzyme inhibitors that reduce the production of A $\beta$ , a potential future treatment of Alzheimer's disease
<b>Bayesian study</b>	A study where collected data is combined with known facts for a complete conclusion
<b>Best-in-class</b>	A product whose characteristics/mechanisms of action is the most effective for a specific disease treatment and thus the best of its kind on the market
<b>Biomarker</b>	A measurable indicator of a medical condition
<b>Biosimilar</b>	A biological drug that is similar to an already approved reference drug, but not identical to the reference drug
<b>Blood-brain barrier</b>	A physiological mechanism in which merged capillary walls in the brain's blood vessels regulate the transport of molecules between the blood and the brain tissue, with the function to protect the brain against viruses and other harmful agents
<b>Central nervous system</b>	The central nervous system consists of the brain and the spinal cord
<b>Clinical studies</b>	Drug trials performed in human subjects
<b>Complete spinal cord injury</b>	A complete injury means that the spinal cord is completely severed. In an incomplete injury there are still a few nerve contacts left
<b>Concept validation studies (Proof-of-concept)</b>	Proof-of-concept studies are carried out to give support for dose selection and route of administration in following clinical studies
<b>Contract Development and Manufacturing Organization (CDMO)</b>	A generic term for companies active in development and manufacturing services in drug development
<b>Contract Research Organization (CRO)</b>	A generic term for service companies active in contract research and services in drug development
<b>Cornerstone Investors</b>	HBM Healthcare Investments (Cayman) Limited, Handelsbanken Fonder AB and the Second Swedish National Pension Fund, the Third Swedish National Pension Fund and John Wattin/Inbox Capital.

<b>Disease modifying treatment</b>	A treatment that interferes with the processes of the disease and changes it in a positive way
<b>Drug candidate</b>	A drug under development that has not yet gained marketing approval
<b>European Medicines Agency (EMA)</b>	The European regulatory authority
<b>First-in-class</b>	A product with new and unique properties/mechanism of action for a certain treatment and thus the first of its kind on the market
<b>Food and Drug administration (FDA)</b>	The US regulatory authority
<b>Generics</b>	A pharmaceutical copy containing the same active substances and having effect as the original drug
<b>Good Manufacturing Practice (GMP)</b>	A quality system intended to ensure that certain types of products, e.g. drugs and medical devices, are manufactured and controlled in a uniform way so that the quality standards appropriate for their intended use are ensured
<b>Hippocampus</b>	Part of the brain that is important for inter alia consolidation of short-term memory to long-term memory as well as for the spatial sense of locality
<b>Humanized antibody</b>	Usually a mouse antibody in which the sequence has been changed to resemble a human antibody
<b>In vitro</b>	A biological process that takes place outside of organisms, in test tubes or cell cultures
<b>In vivo</b>	A biological process that takes place in animals or humans
<b>Ligand</b>	Molecule that binds to the desired target in the body
<b>Medical device for implantation</b>	A medical device that is intended to be totally or partially introduced, surgically or medically, into the human body, or through a medical procedure in a body opening, and intended to remain there after the operation
<b>MCI, Mild Cognitive Impairment</b>	The patient presents with mild impairment of memory and other cognitive abilities
<b>Microtubules</b>	Also called cytoskeleton – small tubes found in cells
<b>Milestone payment</b>	Financial compensation obtained within the framework of a project or collaboration agreement when a certain specified objective has been achieved
<b>Monoclonal antibody</b>	An antibody that can be produced so that all copies are exactly alike
<b>Monomer</b>	A monomer is the starting molecule in polymerization. The monomers are joined into long molecular chains through the polymerization, resulting in a polymer with the monomer as the repeating unit
<b>Neurodegenerative diseases</b>	Diseases in which the nervous system atrophies
<b>Oligomer/protofibril</b>	A molecular chain consisting of several monomers joined together
<b>Orphan drugs</b>	Drugs for patients with rare and serious diseases
<b>Peptide</b>	A molecule made up of amino acids connected into a short chain
<b>PET</b>	Positron emission tomography, an investigational imaging method
<b>Pathogens</b>	Toxic substances or organisms that cause disease
<b>Placebo</b>	Ineffectual substance given in the same formulation as an active substance to control group of patients
<b>Phosphorylation</b>	A phosphate group sticks to an amino acid in a protein
<b>Preclinical studies</b>	Studies performed in model systems, i.e. not in humans
<b>Prodromal</b>	Pre-stage, in a clinical context often before the disease has developed
<b>Product candidate</b>	A product under development that has not yet gained marketing approval
<b>Research phase</b>	Early research is focused on studying and elucidating the underlying molecular disease mechanisms

