




Stockholm
The Capital of Scandinavia

Stockholm Uppsala Life Science Investment Hotlist

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Stockholm
Business Region
Development

Eight of Europe's 100 hottest technology companies are from the Stockholm region. We can help you find the next rising stars.



Stockholm Business Region Development

Official inward investment agency of Stockholm region. Fully owned by the City of Stockholm. Formed a co operation with 50 municipalities in the Stockholm region. www.investstockholm.com.

Companies

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Challenge

- Pathogens such as HIV, malaria and TB are too clever and complex for normal “simple” vaccines
- Vaccines need to be more sophisticated

Our solution

- Abera has developed a universal platform to generate a strong, diverse and long-lasting response to “difficult” pathogens
- Vaccine candidates against TB, influenza and Streptococcus pneumoniae are under development with leading partners

Market Potential

- Global vaccine sales 21 billion USD in 2008
- Global vaccine sales for influenza and pandemics 4 billion USD annually

Company name: **Abera Bioscience**
Category : **Biotech**
Sub category: **Vaccine Development**
Location : **Stockholm**

Early development
Proof of concept
CE-marking
Commercialised

CHALLENGE

- Infectious diseases such as HIV, tuberculosis (TB) and Streptococcus pneumonia (SP) constitute great threats to health globally.
- Vaccines are the most cost effective way to combat the increasing threat of infectious diseases.
- Some viral and bacterial diseases are prevented by simple vaccines consisting of dead or weakened viruses/bacteria or by inactivated toxins derived from the pathogen.
- Unfortunately, pathogens such as HIV, malaria and TB are too clever for this simple approach. More sophisticated vaccines are needed.

SOLUTION

- Abera has developed a universal platform for vaccine development, which opens up the possibility to produce strong, diverse and long-lasting responses to "difficult" pathogens.
- The platform makes live vaccines based on modified, harmless bacteria that express proteins from a "difficult" pathogenic bacterium on their surface.
- Vaccine candidates against TB, influenza and Streptococcus pneumoniae are under development with leading partners.
- The Abera platform enables cheap and fast production, both for intranasal and oral administration.

BUSINESS MODEL

- Abera aims to develop its vaccine candidates to clinical phase I and II and then sell or out-license the candidates.
- Development is conducted in collaboration with leading academic and industrial partners.
- First vaccine candidate under development (TB) acts as proof-of-principle for the platform.
- In addition, technology platform is out-licensed to external partners working in other application areas.
- Patent application covering the platform filed in Q3 2010 and as PCT in Q3 2011.

MARKET

- Global vaccine sales 21 billion USD in 2008 with 11% growth rate. Vaccine sales for influenza and pandemics 4 billion USD 2010 with growth rate of 25%.
- Demand is currently higher than supply. Many countries lack millions of doses.
- In 2010, 8.8 million people fell ill with TB and 1.4 million died.
- 150 companies engage in vaccine development in general. Very few focus on multivalent vaccines.



PROGRESS

Development

- Abera's platform is in the proof-of-principle stage and already the company has seen very promising results.
- Abera has secured more than 1M USD for its research and development from grants to date. To co-finance the grants, Abera is now raising another 1M USD from investors.

Next steps

- Abera looks forward to results from animal studies for the influenza vaccine, TB vaccine, and SP vaccine in Q2 2013.
- At the moment the company is evaluating possibilities of developing veterinary vaccines which are quicker to market.

OTHER INFORMATION

- Abera was founded in 2012 as a spinoff from Xbrane Bioscience AB.

