

---

## Karolinska Development

---

Karolinska Development (Nasdaq Stockholm: KDEV) is an investment company which offers a unique opportunity to share in the growth in value of a number of Nordic life sciences companies with high commercial potential, eight of which have projects in the clinical development or early commercial phase. Clinical phase II results are expected for presentation by five of the portfolio companies' projects in 2018 and 2019, offering the potential for substantially increased opportunities for attractive divestments or licensing deals. Comparable candidate drugs have, in recent years, been out-licensed or sold for contract values of between SEK 1.6 and 5.3 billion for the individual projects. The portfolio companies have been strengthened in the past year through the recruitment of senior executives with a documented ability to close international business deals in the life sciences sector.

For further information, see [www.karolinskadevelopment.com](http://www.karolinskadevelopment.com)

---

## Financial Update

---

### Second quarter

- The net profit/loss for the second quarter was SEK 31.3 million (SEK -21.3 million in the second quarter of 2017). Earnings per share totalled SEK 0.5 (SEK -0.3 in the second quarter of 2017).
- The result of the Change in fair value of shares in portfolio companies amounted to SEK 26.0 million. The increase was primarily due to the value development of Modus Therapeutics.
- The total fair value of the portfolio was SEK 831.6 million at the end of June 2018, an increase of SEK 103.0 million from SEK 728.6 million at the end of the previous quarter. The net portfolio fair value was at the same time SEK 524.7 million, an increase of SEK 68.1 million from SEK 456.4 at the end of the previous quarter.
- Net sales totalled SEK 0.8 million during the second quarter of 2018 (SEK 0.6 million during the second quarter of 2017).
- Karolinska Development invested a total of SEK 54.2 million in portfolio companies during the second quarter. Second quarter investments in the portfolio companies by Karolinska Development and other specialised life sciences investors totalled SEK 123.4 million.
- Cash and cash equivalents decreased by SEK 49.2 million during the second quarter, totalling SEK 96.5 million on 30 June 2018.

---

## Significant events during the second quarter

---

- Asarina Pharma announced the start of a clinical Phase IIB study with the drug candidate Sepranolone. The study will be conducted in patients with premenstrual dysphoric disorder, the severest form of premenstrual syndrome (April 2018).

- Karolinska Development followed up the partial exit in BioArctic, conducted during the fourth quarter of 2017, and divested the remaining holdings to a total amount of SEK 12.0 million (April 2018).
- Aprea Therapeutics presented initial positive results at the 2018 American Association of Cancer Research Annual Meeting in Chicago from its ongoing Phase Ib/II clinical study of APR-246 in patients with myelodysplastic syndrome (April 2018).
- Modus Therapeutics candidate drug sevuparin has been granted rare pediatric disease designation by the US Food & Drug Administration (FDA) for the treatment of children with sickle cell disease (April 2018).
- Pharmanest announced the appointment of Helena Jansson as new Chief Executive Officer. She replaces Gunilla Lundmark, who left her position after seven years (May 2018).
- Pharmanest entered into an exclusive agreement with Acerus Pharmaceuticals Corporation pertaining to the commercialization of Pharmanest's gynecological pain relief product SHACT (Short Acting Lidocaine product) in Canada (May 2018).
- Aprea Therapeutics presented continued positive development for the candidate drug APR-246 in patients with myelodysplastic syndrome at the 2018 European Hematology Association (EHA) Annual Meeting in Stockholm (June 2018).

---

## Significant post-period events

---

- Karolinska Development announces that HealthCap with an investment of SEK 60 million becomes a new shareholder of Modus Therapeutics under a conditional agreement, with closing after the end of the second quarter. At the same time, convertible notes held by current shareholders will also be converted into shares. The new investment together with the conversion, amount to a total of just above SEK 140 million. The transaction will increase the book value of Karolinska Development's holding in Modus Therapeutics already in the second quarter (July 2018).

### Viktor Drvota, CEO of Karolinska Development, comments:

"We are proud to report a profitable second quarter that is the result of the healthy development by our portfolio companies, paving the way for, amongst other things, the investment in Modus Therapeutics by an international renowned life science investor. We can now look forward to a very exciting latter half of the year in which several of the portfolio companies are expected to present important results from phase II studies, including Modus Therapeutics, Dilafor and Umecrine Cognition."

### Contact information

For further information, please contact:

**Viktor Drvota**, Chief Executive Officer  
+46 73 982 52 02  
viktor.drkota@karolinskadevelopment.com

**Fredrik Järrsten**, Chief Financial Officer  
+46 70 496 46 28  
fredrik.jarsten@karolinskadevelopment.com

---

## Chief Executive's Report

---

### HealthCap's investment in Modus Therapeutics – a vote of confidence

The announcement that one of Europe's leading venture capital companies, HealthCap, is investing a total of around SEK 60 million in Karolinska Development's portfolio company, Modus Therapeutics, is a vote of confidence and confirms our long-standing belief in Modus' potential. The transaction is a clear example of Karolinska Development's active value creation and underlines the quality and level of innovation of Modus' pharmaceutical projects. HealthCap is also a former joint owner of another of Karolinska Development's portfolio companies, Aprea Therapeutics.

The transaction results in an increase in the book value of Karolinska Development's holding in Modus Therapeutics as a result of the higher valuation. This in turn, has a positive effect on earnings of around SEK 35 million.

### Positive results for APR-246 in patients with MDS and AML

In Q2, Aprea Therapeutics' APR-246 candidate drug presented positive initial results in a combination study with the azacitidine standard treatment in patients with TP53 mutated myelodysplastic syndrome and acute myeloid leukemia (MDS and AML). The results were noted by the study's lead principal investigator, Dr David Sallman, in the OncLive webcast, when he stressed the remarkably good treatment efficacy. The patient group's poor prognosis notwithstanding, all nine patients evaluated to date have responded to the treatment, eight of which achieved a complete response. This should be viewed in the light of existing treatments that produce a complete response in around 20-30% of patients.

Incidences of MDS are relatively limited and a treatment such as APR-246 would, therefore, be an ideal orphan drug – a classification that would offer significant benefits during the process of obtaining marketing approval. An orphan drug classification in the USA and Europe would, furthermore, grant seven years' and ten years' market exclusivity, respectively.

The use of APR-246 in leukemia target indications is not, however, the only study; ovarian cancer is amongst the other target indications being studied and results of the PiSARRO study of APR-246 with members of this particular patient group are expected in the second quarter of 2019.

We are keen for our portfolio companies to spread their development risks by evaluating multiple indications and the broad development programme for APR-246 is a good example of the success of this approach.

### Important clinical results expected in the latter half of the year

The portfolio companies' successful development work is expected to result in the presentation of important phase II results in 2018 and 2019 by Aprea Therapeutics, Dilafor, Modus Therapeutics and Umeocrine Cognition, amongst others.

**Dilafor** is developing tafoxiparin, which is a treatment designed to prevent protracted labor. A phase IIb study is comparing tafoxiparin, with the standard treatment of oxytocin, and a placebo. Dilafor's treatment has the potential to become first-in-class. Not much has happened in this area over the past few decades, with the standard treatment developed back in the 1950s.

Karolinska Development owns 36% of Dilafor through KDev Investments. Licensing deals in related areas have yielded contract values ranging from a little over SEK 4 billion to over SEK 5 billion. The average probability of positive phase II results in this therapeutic indication area is 50%<sup>1</sup>.

---

<sup>1</sup> Phase II success rates per disease area. Source: Hay Michael, et al. "Clinical development success rates for investigational drugs." *Nature biotechnology* 32.1 (2014):40

**Modus Therapeutics** is expected to present the results of a phase II study of the candidate drug, sevuparin, for the treatment of the heritable disease, sickle cell anemia, in the second half of 2018. People with this disease are at risk of microvascular obstructions, known as Vaso-Occlusive Crises (VOCs), which cause oxygen deprivation and severe pain. There is currently no treatment available for the acute phases of the disease, other than analgesics. Sevuparin is classified as a potential orphan drug in the USA and EU, granting market exclusivity for seven and ten years, respectively.

