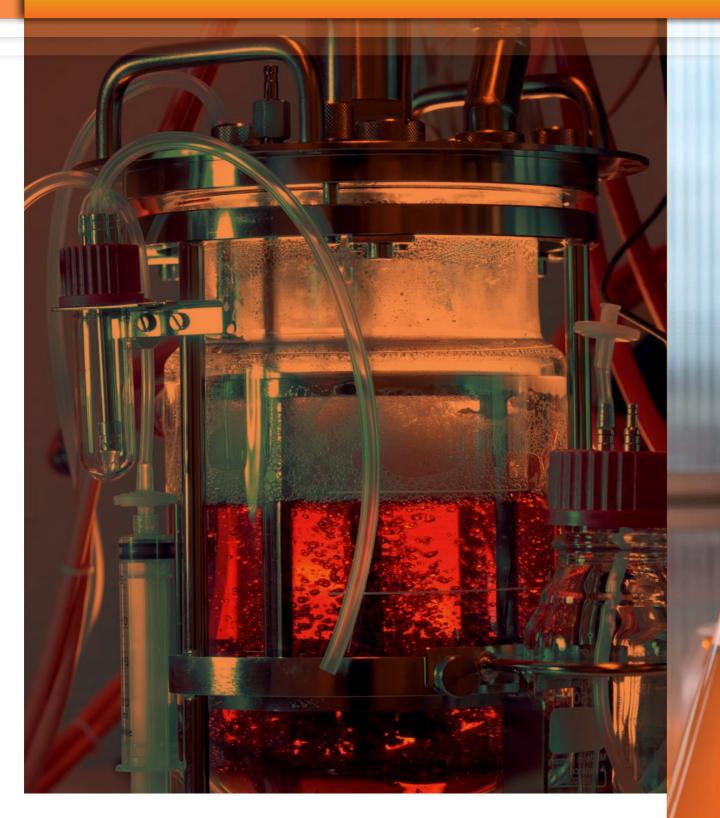
*M*ibiton ANNUAL REPORT 2011



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Accelerating business in the Life Sciences

ANNUAL REPORT 2011



MIBITON QUALITY CERTIFICATE 2011 AWARDED TO BERT TOURNOIS

*M*ibiton awarded Bert Tournois, CEO of TOP (Wageningen, NL) with the *M*ibiton Quality Certificate 2011. He used his outstanding entrepreneurial expertise to set up a highly integrated Life Sciences incubator with more than twenty companies. His 'Venture Catalyst' activities have a great impact on regional business development, ensuring that novel food processing innovations reach the market. Until now, he has been involved in two *M*ibiton-Share projects with a total value of one million euros.









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MORE WITH MIBITON!



In 2011, *M*ibiton further fortified the infrastructure of the Life Sciences regions in Wageningen, Groningen and Leiden. We made five investments representing a total value of 1.3 million euros. Besides investments within the context of our Share and Solo funds, we are very pleased with our first investment within **M**ibiton Science. This novel fund is specially designed to enable early spin-off companies to collaborate with research organizations and to create value by using state-of-the-art R&D facilities. With the Science fund *M*ibiton is returning to its original roots: stimulating entrepreneurship within universities.

Just before the end of the year *M*ibiton and other shareholders secured a very good deal with Merck, which gave a boost to BioConnection and their GMP biopharmaceutical production facility in the new Life Sciences Park in Oss.

Also in 2011, we asked the Rotterdam School of Management to perform a study into the socioeconomic impact of *M*ibiton in stimulating the Dutch Life Sciences Sector, Based on extensive research, which included interviews with all relevant stakeholders, the impact of more than 15 years of *M*ibiton can be summarized as follows:

- Every euro invested by *M*ibiton had an average financial multiplier of five;
- The flexibility and speed, which is typical for our investment process, reduced time-tomarket by about one year;
- In a significant number of cases, the *M*ibiton facility investment was essential for the company to come to fruition.

We are extremely pleased with these results, which clearly show that *M*ibiton plays a small but significant role in the Netherlands Life Sciences arena.

In 2012, *M*ibiton will continue its activities in collaboration with the relevant Top Sectors and with regional initiatives to facilitate more tailormade and dedicated investments.

Colja Laane (Chairman *M*ibiton Foundation)



FROM LEFT TO RIGHT Bert Tournois, Managing Director Top BV and ERWIN HOUTZAGER, FOUNDER & CEO PHYCOM BV

PHYCOM AND TOP:

*"M*IBITON GIVES **OUR BUSINESSES A** THREE-YEAR LEAD"

TOP and Phycom (Wageningen, NL) received financing for a food processing facility through the Mibiton Share fund. This financing gave the companies a head start in the development of new technology.

Phycom uses innovative technology to produce algae for food and pharma applications. The company has acquired a firm technology base integrating Pharma know-how into the Food sector. TOP is specialized in implementing nove processing technologies for the food industry. Last year Bert Tournois, the founder and CEO TOP BV, received the Mibiton Quality Certifica (See inside cover).

The *M*ibiton Share fund will enable both companies to exploit a novel food processing line consisting of a separation unit, an extraction unit and a drying unit. Erwin Houtzager, CEO of Phycom: "The processing line includes a very



innovative drying facility. This extraction process operates under mild process conditions and uses less energy than existing technologies. *M*ibiton enabled us to upscale our capacity; it will give Phycom a three-year lead. In addition to increasing our capacity, this facility enabled us to form partnerships with end users and to strengthen our competitive position."

TOP, in turn, uses part of the capacity for third party toll manufacturing, for example to extract intrinsic compounds from vegetables and fruits, and to valorize residual food wastes. The facility will also be used for the development and sale of new installations. *M*ibiton thus facilitates the introduction of a complete new drying technology in the production of algae.

This technology is developed by TOP, a company that forms a bridge between science and technology with the aim of bringing technology to the market. Innovations and inventions are central to our company (TOP started out as a coffee-machine company). However, we also know how to convert these ideas effectively into real life working technology and marketable products. A crucial part of our success is that we are a 'search' company rather than a 'research' company. "New knowledge and thus research is no longer the bottleneck for innovation. The Netherlands only contributes a few percent towards international knowledge: most of the knowledge is found outside the Netherlands! We search and find readily available knowledge worldwide," says Bert Tournois. The bottleneck in innovation nowadays is the availability of large pilot scale technology for the Proof-of-Concept of products close to entering the market.