Financials (USD) 2012

Revenue	0
EBIT	- 151000
Balance sheet total	332000
Valuation	-

Five Largest Owners Shares (%)

Serendipity Innovations	32.7
Jan-Willem de Gier	15.5
Sjouke Luirink	15.5
Samuel Wagner	6.1
Mårten Hellberg	6.1

Other

Founded	2012
Employees	4



TRACK RECORD AND EXPERTISE

- Through Prof. Alf Lindberg, Abera has access to extensive experience in vaccine development. Alf has held positions like CSO and Director of R&D at Wyeth Vaccines and Sanofi Pasteur.
- Dr. Joakim Tedroff is Medical Doctor and Professor in neurology. He was the co-founder of the successful research company Carlsson Research which was acquired by NeuroSearch in 2006.
- Prof. Jan-Willem de Gier is an internationally recognized scientist in the field of membrane protein research.

BOARD OF DIRECTORS AND MANAGEMENT

Prof. Saeid Esmailzadeh	Chairman
Prof. Alf Lindberg	Board member
Dr. Joakim Tedroff	Board member
Prof. Jan-Willem de Gier	Board member

Amin Omrani	CEO
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WHAT ARE WE LOOKING FOR?

- Abera is currently looking for strategic partners to develop new vaccine candidates.
- Also, the company is looking to raise 1M USD to finance further development of existing candidates.

Contact information

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Challenge

- Biological databases are growing
- Lack of computational capacity

Our solution

- Simple distributed computing
- Use of all possible computational resources
- Dynamic workflow

Market Potential

- 26% annual growth of the bioinformatics market
- 17,4% annual growth of the Cloud Based SaaS market
- Big Data is estimated to double every 1,2 year

Company name: **BinaryBio AB**
Category : **Bio Molecular Simulations and Bioinformatics**
Sub category: **Distributed Computing**
Location : **Stockholm**

Early development

Proof of concept

CE-marking

Commercialised

CHALLENGE

- Modern molecular simulations depend on sophisticated sampling algorithms to go from virtual molecule to reliable end results. Getting these results requires a combination of skills that includes chemistry and biology, but also IT and computer science.
- Biological databases are growing faster than the development of computing power. The lack of computational capacity creates a bottleneck for analysis of the generated data and extract meaningful knowledge from it.

SOLUTION

- BinaryBio has developed a platform, called Cores, specifically created for working with complex sampling algorithms, by letting the user focus on obtaining end result, while running simulations in the most efficient way.
- Once presented with a project, Cores will divide it into individual calculations or simulations that can be run in parallel. This can be done on local or remote clusters, workstations or cloud computing instances.
- With Cores, any input or output of any part of a project can be monitored at any point during a calculation. This way, results can be easily, and meaningfully combined to form the basis for new calculations.

BUSINESS MODEL

- Cores is today offered as a licensed software to pharmaceutical companies. A web based SaaS will also be released to customers that are requesting cloud resources to a greater extent. The licensed software targets large size firms who have their own IT infrastructure while the SaaS targets SME's with less financial- and IT resources.
- Cores is aimed to support applications in the field of molecular dynamics, protein modelling and docking. Later on other compute intensive applications within industries such as 3D-aniamtion, computational engineering, finance and oil-prospecting will also be supported.

MARKET

- The Bioinformatics market is expected to grow by 26% annually between 2011-2013 and the turnover is expected to be 8.3 billion in 2014.
- The market for cloud based SaaS is expected to grow 17,4% annually, from \$11,8B (2012) to \$26,5B (2016).
- The target costumers are mainly pharmaceutical companies working with in silico processes and molecular dynamics simulations, but later also other compute intensive industries, as mentioned above.
- The largest competitors are Cycle Computing, Techila, CLC-Bio and GreenButton. Their technology, industry focus and business models differ from each other and from BinaryBio.

PROGRESS

Development

- Presently the basic technology development of the Cores platform is finished. A pilot study is currently on-going together with UCB Pharma in Belgium. Bug fixes and customized technical development are proceeding in parallel with the pilot study.

Next steps

- Next step is to finish the SaaS part of the development and customize Cores further. Marketing and sales will proceed and feedback from customers will lead the technology development to a merchantable product and service.

