
NOVO SEEDS

INVESTING IN
TOMORROW'S
BIOTECH
SUCCESS



Stimulating growth

Nourishing new ideas

Novo Seeds was launched in 2007 as a collaboration between the Novo Nordisk Foundation and Novo A/S. We run two programmes: a pre-seed programme of grants administered on behalf of the Novo Nordisk Foundation, and a seed programme that provides seed investment capital to early-stage life science projects and companies. Both programmes provide financial, managerial and strategic support to Scandinavian life science projects with commercial potential.

Our vision

Novo Seeds wishes to contribute significantly to the creation of a dynamic and successful early-stage biotech environment in Scandinavia. To fulfil this vision, we work closely with Scandinavian universities, awarding pre-seed grants to test the commercial potential of the most promising life science research at these institutions. We also invest in Scandinavian seed biotech companies that can potentially attract international venture capital and ultimately become commercially successful enterprises.

Helping seeds grow

During the first three years, Novo Seeds has evaluated more than 330 projects, granted pre-seed grants to nine projects and made seed investments in 11 Scandinavian life science start-up companies. In 2010, we awarded pre-seed grants to five projects:

- / Galacto, a research project from Lund University investigating the use of galectin 3 inhibitors for the treatment of cancer;
- / PregMalVac, a project from the University of Copenhagen looking for a new way to develop a malaria vaccine for pregnant women;
- / Prorec AB, a project based at the Karolinska Institute in Stockholm developing new therapy for pituitary-related disorders;
- / NovVac, a vaccine project from the Technical University of Denmark (DTU) seeking a new approach to the identification of optimal vaccine candidates; and
- / Nanovi, a project from the Technical University of Denmark (DTU) using nanotechnology to develop improved contrast agents and markers for radiotherapy.

During 2010, investments were made in four new companies – Orphazyme, Pcovery, C10 Pharma and Nanofence – as well as follow-on investments in several of our portfolio companies.

From pre-seed grants to seed financing

From 2009 to 2010, two of Novo Seeds' pre-seed projects developed successfully to a seed-financeable stage. Orphazyme and Pcovery were able to close their first seed-financing rounds with Novo Seeds as lead investor.

Such speedy development is obviously very encouraging. But it is not achieved by financing alone. Novo's pre-seed grants are accompanied by significant commercial support from the Novo Seeds team or our associated network of external consultants. Such support is crucial if pre-seed projects are to develop further and obtain seed equity financing.

Key results for seed portfolio companies

Many of our portfolio companies achieved significant milestones this year. Some secured additional financing from new external investors, and others demonstrated the feasibility of their pioneering concepts.

EpiTherapeutics raised more than DKK 23 million in extension of the seed round by investment from three new investors: LFI, the investment arm of the Lundbeck Foundation; OSI Ventures, the venture investment arm of the US-based biotech company, OSI (now Astellas); and Merck Serono Ventures. Orphazyme extended the seed-financing round with an investment from Sunstone Capital.

Two of our portfolio companies obtained non-dilutive research financing. Pcovery received a DKK 1.9 million grant from the Danish Council for Strategic Research¹⁾, and Epitherapeutics is leading a consortium that obtained a DKK 28 million grant from the Danish High Technology Foundation.

In 2010, Thrombologic became the first Novo Seeds portfolio company to initiate a clinical study, with testing carried out at the Copenhagen University Hospital, Rigshospitalet.

Finally, two of our portfolio companies completed in vivo proof-of-concept testing. Inagen demonstrated the potency and safety of its anti-CMV treatment, and Cytoguide completed proof-of-concept testing for its humanised mAb, targeting the CD163 receptor on macrophages.

1) Correction: Pcovery received a research grant from the Danish Council for Strategic Research, not Wellcome Trust as written in the printed edition.

Seed investments

ORPHAZYME

Orphazyme develops new therapeutic strategies for the treatment of lysosomal storage diseases.
www.orphazyme.com

NANOFERENCE

Nanofence focuses on oral and pulmonary delivery of RNAi drugs.
www.nanofence.com

cytoguide

Cytoguide develops combined drugs that target receptors on cells in pathological tissues. The combinatory drugs are used for the treatment of diseases where macrophages play a key role.
www.cytoguide.dk



Aros Pharma develops a new pharmaceutical product for relief of visceral pain. The company will initiate clinical studies in 2011.
www.arospharma.com

C10 PHARMA

C10 Pharma focuses on the development of new antibiotics to combat infections caused by Gram-positive and Gram-negative bacteria.
www.c10pharma.com



Pcovery develops anti-fungal therapies targeting a proton pump essential for fungal survival.
www.pcovery.com

EpiTherapeutics

EpiTherapeutics specialises in the development of innovative cancer drugs to regulate epigenetic mechanisms. The company's lead programme targets prostate cancer.
www.epitherapeutics.dk

THROMBOLOGIC

Thrombologic is developing a new therapy for the treatment of sepsis and multiple organ failure in critically ill patients. Their first clinical study was initiated in 2010.
www.thrombologic.com

INAGEN

Inagen develops new anti-viral treatments. The company's primary drug candidate targets Cytomegalovirus (CMV), a major problem for immunosuppressed patients.
www.inagen.com

Meet Orphazyme and Pcovery

ORPHA Z YME

Orphazyme is a spin-out from the Danish Cancer Society. In 2009, Professor Marja Jäättela and then PhD student, Thomas Kirkegaard discovered that the heat shock protein, Hsp70 can be used to normalise the lysosomes in cells of patients with lysosomal storage disorders. As a result of this groundbreaking discovery, Thomas Kirkegaard founded Orphazyme together with Anders Hinsby in June 2009.