Karolinska Development owns 52% of Modus through KDev Investments after full dilution, based on the most recent round of financing. Two partnership agreements for pharmaceutical projects in the same developmental phase for the treatment of sickle cell anemia have, amongst others, been signed in recent years with contract values of over SEK 5 billion and almost SEK 3 billion, respectively. The average chance of positive phase II data for projects in this therapeutic indication area is 50%<sup>2</sup>.

**Aprea Therapeutics** is conducting an adaptive phase Ib/II study of the APR-246 candidate drug in combination with chemotherapy for the treatment of platinum-resistant ovarian cancer, the most lethal form of gynecological cancer. The company's candidate drug has shown itself capable of reactivating mutant p53 protein – an endogenous substance that, under normal conditions, inhibits uncontrolled cell division.

The study is scheduled for completion in the latter half of 2018, but its adaptive structure offers the potential for enrolling additional patients, and the results may, therefore, be delayed until early 2019. If APR-246 proves to be an effective treatment for ovarian cancer, there is a strong likelihood that the substance will also be effective in the treatment of other forms of cancer. The candidate drug is already being evaluated in other therapeutic areas, and the interim results of the study of MDS patients described above are notably positive.

Karolinska Development owns 1.5% of the company directly and a further 16% through KDev Investments. A licensing deal for a similar pharmaceutical project was completed some years ago with a contract value of almost SEK 4 billion. The average chance of positive phase II data for projects in this therapeutic indication area is 27%<sup>2</sup>.

**Umecrine Cognition** is conducting two phase II studies of the GR3027 candidate drug. The first of these studies involves patients with hepatic encephalopathy (HE) and associated neuropsychiatric symptoms, and the results are expected in 2018. The second phase II study involves patients with a serious form of sleep disorder, and the results are expected in 2018. As far as Karolinska Development is aware, no other company has similar treatments in the clinical phase of development.

Karolinska Development owns 67% of Umecrine Cognition. Two licensing deals involving similar pharmaceutical projects were signed in recent years with contract values of over SEK 3 billion and SEK 1.6 billion, respectively. The average probability of positive phase II results for this type of project is 34%<sup>2</sup>.

Overall, Karolinska Developments' investments have performed well during the quarter – so well that the company has posted a positive result. We will continue to support our portfolio companies and look forward to the numerous potentially value-boosting steps in their development that can be expected during the latter half of the year while we continue evaluating our financial situation.

Solna 16 August, 2018

Viktor Drvota  
Chief Executive Officer

<sup>2</sup> Phase II success rates per disease area. Source: Hay Michael, et al. "Clinical development success rates for investigational drugs." Nature biotechnology 32.1 (2014):40

## Portfolio Companies

### A Focused Portfolio with High Commercial Potential

Karolinska Development's investments in therapeutic companies are conducted in syndicates with other professional life science investors until proof-of-concept is demonstrated in Phase II trials, at which point different exit options are evaluated. For medtech companies, the business model is to finance the companies beyond break-even before realizing the investments.










Karolinska Development has a focused portfolio of therapeutic and medtech companies with significant value-generating potential. The portfolio companies are developing highly differentiated and commercially attractive products that have the potential to deliver compelling clinical and health economic benefits, as well as attractive returns on investment.

During the past years, Karolinska Development has optimized the clinical programs of the portfolio companies to reach clinically meaningful value-inflection points in 2018. Experienced leadership has been recruited to the management and boards of the portfolio companies. Furthermore, Karolinska Development has supported the financing of the portfolio companies through syndication with experienced international and domestic professional life science investors. As a result, several of Karolinska Development's portfolio companies now are financed and well positioned to deliver key value-generating clinical or commercial milestones over the next 12-18 months.

The therapeutics companies' next key value-generating milestones are expected in 2018 and 2019, when several of the companies are supposed to present Phase II proof-of-concept data. The medtech companies OssDsign and Promimic are revenue generating and have significant milestones mapped out in 2018/2019 regarding execution of their commercial strategies.

In addition to its active value creation in seven portfolio companies, Karolinska Development has passive investments in two portfolio companies and retained economic interests in the form of earn out-agreements in additionally five life science companies.






### Our current portfolio - significant value-inflection in 12 – 18 months

Therapeutics	Net ownership*	Preclinical	Phase I	Phase II	Phase III	2 <sup>nd</sup> indication(s) ongoing/planned
	KD 1.5% ** KDev Invest 16%	Ovarian cancer			2019	Myelodysplastic syndrome, Platinum-resistant ovarian cancer, Esophageal cancer, Melanoma
	KDev Invest 52%	Sickle cell disease			2018	At-home setting with subcutaneous injection, Malaria
	KDev Invest 36%	Labor arrest			2018	Labor induction
	KD 67 %	Hepatic encephalopathy			2019	Idiopathic hypersomnia
	KD 14% **	Endometriosis			2018	
	KD 10%**	Pain during intrauterine device placement			2020	Passive investment
	KDev Invest 2.5%	Premenstrual dysphoric disorder			2019	Passive investment
Medtech		Prototype	Development	PMA / 510k	Market	
	KD 21% **	Patient-specific craniofacial implants			Expansion in the EU and the US 2018	
	KDev Invest 33%	Medical implant coatings			Expansion in the EU and the US 2018	

KD: Karolinska Development – KDev Invest: KDev Investments  
 \* Fully diluted ownership based on current investment plans  
 \*\* Includes indirect holdings through KCIF Co-Investment Fund

Current stage of development → Progress and expected results

### Earn-out agreements

				
Phase III	Phase II	Phase II	Preclinical	Product development



**Project (First-in class)**  
APR-246

**Primary indication**  
Ovarian cancer

**Development Phase**  
Phase IIa

**Holding in company\***  
Karolinska Development  
1.5%\*\*  
KDev Investments 16%

**Other investors**  
Versant Ventures (US),  
5AM Ventures (US),  
HealthCap (Sweden),  
Sectoral Asset  
Management (Canada),  
KCIF Co-Investment Fund KB

**Origin**  
Karolinska Institutet

**More information**  
 [aprea.com](http://aprea.com)

*\* Fully-diluted ownership based on  
current investment plans.*

*\*\* Includes indirect holdings  
through KCIF Co-Investment Fund*

#### Deal values for similar projects

- USD 469 million MEI  
Pharma (licensor) &  
Helsinn Group (licensee)
- USD 483 million  
Calithera Biosciences  
(licensor) & Incyte  
(licensee)

## Aprea Therapeutics AB



### Unique approach to treating a broad range of cancers

Aprea Therapeutics (Stockholm, Sweden and Boston, US) is a biotech company developing novel anticancer compounds targeting the tumor suppressor protein p53. Mutations of the p53 gene occur in around 50% of all human tumors. These mutations are often associated with resistance to anticancer drugs and poor overall survival, representing a major unmet medical need in the treatment of cancer. Aprea's lead drug candidate APR-246 is a first-in-class compound that reactivates mutant p53 protein, inducing programmed cell death in human cancer cells.

APR-246 is currently in a Phase IIa trial of a combined Phase Ib/IIa clinical study (the PiSARRO study), investigating the drug candidate's safety and efficacy in combination with chemotherapy in second-line treatment of patients with platinum-sensitive high-grade serous ovarian cancer (HGSOC). The Phase Ib component established safety, tolerability and pharmacokinetics of APR-246 in combination with standard chemotherapy.

Aprea is also enrolling four Phase Ib/II studies in myelodysplastic syndrome (MDS), platinum-resistant HGSOC, esophageal cancer and melanoma. Initial positive results from the Phase Ib part of the ongoing Phase Ib/II study in MDS have been presented at key congresses. The study evaluates the safety and efficacy of APR-246 in combination with standard chemotherapy (azacitidine) for the treatment of TP53 mutated MDS and acute myeloid leukemia (AML). Initial data of 9 evaluable patients show that there was a 100% overall response rate (ORR), with 8 of 9 patients achieving a complete remission. In comparison, the ORR in corresponding patients receiving standard of care is approximately 20%. The combination of APR-246 and azacitidine was also well tolerated.

#### The market

APR-246 has the potential to be used in many cancers as mutations in p53 are found in around 50% of all diagnosed cancers. The lead target indications thus far include ovarian cancer and blood tumors as MDS and AML. Ovarian cancer is the 7th most common cancer in women, with over 60,000 new patients diagnosed worldwide each year. HGSOC accounts for 70-80% of all deaths from ovarian cancer. MDS is an orphan disease and represents a spectrum of hematopoietic stem cell malignancies. Approximately 30-40% of MDS patients progress to AML and mutation in p53 are found in up to 20% of MDS and AML patients, which is associated with poor overall prognosis.