OTHER INFORMATION

- BinaryBio came in third place among 10 000 companies at Microsoft European Bizpark Summit 2011.
- BinaryBio won the best business idea at the business plan competition Venture Cup in 2010.
- Close relationship with the Royal Institute of Technology, Stockholm University and SciLifeLab Stockholm.

<i>Financials (USD)</i>	2011	2010	2009
Revenue	260	0	0
EBIT	-7	0	0
Balance sheet total	-	0	0
Valuation	-	0	0

<i>Five Largest Owners</i>	Shares (%)
Erik Lindahl	25
Arne Elofsson	25
Serendipity Innovations	18
Saeid Esmaeilzadeh	15
Ashkan Pouya	15

<i>Other</i>	
Founded	2010
Employees	2
How much funding in total has been raised in previous rounds?	225 000 USD

TRACK RECORD AND EXPERTISE

The technology behind BinaryBio is based on research from professor Erik Lindahl, theoretical biophysics and computational structural biology at the Royal Institute of Technology Stockholm, and professor Arne Elofsson, bioinformatics at Stockholm University. Erik and Arne have earlier developed research tools such as Gromacs, Pcons and TOPCONS. Gromacs is one of the fastest and most popular molecular dynamics software package available. Erik has also contributed to the development of Folding@Home, the world's most powerful computer resource and the largest project for distributed computing.

BOARD OF DIRECTORS AND MANAGEMENT

Saeid Esmailzadeh	Chairman
Erik Lindahl	Board member
Amin Omrani	CEO

WHAT ARE WE LOOKING FOR?

- Venture Capital for product development. The size of the investment needed is around \$500 000.
- Strategic partnership with pharmaceutical companies working with in silico processes, simulations and/or heavy computations.

Contact information

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Challenge

- Stem cells and other primary cells are considered difficult to culture
- Cell therapy, the future hope of medicine, has not advanced as fast as hoped

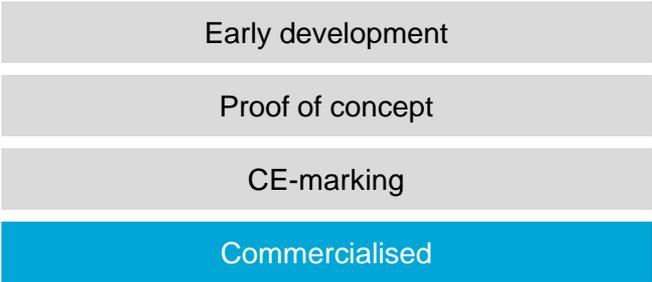
Our solution

- Products that have solved most technical problems in stem cell culture
- Our products can be manufactured according to current good manufacturing practice (cGMP) which is a prerequisite to enter clinical trials and eventually cell therapy
- True stem cell banking for children

Market Potential

- Over 5B USD for above markets

Company name: **BioLamina AB**
Category: **Biotech**
Sub category: **Cell culture tools**
Location: **Stockholm**



CHALLENGE

- Culturing primary cells like stem cells and cells like heart cells has been considered technically very difficult. Since the knowledge of primary cell culture is crucial for cell therapy, these problems have delayed cell therapy to be tested in human clinical trials inhibiting the development of this therapy.
- It has been considered a large problem to expand enough stem cells for treatment purposes.

SOLUTION

- Our products mimic the body and provide an environment that the primary cells have in the body.
- The uniqueness of our products is that they are the only products that truly support the growth of stem cells and other primary cells outside the body on cell culture dishes, which is needed in cell therapy.
- Our products make cell culture outside the body much more homogeneous and easier to use.
- One can expand in principle as much cells as you want with our technique, which is also unique.

BUSINESS MODEL

- We sell our research reagents to 27 countries through our website, country specific distributors and soon through a global distributor. Our aim is to become profitable within the research reagent market.
- Development of the cGMP quality product opens up several new markets for us (cell therapy, IVF-cell banking, hair loss treatment) which are very promising.
- We have mostly concentrated on development of innovations from Karolinska and we have over 10 patent families surrounding the production methods of our proteins and their application of use.