To allow Orphazyme to investigate the full potential of Hsp70 – and begin in vivo testing – Novo Seeds awarded a pre-seed grant to the company in 2009. Only six months later, and based on positive data from the pre-seed grant, the commercial potential of Orphazyme was apparent. In February 2010, we closed our seed investment in Orphazyme.



Pcovery is a spin-out from Aarhus University. The company is based on the discoveries by the PUMPKIN centre, which was founded by Professor Jens Christian Skou, who received the Nobel Prize in 1997 for his pioneering work on ion channels.

Pcovery received a pre-seed grant in 2009 to study a proton pump (H⁺-ATPase) found in fungi. The aim of this project was to identify small molecule inhibitors in the pump and assess their potential as anti-fungal agents. Pcovery's pilot studies demonstrated that this ion channel was a relevant and drugable target, and these results allowed Pcovery to complete its first seed-financing round in the spring of 2010, with Novo Seeds and East Jutland Innovation as main investors. With the financing in place, Pcovery initiated a drug development process based on the results of their pilot studies.

In November 2010, the Danish Council for Strategic Research awarded Pcovery a grant worth DKK 1.9 million, securing financing for identifying new antifungal compounds. Pcovery is now a fully-fledged biotech company, well underway to develop new antifungal drugs.¹⁾

Pcovery and Orphazyme are good examples of the vital support our pre-seed programme provides to university projects with commercial potential.

1) Correction: Pcovery received a research grant from the Danish Council for Strategic Research, not Wellcome Trust as written in the printed edition.

Pre-seed grants

Cytoguide develops combined drugs that target receptors on cells in pathological tissues. The combinatory drugs are used for the treatment of diseases where macrophages play a key role.

The Galecto Galectin-3 Inhibitors for Chemotherapy project develops improved cancer treatment, using the Galectin-3 protein to increase the effectiveness of existing anti-cancer agents.

InVacc possesses a proprietary platform for enhancing the potency of DNA-vaccines. The InVacc technology delivers faster, stronger and more long-lived immune responses to acute and chronic infections.

Nanovi develops x-ray dense nanoparticles to directly mark tumours. With its NanoTrap™ technology, the company works to improve the precision of radiation delivery.

NovVac is refining its unique bioinformatics platform, VacFinder™, used to identify pathogen B-cell antigens with high immuno-protective potential.

Orphazyme develops new therapeutic strategies for the treatment of lysosomal storage diseases.

Pcovery focuses on structure-based drug development against membrane protein drug targets with a broad portfolio of innovative technologies, drug targets and chemical products.

The PregMalVac project works to develop a vaccine against pregnancy-associated malaria.

Prorec AB investigates a new cancer treatment that targets prolactinomas in the pituitary gland.

SeedSummit 2010

In November, Novo Seeds hosted its second SeedSummit event. More than 75 invited guests from European and US venture funds, pharmaceutical companies, corporate venture groups and other stakeholders met to discuss how emerging life science start-ups can thrive and attract capital in today's venture capital market.

Novo Seeds invited five speakers to share their insights. Jasper Bos from Merck Serono Ventures talked about the increasing importance of corporate venture funds, particularly for early-stage companies.

Martin Murphy, MVM Life Science Partners and Scott Minick, ARCH Ventures presented European and American perspectives on the future challenges and opportunities for start-up companies, and provided instructive examples from past and present biotech companies.

Peter Madsen and Kristian von Bengtsson from Copenhagen Suborbitals were the summit's last two speakers. Proving that the sky is definitely not the limit, Peter and Kristian are building their own manned rocket on a very limited budget based on funding from sponsors and volunteers. Talking the audience through the many challenges involved in their suborbital space endeavour, Peter and Kristian's presentation provided a very apt conclusion to the summit, demonstrating to us all what real entrepreneurs are made of.

'Investors appreciate outcomes that are flexible and not binary. Companies have to be clear about the demand for the product.'

Martin Murphy

MVM Life Science Partners

'Pharma must arrive early to the party to build early bridges. Anything that is novel, differentiated and end-user focused can generate interest.'

Jasper Bos

Merck Serono Ventures

'Get to value inflection milestones before the next round of fundraising. Investment capital exists, but you need to be the best of the best to attract it.'

Scott Minick

ARCH Ventures