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Erwin Houtzager, CEO of Phycom: "Mibiton understands what it is to be an entrepreneur and helps us to accelerate our plans."

Houtzager adds: "*M*ibiton understands what it is to be an entrepreneur and helps us to accelerate our plans. The fund fills a gap by financing Life Sciences facilities that are too risky for VCs. However, *M*ibiton ensures that the risk remains with the entrepreneur, and that is as it should be."



FROM UP TO LOW WILLEM VAN WEPEREN, CEO, AND PIETER GAILLARD, CSO, BOTH TO-BBB

"FUNDS LIKE MIBITON ARE ESSENTIAL"

The company to-BBB (Leiden, NL) was granted a Mibiton Solo investment in laboratory equipment to further unravel the mechanism of novel drugs crossing the blood-brain barrier. Life Sciences start-ups like to-BBB depend heavily on the availability of grants and loans.

To-BBB has developed 'targeted proprietary liposomal particles', which will enable specific medicines to enter the brain. This so-called G-Technology[®] safely enhances brain uptake. The company initiated a phase I/IIa clinical trial to treat brain metastases and glioma with its lead product 2B3-101. The second product, 2B3-201, is under development to combat neuroinflammation associated with several CNS indications.

The *M*ibiton facility includes a microscope and analytical liquid chromatography equipment. CEO Willem van Weperen: "The equipment greatly assists us in our R&D and will result in a further broadening of our product portfolio. So far, we

have acquired all the laboratory equipment by using our own resources. Even though a Series-B financing round has been closed there is still a need to explore other options to facilitate key investments that drive further development of our technologies."

> Willem van Weperen: "The Mibiton facility greatly assists us in our R&D and will result in a further broadening of our product portfolio."

The *M*ibiton Solo programme enables to-BBB to progress more quickly in the development of its products. To-BBB needs to generate high quality data by using superior quality equipment, because the pharma companies are showing a great interest in this technology. Therefore, participating in the Solo programme will also help to generate successful deals with pharma companies.

CSO Pieter Gaillard adds: "Funds and grants like *M*ibiton are extremely important for SMEs in the Life Sciences. It takes a long time to reach a proof-of-concept starting from a scientific idea, let alone to enter the market with an approved product. You need substantial financial support at every stage. We are very fortunate to have organizations like AgentschapNL and *M*ibiton in the Netherlands. They are specialized in Life Sciences as well as in business of Life Sciences. We therefore welcome the ongoing support of the Dutch Government for the Life Sciences. Without this it would have been impossible for us to become successful."

Van Weperen: "It is fantastic that the Life Sciences sector has now been appointed as one of the top sectors in het Netherlands. The SMEs in this sector are the direct result of the strong knowledge base in the Life Sciences. This provides the Netherlands with a solid base enabling easier access to international pharmaceutical markets."

"MIBITON ACCELERATES MUCOSIS'S VACCINE PRODUCTION"



GOVERT SCHOUTEN, CEO MUCOSIS BV

Mucosis received a Mibiton Solo investment to produce and analyse specific vaccine proteins. With Mibiton's help Mucosis was able to expand its production capacity and accelerate the development of its vaccine platform.

The mucosal surfaces of the respiratory, reproductive and digestive tract organs represent an enormous area that is quite vulnerable to infections. The mucosal membranes, however, have the potential to secrete antibodies to block or inactivate pathogens. Mucosis (Groningen, NL) develops mucosal vaccines based on its Mimopath[®] technology. These vaccines strongly induce antibodies both in the mucosal membranes and in the blood to prevent pathogens from entering the body, and to inactivate pathogens if they still succeed in penetrating the mucosal lining.

CEO Govert Schouten: "Mucosal immune responses can function as an important first line of defense. The most effective means of inducing a protective immune response is through mucosal immunization, i.e. orally or nasally. Despite this evidence, the vast majority of vaccines in use today are administered by injection, which does not result in an efficient production of antigenspecific antibodies in the mucosal membranes." Mucosis has developed its Mimopath[™] technology based on this principle. Mucosis is performing a first clinical study to vaccinate against flu. The company is also developing novel vaccines. These include novel Pneumococcal vaccines. RS viral vaccines and vaccines for the Shigella and ETEC bacteria.

Last year the company needed more capacity to manufacture vaccines and develop assays. This capacity is essential to produce the necessary vaccine material for the preclinical studies. The required investment was more than a quarter of a million euros. Govert Schouten: "Without *M*ibiton it would have taken a lot of time to attract this amount of money. We would have had less time to generate value and our competitors would have gained terrain. *M*ibiton acted very fast. This investment enabled us to increase our technological competences, broaden our IP position and effectively prepare outsourced large-scale GMP batches.

Govert Schouten: "The Mibiton facility will enable us to accelerate our development programme, thereby significantly shortening our time-to-market."

Schouten is pleased that Life Sciences and Health is one of the top sectors in the Dutch economic policy. "This is very important for the development of the sector. The new innovation credit line, in particular, works very well for SMEs like Mucosis."

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FROM LEFT TO RIGHT VICTOR SCHOLTEN, ASSISTANT PROFESSOR IN BUSINESS ADMINISTRATION OF DELFT UNIVERSITY OF TECHNOLOGY AND WIM HULSINK. Associate Professor of the Rotterdam School of MANAGEMENT, ERASMUS UNIVERSITY



"MIBITON SURPRISES" AS A BUSINESS ACCELERATOR"

Mibiton investments accelerate the development of the companies involved, with the time saved varying from six months to a year. This is a crucial period in the time-to-market race between Life Sciences companies. *M*ibiton helps companies to reassess their strategic position.

*M*ibiton is a vehicle that can be used to accelerate the development of SMEs in the Life Sciences. The investments from the Solo and Share Funds enable the companies to deliver products earlier and therefore gain a competitive advantage. This is the outcome of the survey 'Meer met *M*ibiton' (More with *M*ibiton) on the social and economic impact of the fund. Wim Hulsink (Erasmus University), one of the authors of the report: "We questioned many companies on the importance of their *M*ibiton investment and asked them 'what if *M*ibiton did not exist, what would have happened to you and your business? And what was the added value of the *M*ibiton

investment?" The study concluded that every euro invested by *M*ibiton had an average financial multiplier of five. The flexibility and speed typical for *M*ibiton's investment process reduced the time to market by about one year. Furthermore, in a significant number of cases, the *M*ibiton facility investment had a strong impact on the strategic positioning of the young Life Sciences company.

