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## Karolinska Development

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Karolinska Development (Nasdaq Stockholm: KDEV) is an investment company which offers a unique opportunity to participate in the growth in value of a number of Nordic life sciences companies with substantial commercial opportunities. All of the portfolio companies are developing potentially ground-breaking treatments for medical conditions with a substantial need for improved therapies, including leukaemia, endometriosis, serious viral infections, sepsis and systemic inflammation, bone defects, and hepatic encephalopathy. To date, two of the companies have launched their first products.

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

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## Financial Update

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- The net profit/loss for the third quarter was SEK -1.2 million (SEK -169.4 million in the third quarter of 2020). Earnings per share totalled SEK -0.01 (SEK -1.0 in the third quarter of 2020). Net profit for the period January – September 2021 amounted to SEK 190.3 (-293.4) million.
- The result of the Change in fair value of shares in portfolio companies for the third quarter amounted to SEK 27.5 million (SEK -173.9 in the third quarter of 2020). The result is largely due to a combination of increased fair value of Forendo Pharma with SEK 70 million and a downturn in share price of in aggregate SEK 15 million in the listed holdings Modus Therapeutics and OssDsign. The fair value was also affected negatively by a decrease of the value of the holding in Umecrine Cognition because of the effect from the directed new share issue conducted in July 2021. The result of the Change in fair value of shares in portfolio companies for the period January – September 2021 amounted to SEK 240.0 (-289.2) million.
- The total fair value of the portfolio was SEK 1,440.6 million at the end of September 2021, corresponding to a increase of SEK 43.1 million from SEK 1,397.5 million at the end of the previous quarter. The net portfolio fair value at that time was SEK 1,075.5 million, corresponding to a increase of SEK 44.7 million from SEK 1,030.8 million at the end of the previous quarter.
- Net sales totalled SEK 0.5 million during the third quarter of 2021 (SEK 0.4 million during the third quarter of 2020). Net sales for the period January – September 2021 totalled SEK 1.7 (2.1) million.
- Karolinska Development invested a total of SEK 21.1 million in portfolio companies during the third quarter. Third quarter investments in portfolio companies by Karolinska Development and other specialised life sciences investors totalled SEK 106.1 million. Karolinska development invested SEK 69.2 million and together with other investors SEK 455.5 million for the period January – September 2021.
- Cash and cash equivalents increased by SEK 24.5 million during the third quarter, totalling SEK 45.3 million on 30 September 2021. During the third quarter, Karolinska Development utilized a credit facility of SEK 42.5 million.

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## Significant events during the third quarter

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- Karolinska Development announced that the company has sold its entire holding in the listed portfolio company Lipidor AB. In total, the transaction covers 0.95 percent of all outstanding shares in Lipidor and brings in net approximately SEK 4 million in cash to Karolinska Development (July 2021).
- The portfolio company Promimic has received a shared 501(k) clearance from the U.S. Food and Drug Administration (FDA) with the orthopedic company Oncos Surgical. The market clearance concerns the implant product BioGrip® Modular Porous Collars, developed by Onkos Surgical, which has been coated with HAnano Surface in order to treat implant loosening in orthopedic oncology and complex revision surgery (July 2021).
- The portfolio company Umecrine Cognition has carried out a directed new share issue of SEK 35.1 million to broaden the ownership base ahead of a planned IPO and to finance the continued clinical development of the company's drug candidate golexanolone. At the same time, Karolinska Development has chosen to convert loans totalling SEK 66.9 million into shares in Umecrine Cognition at the same subscription price as in the new share issue (July 2021).
- The portfolio company Modus Therapeutics has completed an oversubscribed issue (113% subscription rate), providing the company SEK 30 million after transaction costs. The newly raised capital will primarily be used to finance the continued clinical development of the company's drug candidate sevuparin for sepsis and septic shock. As the next step in the company's development, a successful listing of the company's share on Nasdaq First North in Stockholm has been completed with the 22nd of July as the first day of trading (July 2021).
- The portfolio company Aprea Therapeutics has reported positive results from a Phase 2 trial evaluating its drug candidate eprenetapopt with azacitidine for post-transplant maintenance therapy in patients with TP53 mutant myelodysplastic syndromes (MDS) and acute myeloid leukemia (AML). The relapse free survival at 1-year post-transplant was 58% and overall survival was 79% (July 2021).
- The US Food and Drug Administration (FDA) has issued a clinical hold for Aprea Therapeutics clinical program evaluating eprenetapopt with acalabrutinib or venetoclax and rituximab in lymphoid malignancies. The issue means there will be a pause in the patient enrollment until the agency reverses the decision. Aprea Therapeutics intends to work in close dialogue with the FDA to clarify and address the agency's concerns in order to resume activity in the clinical trial program as soon as possible (August 2021).
- The portfolio company OssDsign AB has launched OssDsign Catalyst in the U.S. The product is a synthetic bone graft that stimulates the formation of healthy bone tissue in spinal fusion surgeries. The launch constitutes an important step in the company's strategy to establish itself on the bone graft market in the largest geographic market for medical device innovations (August 2021).

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## Significant post-period events

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- The portfolio company OssDsign has included the first patient to the clinical trial TOP FUSION which aims to evaluate the long-term safety and efficacy of the synthetic bone graft OssDsign Catalyst in patients undergoing spinal fusion surgery (September 2021).
- The portfolio company OssDsign has received an expanded marketing authorization from the U.S. Food and Drug Administration (FDA) for the company's patient-specific cranial implant product OssDsign Cranial PSI. The approval underlines that OssDsign's patented calcium phosphate composition has osteoconductive properties inducing resorption and formation of new bone tissue (October 2021).
- The portfolio company Umecrine Cognition has entered a collaboration with Professor Trevor G Smart and his research group at University College London. The collaboration will involve molecular analysis and behavioral studies of Umecrine Cognition's most advanced drug candidate, golexanolone (October 2021).
- The portfolio company AnaCardio has strengthened its organization in preparation for the initiation of a phase 1b/2a study of its drug candidate AC01 in patients with heart failure. Anacardio has recently recruited Patrik Strömberg as its new CEO. He holds a PhD in biochemistry from Karolinska Institutet, an MBA from the Department of Business Administration at Stockholm University and has many years of experience in drug development and business development from leading positions within AstraZeneca and Sobi (October 2021).
- The portfolio company Dilafor, a drug development company focusing on the development of tafoxiparin for obstetric indications, has enrolled the first patient in a clinical Phase 2a study with tafoxiparin in pregnant women diagnosed with preeclampsia (October 2021).
- The portfolio company Umecrine Cognition has presented new scientific results showing that the innate neurosteroid allopregnanolone plays an important role in the development of cognitive symptoms observed in patients with primary biliary cholangitis (PBC). Since Umecrine Cognition's drug candidate golexanolone could potentially impact allopregnanolone the company has, based on the novel clinical results and other supportive data, initiated preparations for a Phase 2 clinical study in PBC (November 2021).
- The portfolio company Modus Therapeutics has received approval from the regulatory authorities in the Netherlands to carry out a clinical Phase 1b-study with sevuparin, a potential new treatment of sepsis/septic shock (November 2021).
- Karolinska Development announces that the global pharmaceutical company Organon is acquiring its portfolio company Forendo Pharma. Forendo Pharma's shareholders will receive an initial payment of USD 75 million (approximate SEK 652 million) and are entitled to additional future payments totalling USD 870 million (approximate SEK 7,560 million) upon the achievement of certain development, registration and commercial milestones pertaining to Forendo Pharma's drug candidates. The total purchase price, if all milestones are met, amounts to USD 945 million. Karolinska Development estimates the risk-adjusted net present value (rNPV) of future cash flows, including the initial payment, from the transaction at SEK 114 million, with a positive effect on net profit of SEK 70 million and a consequential increase in the portfolio company's fair value of SEK 70 million in the third quarter 2021. The completion of the transaction is subject to review by competition authorities and other customary conditions. The transaction is expected to close in December 2021 (November 2021).

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

“The portfolio companies’ progress and the positive value development of our holdings increases the potential for securing additional financial resources to support Karolinska Development’s development going forward. The latest example of our ability to contribute to value creation is the divestment of Forendo Pharma to the global pharmaceutical company Organon in a deal that could result in up to USD 945 million in proceeds for Forendo Pharma’s shareholders”.

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## Chief Executive's Report

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Several of our portfolio companies have recently made considerable progress in their operations. The most prominent example of value creation is the successful divestment of Forendo Pharma to the global pharmaceutical company Organon in a deal that could result in up to USD 945 million in proceeds for Forendo Pharma's shareholders, which underpins the potential in Karolinska Development's long-term business strategy.

Karolinska Development handpicks most of its investments from the enormous flow of medical innovations from prestigious universities and research institutions in the Nordic region. We invest in pharmaceutical projects and mediatechnical products with the potential to revolutionise the treatment of diseases with a substantial need for new therapies. We become involved in the projects at an early stage in their progress and are thereby able to take significant ownership shares and ensure that the projects develop in a way that optimises their attractiveness for commercial partners and new investors at a later stage. We have a long investment horizon and add value during every stage of the portfolio companies' development by means of our wide-ranging expertise in company building in general and the development of life science projects in particular. The portfolio companies' maturity levels can, from a purely schematic viewpoint, be divided into three phases: 1) establishment of a new company based on ground-breaking research; 2) development of the project to proof of concept; and 3) stock market flotations or company divestments that enable us to secure a good return on our investment. It is worth noting, in this context, that Karolinska Development often continues its involvement in the companies, long after their flotations.

The composition of our current investment portfolio is good, with portfolio companies in all of these three phases, and I will describe some of the progress made by these companies in their respective categories over and after the past quarter below.

### Establishment phase portfolio companies

Karolinska Development recently acquired a 21% holding in AnaCardio, an unlisted company which, based on research by the Karolinska Institute, is developing a completely new type of treatment for heart failure. The past quarter saw the recruitment of Patrik Strömberg as AnaCardio's new CEO and of Alan Gordon as its Medical Director. Patrik has extensive experience of drug development, including the past 14 years at Sobi, where he was the VP for External Innovation, and held other roles in business development and preclinical research prior to that. Alan is a cardiologist specialising in heart failure who has worked in San Francisco for nearly 20 years as the Medical Director of a number of pharmaceutical and biotech companies, focusing mainly on cardiovascular indications. The next milestone for AnaCardio is to launch a clinical study with a drug candidate based on the new pharmaceutical concept, which is expected to yield a substantially better safety profile than the current standard treatment.

Svenska Vaccinfabriken is using advanced technology to develop therapeutic vaccines which, unlike those that are simply preventative, also have the potential to cure already infected patients. The company is currently completing development of its first candidate vaccine against hepatitis B and D before moving on to the clinical trials phase. Karolinska Development has a 31% share in the company.