#### Recent progress

- Initial positive results from the ongoing Phase Ib/II study in MDS presented at the 2018 American Association of Cancer Research (AACR) Annual Meeting in Chicago (April 2018) and at the 2018 European Hematology Association (EHA) Annual Meeting in Stockholm (June 2018).

#### Expected milestones

- Results of Phase IIa part of PiSARRO study expected in 2019.
- Results from the other Phase Ib/II studies expected over the coming years.





**Project (First-in-class)**

Sevuparin

**Primary indication**

Sickle cell disease (SCD)

**Development Phase**

Phase II

**Holding in company\***

KDev Investments 52%


**Other investors**

The Foundation for Baltic and  
East European Studies,  
Praktikerinvest

**Origin**

Karolinska Institutet, Uppsala  
University

**More information**

 modustx.com

*\*Fully-diluted ownership based on  
current investment plans*

**Deal values for similar  
projects**

- USD 665 million Novartis AG (buyer) & Selexys Pharmaceuticals (seller)
- USD 340 million GlycoMimetics (licensor) & Pfizer (licensee)

## Modus Therapeutics AB



### Targeting relief for sickle cell disease patients

Modus Therapeutics (Stockholm, Sweden) is developing sevuparin, an innovative, disease-modifying drug which has the potential to become a first-in-class treatment for sickle cell disease (SCD).

Sevuparin's anti-adhesive mechanism means it has the potential to prevent and resolve the microvascular obstructions experienced by SCD patients. These obstructions cause the severe pain experienced by patients during Vaso-Occlusive Crises (VOCs) and result in high morbidity through organ damage as well as the risk of premature death.

Modus is conducting a Phase II study of sevuparin in hospitalized SCD patients experiencing VOC, the results of which are expected in 2018. The trial is targeting 160 patients who are randomized to receive either an intravenous infusion of sevuparin or placebo on top of standard pain medication. This proof-of-concept study is designed to demonstrate reduced time to resolution of VOC, defined as freedom from parenteral opioid use and readiness for discharge from hospital. Secondary end-points include pharmacokinetics and safety. The study is taking place in Europe, Jamaica and the Middle East under a co-development deal with Ergomed, which co-invests into the trial in return for an equity stake in Modus.

Modus is also aiming to develop a presentation of sevuparin that could be self-administered by SCD patients in a timely manner to prevent VOCs developing.

#### The market

SCD is an orphan disease with approximately 100,000 patients in the US and 35,000 patients in Europe. In addition to this, there is a large patient pool in the Middle East, India, South America and Africa. The average number of VOCs per patient seeking hospital care is in the order of one VOC per year. The commercial impact of a SCD treatment that reduces hospital stay and the use of opioid analgesics is expected to be substantial. A label expansion to include also the preventive treatment would expand the market size significantly.

#### Recent progress

- Phase I/II data demonstrating anti-adhesive properties of sevuparin published in the scientific journal PLOS ONE (December 2017).
- Dr. John Öhd appointed Chief Medical Officer (March 2018).
- Sevuparin granted Rare Pediatric Disease Designation by the FDA for the treatment of children with SCD (April 2018).
- SEK 140 million raised in a financing led by new investor HealthCap, which will invest SEK 60 million (July 2018).

#### Expected milestones

- Complete recruitment into Phase II proof-of-concept trial in 2018.
- Results from Phase II trial expected in 2018.



**Project (First-in-class)**  
GR3027

**Primary indication**  
Hepatic encephalopathy

**Development Phase**  
Phase IIa

**Holding in company\***  
Karolinska Development 67%

**Other investors**  
Norrlandsfonden,  
Fort Knox Försäkring AB,  
PartnerInvest

**Origin**  
Umeå University

**More information**  
 [umecrinecognition.com](http://umecrinecognition.com)

*\* Fully-diluted ownership based on current investment plans.*

#### Deal values for similar projects

- USD 397 million Aerial Biopharma (licensor) & Jazz Pharmaceuticals (licensee)
- USD 201 million Vernalis (licensor) & Corvus Pharmaceuticals (licensee)

## Umechrine Cognition AB



### Unique treatment approach for CNS-related disorders

Umechrine Cognition (Solna, Sweden) is developing a therapy that represents a new target class for several major CNS-related disorders. The lead compound GR3027 is presently in clinical development for hepatic encephalopathy (HE), a serious neuropsychiatric and neurocognitive complication in acute and chronic liver disease (including cirrhosis). The drug candidate is also being clinically evaluated as a new treatment of idiopathic hypersomnia (IH), which is a severe orphan disease characterized by chronic excessive daytime sleepiness despite normal sleep.

An increase in the inhibitory GABA system in the CNS is believed to be a main driver for the clinical signs and symptoms in a wide range of cognitive and sleep disorders, including HE and IH. This makes GABA-receptor modulating steroid antagonists that act on the neurosteroid enhancement of GABA receptor activation, as developed by Umechrine Cognition, a credible therapeutic class to explore.

GR3027 has been shown to restore different types of neurological impairments in experimental models. The drug candidate enters the CNS and reverses the inhibitory effects of the neurosteroid allopregnanolone on brain function in humans. Positive Phase Ib data from the ongoing combined Phase Ib/IIa study in HE shows that GR3027 is well tolerated, does not cause any dose-limiting side effects and has a favorable pharmacokinetic profile. GR3027 has now advanced into the phase IIa part of the study, from which results are expected in 2019. A Phase IIa study in IH is also ongoing, with data readout expected in 2018.

#### The market

HE is a severe disorder with a large unmet need. In total, liver cirrhosis affects up to 1% of US and EU populations. Between 180,000 and 290,000 patients with cirrhosis in the US are hospitalized due to complications of HE. Once HE develops, mortality reaches 22-35% after five years. HE is also associated with large societal and individual costs.

There are no approved treatments for IH but several wake-promoting agents are used off-label. However, they are inadequate to alleviate symptoms in most patients, and refractory or intolerance symptoms occur in one-quarter of patients.

#### Recent progress

- Positive Phase Ib data for GR3027 presented (September 2017).
- SEK 20 million raised from existing investors to fund a Phase IIa study in IH (October 2017).
- First patient included in clinical Phase IIa study in patients with IH (November 2017).

#### Expected milestones

- Results from the Phase IIa part of the combined Phase Ib/IIa study in HE expected in 2019.
- Results from Phase IIa study in IH expected in 2018.



## Dilafor

**Project (First-in-class)**

Tafoxiparin

**Primary indication**

Labor arrest

**Development Phase**

Phase IIb

**Holding in company\***

KDev Investments 36%

**Other investors**

The Foundation for Baltic  
and East European  
Studies,  
Praktikerinvest,  
Rosetta Capital,  
Lee's Pharma

**Origin**

Karolinska Institutet

**More information**
 dilafor.com

*\* Fully-diluted ownership based on  
current investment plans.*

**Deal values for similar  
projects**

- USD 595 million  
Neurocrine Biosciences  
(licensor) & AbbVie  
(licensee)
- USD 465 million Palatin  
Technologies (licensor) &  
AMAG Pharmaceuticals  
(licensee)

## Dilafor AB



### Reducing complications with childbirth

Dilafor (Solna, Sweden) is developing tafoxiparin for obstetric indications. The company's primary goal with tafoxiparin is to decrease the incidence of slow progress of labor both after induction of labor and after spontaneous onset of labor. Tafoxiparin has shown in a Phase II clinical trial encouraging evidence that it can decrease the proportion of women with labor more than 12 hours. A Phase IIb dose-finding study is underway, enrolling 370 pregnant women.

Insufficient, slow progress of labor occurs in at least forty percent of all births and to an even higher degree among first-time mothers. In its most severe form, known as protracted labor, it can last more than 12 hours. Protracted labor is the main cause of emergency surgical deliveries, such as caesarian section. The condition is often associated with complications for both mother and child, which lead to serious short-and long-term consequences as well as substantial health care costs.