The accelerator function was a surprising result of our study. Most of the time the effects of investment funds are measured as a multiplier for new jobs. We found that companies greatly appreciate *M*ibiton's fast and flexible approach. It often gives them the opportunity to make strategic decisions, or even to change direction. Victor Scholten from the TU Delft, who was also involved in the realization of the report, adds: "*M*ibiton makes relatively small investments, but they are very important for start-up companies. This is because it enables them to accelerate the delivery of products to customers who might have been lost if production had been delayed due to a lack of capacity." Scholten: "Mibiton makes it easier for companies to survive in that early stage, when it's difficult to obtain funds for facilities. The companies have learned to live with the higher interest rates, and it gives them an extra drive to perform." The outcome of the report may influence the future direction of Mibiton. Over the years, the fund has developed a set of best practices in investing in Life Sciences companies. This experience might be very useful in other high tech sectors, such as nano technology and space technology. One of the recommendations of the study is to create 'sistermibitons' for these new sectors. Hulsink: "We also spoke with the trade organization for laboratory equipment and devices, FHI. *M*ibiton could play a new role in facilitating the co-creation of new instruments and apparatus. The Fund is like a matchmaker bringing different stakeholders together and takes on the role of a broker when markets or investors fail. *M*ibiton already works with trade organizations, but it might be worth investigating whether *M*ibiton should cooperate more closely with scientific organizations like the Royal Academy of Sciences and NWO."

The complete study 'Meer met *M*ibiton' (in Dutch) can be found on the *M*ibiton website. www.mibiton.nl.

*"M*IBITON ENABLES **US TO MAINTAIN** CONTROL"

A Mibiton Science facility helps the start-up company Waste2Chemical and Wageningen

University. The company is turning organic The process fulfils an urgent need for profitable waste into valuable bio-based chemicals, which technologies to convert organic waste streams. is a fine example of making the chemical "We have a very good alternative for the industry more sustainable. production of biogas, which is currently the only option. We produce precise molecular building "Thanks to *M*ibiton we are able to control the blocks for the chemical industry", says prof. development of Waste2Chemical ourselves. We Cees Buisman, Wageningen University. CCO will start producing valuable bio-based chemicals Niels van Stralen adds: "We believe our products from waste. Our chemicals are used in coatings. will be cost competitive, because we use organic plastizers and lubricants. We want to waste rather than expensive oil. Our fermentation demonstrate the feasibility of both our process process is very selective; it will produce welland our products", says Kirsten Steinbusch, CEO defined fatty acids and this is what the market is of Waste2Chemical. looking for."

This investment is *M*ibiton Science's first facility. *M*ibiton Science was introduced last year for facilities that are shared by a knowledge institute and a company.



LEFT KIRSTEN STEINBUSCH, FOUNDER AND CEO WASTE2CHEMICAL, FROM TOP TO BOTTOM CEES BUISMAN, PROFESSOR ENVIRONMENTAL TECHNOLOGY AND NIELS VAN STRALEN, FOUNDER WASTE2CHEMICAL

histry of Economic Affairs. Agriculture and Innovation



Waste2Chemical is a spin-off from the subdepartment of Environmental Technology of Wageningen University. It is developing a novel robust fermentation technology to convert high solid organic waste and residues into medium chain fatty acids. These acids can be used for the production of bio-based chemicals, representing a very large worldwide market potential. The products could play an important role in the drive to transform the chemical industry into a more sustainable bio-based industry.

Kirsten Steinbusch: "Mibiton has solved the chicken-or-egg problem. We are now able to produce small quantities of bio-based chemicals that can be tested by potential customers."

"With the Mibiton Science facility we will build a prototype mobile pilot installation to process up to one ton of organic waste per day. This will result in ten to twenty kilograms of product. We expect to start production in the summer of 2012. *M*ibiton has solved the chicken-or-egg problem. We are now able to produce small quantities of bio-based chemicals that can be tested by potential customers," says Kirsten Steinbusch, who discovered the technology during her PhD-study in Professor Buisman's Department.

Buisman adds: "Loans are a heavy burden for a start-up company. *M*ibiton offers a welcome alternative."

"MIBITON HELPS TO IMPROVE BRAIN SURGERY"

The young company Neurendo was granted a Mibiton Solo investment to produce the novel disposable Trocar system. This innovative system, developed in close collaboration with Professor Grotenhuis (UMC St. Radboud, Nijmegen, NL) and Dr. Hoving (UMC Groningen, NL), will enable surgeons to perform brain operations more safely and precisely.

The minimally invasive brain surgery equipment currently available is hand held, which can lead to unintentional movements during operations. In addition, the current tools are difficult to clean effectively, which significantly increases time-touse and operational costs. The Trocar system solves both problems: it can be fixed to the skull and it is disposable. This application increases sensitivity and reduces the risk of damage to brain tissue during surgery.

CEO Malcolm Begemann: "The Mibiton fund has accelerated the development of Neurendo; we can move more quickly onto the next stage, and it enables us to develop the market."

> "We have developed a first prototype and are currently planning large scale production ", says Malcolm Begemann, Managing Director of Neurendo. "Commercial banks were very wary of financing this activity. We are therefore very pleased that *M*ibiton has confidence in our business case, enabling us to continue our development programme using the Solo financing facility."

The Solo facility will be used to develop the high precision injection moulds that are needed to produce the various parts of the Trocar system. Thanks to *M*ibiton, Neurendo is able to start the production, which is expected in the course of 2012.

Begemann: "The fund has accelerated the development of Neurendo; we can move more quickly onto the next stage, and it enables us to develop the market. We anticipate a rapid market introduction with the help of a company with an international portfolio in medical devices. In the Benelux we might start with a dedicated expert in this field. We expect that within five years the Trocar system will be used in a substantial number of neurosurgery procedures."

He emphasizes the importance of funds like *M*ibiton: "Government grants tend to go to large established companies and knowledge institutes. We are very pleased with the opportunities that funds like *M*ibiton offer to small companies like Neurendo. The Dutch government's current tax reductions for R&D are important for large companies, but are not attractive to start-ups who are making no profit. We therefore welcome specific grants for small Life Sciences companies."