### Portfolio companies in proof of concept phase

In the light of the positive results of the Dilafor portfolio company's phase 2b study of tafoxiparin, where the candidate drug was shown to increase cervical ripening in first-time mothers, the company is now further

developing the project. Market analyses show that a drug that effectively promotes cervical ripening, and which can thereby reduce the risk of complications during deliveries, has the potential to achieve annual sales in excess of USD 1 billion in the US market alone. The company recently successfully raised SEK 65 million in new capital, divided into two tranches, with SEK 24 million and SEK 2 million coming from Karolinska Development and KDev Investments (which is jointly owned with Rosetta Capital), respectively. Dilafor has initiated a comprehensive programme of business development work with the aim of either floating or selling the company in 2022.

### Listed portfolio companies

The increasing maturity of our portfolio companies opens up opportunities for stock market flotations that can facilitate the financing of their future value creation and increase exposure for their delivered progress. Two portfolio companies have been floated this year, and at the time of writing, four of our 10 holdings are listed. An additional two companies have, furthermore, announced that they are preparing to enter the public market. Stock market flotations help increase the liquidity of our assets, increasing our opportunities to realise increases in the value of the holdings and thereby, in the longer term, our ability to finance new investments.

Modus Therapeutics, which was listed on the NASDAQ First North Growth Market in July, established a scientific council during the quarter, which will provide absolutely critical support in planning impending clinical studies of their candidate drug, sevuparin, in patients with sepsis/septic shock. The experts engaged – Professors Lennart Lindbom, Eddie Weitzberg, and Mats Wahlgren – are all influential in disciplines of relevance to the development of sevuparin and have valuable contact networks in large parts of both the research community and the global pharmaceutical industry.

In July, the Umecrine Cognition portfolio company carried out a successful directed new share issue of SEK 35.1 million. The aim was to broaden the ownership base ahead of a potential stock market flotation and secure financing of the continued clinical development of the company's candidate drug, golexanolone, which is being developed to offer patients with neurocognitive conditions a completely new type of treatment. Promimic is also preparing for a stock market flotation, and during the past quarter, its partner company, Oncos Surgical, received market clearance in the USA for its BioGrip® Modular Porous Collars product, which has been coated with Promimic's HA<sup>nano</sup> Surface in order to treat orthopaedic implant loosening and thereby reduce the need for complex revision surgery. OssDsign – another of our portfolio companies focusing on orthopaedics – simultaneously launched its unique synthetic bone graft, OssDsign Catalyst, in the US market.

### Organon acquires Forendo Pharma for up to USD 945 million

After the end of the reporting period, our portfolio company Forendo Pharma was acquired by Organon & Co., one of the world's leading pharmaceutical companies in the field of women's health. The transaction is one of the largest ever in the Nordic biotech industry and demonstrates the strength of Karolinska Development's long-term strategy for value creation. We have contributed for many years to Forendo Pharma's successful development of drug candidates that have the potential to improve the lives of millions of women worldwide, efforts that is now proving to result in a very good financial return on invested capital. Forendo's shareholders will receive an initial payment of USD 75 million and are also eligible for contingent earn-out payments totalling USD 870 million. Karolinska Development's total ownership of the company, including indirect ownership through the KCIF Co-Investment Fund, is 9.7 percent.

The portfolio companies' progress and the positive value development of our holdings increases the potential for securing additional financial resources to support Karolinska Development's development

going forward. Our hope, through our ongoing efforts to identify interesting new investment opportunities and to support the companies in their development and the commercialisation of new pharmaceutical and mediatechnical products, is that the lives of millions of patients worldwide will be both enhanced and extended.

Solna, 18 November 2021

Viktor Drvota  
Chief Executive Officer

## Portfolio Companies

### High potential for continued value generation

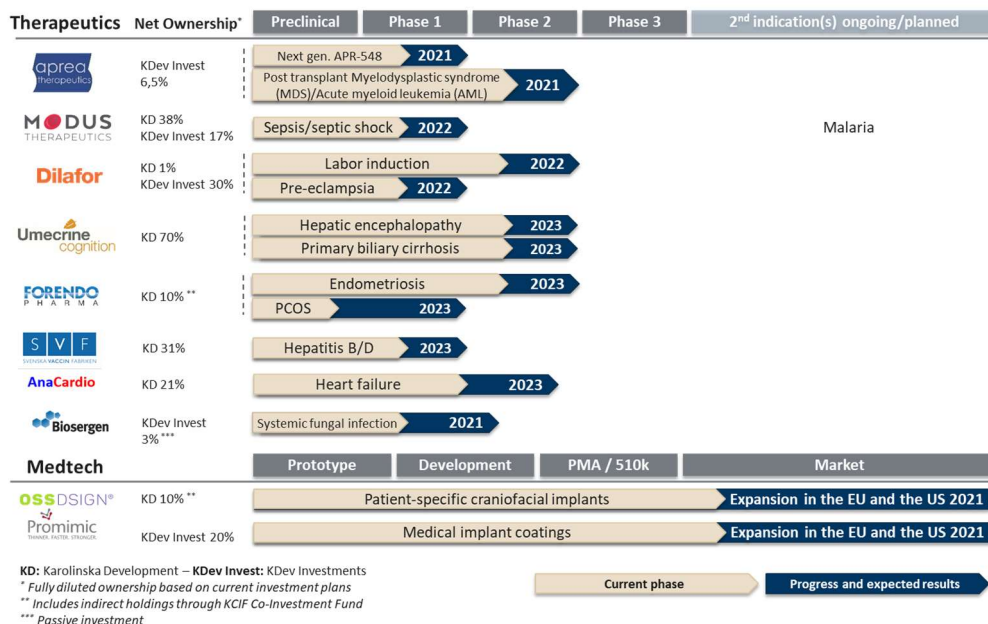
Karolinska Development's investments in therapeutic companies are conducted in syndicates with other professional life science investors, normally until proof-of-concept is demonstrated in phase 2 trials, at which point different exit options are evaluated. For medtech companies, the business model is 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. The majority of Karolinska Development's portfolio companies are well-financed for their ongoing development and commercialisation work and are well-positioned to meet decisive value-generating milestones over the next two years. The ongoing pandemic has affected the portfolio companies to varying degrees, but the majority have been able to develop in accordance with previously set timetables.

In addition to its active value creation in nine portfolio companies, Karolinska Development has passive investments in one portfolio company.

### Our current portfolio – potential for value-inflection







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

**Primary indication**  
MDS

**Development phase**  
Phase 3

**Holding in company\***  
KDev Investments 6.5%

**Other investors**  
HealthCap,  
Consonance Capital,  
Versant Ventures,  
Redmile Group,  
Fidelity Management &  
Research Co

**Origin**  
Karolinska Institutet

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

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

#### Deal values for similar projects

- USD 469 million MEI Pharma (licensor) & Helsinn Group (licensee) 2016
- USD 483 million Calithera Biosciences (licensor) & Incyte (licensee) 2017

## Aprea Therapeutics Inc



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

Aprea Therapeutics (Boston, USA and Stockholm, Sweden) develops novel anticancer drugs targeting the tumour suppressor protein, p53. Mutations of the p53 gene occur in around 50% of all human tumours and are associated with poor overall survival. Aprea's candidate drug, eprenetapopt (APR-246), has shown an ability to reactivate mutant p53 protein, inducing programmed cell death in many cancer cells. The company has received a breakthrough therapy and orphan drug designation from the American Food and Drugs Administration, the FDA for eprenetapopt.

The FDA approved an Investigational New Drug (IND) application for APR-548 – a next generation candidate drug being developed for oral administration – during 2020. The company is now initiating a clinical development programme for APR-548 in the treatment of TP53-mutated MDS.

Recently, positive results were reported from a phase 2 study of eprenetapopt in combination with azacitidine as post-transplant maintenance therapy in patients with p53-mutated MDS and acute myeloid leukaemia (AML). The relapse free survival at 1-year post-transplant was 58% and the overall survival was 79% (July 2021).

The FDA has issued a clinical hold for Aprea Therapeutics clinical program. Aprea Therapeutics intends to work in close dialogue with the FDA to clarify and address the agency's concerns in order to resume activity in the clinical trial program as soon as possible.

Aprea has been listed on the NASDAQ Global Select Market in the USA since October 2019.

#### The market

Eprenetapopt has the potential for use in many different types of cancer as mutations in p53 are found in around 50% of all diagnosed cancers. The lead target indications thus far include blood tumours such as MDS and AML. MDS is an orphan disease and represents a spectrum of hematopoietic stem cell malignancies. Approximately 30-40% of MDS patients progress to AML and mutations in p53 are found in up to 20% of MDS and AML patients, which is associated with poor overall prognosis.

#### Recent progress

- FDA has granted orphan drug designation to Aprea Therapeutics drug candidate eprenetapopt for the treatment of AML (April 2021).
- Positive results were reported from a phase 2 trial evaluating the drug candidate eprenetapopt with azacitidine for post-transplant maintenance therapy in patients with TP53 mutant MDS and AML. The relapse free survival at 1-year post-transplant was 58% and overall survival was 79% (July 2021).
- FDA has issued a clinical hold for Aprea Therapeutics clinical program evaluating eprenetapopt with acalabrutinib or venetoclax and rituximab in lymphoid malignancies. The issue means there will be a pause in the patient enrollment until the agency reverses the decision. Aprea Therapeutics intends to work in close dialogue with the FDA to clarify and address the agency's concerns in order to resume activity in the clinical trial program as soon as possible.

#### Expected milestones

- The results from the phase 1 study of APR 548 are expected in the second half of 2021.

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

Sevuparin

**Primary indication**

Sepsis/Septic shock

**Development phase**

Phase 2

**Holding in company\***

Karolinska Development 38%

KDev Investments 17%

**Other investors**

The Foundation for Baltic and

East European Studies,

Praktikerinvest

**Origin**

Karolinska Institutet, Uppsala

University

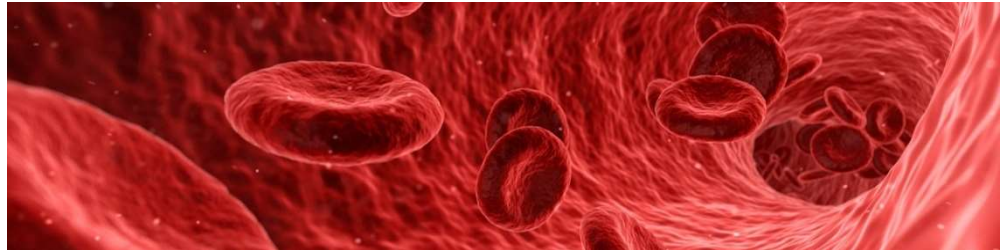
**More information** modustx.com

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

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## Modus Therapeutics AB

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### Establishing new treatments of sepsis/septic shock

Modus Therapeutics (Stockholm, Sweden) is developing sevuparin as a treatment of sepsis/septic shock, a potentially life-threatening condition that is currently lacking efficient pharmaceutical therapies. Patients that are affected by sepsis are exposed to a risk of developing multi-organ failure and – in severe cases – decease. Sevuparin is a polysaccharide drug candidate with a multimodal mechanism of action, including anti-inflammatory, anti-adhesive and anti-aggregate effects. It acts by interfering with the harmful agents generated by white blood cells during systemic inflammation. This interference could potentially break the molecular chain of events that lead to vascular damage and plasma leakage in patients with sepsis/septic shock and other systemic inflammatory manifestations. Data from pre-clinical animal as well as in vitro human cell models has revealed that sevuparin was able to protect blood vessels and counteract lung plasma leakage during systemic inflammation.

