novo holdings
Investors in life science

2021

A record year building exceptional companies for a **global impact**



- IO Biotech IPO on US NASDAQ
- Forendo Pharma acquired for nearly US$ 1 billion
- Muna launched with world-leading science to advance latest scientific breakthroughs in neuroscience
- Adcendo raised US$ 60 million Series A to deliver next-generation Antibody-Drug Conjugates
- Hemab raised US$ 50 million Series A to develop bispecific antibodies for the treatment of rare bleeding disorders
- Novo Seeds expanded its bioindustrials portfolio with Bactolife and 21st Bio
- Over US$ 550 million raised by portfolio companies in 2021

An **outstanding year** for our venture creation team

2021 has demonstrated the enormous potential of our industry to translate scientific breakthroughs into better treatments addressing substantial global unmet medical needs. Novo Seeds is focused on maximising the potential of Nordic innovation and we continue to see an increasing number of exciting investment opportunities. Our commitment to early-stage financing and venture creation has resulted in a never-seen-before amount of capital and interest from fellow VCs across Europe and the US – a testament to our global standing in the industry and to world class science and innovation in the Nordics. In 2021, over US$ 550 million was raised by our portfolio companies.

We proactively identify global breakthrough scientific discoveries that have the potential to deliver innovative therapies for patients. It is a testament to our commitment that over the last 12 years the vast majority of Danish biotechs with international VC investors have been incubated and built by Novo Seeds.

In 2021 three companies that we helped build, Muna Therapeutics, Adcendo and Hemab, raised significant +50 million USD Series A rounds. One of our ambitions is to nurture and incubate the untapped innovation in the Nordic region and in parallel source global innovation with the goal of building and facilitating synergistic collaborations across the life science ecoystem. Our experience in building biotech companies, together with our financial resources, network and group of entrepreneurs-in-residence, makes us one of the leading venture creators in Europe. We are proud to co-lead many of these new investments with exceptional fellow investors, and proud to work with academic founders across the most renowned academic institutions in the Nordics and around the world.

As long-term investors committed to company creation, we are equally excited by the recent NASDAQ IPOs of portfolio companies, Galecto Biotech and IO Biotech. For both companies Novo Seeds was the first investor and continued to be a major investor throughout the company's development and progress. Pharma M&A was a major theme in 2021 and we were pleased that our portfolio company, Forendo Pharma, was acquired by Organon for US$ 954 million, yet another example of Nordic value creation.

We are uniquely positioned to identify, build and guide the most transformative healthcare ventures of our time throughout their life cycle. 2021 was truly a record year for building exceptional companies with the potential to make a global impact; we anticipate more exciting company creation and significant developments across our portfolio in 2022.





2021 at a glance

> $550m

total amount raised by portfolio

2 exits

1 IPO, 1 M&A

5

new investments

2

new cos launched

Launching **world class biotechs** and key transactions from the portfolio

Muna Therapeutics, a biopharmaceutical company pioneering the development of first-in-class small molecule therapeutics for neurodegenerative diseases, announced the successful closing of a US$ 73 million Series A financing round, one of the largest biotech financings in the Nordics.

Adcendo is developing antibody-drug conjugates (ADCs) for the treatment of cancers and raised a US$ 62 million Series A financing led by Novo Seeds. The Company has been supported by Novo Seeds since 2017 and was incubated in 2018 at the BioInnovation Institute (BII), an international life sciences incubator in Copenhagen.

Hemab, a biotech company developing next generation therapeutics for serious underserved bleeding and thrombosis disorders raised a US$ 55 million Series A in July. The Company was created in 2020 by Novo Seeds working closely with the Founders to develop a commercially attractive business plan to maximise the potential of Hemab's promising technology platform. The pipeline will initially focus on underserved people living with rare bleeding disorders such as Glanzmann's Thrombasthenia, with plans to expand into more common disorders of hemostasis and thrombosis.

Tribune Therapeutics, set up to exploit a novel, pan-antifibrotic mechanism across a wide range of indications, was co-created and funded by Novo Seeds and HealthCap. The Company's breakthrough asset is in-licensed from Norway's Oslo University Hospital.

Asgard Therapeutics is pioneering in vivo cell reprogramming approaches to elicit potent anti-cancer immune responses and completed a EUR 6 million seed financing round co-led by Novo Seeds. Prior research work had been supported by several translational grants, including support from the Novo Nordisk Foundation and the European Commission's Horizon 2020 initiative.

Forendo Pharma, a clinical stage drug development company focusing on novel treatments in women's health, was acquired by Organon, a spin-off of Merck, for a total consideration of nearly US$ 1 billion.

IO Biotech, a company Novo Seeds helped build, raised a EUR 127 million Series B and subsequently completed a US NASDAQ IPO for gross proceeds of US$ 115 million. Novo Seeds invested in the Series B and the IPO and remains a significant owner. IO Biotech is focused on developing its T-win® technology platform, a novel approach to cancer immunotherapy designed to activate naturally occurring T cells to target immunosuppressive mechanisms.