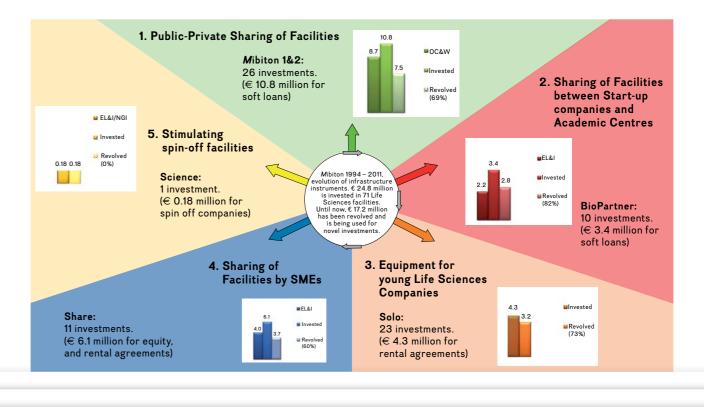
MIBITON, INVESTING IN INNOVATIVE DUTCH LIFE SCIENCES FACILITIES

Regional distribution of the 71 *M*ibiton investments in the Netherlands representing a total investment of € 24.8 million. For each region, the investments are specified in medical - (red), agro and food related - (green) and industrial (white) Life Sciences facilities.

71 Mibiton facilities in the Netherlands

The *M*ibiton foundation (Material Infrastructure Biotechnology Netherlands) was founded in 1994 to stimulate the use of innovative equipment and facilities in the field of the Life Sciences. Seventy one facilities were founded in The Netherlands between 1994 and 2011. The total investment is \in 24.8 million, of which \in 17.2 million has been refunded. Various programmes were created to meet market requirements. These programmes focus on the stimulation of public-private collaborations (*M*ibiton), the foundation of spin-outs from research organizations (BioPartner) and the development of young companies (Solo programme).

The *M*ibiton Share fund, focusing on Life Sciences development- and production facilities for SMEs, has been operational since 2005. Investments are structured as user arrangements. The *M*ibiton Science Fund (2010) focuses on investing in young spin-off





- companies, which share the equipment with the Research Organisation.
- The *M*ibiton organization consists of the Investment Team, a Network Office Director and the 5-membered Board with representatives from the scientific, industrial and financial community. The Ministry of Economic Affairs, Agriculture and Innovation has been co-financing *M*ibiton since 2000.

HALBE ZIJLSTRA, STATE SECRETARY OF EDUCATION, CULTURE AND SCIENCE

MIBITON: A CLASSIC **EXAMPLE OF A REVOLVING FUND**"



Mibiton is a classic example of a revolving fund. It was one of the first knowledge projects to benefit from the 'FES funds'. At that time, in the first 'ICES/ KIS' round with a modest budget of 250 million guilders, there were no complex decision-making procedures. Instead, the Department's civil servants continued their meetings, breaks included, until there was 'white smoke' and they could choose the first knowledge projects with a plus or a minus sign.

The idea behind *M*ibiton was way ahead of its time. It had to do with 'entrepreneurial professors' who set up the necessary spin-off and spin-outs in

cooperation with interested companies. The professors obtained the funds for facilities from the government, and the companies in the consortia were committed to a certain share in financing the facility. Then, when there was a profit, part of the money streamed back to Mibiton. A revolving fund is a solid type of construction, demonstrated by the fact that the money is still coming in over one and a half decennium later.

At the time this new phenomenon was viewed rather critically. Where the civil servants involved gave this project the benefit of the doubt, Senter (an early predecessor of AgentschapNL) was seldom positive. *M*ibiton narrowly escaped extinction on more than one occasion."

*M*ibiton managed to continue and succeed, sometimes in spite of the opposition. The organization is now alive and kicking as is demonstrated by its programmes: Solo, Share and Science. *M*ibiton is irreplaceable as a partner in the Life Sciences sector. It is a textbook example of a revolving fund."

MIBITON INVESTMENTS FROM 2005 - 2011

MIBITON SCIENCE PROGRAMME

Facility	Pilot facility to valorise o
Investment	€ 184,000
Project leaders	Mw. ir. K.J.J. Steinbusch
Company	Waste2Chemical
Partners	Wageningen UR Environm

Waste2Chemical (2010), a spinoff from the department of Environmental Technology of Wageningen UR, is developing a novel robust fermentation technology to convert organic waste and residues into Medium Chain Fatty Acids. These fatty acids can be used for the production of biobased chemicals and other products, representing a very large worldwide market potential. The Science investment enables the Department of Environmental Technology and Waste2Chemical to up-scale the innovative fermentation technology.

MIBITON SHARE PROGRAMME

Facility
Investment
Project leader
Company
Partners

Isolation, extraction and drying of food € 450.000 E. Houtzager PhD Phycom TOP

Phycom (2009) is developing innovative technologies to produce and process algae for food and pharma applications. The company has acquired a firm technology basis, by integrating Pharma know how into the Food sector. TOP BV (2006) is specialized in implementing novel processing technologies for the food industry. TOP's customers include SMEs in the field of process engineering and food processing. By using the Share fund, both companies will exploit a novel food processing line consisting of a separation unit, an extraction unit and a drying unit.

NETTIE BUITELAAR, CEO LEIDEN **BIO SCIENCE PARK FOUNDATION**

"MIBITON IS HERE TO STAY!"

"For the past fifteen years, *M*ibiton has played an increasingly important role in the support of life science companies. Time to market is the key to success in the world of drug development, and in a recent report on the impact of *M*ibiton (See page 8), *M*ibiton clients indicated that the average time gained by using *M*ibiton financing is about ten months, almost a year! *M*ibiton's enthusiastic approach to finding tailor-made solutions for each individual client is one of the key factors of its success. For the companies at the Leiden Bio Science Park, *M*ibiton has always been one of the financing sources of choice. And this choice has proved successful in the form of the '*M*ibiton Quality Certificate', which was awarded to the Leiden Bio Science Park in 2009.

For these reasons, it is important that *M*ibiton remains one of the essential players in the Life Science & Health sector in the Netherlands."



"SUCCESSFUL SMES ARE ADEPT AT MANAGING THEIR OWN BUSINESSES AND ASSESSING THE RISKS OF INVESTMENT"



organic waste to biochemicals

PhD. N. van Stralen MSc

mental Technology (Prof. C.J.N. Buisman PhD)

BERT TOURNOIS, MANAGING DIRECTOR TDI TOURNOIS DYNAMIC INNOVATIONS BV

"SMEs should not be involved in the public private partnerships (PPPs) currently being promoted by the Dutch government. PPPs result in considerable amounts of money being invested in the generation of knowledge that might not be useful for application. I am in favour of private-private cooperation aimed at bringing new processes and products to the market. Universities are inclined to diverge. I prefer to converge.'