Previous clinical trials in other patient groups have shown that sevuparin is well tolerated and has a favourable safety profile. In March 2021, Modus Therapeutics announced its intention to initiate a clinical development program in sepsis/septic shock. Sevuparin is believed to have a beneficial effect on the severe systemic inflammation that characterizes this condition. The company intends to finance the development within the new indication through a rights issue in connection with the listing at the Nasdaq First North Growth Market. Modus also continues to collaborate with academic partners to identify additional indications where sevuparin has potential to create substantial therapeutic value.

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#### The market

Septic shock is a leading cause of death in intensive care units, with mortality rates typically exceeding 30 percent. There is currently no specific pharmaceutical treatment available for the treatment of sepsis. As a result, it is one of the costliest conditions to treat in the hospital care setting. In 2019, US in-patient care costs for patients with sepsis was estimated to USD 23 billion. Sepsis/septic shock is triggered by an infection and causes the same form of severe uncontrolled inflammation that can occur in conjunction with extensive surgery, trauma, burns and autoimmunity.

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#### Recent progress

- Modus Therapeutics announced an updated strategy that sees the Company focus on the clinical development of sevuparin as a new, important potential treatment for sepsis/septic shock, and possibly other severe inflammatory complications (March 2021).
- A successful listing of the company's share on Nasdaq First North in Stockholm was made. The newly raised capital will primarily be used to finance the continued clinical development of the company's drug candidate sevuparin for sepsis and septic shock (July 2021).

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#### Expected milestones

- Phase 1b LPS challenge study in the Netherlands, with Q4 2021/ Q1 2022 as the estimated start date.
- Phase 2 proof-of-concept (PoC) for sepsis/septic shock with an estimated start date of Q3/Q4 2022.

## Dilafor

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

**Primary indication**  
Labor induction

**Development phase**  
Phase 2b

**Holding in company\***  
Karolinska Development 1%  
KDev Investments 30%

**Other investors**  
The Foundation for Baltic  
and East European  
Studies,  
Opocrin,  
Praktikerinvest,  
Rosetta Capital,  
Lee's Pharmaceutical

**Origin**  
Karolinska Institutet

**More information**  
 [dilafor.com](https://dilafor.com)

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

### Deal values for similar projects

- USD 397 million Velo Bio (seller) & AMAG Pharmaceuticals (buyer) 2018
- USD 465 million Palatin Technologies (licensor) & AMAG Pharmaceuticals (licensee) 2017

## Dilafor AB



### Reducing complications with childbirth

Dilafor (Solna, Sweden) is developing tafoxiparin for obstetric indications, with particular reference to protracted labor and associated complications.

About one quarter of all pregnant women undergo induction in labor. In just over half of all cases, the induction fails, leading to protracted labor that entails an increased risk for both mother and child due to medical complications. Between 25 and 40% of women who experience protracted labor eventually require an emergency caesarean section. Surgical intervention always entails not only a risk to the patient, but substantial health care costs. Tafoxiparin could eliminate patient suffering and save valuable health care resources.

Subcutaneous administration of tafoxiparin in an earlier phase 2a study showed a significantly positive effect with a shortened time to delivery and an enhanced ripening of the cervix in patients delivered after induction. A soft and ripe cervix is a prerequisite of successful labor induction.

#### The market

Approximately one quarter of all pregnant women require labor induction. The current standard treatment includes administration of prostaglandins and oxytocin, but in over 50% of cases, the induction fails, leading to protracted labour, emergency caesarean sections, or other maternal and foetal complications.

#### Recent progress

- Dilafor reported positive results from its phase 2b study (June 2021).
- Dilafor enrolled the first patient in a clinical Phase 2a study with tafoxiparin in pregnant women diagnosed with preeclampsia (October 2021).

#### Expected milestones

- Continued phase 2b study with lower dosage according to plan.



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

**Primary indications**  
Hepatic encephalopathy  
Idiopathic hypersomnia

**Development phase**  
Phase 2a

**Holding in company\***  
Karolinska Development 70%

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

**Origin**  
Umeå University

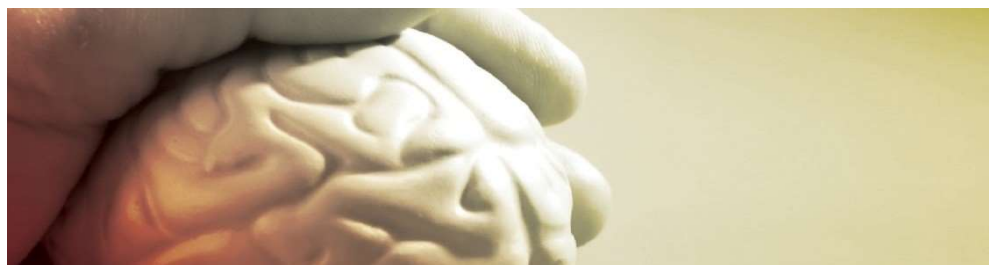
**More information**  
 [umecrinecognition.com](http://umecrinecognition.com)

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

#### Deal values for similar projects

- USD 397 million Aerial Biopharma (licensor) & Jazz Pharmaceuticals (licensee) 2014
- USD 201 million Vernalis (licensor) & Corvus Pharmaceuticals (licensee) 2015

## Umecrine Cognition AB



### Unique treatment approach for CNS-related disorders

Umecrine Cognition (Solna, Sweden) is developing golexanolone (GR3027) – a candidate drug in a new class of pharmaceuticals that affect the GABA system. An over-activation of the inhibitory GABA system in the CNS is suspected in conjunction with liver failure, causing very serious clinical symptoms. The over-activation is also thought to lay behind certain cognitive impairments and sleep disturbances. GABA-receptor modulating steroid antagonists, such as golexanolone, counter the increased activation of the GABA system and hence constitute a promising group of candidate drugs.

Golexanolone GR3027 has been shown to restore different types of neurological impairments in experimental models. The candidate drug enters the brain and works by reversing the inhibitory effects of the neurosteroid allopregnanolone on brain function in humans.

A clinical phase 2a study of golexanolone in patients with hepatic encephalopathy (HE) – a serious neuropsychiatric and neurocognitive condition that occurs in conjunction with acute and chronic hepatic damage with underlying cirrhosis – was conducted during the last year. The results showed that the candidate drug was well-tolerated, that the safety profile was good, and that the pharmacokinetic profile was favourable. One of the effect parameters – a well-established and sensitive form of EEG study – demonstrates that the candidate drug has a significant effect on brain signalling, with a correlated positive effect on extreme daytime fatigue. There was no significant effect, however, on other secondary outcome measures. In December, the company announced that, based on these study results, it had established a plan for the further development of the candidate drug.

#### The market

HE is a serious disease with a large unmet need that affects up to 1% of the population in the USA and EU. 180,000-290,000 patients are hospitalised every year in the USA due to complications of HE. Once HE develops, mortality reaches 22-35% after five years. HE is also associated with substantial societal costs.

#### Recent progress

- Umecrine Cognition announced that they have the intention to list the company in Q4 2021 in order to finance the phase 2b study.
- Umecrine Cognition has entered a collaboration with Professor Trevor G Smart and his research group at University College London. The collaboration will involve molecular analysis and behavioral studies of the drug candidate, golexanolone (October 2021).
- Umecrine Cognition has presented new scientific results showing that the innate neurosteroid allopregnanolone plays an important role in the development of cognitive symptoms observed in patients with primary biliary cholangitis (PBC).

#### Going forward

- Planned listing in Q4 2021.



**Project (First-in-class)**  
FOR-6219

**Primary indication**  
Endometriosis

**Development phase**  
Phase 1b

**Holding in company\***  
Karolinska Development 9.7%\*\*

**Other investors**  
Novo Seeds,  
Novartis Venture Fund,  
Merck Ventures,  
Vesalius Biocapital,  
Innovestor, Novartis

**Origin**  
University of Turku, Finland

**More information**  
 forendo.com

\* Fully-diluted ownership based on current investment plans

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

#### Deal values for similar projects

- USD 853 million Astellas (buyer) & Ogeda (seller) 2017
- USD 595 million Neurocrine Biosciences (licensor) & AbbVie (licensee) 2010

## Forendo Pharma Ltd



### Novel therapies for women's health.

Forendo Pharma (Turku and Oulu, Finland) is developing a new treatment for eliminating endometriosis while at the same time maintaining normal hormonal cycles. The company is also active in the field of hepatic disease.

Endometriosis is an oestrogen dependent disease that affects women in reproductive age and is caused by cells normally lining the uterus being present outside of the uterine cavity, which induces chronic inflammation in the surrounding tissue. The disease is manifested in many diverse ways and it often causes particularly painful menstruations and chronic pelvic pain. The existing drug therapies ameliorate the symptoms by suppressing oestrogen synthesis, but one clear disadvantage of these types of treatment is that they disrupt the systemic oestrogen balance, giving rise to osteoporosis and other serious side effects that hinder their long-term usage.

Forendo Pharma's candidate drug, FOR-6219, inhibits the HSD17B1 enzyme – a previously unresearched but powerful drug target for tissue-specific regulation of hormone activity. Forendo has demonstrated proof of mechanism in preclinical models in which the candidate drug has been shown to block the local formation of oestrogen in the endometrium (the uterus' surface tissue). This may enable a regression of the endometriosis and relief in the associated inflammatory pain without impacting systemic oestrogen levels. Forendo announced in March 2021 the successfully completed phase 1 program for FOR-6219 – a candidate drug aimed for the treatment of endometriosis. Based on the positive results generated in this program, Forendo Pharma is now preparing a phase 2 study in the US.

#### The market

It is estimated that 10% of all fertile women are affected by endometriosis. This corresponds to a total of 176 million women in the world. Endometriosis has a detrimental effect on the well-being of the women affected and the socio-economic burden of the disease from e.g. sick leaves is profound due to the lack of safe and effective treatment. Forendo's approach to treat endometriosis therefore has a high potential to substantially impact future treatment regimens.