The Phase IIb study aims to test tafoxiparin/placebo in addition to standard care (oxytocin infusion) in term-pregnant first-time mothers that, after spontaneous onset of labor, require labor augmentation due to slow progress of labor or labor arrest, which carries a high risk of being followed by protracted labor.

Dilafor has a license and partnership agreement with Lee's Pharmaceutical, which have the right to manufacture, develop and commercialize tafoxiparin for obstetrics and gynecological indications in China, Hong Kong, Macau and Taiwan.

#### The market

It has been estimated that as many as 40% of all pregnant women run into complications during childbirth in the form of protracted labor, where pharmaceutical therapy is relevant. This number represents the primary target population for tafoxiparin, which indicate a substantial market potential. Existing pharmacological therapies that improve uterine contractions are usually insufficient, as they are not working well enough in up to 50% of cases. Consequently, there is strong interest in better treatments such as tafoxiparin, which has "first-in-class" potential.

#### Recent progress

- Initiated a Phase IIb dose-finding study with tafoxiparin in Europe (January 2017).

#### Expected milestones

- Complete recruitment into Phase IIb dose-finding trial in 2018.
- Results from Phase IIb trial expected 2018.

## OSSDSIGN®

**Project**

OSSDSIGN® Cranial and  
OSSDSIGN® Facial

**Primary indication**

Cranial implants

**Development Phase**

Marketed

**Holding in company\***

Karolinska Development 21%\*\*

**Other investors**

SEB Venture Capital,  
Fouriertransform

**Origin**

Karolinska University Hospital,  
Uppsala University

**More information**


ossdsign.com

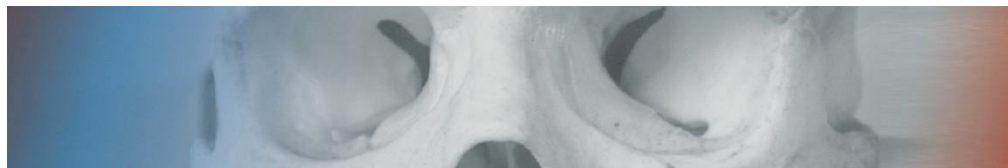
\* Fully-diluted ownership based on  
current investment plans

\*\* Includes indirect holdings through  
KCIF Co-Investment Fund

**Deal values for similar  
projects**

- USD 330 million Baxter International (buyer) & ApaTech (seller)
- USD 360 million Royal DSM (buyer) & Kensey Nash (seller)

## OssDsign AB



### Commercializing the best craniofacial implants

OssDsign (Uppsala, Sweden) is an innovator, designer and manufacturer of implants and material technology for bone regeneration. Its lead products – OSSDSIGN® Cranial and OSSDSIGN® Facial – are already being sold on several European markets including Germany, the UK and the Nordic region, as well as selected non-European markets including Singapore and Israel. The company is commercializing its cranial implant in the US and a US subsidiary has been established to strengthen the market presence. OssDsign is also undertaking regulatory and commercial activities in Japan.

OssDsign's commercial strategy is focused on building sales of its innovative products through a combination of its internal sales organization and distribution partnerships, and the company is well-funded to support this strategy.

OssDsign's personalized bone regeneration technology provides improved healing properties that are clinically proven to enhance patient outcomes. By combining a regenerative ceramic material reinforced with titanium, with tailored patient-specific designs enabled by state-of-the-art computer-aided design, 3D printing and moulding techniques, the technology platform aims to contribute to the permanent healing of a range of bone defects. Enhanced healing means a better implant solution for patients and cost savings for hospitals.

#### The market

OssDsign is focusing on the market for craniomaxillofacial (CMF) implants. The total market size was estimated to USD 1,8 billion in 2016 and is expected to grow at an CAGR of 5-9% worldwide over the five next years. The market for OssDsign's lead product in cranioplasty alone is estimated to approximately USD 200 million. OssDsign pursues a focused business strategy on a well-defined patient population. The advantages are that the targeted procedures are carried out in a limited number of easily identifiable hospitals around the world. The indications are relatively price insensitive and easy to access on many markets from a regulatory perspective.

#### Recent progress

- Launch of OSSDSIGN® Cranial in the US (April 2017).
- US subsidiary established (January 2018)

#### Expected milestones

- Launch of OSSDSIGN® Cranial and OSSDSIGN® Facial on new EU markets and selected markets outside of Europe during 2018.


**Project**

 HA<sup>nano</sup> Surface

**Primary indication**

Implant surface coatings

**Development Phase**

Marketed

**Holding in company\***


KDev Investments 33%

**Other investors**

 ALMI Invest,  
K-Svets Ventures,  
Chalmers Ventures

**Origin**

 Chalmers University of  
Technology

**More information**
 promimic.com

*\*Fully-diluted ownership based on  
current investment plans*

**Deal values for similar  
projects**

- USD 95 million Nobel Biocare (buyer) & AlphaBioTec (seller)
- USD 120 million MAKO surgical (buyer) & Pipeline Biomedical (seller)

## Promimic AB



### Coatings to enhance the properties of medical implants

Promimic (Gothenburg, Sweden) is a biomaterials company that develops and markets a unique coating for medical implants called HA<sup>nano</sup> Surface, which increases their integration into bone and anchoring strength.

The HA<sup>nano</sup> Surface is nanometer thin, which helps preserve the micro-structure of the implant and reduces the risk of cracks in the coating. The coating is unique because it can be applied to any implant geometry and material, including porous materials and 3D structures. Furthermore, the HA<sup>nano</sup> coating technology offers a fast way to market since the technology that the coating is based on has been approved by FDA, whereby a new implant coated with HA<sup>nano</sup> Surface can receive marketing approval through the 510(k) route. The coating process is easy to implement in the industrial scale production of implants.

Promimic has established a sales operation in the US and a series of development and commercial partnerships, including with Sistema de Implante Nacional (S.I.N.), a leading provider of dental implants in Brazil. S.I.N. is presently preparing a US launch of dental implants coated with HA<sup>nano</sup> Surface, which has been cleared for use by the FDA. A manufacturing facility for HA<sup>nano</sup> coated implants to supply the US and Chinese markets has also been established by the Promimic's partner, Danco Anodizing.

#### The market

Promimic is focusing on the markets for dental and orthopedic implants, which collectively represents a worldwide market opportunity of USD 600 - 800 million. The implant industry is a large, high-growth market which delivers high profit margins. The competition amongst implant manufacturers is fierce and each market segment is dominated by four-to-eight global companies. The strategies of many of these companies rely on in-licensing new technologies in order to differentiate their products and strengthen their market position. Promimic has a business model designed to meet these needs. It is centered on out-licensing its HA<sup>nano</sup> Surface technology to leading implant manufacturers so that they can incorporate it into their products.

#### Recent progress

- 510(k) clearance granted by US FDA to market dental implants coated with Ha<sup>nano</sup> Surface (December 2017).

#### Expected milestones

- Further product launches and license agreements with major manufacturers during 2018.

## Financial Development

The following financial reporting is divided into one financial reporting for The Parent Company and one for The Investment Entity. The Parent Company and The Investment Entity are the same legal entity, but the reporting is divided in order to meet legal reporting requirements.

The Parent Company is reporting in accordance with the guidelines under the Swedish Annual Accounting Act and Swedish Financial Accounting Standards Council, RFR 2. The Investment Entity is required to meet the reporting requirements of listed companies and thus in accordance with IFRS adopted by the EU and the Swedish Annual Accounts Act

Amounts with brackets refer to the corresponding period previous year unless otherwise stated.