Avilex Pharma and Simcere Pharmaceutical Group Ltd announced a strategic partnership to develop and commercialize novel treatments for acute ischemic stroke in China. Avilex is eligible to receive payments over US$ 173 million.

Muna Therapeutics
set to ride the next wave of breakthroughs in neurodegenerative diseases

We are in an era of rapid advancement in understanding how to slow or stop the relentless progression of neurodegenerative diseases such as Alzheimer's and Frontotemporal Dementia that devastate cognition and quality of life for patients and caregivers. Muna is well positioned to leverage recent field development and expertise to deliver impactful disease modifying small molecule therapeutics to patients. Muna was founded by Novo Seeds and pioneers in neurodegenerative diseases research, from Aarhus University, Denmark; KU Leuven, Belgium; and Axxam, Italy. It is led by seasoned pharma executives Rita Balice-Gordon, CEO (ex Sanofi) and Anders Hinsby, COO (ex Orphazyme), both Novo Seeds Entrepreneurs in Residence.

Muna's unique biology platform and pipeline has the potential to address a number of neurodegenerative diseases, powered by world-leading science and an experienced leadership team with a proven track record in neurologic disease drug discovery and development.

Muna's successful series A illustrates the value generation of our incubation strategy. Novo Seeds' strategy is to back teams from all over the globe with world class science and attract other blue-chip investors to help transform these enterprises into successful businesses in the Nordics.

Novo Seeds' investment ethos, long-term vision, industry expertise and 'hands-on' approach enables it to create world leading companies such as Muna and ensure all the elements for success are there from the start. Muna combines a globally experienced leadership from the Novo Seeds Entrepreneur in Residence team, renowned research scientists in neurodegeneration research and prominent international investors.



CEO Rita Balice-Gordon



Adcendo
building a world leading ADC company

Antibody-drug conjugates have seen a revival in the last couple years with several high-profile acquisitions. Adcendo was founded in 2017 by scientists Niels Behrendt, Lars Henning Engelholm and Christoffer Nielsen from The Finsen Laboratory at Rigshospitalet and the University of Copenhagen. Novo Seeds played an instrumental role during the initial phase by shaping the strategy and assembling an experienced advisory board, and proposed John Haurum, Entrepreneur in Residence at Novo Seeds, as Chair of the Board of Directors. This led to Adcendo raising US$ 62 million in Series A financing with Novo Seeds co-leading a cross-Atlantic syndicate of blue-chip investors.

Following the Series A, Adcendo was able to recruit several high-profile hires such as Michael Pehl, former Immunomedics CEO, and Dennis Benjamin, former Head of R&D at Seagen. Building on our network, Novo Seeds was able to contribute through identifying a highly experienced CDO and CTO and proposed John Haurum, Entrepreneur in Residence at Novo Seeds, as Chair of the Board of Directors. Adcendo is currently working to bring its lead program on the novel cancer target uPARAP to development candidate nomination and proof of concept in patients with sarcoma, a highly heterogenous group of cancers with a high unmet medical need but despite this, very little innovation. In addition, Adcendo is building a pipeline of additional novel cancer targets ideally suited to ADC approaches. Adcendo is a testament to our strategy and vision to support and invest in leading Nordic biotech companies and contribute more than capital to life science companies. We appreciate the contributions made by the BioInnovation Institute, an international life science incubator based in Copenhagen, and look forward to investing in many more of their exceptional biotech spinouts.

IO BIOTECH
from Seed to IPO on US NASDAQ

In November, IO Biotech announced the closing of its Initial Public Offering (IPO) on NASDAQ for gross proceeds of $115.1 million, following in the footsteps of Galecto, and once again illustrating our commitment to supporting our portfolio companies across their life-cycle. This IPO followed the closing of a EUR 127million Series B round in January 2021.

IO Biotech is focused on developing its T-win® technology platform, a novel approach to cancer immunotherapy designed to activate naturally occurring T cells to target immunosuppressive mechanisms. IO Biotech is advancing its lead immuno-oncology candidate, IO102-IO103 targeting IDO and PD-L1, through clinical studies and is developing further preclinical and clinical pipeline candidates.

As the original incubators and first investor in IO Biotech, Novo Seeds was proud to see the Company list on NASDAQ. The Company was created and launched by Novo Seeds in January 2015, working closely with the founders to develop a commercially attractive business plan to maximize the potential of the Company's promising T-win® technology platform. Novo Seeds played a critical role in the Company's growth, helping to establish a high caliber management team and continue to invest over the last eight years as IO Biotech moved from being a start up to a clinical-stage biopharmaceutical company.



A leader in **sustainability**

We have witnessed the strong impact of biotechnology on drug discovery, and we believe it also has enormous potential to advance many industrial applications across the agricultural, food, environmental, chemicals/materials, health and deep-tech sectors. At Novo Seeds, we look for disruptive technologies that are scalable and will have a long-term sustainable impact on society. Our long-term approach, global perspective and deep capital pools enable us to build companies from scratch and fund until commercial scale. Novo Seeds leverages its network to build syndicates with leading agricultural sector investors including the venture arms of two of the world's foremost agricultural science companies, Syngenta Group Ventures and FMC Ventures.