#### Recent progress

- Successfully completed phase 1 program for FOR-6219 – a candidate drug aimed for the treatment of endometriosis. Based on the positive results generated in this program, Forendo Pharma is now preparing a phase 2 study in the US (March 2021).
- The global pharmaceutical company Organon enters into an agreement to acquire all shares in Forendo Pharma (November 2021)

#### Expected milestones

- Initiation of phase 2 study in endometriosis at the end of 2021.
- The transaction to acquire Forendo Pharma is expected to close in December 2021.



**OSSDSIGN®**
**Project**

OSSDSIGN® Cranial and  
OSSDSIGN® Facial

**Primary indication**

Cranial implants

**Development phase**

Marketed

**Holding in company\***

Karolinska Development 10%\*\*

**Other investors**

SEB Venture Capital,  
Fouriertransform

**Origin**

Karolinska University Hospital,  
Uppsala University

**More information**

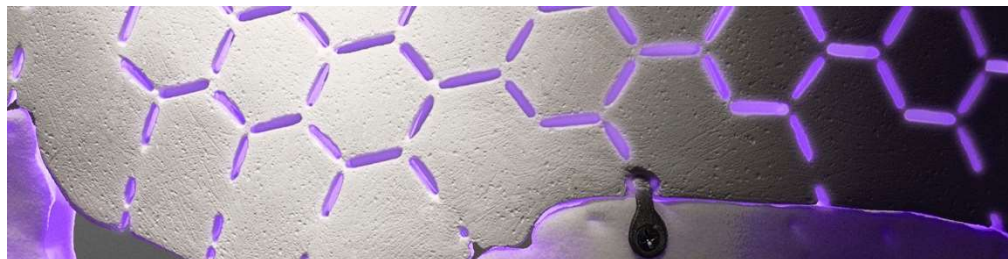

ossdsign.com

\* 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) 2010
- USD 360 million Royal DSM (buyer) & Kensey Nash (seller) 2012

**OssDsign AB**

**Commercializing the best craniofacial implants**

OssDsign (Uppsala, Sweden) is an innovative company that designs and manufactures implants and material technology for bone regeneration. Its lead products, OSSDSIGN® Cranial and OSSDSIGN® Facial, are already being sold in several European markets, including Germany, the UK, and the Nordic region. The company is commercialising its cranial implant in the USA and is currently preparing commercial activities in Japan after the approval of the company's OSSDSIGN® Cranial PSI product. OssDsign acquired Sirakoss Ltd, a company operating in the field of bone graft substitutes. This strategic acquisition means a fivefold increase in the company's addressable market.

During the year, the company worked intensively to increase sales. The US subsidiary has been actively working since 2019 on strengthening the company's position in the USA through long-term, sound customer relationships. A recent patent application from the US Patent Office further enhances OssDsign's potential for future growth in the USA.

OssDsign's clinically proven bone regeneration technology has better healing properties than similar products. The company uses cutting edge 3D printing, moulding, and regenerative medicine technology to customise solutions for individual patients. The result is a patient-specific, titanium-reinforced implant made from a ceramic material with regenerative properties that accelerates the natural tissue formation and enables permanent healing of a bone defects. The regenerative effect of the ceramic material helps ensure a shorter healing process and entails both reduced suffering for the patient and cost savings for hospitals.

**The market**

OssDsign focuses 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 next five years. The market for OssDsign's lead product in cranioplasty alone is estimated to approximately USD 200 million. OssDsign's products target a well-defined patient population – the relevant type of operation is performed at a limited – and easily identifiable – number of hospitals worldwide. The price sensitivity is low, and the products are relatively easy to register in multiple markets.

**Recent progress**

- OssDsign has carried out a fully guaranteed rights issue of SEK 240 million in combination with overallotment options of approximately SEK 30 million – a total of approximately SEK 270 million. The purpose of the financing is, among other things, to accelerate the company's development through the new strategy program ASCENT25 (May 2021).
- OssDsign AB has launched OssDsign Catalyst in the U.S. The product is a synthetic bone graft that stimulates the formation of healthy bone tissue in spinal fusion surgeries (August 2021).
- OssDsign has received an expanded marketing authorization from the U.S. Food and Drug Administration (FDA) for the company's patient-specific cranial implant product OssDsign Cranial PSI (October 2021).

**Expected milestones**

- Financing for continued roll-out of the product internationally and market introduction of the Sirakoss product.


**Project**

 HA<sup>nano</sup> Surface

**Primary indication**

Implant surface coatings

**Development phase**

Marketed

**Holding in company\***

KDev Investments 20%

**Other investors**

K-Svets Ventures,


ALMI Invest,

Chalmers Ventures

**Origin**

Chalmers University of

Technology

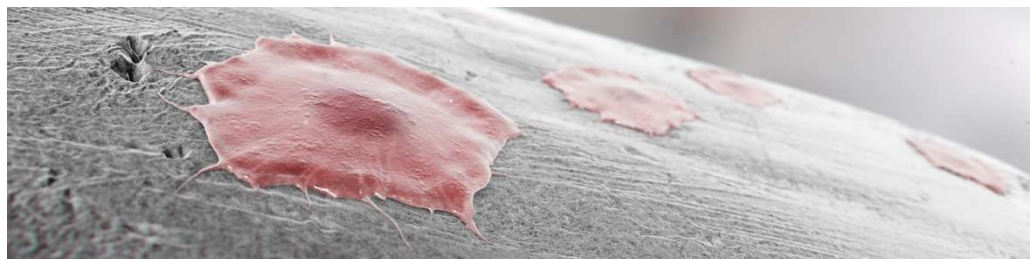
**More information**
 promimic.com

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

**Deal values for similar projects**

- USD 95 million Nobel Biocare (buyer) & AlphaBioTec (seller) 2008
- USD 120 million MAKO surgical (buyer) & Pipeline Biomedical (seller) 2013

## 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.

HA<sup>nano</sup> Surface is a sustainable, nanometre-thin coating that helps preserve the surface structure of the implant by reducing the risks of cracking. The coating is unique because it can be applied to any implant geometry and material, including porous materials and 3D structures. The technology on which HA<sup>nano</sup> is based is FDA-approved, which means that a new implant coated with HA<sup>nano</sup> Surface can receive marketing approval through the 510(k) route and reach a new market quickly. The coating process is easy to implement in the industrial scale production of implants.

Promimic has an established sales operation in the USA and a series of development and commercial partnerships, including one with Sistema de Implante Nacional (S.I.N.), a leading provider of dental implants in Brazil, which is commercialising dental implants coated with HA<sup>nano</sup> Surface, and one with Danco Anodizing, which has established a manufacturing facility for implants with HA<sup>nano</sup> Surface, targeting the US and Chinese markets. Promimic strengthened its position in the orthopaedic market in 2019 and 2020 by entering into partnerships with Onkos Surgical and INNOVASIS Inc. The partnership with Onkos Surgical includes the development and commercialisation of products treated with the HA<sup>nano</sup> Surface technology for limb salvage surgery. INNOVASIS Inc. manufactures and sells 3D-printed spinal implants treated with HA<sup>nano</sup> Surface® in order to improve osseointegration and stimulate new bone formation and bone growth on the implant surface.

#### The market

Promimic is focusing on the markets for dental and orthopaedic implants, which collectively represent a worldwide market opportunity of USD 600 - 800 million. The competition amongst implant manufacturers is fierce and each market segment is dominated by four to eight global companies. Promimic's business model is centred on out-licensing the HA<sup>nano</sup> Surface technology to leading implant manufacturers.

#### Recent progress

- Seven new products have, so far during 2021, been submitted to the FDA for 510(k) approval.
- Seven products with Promimic's technology have, so far during 2021, been 510(k) approved by the FDA.
- At least two new applications for 510(k) approval will be sent to the FDA during 2021.

#### Expected milestones

- In the beginning of 2022, further product launches and license agreements are expected to be closed and announced.
- Possibility of a listing of the company's share on Nasdaq First North Growth Market in 2022.




**Project (First-in-class)**  
SVF-001

**Primary indication**  
Hepatit B och D  
SARS-CoV-2 and other Corona  
virus

**Development phase**  
Preclinical

**Holding in company\***  
Karolinska Development 31%

**Origin**  
Karolinska Institutet

**More information**  
 svenskavaccinfabriken.se

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

#### Deal values for similar projects

- USD 546 million Affinivax raises Series B and C financing 2020
- USD 1.4 billions MYR Gmbh (acquired) & Gilead Sciences Inc (buyer) 2020

## Svenska Vaccinfabriken Produktion AB



### Developing therapeutic proteins and DNA vaccines

Svenska Vaccinfabriken Produktion AB ("SVF") develops therapeutic proteins and DNA vaccines against hepatitis B and hepatitis D, as well as vaccines to prevent infections by SARS-CoV-2 and potential future Coronaviruses. Therapeutic vaccines, unlike preventative vaccines, have the potential to cure already infected patients.

Despite the availability of preventative vaccines and antiviral treatments, over 250 million people live with a chronic hepatitis B infection. One million chronic carriers die each year due to complications caused by the virus, such as liver cirrhosis and liver cancer. The closely related hepatitis D virus infects 15-25 million hepatitis B carriers and exacerbates the progression of the disease.

Svenska Vaccinfabriken is using an in-house developed vaccine platform to produce a specific form of antibodies that blocks the ability of the hepatitis virus to invade human cells. The company has generated promising efficacy data in a preclinical animal model and is now continuing its preclinical development with the goal of enabling a phase 1 study to be initiated in 2022/2023.

Although Coronavirus infections are usually mild, some virus types can lead to life-threatening conditions. This has been the case in the outbreaks of SARS-CoV in 2003, MERS-CoV in 2012, and during the ongoing Covid-19 pandemic. SVF has also developed a platform to address and prevent severe infections of this kind and which is expected to afford the potential for quickly developing and producing vaccines against both existing and new forms of Coronaviruses. The company submitted a patent application specifically linked to a potential Covid-19 vaccine during the year.

#### The market

Svenska Vaccinfabriken is currently focusing its innovative vaccine platform on the market for therapeutic vaccines for hepatitis B and D, and preventative vaccines for respiratory viral diseases, such as Covid-19. The 2017 KuicK research report, "Global Hepatitis Drug Market & Clinical Trials Insight 2023" estimated the value of the annual global market for hepatitis B at between USD 4 and 5 billion, growing to USD 5-6 billion by 2023. The annual global market for hepatitis D, by contrast, is estimated at around USD 1 billion. There is substantial competition between vaccine developers, who comprise both smaller biotech companies and international pharmaceutical companies. Svenska Vaccinfabriken's business model is based on guiding their vaccine projects to the clinical development phase and then licensing them out global pharmaceutical companies with established distribution networks. Investors' interest in early vaccine companies and platforms similar to Svenska Vaccinfabriken's has increased markedly in recent years. This is thought to be due to an increased awareness of the potential for the commercialisation of vaccines based on next generation technology, such as RNA vaccines and DNA vaccines. Interest in therapies to treat hepatitis B and D has further intensified – two areas in which the unmet medical need is still significant.