### Financial development in summary for the Investment Entity

SEKm	2018 Apr-Jun	2017 Apr-Jun	2018 Jan-Jun	2017 Jan-Jun	2017 Full-year
<b>Condensed income statement</b>					
Change in fair value of shares in portfolio companies	26.0	-3.5	21.2	-9.2	252.1
Net profit/loss	31.3	-21.3	11.6	-46.4	179.6
<b>Balance sheet information</b>					
Cash, cash equivalents and short-term investments	96.5	189.1	96.5	189.1	169.6
<b>Share information</b>					
Earnings per share, weighted average before dilution (SEK)	0.5	-0.3	0.2	-0.8	2.9
Earnings per share, weighted average after dilution (SEK)	0.5	-0.3	0.2	-0.8	2.9
Net asset value per share (SEK) (Note 1)	4.4	0.9	4.4	0.9	4.3
Equity per share (SEK) (Note 1)	4.3	0.8	4.3	0.8	4.2
Share price, last trading day in the reporting period (SEK)	8.0	5.6	8.0	5.6	5.8
<b>Portfolio information</b>					
Investments in portfolio companies	54.2	11.8	67.6	40.7	91.9
Of which investments not affecting cash flow	2.0	1.1	4.0	1.8	4.6
Portfolio companies at fair value through profit or loss	524.7	180.9	524.7	180.9	447.8

### Financial Development for the Investment Entity in 2018

#### *Investments (comparable numbers 2017)*

Investments in the portfolio in the second quarter 2018 by external investors and Karolinska Development amounted to SEK 123,4 (21.4) million, whereof 56% (45%) by external investors.

Karolinska Development invested SEK 54.2 (11.8) million, of which SEK 52.2 (10.7) million was cash investments. Investments were made in Modus Therapeutics SEK 22.2 million, Dilafor SEK 11.3 million, Umecrine Cognition SEK 11.1 million, Forendo SEK 6.5 million and Promimic SEK 1.2 million. Non-cash investments (accrued interest on loans) amounted to 2.0 (2.0) million.

Investments by external investors in the same portfolio companies amounted to SEK 69.2 (9.6) million. Investments were made in Modus SEK 6.4 million, Umecrine Cognition SEK 3.9 million, Dilafor SEK 15.7 million, Forendo SEK 40.4 million and Promimic SEK 2.8 million.

During the year, Karolinska Development and external investors have made investments in the portfolio companies as follows:

SEKm	Karolinska Development	External Investors	Total Invested Q1-Q2 2018
Modus Therapeutics	33.6	11.0	44.6
Umecrine Cognition	14.1	3.9	18.0
Dilafor	11.3	29.6	40.9
Forendo Pharma	6.5	40.4	46.9
Promimic	1.2	2.8	4.0
OssDsign	1.0		1.0
<b>Total</b>	<b>67.6</b>	<b>87.7</b>	<b>155.3</b>

### **Portfolio Fair Value**

Fair Value of the portfolio companies owned directly by Karolinska Development increased by SEK 12.6 million during the second quarter 2018. Fair value increased as a result of the investments in the portfolio companies Umecrine Cognition and Forendo Pharma, accrued interest on loans to portfolio companies and exchange rate adjustments on the investment in Forendo Pharma but decreased as a result of the divestment of the listed holding in BioArctic.

Fair Value of the portfolio companies owned indirectly via KDev Investments increased by SEK 90.3 million during the second quarter 2018. The main reason for the increase was the valuation of HealthCap's investment in Modus Therapeutics. The investments in Modus Therapeutics, Dilafor and Promimic also positively affected Fair Value.

Total Fair Value from portfolio companies owned directly by Karolinska Development and indirectly via KDev Investments increased by SEK 102.9 million in the second quarter 2018.

As a consequence of the increase in Fair Value of the part of the portfolio owned via KDev Investments, the potential distribution to Rosetta Capital increased by SEK 34.7 million, resulting in Net Portfolio Fair Value increasing by SEK 68.1 million in the second quarter 2018.

SEKm	30 Jun 2018	30 Mar 2018	Q2 2018 vs Q1 2018
Karolinska Development Portfolio Fair Value (unlisted companies)	440.8	416.6	24.2
Karolinska Development Portfolio Fair Value (listed companies)	0.0	11.6	-11.6
KDev Investments Portfolio Fair Value (unlisted companies)	390.8	300.5	90.3
<b>Total Portfolio Fair Value</b>	<b>831.6</b>	<b>728.7</b>	<b>102.9</b>
Potential distribution to Rosetta Capital of fair value of KDev Investments	306.9	272.2	34.7
<b>Net Portfolio Fair Value (after potential distribution to Rosetta Capital)</b>	<b>524.7</b>	<b>456.5</b>	<b>68.1</b>

Total Portfolio Fair Value on 30 June 2018 amounted to SEK 831.6 million and the potential distribution to Rosetta Capital amounted to SEK 306.9 million. Net Portfolio Fair Value on 30 June 2018 amounted to SEK 524.7 million.

**Results second quarter 2018 (comparable numbers 2017)**

During the second quarter 2018, Karolinska Development's revenue amounted to SEK 0.8 (0.6) million and consists primarily of services provided to portfolio companies. Revenue for the period January – June 2018 amounted to SEK 1.5 (1.2) million.

During the second quarter 2018 other expenses amounted to SEK 3.6 (3.2) and personnel costs amounted to SEK 2.7 (5.3) million. The main reason for the lower personnel costs, compared to the second quarter 2017, is the reversed accrued costs regarding closing of the performance-based share incentive program 2015 (PSP 2015). For the period January – June 2018 other expenses amounted to SEK 7.7 (5.7) million and personnel cost amounted to 8.2 (11.0).

Change in fair value of shares in portfolio companies of in total SEK 26.0 (-3.5) million includes the difference between the increase in Net Portfolio Fair Value during the second quarter 2018 with SEK 68.2 million and the net of investments in the portfolio companies of SEK 54.2 million and the divestment of the remaining holding in BioArctic of SEK 12 million. Change in fair value of other financial assets amounted to SEK 21.3 (0.0) million and is mainly a consequence of the valuation of a royalty receivable. For the period January – June 2018 the change in fair value of shares in portfolio companies amounted to SEK 21.2 (-9.2) million and the change in fair value of other financial assets amounted to SEK 25.5 (0.0) million.

The operating profit/loss in the second quarter amounted to SEK 41.7 million compared to SEK -11.4 million second quarter 2017. The operating profit/loss for the period January – June 2018 amounted to 32.3 (-24.7) million.

Financial net increased during the second quarter 2018 compared to the second quarter 2017 and amounted to SEK -10.4 (-9.8) million. For the period January – June 2018 the financial net amounted to SEK -20.7 (-21.7) million.

The Investment Entity's Net profit/loss amounted to SEK 31.3 (-21.3) million in the second quarter 2018. Net profit/loss for the period January – June 2018 amounted to SEK 11.6 (-46.4) million.

**Financial position**

The Investment Entity's equity amounted to SEK 277.1 million on 30 June 2018 compared to SEK 247.4 million on 31 March 2018. The decrease was a consequence of the Net profit/Loss of SEK 31.3 million for the second quarter 2018. The Investment Entity's equity to total assets ratio amounted to 40% on 30 June 2018 compared to 38% on 31 March 2018.

After paying operational costs and investments in the second quarter 2018, cash and cash equivalents together with short-term investments, amounted to SEK 96.5 million on 30 June 2018.

---

## Financial Development – Parent Company

---

*The Parent Company refers to Karolinska Development AB (comparable numbers first quarter 2017).*

During the second quarter 2018, the Parent Company's Net profit/loss amounted to SEK 31.3 million (SEK -21.3 million).

Due to the positive result for the second quarter 2018, the equity increased from SEK 247.4 million 31 March 2018 to SEK 277.1 million 30 June 2018.

---

## Shares

---

**The share and share capital**

Trade in the Karolinska Development share takes place on Nasdaq Stockholm under the ticker symbol "KDEV". The last price paid for the listed B share on 29 June 2018 was SEK 7.96, and the market capitalization amounted to SEK 500 million.

The share capital of Karolinska Development on 30 June 2018 amounted to SEK 0.6 million divided into 1,503,098 A shares, each with ten votes (15,030,980 votes) and 62,915,639 B shares, each with one vote (62,915,639 votes). The total number of shares and votes in Karolinska Development on 30 June 2018 amounted to 64,418,737 shares and 77,928,026 votes.