MARKET

- The market size for primary cell reagents are today about 1B USD
- Primary cell culture grows with an CAGR of 16%
- Markets for IVF-stem cell banking, Hairloss treatment and cGMP reagents are worth more than 10 BUSD
- Our competitors today are Corning, Stem Cell Technologies, Millipore, SigmaAldrich, Life Technologies among others

PROGRESS

Development

- We have 10 products in development for the primary cell culture reagent field
- We should have the cGMP product ready in Q1 2013, which opens many new doors and has a more B2B character. Many pharma companies are waiting for this product

Next steps

- Scale up production volume (Q1 2013), decrease price of our main product (Q2 2013) and become the golden standard in stem cell culture

OTHER INFORMATION

- We have been elected by Affärsvärlden to be one of the top 33 Technology companies in Sweden 2011 and 2012. We are also chosen by Genetic Engineering & Biotechnology News as one of the 20 promising companies within the field.
- By the end of 2012, we will have a global distribution partner, which will help our product to become a golden standard.

Financials (USD)	2011	2010	2009
Revenue	0.7M	0.2M	0.1M
EBIT	0M	0M	0M
Balance sheet total	2.3M	3M	0.3M
Valuation	29M	-	-

Five Largest Owners	Shares (%)
Tryggvason Biotech Ab	43%
Kristian Tryggvason	18%
Nxt2b	16%
Magnus Kenneby	9%
Rolf Kenneby	4%

Other	
Founded	2009
Employees	8
How much funding in total has been raised in previous rounds?	3M USD

TRACK RECORD AND EXPERTISE

- McKinsey, Corporate Finance, Swedish future bright star award
- COO Pharmacia; Founder and CEO of Q-Med, sold it to Galderma
- CSO and CEO of Olink, a company of 20 people selling reagents

- MBA, PhD, Business Development, Project Management, Founder
- COO of Sentoclone, civil engineer, QC/QA and Q management
- Over 30 years of research in matrix proteins, Professor at Duke

BOARD OF DIRECTORS AND MANAGEMENT

Magnus Kenneby	Chairman
Bengt Ågerup	Board member
Simon Fredriksson	Board member
Kristian Tryggvason	CEO
Anders Lindblad	COO
Karl Tryggvason	Scientific Advisor

WHAT ARE WE LOOKING FOR?

- Financing development of our cGMP products so we can enter the 10 BUSD IVF-stem cell banking, cell therapy and hair loss treatment markets

Contact information

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Challenge

- How can we find cancer earlier?
- How will the cancer disease develop?
- How do we know if a cancer treatment gives desired effect or not?

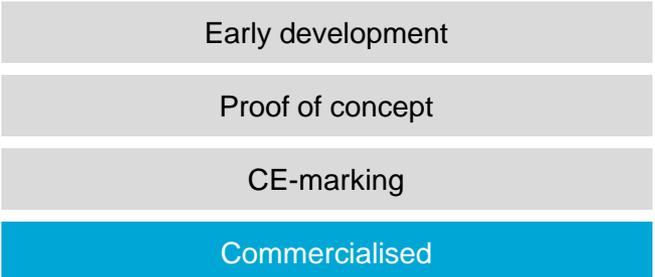
Our solution

- DiviTum™ can allow for earlier detection
- DiviTum™ has the ability to prognosticate cancer disease development
- DiviTum™ can monitor the effect of a cancer treatment

Market Potential

- >12.6 M people get cancer every year
- Europe & US alone (~15% world population) USD >5 Billions

Company name: **Biovica International**
Category : **Medtech**
Sub category: **Diagnostics**
Location : **Uppsala**





CHALLENGE

- How can we improve peoples life by finding cancer earlier?
- How can we improve the probability of successfully treating cancer?
- How can we improve the medical doctors ability to properly diagnose and monitor their cancer patients?