#### Recent progress

- Karolinska Development increased its investment in SVF in June 2021. Karolinska Development's ownership, after the add-on investment, now totals 31%.
- SVF granted US-patent regarding chimeric genes for immunotherapy against chronic hepatitis B and D virus infections.

#### Expected milestones

- The work of preparing the hepatitis B and D vaccine product for development in humans is expected to be completed in 2022.
- Phase 1 studies of hepatitis D and B vaccines could potentially be initiated in 2022/2023.



## AnaCardio

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

**Primary indication**  
Heart failure

**Development phase**  
Phase 2a

**Holding in company'**  
Karolinska Development 21%

**Origin**  
Karolinska Institutet  
Karolinska universitetssjukhuset

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

### Deal values for similar projects

- USD 2.1 billion – Cardioxyl Pharmaceuticals (licensor) & Bristol-Myers Squibb (licensee), 2015
- USD 620 million – Corthera (licensor) & Novartis (licensee), 2012

## AnaCardio AB



### A safer long-term treatment for heart failure

AnaCardio (Stockholm, Sweden) is developing a new form of peptide drug that protects cardiac tissue in conjunction with heart failure.

Heart failure occurs when the heart's ability to pump sufficient blood to meet the body's needs has deteriorated. The underlying condition often involves a weakening of the heart's musculature, resulting in an inability to pump the blood out of the heart's chambers. The condition arises as a sequela of previous cardiovascular complications, such as high blood pressure or vasoconstriction. Chronic heart failure often presents with diffuse symptoms, such as tiredness or breathlessness, and delayed diagnosis is consequently a common problem. Acute heart failure results in an individual's health status becoming critical, necessitating hospitalisation. One of the major issues with existing pharmaceuticals is that they are not designed for long-term treatment, due to a degree of toxicity that results in the breakdown of cardiac tissue and consequent side effects, such as arrhythmia, low blood pressure, ischemia, and an increased risk of premature mortality.

AnaCardio's clinical candidate drug is being developed to restore the heart's normal muscular function and blood circulation, without causing tissue breakdown. The candidate drug works by increasing the cardiac muscle's sensitivity to calcium – one of the most important signal molecules in normal muscular functioning. 30 heart failure patients were treated with an infusion of AnaCardio's candidate drug as part of an earlier clinical phase 2a study whose results showed a robust safety profile and a favourable pharmacological effect on cardiac function. The company is now preparing a clinical phase 2a study of a peroral treatment in order to increase the candidate drug's user-friendliness and, hence, its commercial potential.

### The market

Heart failure is a global disease with a substantial unmet medical need for safe, effective drugs. Cardiovascular diseases are becoming more widespread as a result of the sedentary lifestyle and growing problems with obesity that are following in the wake of increasing global affluence. An estimated 20 million people suffer from chronic heart failure and around 3 million people are hospitalised to treat it every year. The risk of developing cardiovascular disease increases with age, and 10-20% of the elderly population is now estimated to suffer from chronic heart failure, which is now the most common reason for hospitalisation amongst the elderly. Heart failure not only causes considerable individual suffering, it also has significant economic consequences for society in the form both of direct costs from in-patient care and of indirect costs in the form of productivity losses and reductions in tax revenues. The increased medical need is reflected in the sales value of heart failure treatments, which is expected to increase from USD 3.8 billion to USD 16.1 billion by 2026 in the world's seven largest pharmaceutical markets.

### Recent progress

- Karolinska Development invested in AnaCardio in June 2021. Karolinska Development's ownership totals 21%.
- New board of directors were appointed in the summer of 2021.
- During the third quarter, the company's new management and organization has been established, including CEO Patrik Strömberg and Alan Gordon as Chief Medical Officer.

### Expected milestones

- In the coming quarters, the company's clinical program is expected to be established.

## 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	2021 Jul-Sep	2020 Jul-Sep	2021 Jan-Sep	2020 Jan-Sep	2020 Full-year
<b>Condensed income statement</b>					
Change in fair value of shares in portfolio companies	27.5	-173.9	240.0	-289.2	-215.4
Net profit/loss	-1.2	-169.4	190.3	-293.4	-207.5
<b>Balance sheet information</b>					
Cash and cash equivalents	45.3	71.1	45.3	71.1	75.9
Net asset value (Note 1)	995.2	718.9	995.2	718.9	805.8
Net debt (Note 1)	-77.3	-3.3	-77.3	-3.3	0.0
<b>Share information</b>					
Earnings per share, weighted average before dilution (SEK)	0.0	-1.0	1.1	-1.7	-1.2
Earnings per share, weighted average after dilution (SEK)	0.0	-1.0	1.1	-1.7	-1.2
Net asset value per share (SEK) (Note 1)	5.7	4.1	5.7	4.1	4.6
Equity per share (SEK) (Note 1)	5.6	4.1	5.6	4.1	4.6
Share price, last trading day in the reporting period (SEK)	3.7	2.7	3.7	2.7	1.8
<b>Portfolio information</b>					
Investments in portfolio companies	21.1	4.0	69.2	19.3	40.0
Of which investments not affecting cash flow	5.6	0.1	16.4	0.7	0.9
Portfolio companies at fair value through profit or loss	1,075.5	675.8	1,075.5	675.8	770.3

### Financial Development for the Investment Entity in 2021

#### *Investments (comparable numbers 2020)*

Investments in the portfolio in the third quarter 2021 by external investors and Karolinska Development together amounted to SEK 106.1 (29.1) million, whereof 80% (86%) by external investors.

Karolinska Development invested during the third quarter SEK 21.1 (4.0) million, of which SEK 15.5 (3.9) million was cash investments. Investments were made in Dilafor SEK 12.9 million, Modus Therapeutics SEK 2.6 million and Umeocrine Cognition SEK 5.6 million (accrued interest on loans). Non-cash investments (accrued interest on loans) amounted to SEK 5.6 (0.1) million.

Investments by external investors in the portfolio companies during the third quarter amounted to SEK 85.0 (25.1) million and were made in Dilafor SEK 19.5 million, Modus Therapeutics SEK 30.4 million and Umeocrine Cognition SEK 35.0 million.

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

<b>SEKm</b>	<b>Karolinska Development</b>	<b>External Investors</b>	<b>Total Invested Q1-Q3 2021</b>
OssDsign	28.4	242.2	270.5
Dilafor	15.8	25.7	41.5
Modus Therapeutics	12.6	30.4	43.0
Umecrine Cognition	6.4	35.0	41.4
AnaCardio	3.0	3.0	6.0
Svenska Vaccinfabriken Produktion	3.0	0.0	3.0
Biosergen	0.0	50.0	50.0
<b>Total</b>	<b>69.2</b>	<b>386.3</b>	<b>455.5</b>

### **Portfolio Fair Value**

Fair Value of the portfolio companies owned directly by Karolinska Development increased by SEK 47.5 million during the third quarter 2021. The main reasons for the increase in Fair value of the portfolio companies were the increase in Fair Value of Forendo Pharma which was confirmed in the acquisition agreement by Organon in November 2021 and through the investments by Karolinska Development's investments in Dilafor and Modus Therapeutics. The Fair Value decreased due to the downturn in share price in the listed holdings Modus Therapeutics and OssDsign. Fair Value also decreased due to the dilution as an effect of the directed new share issue conducted in Umecrine Cognition in July 2021 and through the sale of Lipidor.

Fair Value of the portfolio companies owned indirectly via KDev Investments decreased by SEK 4.4 million during the third quarter 2021. The main reasons for the decrease in Fair value of the portfolio companies was the downturn in share price in the listed holding Modus Therapeutics but also through the partial sale of shares in Aprea Therapeutics.

Total Fair Value from portfolio companies owned directly by Karolinska Development and indirectly via KDev Investments increased by SEK 43.0 million in the third quarter 2021.

As a consequence of the decrease in Fair Value of the part of the portfolio owned via KDev Investments, the potential distribution to Rosetta Capital decreased by SEK 1.6 million, resulting in Net Portfolio Fair Value increasing by SEK 44.6 million in the third quarter 2021.

<b>SEKm</b>	<b>30 Sep 2021</b>	<b>30 Jun 2021</b>	<b>Q3 2021 vs Q2 2021</b>
Karolinska Development Portfolio Fair Value (unlisted companies)	760.1	731.8	28.3
Karolinska Development Portfolio Fair Value (listed companies)	74.6	55.4	19.2
KDev Investments Portfolio Fair Value	606.0	610.4	-4.4
<b>Total Portfolio Fair Value</b>	<b>1,440.6</b>	<b>1,397.5</b>	<b>43.0</b>
Potential distribution to Rosetta Capital of fair value of KDev Investments	-365.1	-366.7	1.6
<b>Net Portfolio Fair Value (after potential distribution to Rosetta Capital)</b>	<b>1,075.5</b>	<b>1,030.8</b>	<b>44.6</b>

### **Profit development 2021 (comparable numbers 2020)**

During the third quarter 2021, Karolinska Development's revenue amounted to SEK 0.5 (0.4) million and consists primarily of services provided to portfolio companies.

Change in fair value of shares in portfolio companies of in total SEK 27.5 (-173.9) million includes the difference between the change in Net Portfolio Fair Value during the third quarter 2021 with SEK 44.6 million and the net of investments in the portfolio companies of SEK 21.1 million and divestments of portfolio companies of SEK 3.9 million. Change in fair value of other financial assets and liabilities amounted to SEK -25.6 (14.5) million and are the consequence of changes in valuation of earn-out deals. For the period January - September 2021, the change in fair value of shares in portfolio companies amounted to SEK 240.0 (-289.2) million and the change in fair value of other financial assets amounted to SEK -40.8 (23.8) million.

During the third quarter 2021 other expenses amounted to SEK 2.2 (1.1) million and personnel costs amounted to SEK 5.5 (7.8) million. The main reason for the decrease in personnel costs compared to the third quarter 2020 is the outcome of bonus scheme related to exit of portfolio companies. For the period January – September 2021 other expenses amounted to SEK 5.6 (6.4) million and personnel cost amounted to 16.5 (19.3) million.

The operating profit/loss in the third quarter 2021 amounted to SEK -5.3 million compared to SEK -168.0 million in the third quarter 2020. The operating profit/loss for the period January - September 2021 amounted to 178.2 (-289.6) million.

Financial net improved during the third quarter 2021 compared to the third quarter 2021 due an adjusted interest income from portfolio company Umecrine Cognition of SEK 5.6 million. The financial net during the third quarter amounted to SEK 4.1 (-1.3) million. For the period January - September 2021 the financial net amounted to SEK 12.1 (-3.8) million.

The Investment Entity's Net profit/loss amounted to SEK -1.2 (-169.4) million in the third quarter 2021. Net profit/loss for the period January - September 2021 amounted to SEK 190.3 (-293.4) million.