## Ownership

On June 30, 2018, Karolinska Development had 3,735 shareholders

Shareholder	A-Shares	B-Shares	Cap %	Vote %
KAROLINSKA INSTITUTET HOLDING AB	1,503,098	2,126,902	5.64%	22.01%
TREDJE AP-FONDEN	0	7,624,406	11.84%	9.78%
SINO BIOPHARMACEUTICAL LIMITED	0	4,853,141	7.53%	6.23%
ÖSTERSJÖSTIFTELSEN	0	3,889,166	6.04%	4.99%
COASTAL INVESTMENT MANAGEMENT LLC	0	3,470,466	5.39%	4.45%
OTK HOLDING A/S	0	2,300,000	3.57%	2.95%
RIBBSKOTTET AB	0	1,700,000	2.64%	2.18%
STIFT FÖR FRÄMJANDE&UTVECKLING AV	0	1,397,354	2.17%	1.79%
FÖRSÄKRINGSAKTIEBOLAGET AVANZA PENSION	0	1,300,661	2.02%	1.67%
FRIHEDEN INVEST A/S	0	1,000,000	1.55%	1.28%
Sum Top 10 Shareholders	1,503,098	29,662,096	48.38%	57.34%
Sum Other Shareholders	0	33,253,543	51.62%	42.66%
<b>Sum All Shareholders</b>	<b>1,503,098</b>	<b>62,915,639</b>	<b>100.00%</b>	<b>100.00%</b>

## Information on Risks and Uncertainties

### Investment Entity and Parent Company

#### Financial risks

No new risk areas have been identified since 31 December 2017. For a detailed description of risks and uncertainties, see the annual report 2017.

The Board of Directors and the CEO hereby certify that this interim report gives a true and fair view of the operations, financial position and results of operations of the Parent Company and the Investment Entity and describes the material risks and uncertainties faced by the company.

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

Solna, 16 August 2018

Hans Wigzell  
Chairman

Tse Ping

Vlad Artamonov

Anders Härfstrand

Magnus Persson

Theresa Tse

Viktor Drvota  
CEO

## Dates for Publication of Financial Information

Interim Report January-September 2018  
Year-end Report 2018

31 October 2018  
14 February 2019

Karolinska Development is required by law to publish the information in this interim report. The information was published on 16 August 2018. This interim report, together with additional information, is available on Karolinska Development's website: [www.karolinskadevelopment.com](http://www.karolinskadevelopment.com).

*Note: This report is a translation of the Swedish interim report. In case of any discrepancies, the official Swedish version shall prevail.*

## Financial Statements

### Condensed income statement for the Investment Entity

SEK 000	Note	2018 Apr-Jun	2017 Apr-Jun	2018 Jan-Jun	2017 Jan-Jun	2017 Full-year
Revenue		758	560	1,492	1,176	2,464
Change in fair value of shares in portfolio companies	2	25,959	-3,497	21,150	-9,222	252,072
Change in fair value of other financial assets		21,325	0	25,520	0	2,483
Other expenses		-3,594	-3,185	-7,673	-5,650	-12,996
Personnel costs		-2,746	-5,291	-8,188	-11,003	-23,513
<b>Operating profit/loss</b>		<b>41,702</b>	<b>-11,413</b>	<b>32,301</b>	<b>-24,699</b>	<b>220,510</b>
Financial net		-10,394	-9,837	-20,718	-21,740	-40,915
<b>Profit/loss before tax</b>		<b>31,308</b>	<b>-21,250</b>	<b>11,583</b>	<b>-46,439</b>	<b>179,595</b>
Taxes		-	-	-	-	-
<b>NET PROFIT/LOSS FOR THE PERIOD</b>		<b>31,308</b>	<b>-21,250</b>	<b>11,583</b>	<b>-46,439</b>	<b>179,595</b>

### Condensed statement of comprehensive income for the Investment Entity

SEK 000	Note	2018 Apr-Jun	2017 Apr-Jun	2018 Jan-Jun	2017 Jan-Jun	2017 Full-year
Net/profit loss for the period		31,308	-21,250	11,583	-46,439	179,595
<b>Total comprehensive income/loss for the period</b>		<b>31,308</b>	<b>-21,250</b>	<b>11,583</b>	<b>-46,439</b>	<b>179,595</b>

### Earnings per share for the Investment Entity

SEK	Note	2018 Apr-Jun	2017 Apr-Jun	2018 Jan-Jun	2017 Jan-Jun	2017 Full-year
Earnings per share, weighted average before dilution		0.49	-0.34	0.18	-0.80	2.93
Number of shares, weighted average before dilution		64,118,818	63,375,596	64,117,875	58,326,207	61,243,234
Earnings per share, weighted average after dilution		0.49	-0.34	0.18	-0.80	2.93
Number of shares, weighted average after dilution		64,118,818	63,375,596	64,117,875	58,326,207	61,300,516

**Condensed balance sheet for the Investment Entity**

SEK 000	Note	30 Jun 2018	30 Jun 2017	31 Dec 2017
<b>ASSETS</b>				
<b>Financial assets</b>				
Shares in portfolio companies at fair value through profit or loss	2	524,662	180,899	447,783
Loans receivable from portfolio companies		3,493	967	3,436
Other financial assets		66,116	38,113	40,596
<b>Total non-current assets</b>		<b>594,271</b>	<b>219,979</b>	<b>491,815</b>
<b>Current assets</b>				
Receivables from portfolio companies		909	778	611
Other current receivables		846	242	531
Prepaid expenses and accrued income		927	903	666
Short-term investments, at fair value through profit or loss		85,167	177,506	150,329
Cash and cash equivalents		11,328	11,621	19,305
<b>Total current assets</b>		<b>99,177</b>	<b>191,050</b>	<b>171,442</b>
<b>TOTAL ASSETS</b>		<b>693,448</b>	<b>411,029</b>	<b>663,257</b>
<b>EQUITY AND LIABILITIES</b>				
<b>Total equity</b>		<b>277,080</b>	<b>41,180</b>	<b>267,121</b>
<b>Long-term liabilities</b>				
Convertible loan	3	403,743	357,550	379,184
Other financial liabilities		4,807	4,807	4,807
<b>Total long-term liabilities</b>		<b>408,550</b>	<b>362,357</b>	<b>383,991</b>
<b>Current liabilities</b>				
Accounts payable		1,242	950	1,155
Other current liabilities		1,358	767	1,627
Accrued expenses and prepaid income		5,218	5,775	9,363
<b>Total current liabilities</b>		<b>7,818</b>	<b>7,492</b>	<b>12,145</b>
<b>Total liabilities</b>		<b>416,368</b>	<b>369,849</b>	<b>396,136</b>
<b>TOTAL EQUITY AND LIABILITIES</b>		<b>693,448</b>	<b>411,029</b>	<b>663,257</b>

**Condensed statement of changes in the Investment Entity's equity**

SEK 000	Not	2018-06-30	2017-06-30	2017-12-31
<b>Opening balance, equity</b>				
		<b>267,121</b>	<b>29,815</b>	<b>29,815</b>
Net profit/ loss for the period		11,583	-46,439	179,595
Effect of incentive programs		-1,624	-123	-15
Set-off issue		-	57,927	57,713
Share issue		-	-	13
<b>Closing balance, equity</b>		<b>277,080</b>	<b>41,180</b>	<b>267,121</b>

**Condensed statement of cash flows for the Investment Entity**

SEK 000	Note	2018 Jan-Jun	2017 Jan-Jun
<b>Operating activities</b>			
Operating profit/loss		32,301	-24,699
<b>Adjustments for items not affecting cash flow</b>			
Change in fair value	2	-46,670	9,222
Other items		-1,974	126
Proceeds from short-term investments		-485	-200
Interest paid/received		-	12
<b>Cash flow from operating activities before changes in working capital and operating investments</b>		<b>-16,828</b>	<b>-15,539</b>
<b>Cash flow from changes in working capital</b>			
Increase (-)/Decrease (+) in operating receivables		-469	-1,047
Increase (+)/Decrease (-) in operating liabilities		-4,327	-1,777
<b>Operating investments</b>			
Proceeds from sale of shares in portfolio companies		11,971	-
Acquisitions of shares in portfolio companies		-63,633	-37,779
Proceeds from sale of short-term investments <sup>1</sup>		65,309	59,571
Investments in short-term investments <sup>1</sup>		-	-
<b>Cash flow from operating activities</b>		<b>-7,977</b>	<b>3,429</b>
<b>Financing activities</b>			
Convertible debentures issue		-	-2,410
<b>Cash flow from financing activities</b>		<b>0</b>	<b>-2,410</b>
<b>Cash flow for the period</b>		<b>-7,977</b>	<b>1,019</b>
Cash and cash equivalents at the beginning of the year		19,305	10,602
<b>CASH AND CASH EQUIVALENTS AT THE END OF THE PERIOD</b>		<b>11,328</b>	<b>11,621</b>
<b>Supplemental disclosure<sup>1</sup></b>			
<b>CASH AND CASH EQUIVALENTS AT THE END OF THE PERIOD</b>		<b>11,328</b>	<b>11,621</b>
Short-term investments, market value at closing date		85,167	177,506
<b>CASH, CASH EQUIVALENTS AND SHORT-TERM INVESTMENTS AT THE END OF THE PERIOD</b>		<b>96,495</b>	<b>189,127</b>

<sup>1</sup>Surplus liquidity in the Investment Entity is invested in interest-bearing instruments and is recognized as short-term investments with a maturity exceeding three months. These investments are consequently not reported as cash and cash equivalents and are therefore included in the statement of cash flows from operating activities. The supplemental disclosure is presented to provide a total overview of the Investment Entity's available fund including cash, cash equivalents and short-term investments described here.