Facility	ty Diagnostic fingerprinting for Acute Myeloid Leukemia	
Investment	€ 404.107	
Project leader	H.E. Viëtor PhD	
Company	Skyline Diagnostics	
Partners	Erasmus MC (Prof. B. Löwenberg PhD), Sanquin (R. Baumgarten PhD)	

Skyline Diagnostics with its headquarters in Rotterdam, the Netherlands, develops and markets arraybased diagnostic tests using gene signatures for personalized medicine. The company has successfully translated several important scientific discoveries into diagnostics. These products, called Profilers, are based on gene expression and offer a great additional clinical value. The Share investment enables the partners to acquire 5 microarray analyzer systems to support a large multi-site trial aimed at registering the AMLprofiler diagnostic device for patients with Acute Myeloid Leukemia. The VALID trial, involving 6 renowned sites in Europe and the USA, is expected to result in a full Pre-Market Approval by the American Food and Drug Administration towards the end of 2011.

Facility	Manufacturing and analyses platform for synthetic peptides in the Leiden Bio Science Park
Investment	€ 600,000
Project leader	R.H. Holslag MSc
Company	Prosensa Therapeutics
Partner	ISA Therapeutics (G. Platenburg MSc)

The Shared Life Sciences facility comprises a state-of-the art peptide synthesis unit, as well as purification and analysis equipment. The peptide synthesis facility will be installed on the premises of the Leiden BioPartner Centre. ISA Pharmaceutics is an innovative clinical stage company focusing on the development of immunotherapeutics. The peptide synthesis facility will enable ISA to develop in-house synthesizing capabilities enabling the physical, chemical and biological characterization of preclinical drug leads. The primary purpose of Prosensa Therapeutics is to use the peptide synthesizing facility to increase the screening capability for conjugates of oligonucleotides and synthetic peptides. This facility will pave the way for novel RNA modulating therapeutics in unmet medical needs, like Myotonic Dystrophy and Huntington's disease".

Facility	Oligonucleotide based drug manufacturing and analysis in a GMP-certified environment - Manufacturing equipment and investments for facility adaptation
Investment	€ 1,297,090
Project leader	R.H. Holslag MSc
Company	Prosensa Therapeutics
Partner	PROXY Laboratories (R.E. Santing PhD)

Prosensa and PROXY Laboratories, both located at the Life Sciences Business Park in Leiden, further strengthened their collaboration by investing in a certified analytical and preclinical production facility. The core of the analytical facility at PROXY Laboratories comprises a TQD Mass Spectrometer and a Q-TOF Mass Spectrometer. When coupled to UPLC systems, these MS configurations can be used for the very sensitive analysis of biological molecules (e.g. oligonucleotides, peptides, oligosaccharides) and subsequent impurities. The core of the manufacturing facility at Prosensa Therapeutics consists of an Oligonucleotide Synthesizing Unit and a Mass Spectrometer. This manufacturing facility with on-line analytical capabilities will enable Prosensa to produce and analyze preclinical batches of NCEs efficiently.

Facility	HPP equipment WAVE 6000/55
Investment	€ 481,500
Project leader	H. Tournois PhD
Company	ТОР
Partner	Juicy-Line (M. Bruijn)

Next Generation DNA sequencer Investment € 398.421 Project leader B.J. Reichert MSc Company BaseClear ZF-screens (Prof. H.P. Spaink PhD)

Facility Investment Project leader

Facility

Partner

Facility

Investment

Company

Partner

Project leader

Shareholders

Biqualys € 125.000 J. van der Leijé MSc and C. van der Plasse a.i. Wageningen Business Generator, Biox BioSciences, mibiton

Oligonucleotide based on drug development using LC-MS in a GLP certified environment € 204.974 G. Platenburg PhD and R.H. Holslag MSc **Prosensa Technologies** PROXY Laboratories (R.E. Santing PhD)

Facility Investment Project leader Company Partner

Facility BioConnection Investment €2.000.000 A. Willemse PhD Project leader Shareholders

€ 84,998

J. Bender MSc, PharmD

Bactimm / Farmalyse

ALEXANDER WILLEMSE, CEO BIOCONNECTION MIBITON AND BIOCONNECTION: SHARING **KNOWLEDGE TO MAKE A DIFFERENCE**



"BioConnection shares knowledge and facilities to assist global innovative (biotech) pharma companies trying to bring their inventions from the lab to the clinic or to the market. With our unique concept of multiplying the strengths of our partners, we can offer a full and tailor-made range of development and manufacturing capabilities. The *M*ibiton investment in BioConnection came at a crucial moment. It worked as a catalyst.

From 2012 BioConnection is located at the Life Science Park Oss where we will continue to expand our services by using the unique (former MSD) environment including the GMP Kilolab facilities for our customers.

Let's make a (Bio)Connection."

UPLC high throughput HPLC

FeyeCon (G.F. Woerlee PhD)

MSD, Brabant Development Company, Mibiton



MIBITON SOLO PROGRAMME

Facility	Facility to produce and analyse vaccine proteins
Investment	€ 292,000
Project leader	C.J. Leenhouts PhD, G.J. Schouten PhD
Company	Mucosis

Mucosis (2006) is a clinical stage Dutch biotechnology company developing innovative mucosal vaccines that can be applied needle-free via the nose or mouth. The company is a spinoff from Groningen University and has developed a novel vaccine technology called Mimopath[™]. This platform is based on bacterial particles derived from the GRAS lactic ferment Lactococcus lactis, which apparently effectively stimulate the innate immune system. Mucosis is currently performing a first clinical study to vaccinate for flu. The company is also currently developing novel vaccines, which include bacterial particles linked to specific antigenic protein segments. The Solo investment involves fermentation facilities to produce the latter vaccine proteins.