### **Financial position**

The Investment Entity's equity to total assets ratio amounted to 88% on 30 September 2021, compared to 87% on 30 September 2020.

The net profit/loss of SEK -1.2 million for the third quarter resulted in the equity on 30 September 2021 decreasing to SEK 990.6 million compared to SEK 991.8 million on 30 June 2021.

Interest-bearing liabilities consisted of bridge loans including accrued interest amounting to SEK 122.6 million on 30 September 2021, after the credit facility of SEK 42.5 million has been utilized (which matures on 31 December 2022 together with 5% interest due at the same time), compared to SEK 73,0 million on 30 September 2020.

After paying operational costs and investments for the third quarter 2021, cash and cash equivalents amounted to SEK 45.3 million on 30 September 2021 compared to SEK 71.1 million on 30 September 2021. Net debt amounted to SEK 77.3 million on 30 September 2021 compared to SEK 3.3 million on 30 September 2020.

The company is going concern. The company's ability to continue operations (going concern) was strengthened not only with the credit facility that the company has with its main owner invoX Pharma of EUR 8.5 million but also with the expected initial payments from the sale of Forendo Pharma that will be paid out after the transaction is closed. The date for closing of the transaction is expected to take place during December 2021 or in the early part of 2022.

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## Financial Development – Parent Company

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*The Parent Company refers to Karolinska Development AB (comparable numbers 2020).*

During the third quarter 2021, the Parent Company's Net profit/loss amounted to SEK -1.2 (169.4) million. Net profit/loss for the period January - September 2021 amounted to SEK 190.3 (-293.4) million.

Due to the negative result for the third quarter 2021, the equity decreased from SEK 991.8 million as of 30 June 2021 to SEK 990.6 million 30 September 2021.

## 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 30 September 2021 was SEK 3.7, and the market capitalization amounted to SEK 657 million.

The share capital of Karolinska Development on 30 September 2021 amounted to SEK 1.8 million divided into 1,503,098 A shares, each with ten votes (15,030,980 votes) and 174,162,311 B shares, each with one vote (174,162,311 votes). The total number of shares and votes in Karolinska Development on 30 September 2021 amounted to 175,665,409 shares and 189,193,291 votes.

### Ownership

On September 30, 2021, Karolinska Development had 11,342 shareholders.

Shareholder	A-Shares	B-Shares	Cap %	Vote %
invoX Pharma Ltd <sup>1</sup>	0	75,727,285	43.11%	40.03%
Worldwide International Investments Ltd	0	32,276,620	18.37%	17.06%
Stift För Främjande & Utveckling	1,503,098	2,641,389	2.36%	9.34%
Östersjöstiftelsen	0	3,889,166	2.21%	2.06%
Coastal Investment Management LLC	0	2,470,541	1.41%	1.31%
Adis Holding AB	0	700,000	0.40%	0.37%
Gälöstiftelsen	0	668,661	0.38%	0.35%
Zhang, Qiuyue	0	654,000	0.37%	0.35%
Karolinska Institutet Holding AB	0	525,000	0.30%	0.28%
Synskadades riksförbund	0	494,939	0.28%	0.26%
<b>Sum Top 10 Shareholders</b>	<b>1,503,098</b>	<b>120,047,601</b>	<b>69.19%</b>	<b>71.40%</b>
<b>Sum Other Shareholders</b>	<b>0</b>	<b>54,114,710</b>	<b>30.81%</b>	<b>28.60%</b>
<b>Sum All Shareholders</b>	<b>1,503,098</b>	<b>174,162,311</b>	<b>100.00%</b>	<b>100.00%</b>

<sup>1</sup>On October 4, 2021, Sino Biopharmaceutical transferred its holding in Karolinska Development to the wholly owned subsidiary invoX Pharma Ltd

## Information on Risks and Uncertainties

### Investment Entity and Parent Company

#### Financial risks

Coronavirus's global spread affects the economy and society as a whole, including Karolinska Development and its portfolio companies. The value of listed companies can decline, delays in clinical trial programs may occur and that the opportunities for refinancing can be hampered. The Board monitors the evolvement of the crisis closely and Karolinska Development is working intensively to minimize the impact on the value of our investments and continues with different financing alternatives to secure the long-term capital requirement and thereby increase the degree of strategic and operational headroom for the future. The short-term financial risk has decreased with the credit facility of EUR 8.5 million secured and the expected initial payments for the sale of Forendo Pharma after the transaction is closed.

For a detailed description of other risks and uncertainties, see the Annual report 2020.

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## Signing of the report

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Solna, 18 November 2021

Viktor Drvota  
CEO

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## Review report

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Karolinska Development AB, corporate identity number 556707-5048

### **Introduction**

We have reviewed the condensed interim report for Karolinska Development AB, the Investment Entity, as at September 30, 2021 and for the nine months period then ended. The Board of Directors and the Managing Director are responsible for the preparation and presentation of this interim report in accordance with IAS 34 and the Swedish Annual Accounts Act. Our responsibility is to express a conclusion on this interim report based on our review.

### **Scope of review**

We conducted our review in accordance with the International Standard on Review Engagements, ISRE 2410 *Review of Interim Financial Statements Performed by the Independent Auditor of the Entity*. A review 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 other generally accepted auditing standards in Sweden. The procedures performed in a review do 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 interim report is not prepared, in all material respects, in accordance with IAS 34 and the Swedish Annual Accounts Act regarding the Investment Entity, and in accordance with the Swedish Annual Accounts Act regarding the Parent Company.

Solna, 18 November 2021

Ernst & Young AB

Oskar Wall

Authorized Public Accountant

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## Dates for Publication of Financial Information

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Year-end report January – December 2021	11 February 2022
Annual Report 2021	25 March 2022
Interim Report January – March 2022	29 April 2022
Annual meeting 2022	12 May 2022
Interim Report January – June 2022	19 August 2022
Interim Report January – September 2022	18 November 2022

Karolinska Development is required by law to publish the information in this interim report. The information was published on 18 November 2021.

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	2021 Jul-Sep	2020 Jul-Sep	2021 Jan-Sep	2020 Jan-Sep	2020 Full-year
Revenue		497	430	1,701	2,123	2,651
Change in fair value of shares in portfolio companies	2,3	27,548	-173,868	239,973	-289,210	-215,378
Change in fair value of other financial assets and liabilities		-25,567	14,499	-40,845	23,757	43,077
Other expenses		-2,179	-1,133	-5,596	-6,427	-8,466
Personnel costs		-5,448	-7,768	-16,519	-19,354	-23,620
Depreciation of right-of-use assets		-172	-176	-517	-528	-690
<b>Operating profit/loss</b>		<b>-5,321</b>	<b>-168,016</b>	<b>178,197</b>	<b>-289,639</b>	<b>-202,426</b>
Financial net		4,126	-1,346	12,116	-3,767	-5,061
<b>Profit/loss before tax</b>		<b>-1,195</b>	<b>-169,362</b>	<b>190,313</b>	<b>-293,406</b>	<b>-207,487</b>
Taxes		-	-	-	-	-
<b>NET PROFIT/LOSS FOR THE PERIOD</b>		<b>-1,195</b>	<b>-169,362</b>	<b>190,313</b>	<b>-293,406</b>	<b>-207,487</b>

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

SEK 000	Note	2021 Jul-Sep	2020 Jul-Sep	2021 Jan-Sep	2020 Jan-Sep	2020 Full-year
Net profit/loss for the period		-1,195	-169,362	190,313	-293,406	-207,487
<b>Total comprehensive income/loss for the period</b>		<b>-1,195</b>	<b>-169,362</b>	<b>190,313</b>	<b>-293,406</b>	<b>-207,487</b>

### Earnings per share for the Investment Entity

SEK	Note	2021 Jul-Sep	2020 Jul-Sep	2021 Jan-Sep	2020 Jan-Sep	2020 Full-year
Earnings per share, weighted average before dilution		-0.01	-0.97	1.08	-1.67	-1.18
Number of shares, weighted average before dilution		175,421,124	175,421,124	175,421,124	175,421,124	175,421,124
Earnings per share, weighted average after dilution		-0.01	-0.97	1.08	-1.67	-1.18
Number of shares, weighted average after dilution		175,421,124	175,421,124	175,421,124	175,421,124	175,421,124

**Condensed balance sheet for the Investment Entity**

SEK 000	Note	30 Sep 2021	30 Sep 2020	31 Dec 2020
<b>ASSETS</b>				
<b>Tangible assets</b>				
Right-of-use assets		862	858	690
<b>Financial assets</b>				
Shares in portfolio companies at fair value through profit or loss	2,3	1,075,495	675,825	770,320
Loans receivable from portfolio companies		-	1,779	-
<b>Total non-current assets</b>		<b>1,076,357</b>	<b>678,462</b>	<b>771,010</b>
<b>Current assets</b>				
Accounts receivable		-	31	3
Receivables from group company		-	-	80
Receivables from portfolio companies		2,510	1,866	243
Other financial assets		722	64,774	41,181
Other current receivables		1,224	1,224	768
Prepaid expenses and accrued income		895	700	929
Cash and cash equivalents		45,320	71,098	75,869
<b>Total current assets</b>		<b>50,671</b>	<b>139,693</b>	<b>119,073</b>
<b>TOTAL ASSETS</b>		<b>1,127,028</b>	<b>818,155</b>	<b>890,083</b>
<b>EQUITY AND LIABILITIES</b>				
<b>Total equity</b>				
		<b>990,601</b>	<b>714,337</b>	<b>800,267</b>
<b>Long-term liabilities</b>				
Long-term liabilities to related parties	4	122,611	74,433	-
<b>Total long-term liabilities</b>		<b>122,611</b>	<b>74,433</b>	<b>0</b>
<b>Current liabilities</b>				
Current interest liabilities to related parties	4	-	-	75,864
Other financial liabilities		3,742	20,155	5,726
Accounts payable		690	685	617
Liability to make lease payment		880	898	711
Other current liabilities		1,343	1,538	1,373
Accrued expenses and prepaid income		7,161	6,109	5,525
<b>Total current liabilities</b>		<b>13,816</b>	<b>29,385</b>	<b>89,816</b>
<b>Total liabilities</b>		<b>136,427</b>	<b>103,818</b>	<b>89,816</b>
<b>TOTAL EQUITY AND LIABILITIES</b>		<b>1,127,028</b>	<b>818,155</b>	<b>890,083</b>

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

SEK 000	Not	2021-09-30	2020-09-30	2020-12-31
<b>Opening balance, equity</b>				
		<b>800,267</b>	<b>1,007,732</b>	<b>1,007,732</b>
Net profit/ loss for the period		190,313	-293,406	-207,487
<b>Closing balance, equity</b>		<b>990,601</b>	<b>714,337</b>	<b>800,267</b>