**Condensed income statement for the Parent Company**

SEK 000	Note	2018 Apr-Jun	2017 Apr-Jun	2018 Jan-Jun	2017 Jan-Jun	2017 Full-year
Revenue		758	560	1,492	1,176	2,464
Change in fair value of shares in portfolio companies		25,959	-3,497	21,150	-9,222	252,072
Change in fair value of other financial assets		21,325	0	25,520	0	2,483
Other expenses		-3,594	-3,185	-7,673	-5,650	-12,996
Personnel costs		-2,746	-5,291	-8,188	-11,003	-23,513
<b>Operating profit/loss</b>		<b>41,702</b>	<b>-11,413</b>	<b>32,301</b>	<b>-24,699</b>	<b>220,510</b>
Financial net		-10,394	-9,837	-20,718	-21,740	-40,915
<b>Profit/loss before tax</b>		<b>31,308</b>	<b>-21,250</b>	<b>11,583</b>	<b>-46,439</b>	<b>179,595</b>
Tax		-	-	-	-	-
<b>NET PROFIT/LOSS FOR THE PERIOD</b>		<b>31,308</b>	<b>-21,250</b>	<b>11,583</b>	<b>-46,439</b>	<b>179,595</b>

**Condensed statement of comprehensive income for the Parent Company**

SEK 000	Note	2018 Apr-Jun	2017 Apr-Jun	2018 Jan-Jun	2017 Jan-Jun	2017 Full-year
Net profit/loss for the period		31,308	-21,250	11,583	-46,439	179,595
<b>Total comprehensive income/loss for the period</b>		<b>31,308</b>	<b>-21,250</b>	<b>11,583</b>	<b>-46,439</b>	<b>179,595</b>

**Condensed balance sheet for the Parent Company**

SEK 000	Note	30 Jun 2018	30 Jun 2017	31 Dec 2017
<b>ASSETS</b>				
<b>Financial assets</b>				
Shares in portfolio companies at fair value through profit or loss	2	524,662	180,899	447,783
Loans receivable from portfolio companies		3,493	967	3,436
Other financial assets		66,116	38,113	40,596
<b>Total non-current assets</b>		<b>594,271</b>	<b>219,979</b>	<b>491,815</b>
<b>Current assets</b>				
Receivables from portfolio companies		909	778	611
Other current receivables		846	242	531
Prepaid expenses and accrued income		927	903	666
Short-term investments at fair value through profit or loss		85,167	177,506	150,329
Cash and cash equivalents		11,328	11,621	19,305
<b>Total current assets</b>		<b>99,177</b>	<b>191,050</b>	<b>171,442</b>
<b>TOTAL ASSETS</b>		<b>693,448</b>	<b>411,029</b>	<b>663,257</b>
<b>EQUITY AND LIABILITIES</b>				
<b>Total equity</b>		<b>277,080</b>	<b>66,742</b>	<b>267,121</b>
<b>Long-term liabilities</b>				
Convertible loan	3	403,743	346,676	379,184
Other financial liabilities		4,807	4,807	4,807
<b>Total long-term liabilities</b>		<b>408,550</b>	<b>351,483</b>	<b>383,991</b>
<b>Current liabilities</b>				
Accounts payable		1,242	1,542	1,155
Other current liabilities		1,358	1,524	1,627
Accrued expenses and prepaid income		5,218	7,069	9,363
<b>Total current liabilities</b>		<b>7,818</b>	<b>10,135</b>	<b>12,145</b>
<b>Total liabilities</b>		<b>416,368</b>	<b>361,618</b>	<b>396,136</b>
<b>TOTAL EQUITY AND LIABILITIES</b>		<b>693,448</b>	<b>428,360</b>	<b>663,257</b>

**Condensed statement of changes in equity for the Parent Company**

SEK 000	Note	30 Jun 2018	30 Jun 2017	31 Dec 2017
<b>Opening balance, equity</b>		<b>267,121</b>	<b>29,815</b>	<b>29,815</b>
Net profit/ loss for the period		11,583	-46,439	179,595
Effect of incentive programs		-1,624	-123	-15
Set-off issue		-	57,927	57,713
Share issue		-	-	13
<b>Closing balance, equity</b>		<b>277,080</b>	<b>41,180</b>	<b>267,121</b>



---

## Notes to the Financial Statements

---

### NOTE 1 Accounting policies

This report has been prepared in accordance with the International Accounting Standard (IAS) 34 Interim Financial Reporting and the Annual Accounts Act. The accounting policies applied to the Investment Entity and the Parent Company correspond, unless otherwise stated below, to the accounting policies and valuation methods used in the preparation of the most recent annual report.

#### Information on the Parent Company

Karolinska Development AB (publ) ("Karolinska Development," "Investment Entity" or the "Company") is a Nordic life sciences investment company. The Company, with Corporate Identity Number 556707-5048, is a limited liability company with its registered office in Solna, Sweden. The Company focuses on identifying medical innovations and investing in the creation and growth of companies developing these assets into differentiated products that will make a difference to patients' lives and provide an attractive return on investment to its shareholders. Investments are made in companies whose sole purpose is to generate a return through capital appreciation and investment income. These temporary investments, which are not investment entities, are designated "portfolio companies" below.

#### Changes in accounting principles 2017

No changes in accounting principles has been made for the Investment Company or the parent company during second quarter 2018.

#### New and revised accounting principles 2018

No new or revised IFRS standards or recommendations from IFRS Interpretations Committee has had impact on the Investment Entity.

#### Definitions

**Equity per share:** Equity on the closing date in relation to the number of shares outstanding on the closing date.

**Equity to total assets ratio:** Equity divided by total assets.

**Interim period:** The period from the beginning of the financial year through the closing date.

**Reporting period:** January – June 2018.

#### Alternative Performance Measures

The Company presents certain financial measures in the year-end report that are not defined under IFRS. The Company believes that these measures provide useful supplemental information to investors and the company's management as they allow for the evaluation of the company's performance. Because not all companies calculate the financial measures in the same way, these are not always comparable to measures used by other companies. Therefore, these financial measures should not be considered as substitutes for measures as defined under IFRS.

**Portfolio companies:** Companies where Karolinska Development has made investments (subsidiaries, joint ventures, associated companies and other long-term securities holdings) which are active in pharmaceuticals, medtech, theranostics and formulation technology.

The Portfolio Fair Value is divided into Total Portfolio Fair Value and Net Portfolio Fair Value.

**Total Portfolio Fair Value:** The aggregated proceeds that would be received by Karolinska Development and KDev Investments if the shares in their portfolio companies were sold in an orderly transaction between market participants at the measurement date.

**Net Portfolio Fair Value** (after potential distribution to Rosetta Capital) is the net aggregated proceeds that Karolinska Development will receive after KDev Investments' distribution of proceeds to Rosetta Capital.

**Net asset value per share:** Net Portfolio Fair Value of the total portfolio (SEK 524.7 million), loans receivable from portfolio companies (SEK 3.5 million), short-term investments (SEK 85.2 million), cash and cash equivalents (SEK 11.3 million), and financial assets less interest-bearing liabilities (SEK 66.1 million minus

SEK 403.7 million), in relation to the number of shares outstanding (64 174 452) on the closing date (30 June 2018).