Facility	Development of a novel disposable Trocar system to perform brain surgery
Investment	€ 175,000
Project leader	Malcolm Begemann MSc
Company	Neurendo

Neurendo (2008) produces a novel disposable Trocar system. The innovative system, invented by prof. Grotenhuis (UMC St. Radboud) and dr. Hoving (UMC Groningen), will enable future surgeons to perform brain operations more precisely and more safely. The Solo investments includes the moulds used to produce the novel disposable Trocar system

Facility	Microscopic- and analytical facility to unravel the blood-brain barrier mechanism
Investment	€ 111,183
Project leader	W. van Weperen MSc MBA
Company	to-BBB

To-BBB is a clinical stage biotechnology company focusing on enhanced drug delivery across the blood-brain barrier. In normal conditions, the bio-availability of medicines in the human brain is restricted due to the so-called Blood-Brain Barrier. This barrier consists of a protective layer of endothelial cells preventing foreign compounds from entering this sensitive part of the brain. To-BBB has developed targeted proprietary liposomal particles. This so-called G-technology™ safely enhances brain uptake, and the company recently initiated a phase I/IIa clinical trial to treat brain metastases and glioma with its lead product 2B3-101. The Solo investment involves microscopic- and analytics equipment to study the molecular uptake mechanisms in detail enabling the company to extend its proprietary knowledge portfolio.

Facility	Production Facility
Investment	€ 248,150
Project leader	ir. P.B. Hol
Company	Delphi Bioscience

Facility Investment Project leader Company

€ 346.000 G.F. Woerlee PhD FeyeCon, CleanAlgae SA / Algae Biotech SA

FeyeCon specializes in developing and manufacturing new, improved and more cost effective products and processes using carbon dioxide technology. Carbon dioxide is used to extract natural food compounds from microalgae, such as omega-3 fatty acids. The subsidiary company CleanAlgae SL specialises in growing and marketing micro-algae. The Mibiton investment involves extraction and purification facilities enabling the isolation of high value compounds from algae species. This investment enables Clean Algae to scale up the innovative algae production platform.

Facility	FlexArrayer lease to acc	
Investment	€ 204,957	
Project leader	F. Dom MSc	
Company	FlexGen	

FlexGen was founded in 2004 as a spin off from Dutch Space and the LUMC. FlexGen commercializes the FlexArrayer, a bench-top instrument for custom microarray and oligopool synthesis. *M*ibiton finances several FlexArrayers, which are currently validated at several international Genomics Centers for specific applications. The Flexarrayer offers researchers great flexibility in designing and producing customized oligopools to perform targeted genomic research.

Facility	Lab. Facility
Investment	€ 161,799
Project leader	Mrs. R. Lamers PhD, Mrs
Company	NSure
Facility	3D Fibre deposition equ

Investment Project leader Company

€ 48.096 J. Riesle PhD CellCoTec

CellCoTec (2004) develops a novel cell therapy that can be applied to cure knee fractures using autologous cell transplants. During a single surgery a mixture of cells is applied using a tailor-made scaffold. The technology has been tested at a preclinical stage and the company is now executing a first clinical trial. Three-dimensional fibre deposition equipment has been purchased, enabling the c-GMP production of scaffolds, which are optimised for the knee morphology of the patients.

Feeding the Future, Facilities for high end products from algae

celerate global expansion

rs. M. Wordragen. PhD

uipment

Facility Application for an Octet biosensor Investment € 97.614 Project leader T. Logtenberg PhD Merus Biopharmaceuticals Company

Using its proprietary technology platforms, which include novel transgenic mice (MeMo[™]), Merus aims to produce new highly potent human antibody-based drugs, either as full-length bispecific antibodies or as Oligoclonics[™], which are mixtures of therapeutic human monoclonal antibodies produced by a single cell. To support the development programme, a high-throughput and highly sensitive Biosensor system has been purchased. This system enables Merus Biopharmaceuticals to efficiently test and select novel therapeutic lead compounds.

Facility	SKIN Analyzer
Investment	€ 400,000
Project leaders	G.J. Puppels PhD, M.P. Dijkshoorn MSc
Company	River Diagnostics

River Diagnostics is developing novel Raman-based equipment that can be used to determine the quality of cosmetic and dermatological products. The company has set up a so-called Technology Adaptation Programme to facilitate collaborations with Contract Research Organisations (CROs). These CROs will now be able to offer the RiverD technology to small-scale end users. Additional applications of the non-destructive River D technology include the quick identification of microorganisms in hospitals and medical centres.

Facility	Personalizing Cancer diagnosis
Investment	€ 168,300
Project leader	H.E. Viëtor PhD
Company	Skyline Diagnostics

Facility Investment Project leaders Company

Octet en AKTA explorer € 149,183 A. van Brakel, L.N. Sierkstra PhD BAC

Facility Investment Project leader Company

Facility

Investment Project leaders

Company

Facility

Expansion of PROXY Laboratories' analytical equipment € 90.488 R.E. Santing PhD PROXY Laboratories

AKTA Process

€ 170,000 A. van Brakel, L.N. Sierkstra PhD BAC

Gen Expression Profiling for Molecular Diagnostics of Leukaemia and other Malignancies € 165,194 Investment H.E. Viëtor PhD, Prof. B. Löwenberg PhD Project leaders Company **Skyline Diagnostics**

MIBITON INVESTMENTS FROM 2000-2004

MIBITON (+) PROGRAMME

Facility	Advanced Ferme
Investment	€ 318,235
Project leader	Prof. J.G. Kuene
Partners	Micromass, ano

Facility

€ 228.251 Project leaders (Wageningen University)

€ 713,314

Biacore 3000

Facility Investment Project leader Partners

Investment

Partners

Facility Investment Project leader Partners

Proteomics Nijmegen € 844.000

Proteomics Groningen



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entation Facilities (Phase 2)

en PhD (Delft University of Technology) onymous company

P.J. Schaap PhD, M.C.R. Franssen PhD, Prof. J.A. van den Berg PhD

Danisco Ingredients, DSM Food Specialties

Prof. R.J. Vonk PhD (University of Groningen) Danone, Merck, Agilent, IQ Corporation, Pharma Key, Biacore, Simac

Prof. R.A. Wevers PhD (Radboud University Nijmegen) Amersham Biosciences, KGCN, Multigen, Tecan, Thermo Elektron, Yamanouchi

JOEP PLUYMEN, CHAIRMAN MSD-ORGANON

MIBITON PLAYS A KEY **ROLE IN FACILITATING INNOVATION AND** GROWTH IN THE DUTCH LIFE SCIENCES SECTOR

"As a long-standing *M*ibiton partner, MSD-Organon is very pleased with the opportunity to contribute to this important mission."