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

SEK 000	Note	2021 Jan-Sep	2020 Jan-Sep
<b>Operating activities</b>			
Operating profit/loss		178,197	-289,639
<b>Adjustments for items not affecting cash flow</b>			
Depreciation		517	528
Change in fair value		-199,128	265,453
Other items		-	-536
<b>Cash flow from operating activities before changes in working capital and operating investments</b>		<b>-20,414</b>	<b>-24,194</b>
<b>Cash flow from changes in working capital</b>			
Increase (-)/Decrease (+) in operating receivables		-2,590	-1,949
Increase (+)/Decrease (-) in operating liabilities		44,179	-33,063
<b>Cash flow from operating activities</b>		<b>21,175</b>	<b>-59,206</b>
<b>Investment activities</b>			
Part payment from earn-out deal		-2,370	-5,092
Proceeds from sale of shares in portfolio companies		3,941	101,853
Acquisitions of shares in portfolio companies		-52,759	-18,590
<b>Cash flow from investment activities</b>		<b>-51,188</b>	<b>78,171</b>
<b>Financing activities</b>			
Amortization of lease liabilities		-536	-
<b>Cash flow from financing activities</b>		<b>-536</b>	<b>0</b>
<b>Cash flow for the period</b>		<b>-30,549</b>	<b>18,966</b>
Cash and cash equivalents at the beginning of the year		75,869	52,132
<b>CASH AND CASH EQUIVALENTS AT THE END OF THE PERIOD</b>		<b>45,320</b>	<b>71,098</b>

**Condensed income statement for the Parent Company**

SEK 000	Note	2021 Jul-Sep	2020 Jul-Sep	2021 Jan-Sep	2020 Jan-Sep	2020 Full-year
Revenue		497	430	1,701	2,123	2,651
Change in fair value of shares in portfolio companies		27,548	-173,868	239,973	-289,210	-215,378
Change in fair value of other financial assets and liabilities		-25,567	14,499	-40,845	23,757	43,077
Other expenses		-2,357	-1,312	-6,131	-6,963	-9,180
Personnel costs		-5,448	-7,768	-16,519	-19,354	-23,620
<b>Operating profit/loss</b>		<b>-5,327</b>	<b>-168,019</b>	<b>178,179</b>	<b>-289,647</b>	<b>-202,450</b>
Financial net		4,136	-1,335	12,152	-3,729	-5,016
<b>Profit/loss before tax</b>		<b>-1,191</b>	<b>-169,354</b>	<b>190,331</b>	<b>-293,376</b>	<b>-207,466</b>
Tax		-	-	-	-	-
<b>NET PROFIT/LOSS FOR THE PERIOD</b>		<b>-1,191</b>	<b>-169,354</b>	<b>190,331</b>	<b>-293,376</b>	<b>-207,466</b>

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

SEK 000	Note	2021 Jul-Sep	2020 Jul-Sep	2021 Jan-Sep	2020 Jan-Sep	2020 Full-year
Net profit/loss for the period		-1,191	-169,354	190,331	-293,376	-207,466
<b>Total comprehensive income/loss for the period</b>		<b>-1,191</b>	<b>-169,354</b>	<b>190,331</b>	<b>-293,376</b>	<b>-207,466</b>

**Condensed balance sheet for the Parent Company**

SEK 000	Note	30 Sep 2021	30 Sep 2020	31 Dec 2020
<b>ASSETS</b>				
<b>Financial assets</b>				
Shares in portfolio companies at fair value through profit or loss	2,3	1,075,495	675,825	770,320
Loans receivable from portfolio companies		-	1,779	-
<b>Total non-current assets</b>		<b>1,075,495</b>	<b>677,604</b>	<b>770,320</b>
<b>Current assets</b>				
Accounts receivable		-	31	3
Receivables from group companies		-	-	80
Receivables from portfolio companies		2,510	1,866	243
Other financial assets		722	64,774	41,181
Other current receivables		1,224	1,224	768
Prepaid expenses and accrued income		895	700	929
Cash and cash equivalents		45,320	71,098	75,869
<b>Total current assets</b>		<b>50,671</b>	<b>139,693</b>	<b>119,073</b>
<b>TOTAL ASSETS</b>		<b>1,126,166</b>	<b>817,297</b>	<b>889,393</b>
<b>EQUITY AND LIABILITIES</b>				
<b>Total equity</b>		<b>990,619</b>	<b>714,377</b>	<b>800,288</b>
<b>Long-term liabilities</b>				
Long-term liabilities to related parties	4	122,611	74,433	-
<b>Total long-term liabilities</b>		<b>122,611</b>	<b>74,433</b>	<b>0</b>
<b>Current liabilities</b>				
Current interest liabilities	4	-	-	75,864
Other financial liabilities		3,742	20,155	5,726
Accounts payable		690	685	617
Other current liabilities		1,343	1,538	1,373
Accrued expenses and prepaid income		7,161	6,109	5,525
<b>Total current liabilities</b>		<b>12,936</b>	<b>28,487</b>	<b>89,105</b>
<b>Total liabilities</b>		<b>135,547</b>	<b>102,920</b>	<b>89,105</b>
<b>TOTAL EQUITY AND LIABILITIES</b>		<b>1,126,166</b>	<b>817,297</b>	<b>889,393</b>

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

SEK 000	Not	30 Sep 2021	30 Sep 2020	31 Dec 2020
<b>Opening balance, equity</b>		<b>800,288</b>	<b>1,007,753</b>	<b>1,007,753</b>
Net profit/ loss for the period		190,331	-293,376	-207,466
<b>Closing balance, equity</b>		<b>990,619</b>	<b>714,377</b>	<b>800,288</b>

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## Notes to the Financial Statements

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### 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.

#### New and revised accounting principles 2021

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

#### Related party transactions

The credit facility from Sino Biopharmaceutical of SEK 42.5 million was utilized during the third quarter. Sino Biopharmaceutical has transferred the credit facility and the bridge loan of SEK 70 million (plus accrued interest) to the subsidiary invoX Pharma in September 2021. The new bridge loan from invoX Pharma of SEK 42.5 million has an interest rate of 5% which matures at the same time as the loan, December 31, 2022.

The bridge loans from invoX Pharma (subsidiary of Sino Biopharmaceutical) total SEK 112.5 million plus interest and fall due on 31 December 2022.

Karolinska Development has the opportunity to utilize a credit facility from invoX Pharma of up to approximately SEK 85 million (EUR 8.5 million), interest rate of 5% on utilized amount and falls due on 31 December 2022, to cover a possible short-term liquidity need.

On October 4, 2021, Sino Biopharmaceutical transferred its entire holding in Karolinska Development to the wholly owned subsidiary invoX Pharma Ltd.

#### Definitions

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

**Reporting period:** January – September 2021.

#### Alternative Performance Measures

The Company presents certain financial measures in the interim 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.

**rNPV:** "risk-adjusted net present value" is a method to value risky future cash flows. rNPV is the standard valuation method in the drug development industry, where sufficient data exists to estimate success rates for all R&D phases.

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

**Net debt:** Interest-bearing liabilities (SEK 122.6 million) reduced with cash and cash equivalents (SEK 45.3 million).

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

**Net asset value as of 30 September 2021:**

<i>SEK 000</i>	Number of shares	Fair value	Part of Karolinska Developments' net asset value	Percentage
			SEK per share <sup>3</sup>	
<b>Listed assets</b>				
Modus Therapeutics	6,144,821	25,194	0.14	2.7%
OssDsign	5,812,638	49,407	0.28	5.3%
<b>Total listed assets</b>		<b>74,601</b>	<b>0.43</b>	<b>8.1%</b>
<b>Unlisted assets</b>				
AnaCardio		3,000	0.02	0.3%
Dilafor		12,014	0.07	1.3%
Forendo		104,117	0.23	4.4%
Svenska Vaccinfabriken Produktion		6,827	0.04	0.7%
Umecrine Cognition		623,041	3.55	67.3%
KCIF Co-Investment Fund KB <sup>1</sup>		11,052	0.03	0.5%
KDev Investments <sup>1</sup>		240,843	1.37	26.0%
<b>Total unlisted assets</b>		<b>931,185</b>	<b>5.31</b>	<b>100.6%</b>
<b>Net of other liabilities and debts<sup>2</sup></b>		<b>-80,311</b>	<b>-0.46</b>	<b>-8.7%</b>
<b>Total net asset value</b>		<b>995,184</b>	<b>5.28</b>	<b>100.0%</b>

<sup>1</sup>The companies have both listed and unlisted assets.

<sup>2</sup> Includes SEK 45.3 million cash and cash equivalents.

<sup>3</sup> In relation to the number of shares outstanding (175,421,124) on the closing date.

## NOTE 2 Shares in portfolio companies, at fair value through profit or loss

### Change in fair value of portfolio companies

<i>SEK 000</i>	2021 Jan-Sep	2020 Jan-Sep	2020 Full-year
<b>Result level 1</b>			
Listed companies, realized	-433	-12,110	-12,109
Listed companies, unrealized	-26,479	-23,596	-24,542
<b>Total level 1</b>	<b>-26,912</b>	<b>-35,706</b>	<b>-36,651</b>
<b>Result level 3</b>			
Unlisted companies, realized	-936	8,289	8,215
Unlisted companies, unrealized	267,821	-261,793	-186,942
<b>Total level 3</b>	<b>266,885</b>	<b>-253,504</b>	<b>-178,727</b>
<b>Total</b>	<b>239,973</b>	<b>-289,210</b>	<b>-215,378</b>

**Shares in portfolio companies, at fair value through profit or loss**

<i>SEK 000</i>	<b>2021-09-30</b>	<b>2020-09-30</b>	<b>2020-12-31</b>
<b>Accumulated acquisition cost</b>			
At the beginning of the year	770,320	1,047,600	1,047,600
Investments during the year	69,154	19,290	39,954
Sales during the year	-3,952	-101,854	-101,856
Changes in fair value in net profit/loss for the year	239,973	-289,210	-215,378
<b>Closing balance</b>	<b>1,075,495</b>	<b>675,825</b>	<b>770,320</b>

**NOTE 3 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 September 2021**

<i>SEK 000</i>	<b>Level 1</b>	<b>Level 2</b>	<b>Level 3</b>	<b>Total</b>
<b>Financial assets</b>				
Shares in portfolio companies, at fair value through profit or loss	74,601	-	1,000,894	1,075,495
Loans receivable from portfolio companies	-	2,510	-	2,510
Other financial assets	-	-	722	722
Cash and cash equivalents	45,320	-	-	45,320
<b>Total</b>	<b>119,921</b>	<b>2,510</b>	<b>1,001,616</b>	<b>1,124,047</b>
<b>Financial liabilities</b>				
Other financial liabilities	-	-	3,742	3,742
<b>Total</b>	<b>-</b>	<b>0</b>	<b>3,742</b>	<b>3,742</b>

**Fair value as of 30 September 2020**

<i>SEK 000</i>	<b>Level 1</b>	<b>Level 2</b>	<b>Level 3</b>	<b>Total</b>
<b>Financial assets</b>				
Shares in portfolio companies, at fair value through profit or loss	38,710	-	637,115	675,825
Loans receivable from portfolio companies	-	1,779	-	1,779
Other financial assets	-	-	64,774	64,774
Accounts receivable	-	31	-	31
Receivables from portfolio companies	-	1,866	-	1,866
Cash, cash equivalents and short-term investments	71,098	-	-	71,098
<b>Total</b>	<b>109,808</b>	<b>3,676</b>	<b>701,889</b>	<b>815,373</b>
<b>Financial liabilities</b>				
Other financial liabilities	-	-	20,155	20,155
Accounts payable	-	685	-	685
<b>Total</b>	<b>-</b>	<b>685</b>	<b>20,155</b>	<b>20,840</b>



**Fair value (level 3) as of 30 September 2021**

SEK 000	Shares in portfolio companies	Other financial assets	Other financial liabilities
At beginning of the year	732,554	41,181	5,726
Transfers from level 3 <sup>1</sup>	-36,752	-	0
Acquisitions	38,207	-	-
Compensations	-	-	-2,370
Gains and losses recognized through profit or loss	266,885	-40,459	386
<b>Closing balance 30 September 2021</b>	<b>1,000,894</b>	<b>722</b>	<b>3,742</b>
Realized gains and losses for the period included in profit or loss	-1,369	0	0
Unrealized gains and losses in profit or loss for the period included in profit or loss	268,254	-40,459	386

<sup>1</sup>Refers to portfolio company, which was listed during the period.