Novo Holdings now has 15 bioindustrials venture-backed companies in the portfolio, alongside large holdings in world-leading bioindustrials companies, Novozymes and Chr. Hansen. In 2021, Novo invested in **BioPhero's** USD 17 million Series A round with the aim of supporting the Company's mission to replace many chemical insecticides with sustainable biological insect pheromones to redefine crop protection. **BioPhero** was first identified and funded through the pre-seed grant program of the Novo Nordisk Foundation in 2014, and subsequently Novo Seeds led the first seed investment round in 2018. Also, this year, Novo Seeds led the EUR 7 million seed round into **Bactolife**, an innovative company with a strong nanobody platform for management of bacterial virulence without the use of antibiotics; and participated in the extended seed round of the food colorant company **Chromologics** (EUR 6 million) together with Blue Horizon Ventures.

Recently, Novo Seeds committed EUR 86 million to **21st Bio**, a Danish bioindustrial scale-up company built on technology licensed from Novozymes. **21st Bio** is focused on supporting upscaling of manufacturing process, with the intention of helping companies meet market demand for quality and competitive yields. With the investment comes a new manufacturing site in Denmark.

Bioindustrials is a focus area for Novo Holdings, and we plan to accelerate the number of portfolio venture investments in the coming years.

REPAIR Impact Fund – Taking Action Against the Next Pandemic

Antimicrobial resistance (AMR) is a longstanding concern of the Novo Group. Novo Seeds first launched the REPAIR Impact Fund in 2018 to confront the pending global medical crisis of AMR. Since its inception the REPAIR Impact Fund has deployed more than US$ 65 million to build a portfolio of nine highly innovative programs based in Europe and the US, working across several modalities to address the challenge of AMR.

MinervaX is developing a maternal vaccine for the prevention of adverse pregnancy outcomes and life-threatening infections caused by Group B streptococcus (GBS). Originally incubated by Novo Seeds, MinervaX announced in 2021 that it had completed enrolment of 200 pregnant women in a Phase 2 study. In addition, MinervaX started dosing healthy adult women previously receiving the Company's GBS vaccine in a Phase 1 booster study and has received regulatory approval to initiate an additional Phase 2 study in 270 pregnant women.

Novo Holdings is proud to be a founding member of the AMR Action Fund having committed US$ 50 million.



Strengthening the **Nordic ecosystem**

One of our key goals is to leverage and nurture the untapped innovation in the Nordic region. As part of our strategy, we have invested in venture funds with strong roots in the Nordics, a region that year after year is ranked as one of the most innovative areas in Europe. In addition to making profitable fund investments, we look forward to working with our regional partners to catalyze more Nordic innovation into viable startups, and therefore add long-term value to our ecosystem.

As a cornerstone investor since 2020, Novo Seeds was pleased to see EIR Ventures close a EUR 122 million fund in 2021. The EIR Ventures I fund invests in early stage as well as more mature life sciences opportunities and has a particular focus on innovations from the leading universities and incubators in the Nordics where it has established collaborations with select Nordic Universities.

Within the bioindustrial area, we invested in Sofinnova Bioindustrial Fund II, which raised EUR 150 million this year. This follows the cornerstone investment we made in the first fund. Fund II will invest in companies leveraging biotechnology to develop sustainable solutions and is a testament to the growing understanding of how biotech can help to address global environmental challenges such as climate change, biodiversity, pollution, and food waste.

Training the next generation of **venture creators**

In the summer of 2021, Novo Seeds started a Venture Creator Fellowship, a 3-month internship focused on training talented young scientists in the process of venture creation and to help us build new companies. Two fellows – Petar Todorov and Suzanna Queckbörner – have worked with our team to landscape and scout novel scientific breakthroughs in non-viral delivery and Women's Health.



Left to right: João Ribas, Senior Associate and Venture Creator Fellows Suzanna Queckbörner and Petar Todorov.

People

In January 2022 **Simon Feldbæk Nielsen** joined BiOrigin, our Entrepreneurs-in-Residence team. Simon was previously Senior Director, Drug Design at LEO Pharma. Simon brings extensive drug discovery and project leader experience from Target ID to clinical PoC. Over the last 5 years, Simon has been a key driver in the transformation of LEO Research to providing first-in-class drugs, with particular emphasis on PROTACs and small molecule PPI modulators. The first success, a small molecule oral IL-17A PPI modulator, is currently in Phase 1 clinical testing.



About Novo Holdings A/S
Novo Holdings A/S is a private limited liability company wholly owned by the Novo Nordisk Foundation. It is the holding and investment company of the Novo Group, comprising Novo Nordisk A/S and Novozymes A/S, and is responsible for managing the Novo Nordisk Foundation's assets.

Novo Holdings is recognized as a leading international life science investor, with a focus on creating long-term value. As a life science investor, Novo Holdings provides seed and venture capital to development-stage companies and takes significant ownership positions in growth and well-established companies. Novo Holdings also manages a broad portfolio of diversified financial assets.

Further information: www.novoholdings.dk