MIBITON SOLO PROGRAMME

BIOPARTNER FACILITIES SUPPORT PROGRAMME

Facility	Production pipeline for natural compounds	Facility	HPLC Alliance system in a G
Investment	€ 616,317	Investment	€ 46,229
Project leader	Prof. R. Verpoorte PhD (Leiden University)	Project leader	R.E. Santing PhD
Partners	Enzyscreen, Feyecon, Xenobiosis and Farmalyse	Company	PROXY laboratories
Facility	High throughput capillair system, micro-organisms	Facility	Salmonella Serovar-Array
Investment	€ 150,000	Investment	€ 94,900
Project leader	Prof. J.D. van Elsas PhD (University of Groningen)	Project leader	J. Thijssen MSc
Partners	Ingeny, BioClear	Company	Check-Points
Facility	High throughput capillair system, human disease genes	Facility	Dedicated Raman Instrumer
Investment	€ 150,000	Investment	€ 110,000
Project leader	Prof. C.H.C.M. Buys PhD (Academic Medical Centre Groningen)	Project leaders	W.M. Riggs, G.J. Puppels F
Partners	Ingeny, Synvolux	Company	River Diagnostics
Facility	CombiChem Synthesis	Facility	DNA Multiplex Platform
Investment	€ 301,435	Investment	€ 140,295
Project leader	Prof. F.P.J.T. Rutjes PhD (Radboud University Nijmegen)	Project leader	G. Simons PhD
Partners	Chiralix, DSM Geleen	Company	PathoFinder
Facility	Seldi Proteomics	Facility	Laboratory equipment
Investment	€ 879,431	Investment	€ 120,259
Project leaders	C.G. de Koster, Prof. J.M.F.G. Aerts PhD, D. Zonneveld BSc (AMC Amsterdam)	Project leader	A.D. de Boer PhD
Partners	MacroZyme, Primagen, Genzyme	Company	Genetwister Technologies
Facility	Test facility for marine invertebrates	Facility	PCR and sequencing equipn
Investment	€ 173,557	Investment	€ 262,710
Project leader	Prof. R.H. Wijffels PhD (Wageningen University)	Project leader	A.D. de Boer PhD
Partners	EcoDeco, Diergaarde Blijdorp, S::can	Company	Genetwister Technologies
Facility	Multiple Imaging Plant Stress	Facility	ZQ2000
Investment	€ 181,517	Investment	€ 150,000
Project leaders	A.J. Koops PhD, W.J.M.R. Jordi PhD (Plant Research International)	Project leader	P.C. van Dijken PhD
Partners	Plant Dynamics, Growlab, Syngenta Mogen	Company	Pepscan Systems
Facility	Molecular Device FLEX Station	Facility	Multiple Peptides Synthesiz
Investment	€ 235,249	Investment	€ 324,452
Project leader	J.A.G. van Strijp PhD (University Medical Center Utrecht).	Project leader	P.C. van Dijken PhD
Partners	Pepscan Systems, JARI Pharmaceuticals, Sopachem NV	Company	Pepscan Systems
Facility Investment Project leaders Partners	Membrane Protein Laboratory € 483,323 Prof. A.P. IJzerman PhD, Mrs. M.W. Beukers PhD (Leiden University) APBiotech, Applikon, Beckman Coulter, Perkin-Elmer, Screentec (Kiadis)		
Facility Investment Project leaders Partners	Elisa robot € 191,373 Prof. J. Brouwer PhD, Prof. H.A. de Boer PhD (Leiden University) MucoVax, Biocult, Pharming Transgenic Technology		

a GLP setting

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ipment

gies (Expressive Research)

sizer

€ 928,451

Facility

Investment Project leader

Partners

MIBITON INVESTMENTS FROM 1994 - 1999

MIBITON INVESTMENTS 1994 - 1999

MIDITON INVES	IMEN 13 1994 - 1999		Filtrations
Facility	PK-3 Greenhouses		
Investment	€ 760,964	Facility	Advanced Fermentation Faci
Project leader	Th.P. Straathof PhD (Unifarm)	Investment	€ 820,629
Partners	Dutch Agro Industry (11 companies)	Project leader	Prof. J.G. Kuenen PhD (Delf
		Partners	DSM (G-B), Applikon, S&G S
Facility	PK-3 Facility		
Investment	€ 93,025	Facility	Molecular laboratory for HIV
Project leader	A.R. Stuitje (VU Amsterdam)	Investment	€ 952,938
Partners	Rijk Zwaan, S&G Seeds	Project leader	J.M. Eekel (AMC Amsterdar
		Partners	ASD, Bristol Myers Squibb,
Facility	Laboratory for carbohydrate analyses		company
Investment	€ 283,434		
Project leader	Prof. R.G.F. Visser PhD (Wageningen University)	Facility	CAVE Biotechnology Centre
Partners	Avebe B.A., Mettler Toledo	Investment	€ 181,512
		Project leader	A. Berg PhD (SARA)
Facility	Analyses plant material	Partners	Silicon Graphics, Unilever F
Investment	€ 156,917		
Project leaders	A.A.J.M. Franken PhD, B. Vosman (Plant Research International)	Facility	Electronic Nose
Partners	Ansynth Service, BMTC, Pharmacia, Registerbureau Lelieweefselkweek	Investment	€ 151,597
		Project leaders	J. Roozen PhD, M. Bucking
Facility	X-ray Structure Analyses Centre	Partners	Bromyc, Coberco Isoco, Ca
Investment	€ 461,214		
Project leader	R. de Vos (University of Groningen)	Facility	High Throughput Screening (
Partners	Unilever Research, N.V. Organon, DSM Central laboratory	Investment	€ 470,865
		Project leaders	G.J.W. Euverink PhD, Prof.
Facility	Laboratory for Plant Biotechnology	Partners	Hercules, DSM Research
Investment	€ 215,562		
Project leader	Prof. J.C.M. Smeekens PhD (Utrecht University)	Facility	MALDI-TOF-MS
Partners	VanderHave Research, MOGEN International, Cooperation SuikerUnie	Investment	€ 172,436
		Project leader	G. Beldman PhD (Wagening
Facility	Microscopy Centre	Partners	B&L Systems, Campina, He
Investment	€ 202,495		Zaden, anonymous company
Project leaders	Prof. A.J.W.G. Visser PhD (Wageningen University), Prof. H.J.Tanke PhD (Leiden		
	University)	Facility	Physiology laboratory
Partners	Unilever Research Lab, Quest International, AKZO Nobel, Kreatech, Beun de	Investment	€ 114,477
	Ronde, ISS, Carl Zeiss	Project leaders	A.J. Koops PhD, W.J.R.M. J
		Partners	Nunhems, VanderHave Res
Facility	DNA-robots		
Investment	€ 145,210	Facility	Detection laboratory
Project leader	R.D. Hall PhD (Plant Research International)	Investment	€ 489,648
Partners	Avebe, Unilever Research Lab, Westburg	Project leader	A.D. de Boer PhD (Genetwi
		Partners	Beckman, B&L Systems, En
Facility	Lab. for Animal genome analysis		Pharmacia, Wallac EG&G, V
Investment	€ 277,479		
Project leader	J.A.M. van Arendonk PhD (Wageningen University)		
Partners	Euribrid Inc., Holland Genetics V.O.F.		