**Fair value (level 3) as of 30 September 2020**

SEK 000	Shares in portfolio companies	Other financial assets	Other financial liabilities
At beginning of the year	884,830	62,620	46,851
Acquisitions	19,290	-	-
Compensations	-13,500	-	-5,094
Gains and losses recognized through profit or loss	-253,504	2,154	-21,603
<b>Closing balance 30 September 2020</b>	<b>637,115</b>	<b>64,774</b>	<b>20,154</b>
Realized gains and losses for the period included in profit or loss	8,289	-	-
Unrealized gains and losses in profit or loss for the period included in profit or loss	-261,793	2,154	21,603

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.

**Shares in portfolio companies (Level 3) as of 30 September 2021**

SEK000	Ownership	Fair value SEK000	Valuation model <sup>1</sup>
AnaCardio	21.4%	3,000	Last post money
Dilafor	0.8%	12,014	Last post money
Forendo Pharma	9.6%	104,117	A combination of last post money and external valuation <sup>2</sup>
Svenska Vaccinfabriken Produktion	30.8%	6,827	Last post money
Umecrine Cognition	74.5%	623,040	External valuation <sup>3</sup>
KCIF Co-Investment Fund KB	26.0%	11,052	A combination of last post money and share price listed company <sup>4</sup>
KDev Investments	90.1%	240,843	A combination of last post money and share price listed company <sup>5</sup>
<b>Total level 3</b>		<b>1,000,894,</b>	

<sup>1</sup>See The Annual Report 2020 Valuation of portfolio companies at fair value, for a description of valuation models.

<sup>2</sup>External risk adjusted net present value (rNPV) calculation of the transaction value, including additional purchase considerations, confirmed in the agreement to divest the company to Organon in November 2021.

<sup>3</sup>Risk adjusted external valuation by an independent valuation institute in December 2020. The external valuation resulted in an rNPV value which has been risk adjusted to reflect an assumed pricing in conjunction with an IPO and the need to secure development financing.

<sup>4</sup>KCIF Co-Investment Fund KB holds both listed shares which are valued in accordance with the closing rate on the final trading day of the period, and unlisted shares which are valued in accordance with the most recent transaction, post-money valuation.

<sup>5</sup>KDev Investments AB holds both listed shares which are valued in accordance with the closing rate on the final trading day of the period, unlisted shares which are valued in accordance with the most recent transaction (post-money valuation) and unlisted shares valued in accordance with the most recent transaction (post-money valuation). After a new investment round in Dilafor, the company now is valued to last post money, the fair value is in line with the risk adjusted external valuation made by an independent valuation institute in June 2021. Dilafor still accounts for 80% of the total fair value in KDev Investments.

### Forendo Pharma

The Fair Value of the directly owned holding in Forendo Pharma, as of 30 September 2021, amounts to SEK 104.1 million (10% of the Net Portfolio Fair Value), as of 30 September 2020 SEK 41.9 million (6% of the Net Portfolio Fair Value). The Fair Value of the part of Forendo Pharma which Karolinska Development owns indirectly via KCIF Co-Investment Fund KB amounts to SEK 10.0 million (1% of the portfolio's net fair value).

The reason for the increase of the booked value of the holding of SEK 70.0 million is based on the rNPV calculation of the total transaction value, including conditional future payments, from the divestment of Forendo Pharma to Organon. Karolinska Development's total ownership in Forendo Pharma, including indirect holdings via KCIF Co-Investment Fund, amounts to 9.7%. The total transaction value for Karolinska Development amounts to USD 91.7 million and is calculated as 9.7% of the total transaction value of USD 945 million. Under the acquisition agreement, the shareholders of Forendo Pharma will receive an initial payment of USD 75 million. In addition, there are conditional payments totalling USD 270 million linked to milestones in the development and registration processes for the company's drug candidates, and additional payments totalling USD 600 million linked to commercial milestones. The completion of the transaction is subject to review by competition authorities and other customary conditions. The transaction is expected to close in December 2021.

Karolinska Development estimates the risk-adjusted net present value (rNPV) of future cash flows, including the initial payment, from the transaction at SEK 114 million, with a positive effect on net profit of SEK 70 million and a consequential increase in the portfolio company's fair value of SEK 70 million in the third quarter 2021. The additional purchase consideration is expected to be paid during the period 2024–2034, and renewed rNPV valuations will be performed continuously in connection with Karolinska Development's future quarterly reporting.

The parameters in the rNPV calculation with the largest impact on the rNPV valuation are the wacc (13%) and the compounded probability of success for fulfilling the conditions in the development, registration processes and commercial milestones for the company's drug candidates. The assumed compounded probabilities of success for the drug candidates FOR-6219 and FOR-7191 are 22,4% and 14,8% respectively. The additional purchase consideration is expected to be paid during the period 2024–2034.

**Sensitivity analysis of the Fair Value of the holding in Forendo Pharma as of 30 September 2021**

The outcome relates to the Change in Fair Value of the portfolio company Forendo Pharma

**Outcome from changing the assumed wacc +/-1% unit, i.e. setting the wacc at 12% and 14% respectively (13% is assumed in the rNPV valuation).**

	12%		14%	
	Result/ equity MSEK	SEK/share	Result/ equity MSEK	SEK/share
Effect of a change in the discount rate <sup>1</sup>	3,322	0.02	-3,152	-0.02

<sup>1</sup>Sensitivity of the impact on Fair Value (rNPV) in the external analysis by changing the wacc by +/- 1% respectively. The applied wacc in the rNPV valuation is 13%.

**Outcome from changing the compounded probability of success for additional purchase considerations related to the drug candidate FOR-6219 to 17,4, 19,9, 24,9 and 27,4% respectively (22,4% is applied in the rNPV valuation)**

	17.4%		19.9%		24.9%		27.4%	
	Result/ equity MSEK	SEK/share	Result/ equity MSEK	SEK/share	Result/ equity MSEK	SEK/share	Result/ equity MSEK	SEK/share
Effect from a change in the compounded probability of success for the drug candidate <sup>2</sup>	-11,500	-0.07	-6,133	-0.03	7,241	0.04	15,845	0.09

**Outcome from changing the compounded probability of success for additional purchase considerations related to the drug candidate FOR-7191 to 9.8, 12.3, 17.3 and 19.8% respectively (14.8% is applied in the rNPV valuation)**

	9.8%		12.3%		17.3%		19.8%	
	Result/ equity MSEK	SEK/share	Result/ equity MSEK	SEK/share	Result/ equity MSEK	SEK/share	Result/ equity MSEK	SEK/share
Effect from a change in the compounded probability of success for the drug candidate <sup>2</sup>	-5,963	-0.03	-3,067	-0.02	3,237	0.02	6,815	0.04

<sup>2</sup>Sensitivity of the impact on Fair Value (rNPV) in the external analysis by changing the probability of success in steps of 2.5% in the range +/- 5% units compared to the applied compounded probability of success in the rNPV valuation

### 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 365.1 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 15.6 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 Sep 2021	30 Sep 2020	31 Dec 2020
Karolinska Development Portfolio Fair Value (unlisted companies)	760,051	478,938	732,554
Karolinska Development Portfolio Fair Value (listed companies)	74,601	38,711	37,766
KDev Investments Portfolio Fair Value	605,988	506,490	162,916
<b>Total Portfolio Fair Value</b>	<b>1,440,640</b>	<b>1,024,139</b>	<b>933,236</b>
Potential distribution to Rosetta Capital of fair value of KDev Investments	-365,145	-348,314	-162,916
<b>Net Portfolio Fair Value (after potential distribution to Rosetta Capital)</b>	<b>1,075,495</b>	<b>675,825</b>	<b>770,320</b>

\*SEK 15.6 million repayment of investments in KDev Investments made by Rosetta Capital and SEK 349.5 million distribution of dividends to preference shares and common shares.

## NOTE 4 Liabilities to related parties

SEK 000	2021-09-30	2020-09-30	2020-12-31
<b>Long-term liabilities to related parties</b>			
InvoX Pharma Ltd <sup>1</sup>	70,000	-	-
InvoX Pharma Ltd <sup>2</sup>	42,500	0	0
Accrued interest Sino Biopharmaceutical	10,111	-	-
<b>Current interest liabilities</b>			
Sino Biopharmaceutical <sup>1</sup>	-	70,000	70,000
Accrued interest Sino Biopharmaceutical	-	4,433	5,864
<b>Total</b>	<b>122,611</b>	<b>74,433</b>	<b>75,864</b>

<sup>1</sup>Bridge loan from Sino Biopharmaceutical has during September 2021 been transferred to the wholly owned subsidiary InvoX Pharma Ltd (with the same conditions), expiry date is 31 December 2022. The interest rate amounts to 8% and falls due on 31 December 2022.

<sup>2</sup>Bridge loan from InvoX Pharma Ltd (Sino Biopharmaceutical has transferred the credit facility to the wholly owned subsidiary InvoX Pharma Ltd. Expiry date is 31 December 2022. The interest rate amounts to 5% and falls due on 31 December 2022.

## NOTE 5 Pledge assets and contingent liabilities

SEK 000	2021-09-30	2020-09-30	2020-12-31
<b>Pledge assets</b>			
<b>Contingent liabilities</b>			
Investment agreement in portfolio company	12,927	3,000	-
<b>Summa</b>	<b>12,927</b>	<b>3,000</b>	<b>0</b>