## NOTE 2 Fair value

The table below shows financial instruments measured at fair value based on the classification in the fair value hierarchy. The various levels are defined as follows:

- Level 1-** Fair value determined on the basis of observed (unadjusted) quoted prices in an active market for identical assets and liabilities
- Level 2-** Fair value determined based on inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly
- Level 3-** Fair value determined based on valuation models where significant inputs are based on non-observable data

### Fair value as of 30 June 2018

SEK 000	Level 1	Level 2	Level 3	Total
<b>Financial assets</b>				
Shares in portfolio companies, at fair value through profit or loss	-	-	524,662	524,662
Loans receivable from portfolio companies	-	3,493	-	3,493
Other financial assets	-	-	66,116	66,116
Receivables from portfolio companies	-	909	-	909
Cash, cash equivalents and short-term investments	96,495	-	-	96,495
<b>Total</b>	<b>96,495</b>	<b>4,402</b>	<b>590,778</b>	<b>691,675</b>
<b>Financial liabilities</b>				
Other financial liabilities	-	-	4,807	4,807
Accounts payable	-	1,242	-	1,242
<b>Total</b>	<b>-</b>	<b>1,242</b>	<b>4,807</b>	<b>6,049</b>

### Fair value as of 30 June 2017

SEK 000	Level 1	Level 2	Level 3	Total
<b>Financial assets</b>				
Shares in portfolio companies, at fair value through profit or loss	-	-	180,899	180,899
Loans receivable from portfolio companies	-	967	-	967
Other financial assets	-	-	38,113	38,113
Receivables from portfolio companies	-	778	-	778
Cash, cash equivalents and short-term investments	189,127	-	-	189,127
<b>Total</b>	<b>189,127</b>	<b>1,745</b>	<b>219,012</b>	<b>409,884</b>
<b>Financial liabilities</b>				
Other financial liabilities	-	-	4,807	4,807
Accounts payable	-	950	-	950
<b>Total</b>	<b>-</b>	<b>950</b>	<b>4,807</b>	<b>5,757</b>

**Fair value (level 3) as of 30 June 2018**

SEK 000	Shares in portfolio companies	Other financial assets	Other financial liabilities
At beginning of the year	433,700	40,596	4,807
Acquisitions	67,639	-	-
Gains and losses recognized through profit or loss	23,323	25,520	0
<b>Closing balance 30 Jun 2018</b>	<b>524,662</b>	<b>66,116</b>	<b>4,807</b>
Realized gains and losses for the period included in profit or loss	-	-	-
Unrealized gains and losses in profit or loss for the period included in profit or loss	23,323	25,520	0

**Fair value (level 3) as of 30 June 2017**

SEK 000	Shares in portfolio companies	Other financial assets	Other financial liabilities
At beginning of the year	149,408	38,113	4,798
Acquisitions	40,712	-	-
Gains and losses recognized through profit or loss	-9,222	-	9
<b>Closing balance 30 Jun 2017</b>	<b>180,898</b>	<b>38,113</b>	<b>4,807</b>
Realized gains and losses for the period included in profit or loss	-48	-	-
Unrealized gains and losses in profit or loss for the period included in profit or loss	-9,174	0	-9

The Investment Entity recognizes transfers between levels in the fair value hierarchy on the date when an event or changes occur that give rise to the transfer.

**Impact of Portfolio Fair Value**

In the table below, "Total Portfolio Fair Value" is as defined in Note 1.

**Impact on Portfolio Fair Value of the agreement with Rosetta Capital**

"Potential distribution to Rosetta Capital", SEK 306.9 million, is the amount that KDev Investments according to the investment agreement between Karolinska Development and Rosetta Capital is obligated to distribute to Rosetta Capital from the proceeds received by KDev Investments (KDev Investments Fair Value). The amount includes repayment of SEK 40.4 million that Rosetta Capital currently has invested in KDev Investments' portfolio companies and the distribution of dividends from Rosetta Capital's common and preference shares. The distribution to Rosetta Capital will only happen when KDev Investments distribute dividends. KDev Investments will only distribute dividends after all eventual payables and outstanding debt has been repaid.

"Net Portfolio Fair Value (after potential distribution to Rosetta Capital)" is as defined in Note 1.

**Expanded Portfolio Fair Value calculations taking the portfolio valuation and potential distribution to Rosetta Capital in consideration**

SEK 000	30 Jun 2018	30 Jun 2017	31 Dec 2017
Karolinska Development Portfolio Fair Value (unlisted companies)	440,754	163,828	413,844
Karolinska Development Portfolio Fair Value (listed companies)	-	-	14,083
KDev Investments Portfolio Fair Value (unlisted companies)	390,828	281,154	286,070
<b>Total Portfolio Fair Value</b>	<b>831,582</b>	<b>444,982</b>	<b>713,997</b>
Potential distribution to Rosetta Capital of fair value of KDev Investments	306,920	264,083	266,214
<b>Net Portfolio Fair Value (after potential distribution to Rosetta Capital)</b>	<b>524,662</b>	<b>180,899</b>	<b>447,783</b>

\* SEK 40.4 million repayment of investments in KDev Investments made by Rosetta Capital and SEK 266.5 million distribution of dividends to preference shares and common shares.

**Information on fair value measurement in level 3**

The valuation of the company's portfolio is based on the International Private Equity and Venture Capital Valuation Guidelines (IPEV) and IFRS 13 Fair Value Measurement. Based on the valuation criteria provided by these rules, an assessment is made of each company to determine a valuation method. This takes into account whether the companies have recently been financed or involved with a transaction that includes an independent third party and if the companies recently have met significant milestones. If there is no valuation available based on a recently refinancing or other third-party valuation and there is no valuation available based on a similar transaction, discounted cash flow models (DCF) may be used.

For detailed description, see the annual report 2017.

## NOTE 3 Convertible loan

Karolinska Development has issued convertible debentures, so called compound financial instruments, in which the holder has right to convert into shares, the number of shares to be issued are not affected by changes in fair value of the shares.

The debt portion of the compound financial instrument is initially recognized at fair value for a similar debt without a conversion right into shares. The equity portion is initially recognized as the difference between the total fair value of compound financial instrument and the fair value of the debt portion. Directly attributable transaction costs are allocated to the debt respectively equity portion based on their initial recognized values.

Post-acquisition the debt portion of the compound financial instrument is valued to amortized costs based on the effective interest method. The equity portion of the compound financial instrument is not revalued post-acquisition, except at conversion or redemption.

Karolinska Development issued convertible debentures with a nominal amount of SEK 387 million on 2 January 2015 which have a nominal interest rate of 8 percent. The nominal amount was reduced to SEK 329 million after the set-off issue in March 2017. The convertible debentures will fall due for payment on 31 December 2019 at the amount of SEK 484 million (as accrued interest is interest bearing), the convertibles grant a right at any time to convert into shares at a conversion rate of 22 SEK per series B share. The value of the debt and equity part (conversion right) was determined on the date of issuance.

The convertible debentures are presented in the balance sheet as shown in the below table.

<b>SEK 000</b>	<b>30 Jun 2018</b>	<b>30 Jun 2017</b>	<b>31 Dec 2017</b>
Nominal amount of convertible debentures issued on 2 January 2015	329,244	386,859	386,859
Issue costs	-23,982	-28,171	-28,171
Equity portion	-42,164	-49,528	-49,528
<b>Debt at issuance date 2 January 2015</b>	<b>263,098</b>	<b>309,160</b>	<b>309,160</b>
Accrued interest costs	116,085	107,026	128,766
<b>TOTAL</b>	<b>379,183</b>	<b>416,186</b>	<b>437,926</b>
<b>Set-off share issue 2017</b>			
Converted nominal amount	-	-57,509	-57,522
Converted part of issue costs	-	4,188	4,189
Converted part of equity portion	-	7,362	7,364
Converted part of accrued interest costs	-	-12,677	-12,680
Redemption of convertible	-	-	-93
<b>Debt prior this year's interest</b>	<b>379,183</b>	<b>357,550</b>	<b>379,184</b>
Accrued interest costs 2017	24,560	-	-
<b>Total</b>	<b>403,743</b>	<b>357,550</b>	<b>379,184</b>