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Characterization biopolymers

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G. Eggink PhD (Agrotechnology and Food Innovations)
Campina, Coberco, CSM Suiker, Friesland Frico Domo, DSM (G-B), Nutreco,
Applikon, Hercules, S&G Seeds, Solvay Duphar, Quest International, LHS Micro-
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Fermentation Facilities (phase 1)

Kuenen PhD (Delft University of Technology) Applikon, S&G Seeds, Hewlett Packet, anonymous company

aboratory for HIV analysis

(AMC Amsterdam) tol Myers Squibb, Glaxo Wellcome, Igen, Merck, Organon, anonymous

echnology Centre

aphics, Unilever Research Lab

PhD, M. Bucking PhD (Agrotechnology and Food Innovations) oberco Isoco, Cacao De Zaan, Hitma

ghput Screening Centre

verink PhD, Prof. L. Dijkhuizen PhD (University of Groningen)

n PhD (Wageningen University) ems, Campina, Hercules, Isogen Biosciences, Nedalco, Nunhems onymous company

PhD, W.J.R.M. Jordi PhD (Plant Research International) VanderHave Research, MOGEN International

per PhD (Genetwister Technologies) B&L Systems, Enthoven Breeding, Enza Zaden, Humako Holding, , Wallac EG&G, Westburg

PPM Oost

TechnoPartner

Thuja Capital

VenGen BV

COMPANY

Beagle

RUG Houdstermaatschappij BV Technofonds Flevoland BV

Technostartersfonds Zuid NL BV

Biomed Cluster Amsterdam

BioPartner Center Amsterdam

BioPartner Center Maastricht

BioPartner Center Wageningen

BioPartner Holding Maastricht BV

Leiden University Medical Center

UU en UMC Utrecht Holding BV

NGI (Netherlands Genomics Initiative)

Technology Transfer Office - AMC Amsterdam

Zernike Group B.V./ BioPartner Start-up Ventures

Technology Transfer Office - Erasmus MC

Biotech Center Groningen Stichting Triade

CTMM (Center for Translational Molecular Medicin)

BMM (BioMedical Materials program)

BioMedical Materials Program (BMM)

BioMedbooster / UM-zaM

BioPartner Center Leiden

Han BioCentre

Immuno Valley

TI Pharma

Radboud Universiteit

TTI Groene Genetica

Facility Investment	Central GMP & GLP facility € 722.914	SHORTLIST LS INVESTOR
Project leaders	Prof. J.A. Schalken PhD, Ir. J. de Koning (Radboud University Nijmegen)	
Partners	Beckman, Bioprocon, BioRad, Eurodiagnostics, Future Diagnostics, IKS,	COMPANY
	Intertrial, Perkin Elmer, Yamanouchi	AGLAIA BioMedical Ventures B.V.
		Agro&Co Kapitaalfonds B.V.
Facility	Genotyping Company	BioGeneration Ventures
Investment	€ 494,711	BOM
Project leader	G. van der Steege PhD (University of Groningen)	Forbion Capital Partners
Partners	Pharma Bioresearch, Amersham Pharmacia, Solvay Duphar	Gilde Healthcare Partners B.V.
		ICOS capital management BV
Facility	Cytokine laboratory	Kennis Conversie Fonds
Investment	€ 279,342	Life Sciences Partner
Project leader	Prof. H. Schellekens PhD (Utrecht University)	Limburg Ventures BV en DSM Venturing
Partners	Biosource, BPRC, Innogenetics, Medarex, U-CyTech	
		MedSciences Capital
Facility	1500 litre G51 Bioreactor	Noord Tech Venture
Investment	€ 293,823	NV Industriebank LIOF
Project leader	G. Eggink PhD (Agrotechnology and Food Innovations)	NV NOM
Partners	CSK Food Enrichment, Fuji Photo Film, Hercules, Numico Research, Applikon	Nederlandse Vereniging Participatiemaatschappijen NVP
	Dependable Instruments	Oost NV

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VESTORS IN THE NETHERLANDS

WEBSITE

www.aglaia-biomedical.com www.agro-co.brabant.nl www.biogenerationventures.com www.bom.nl www.forbion.com www.gildehealthcare.nl www.icoscapital.com www.holding.rug.nl/kennisconversie www.lspvc.com www.limburgventures.com www.dsm-venturing.com www.medsciencescapital.com www.holding.rug.nl/northtech www.liof.nl www.nom.nl www.nvp.nl www.oostnv.nl www.ppmoost.nl www.holding.rug.nl www.mkbfondsen-flevoland.nl www.technopartner.nl www.thujacapital.com www.vengen.nl www.technostars.nl

SHORTLIST NETWORK RELATIONS

WEBSITE

www.pcsdc.com www.amsterdambiomed.nl www.biomedbooster.com www.bmm-program.nl www.asp.nl www.biopartnerleiden.nl www.bpcm.nl www.biowageningen.nl www.unimaas.nl www.triade.umcg.nl www.bmm-program.nl www.ctmm.nl www.hanbiocentre.nl www.immunovalley.nl www.lumc.nl www.genomics.nl www.ru.nl www.tto.vu.nl www.erasmusmc.nl/tto www.tipharma.com www.groenegenetica.nl www.utrechtholdings.nl www.zernikegroup.com

THE MIBITON FOUNDATION

MATERIAL INFRASTRUCTURE BIOTECHNOLOGY NETHERLANDS

The *M*ibiton Foundation stimulates entrepreneurship and public-private partnerships by investing in Life Sciences facilities.

Office Management Mrs. Vera Blom

Investment Team Kees Recourt PhD (Recourt Life Sciences) Edward van Wezel MSc (BioGeneration Ventures)

Communication Management Rob Hanzon

Board

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COLOPHON

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Colja Laane, chairman, hands over the annual report 2010 to Robert Strijk, Alderman Attainableness, Finance and Economy of the local authority Leiden on 2010 in Corpus Leiden