<b>Sponsor</b>	The person, company, institution or organization responsible initiating, organizing or financing a clinical trial
<b>Supernatant</b>	Common clear liquid that occurs during centrifugation
<b>System atrophy</b>	Cell death which causes atrophy of a system, for example brain tissue
<b>Tau</b>	A protein that is changed in the brain in Alzheimer's disease, but also in several other diseases
<b>The Code</b>	The Swedish code of corporate governance
<b>The Main Shareholders</b>	Demban AB and Ackelsta AB
<b>The Offering</b>	The offer to the public in Sweden and institutional investors in Sweden and abroad to subscribe for newly issued B-shares and acquire existing B-shares in BioArctic AB
<b>The Swedish mutation</b>	A mutation in the amyloid precursor protein leading to increased production of A $\beta$ and early development of Alzheimer's disease. Discovered in a Swedish family in 1992 by Professor Lars Lannfelt and his research group.

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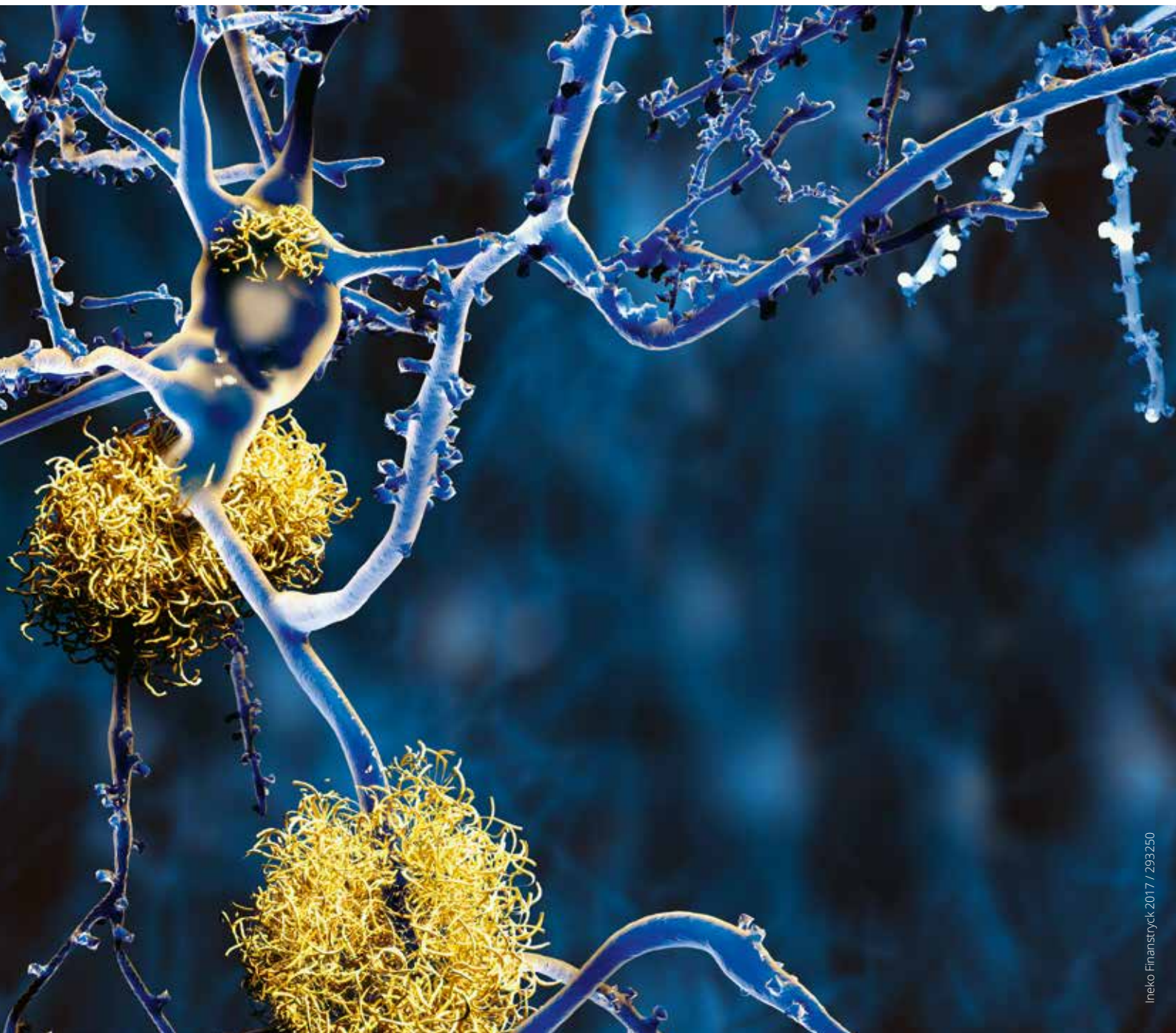
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