SOLUTION

- Cancer is spread by uncontrolled cell division
- By measuring the cell-division rate in people, earlier detection of cancer and better prognosis of cancer disease is possible
- Biovica has developed the most sensitive test in the world for measuring cell-division
- The increased and unique sensitivity opens up a new area, i.e. solid tumours that cannot be successfully analysed with older tests available on the market

BUSINESS MODEL

- Biovica produces and sells the DiviTum™ assay, developed in our research laboratory in Sweden
- DiviTum™ is distributed on selected markets, where we collaborate with external partners with local expertise
- Licencing of the technology to business partners
- Continuing to build on the already published data with our partners, e.g the Karolinska Institute in Stockholm

MARKET

- Market size is substantial. The potential for Europe and US (~15% of world population) is >\$5Billion
- The market is growing year by year, with ageing population and increasing cancer incidence
- Other tests that measures the same enzyme are less sensitive. This opens up a unique position for DiviTum™ for application in solid tumours
- Biovica has a strong patent based on the process



PROGRESS

Development

- Patent in 40 countries
- CE marked product
- ISO certified processes
- ~10 published studies (>1.000 on the TK enzyme)
- Distribution agreements signed on selected markets
- Financed through investors and Vinnova/Eurostar

Next steps

- Further documentation of the product, e.g. together with Karolinska Institute, Stockholm (in progress)
- Injection of capital for execution of commercialisation of product

OTHER INFORMATION

- Biovica has received funding from Eurostars, ranked as #4 out of 350 projects.
- Biovica has received the Network Stars Award from Europe Enterprise Network for the best research project in competition with >300 projects.

Financials (USD)	2011	2010	2009
Revenue	800k	600k	400k
EBIT	-500k	-200k	-100k
Balance sheet total	1,500 k	1,600 k	900k
Valuation	-	-	-
Five Largest Owners		Shares (%)	
S. Gronowitz & family	29%		
A. Rylander	15%		
H. Bornefalk & family	7%		
F.B. Johnsson	7%		
M. Danielsson	5%		

Other	
Founded	2009
Employees	8
How much funding in total has been raised in previous rounds?	3 MUSD



TRACK RECORD AND EXPERTISE

- Professor Mats Danielsson – Professor at Royal Institute of Technology in Stockholm. Founder and CEO of Mamea Imaging, now acquired by Philips
- Anders Rylander, CEO of Biovica, founder of Axholmen Management Consultant firm. CTO for ICA (\$14 billion food retailer), Senior Manager at Accenture
- Mattias Bergqvist - Marketing Director of Biovica, previously Marketing Director Oncology at AstraZeneca Nordics and Brand Director Oncology at AstraZeneca Global Marketing (UK)
- Ass. Professor Simon Gronowitz – Innovator of the product. 30 years of experience within the area, several patents and products that have been commercialized

BOARD OF DIRECTORS AND MANAGEMENT

Frank Bertil Johnsson	Chairman
Prof. Mats Danielsson	Board member
Anders Rylander	CEO
Mattias Bergqvist	Marketing Director
Magnus Neumüller	Development Manager

WHAT ARE WE LOOKING FOR?

- Biovica is looking for distributors, licensing partners and potential investors for expansion
- We're open for both industrial collaboration (pharma or diagnostics companies) or financial (venture capital firms) investors
- Biovica is looking for an investment in the range of \$7-8M

Contact information

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Company name: **Corline Systems AB**
Category : **Medtech**
Sub category: **Biomaterials and implants**
Location : **Uppsala**

Challenge

- Clinical devices and implants cause excessive inflammation reactions, leading to clotting and scar tissue formation
- If inflammation reaction can be weakened, patient risks are reduced and treatment efficacy is increased

Our solution

- A proprietary heparin technology to coat device/tissue surfaces
- Coating offers local protection against inflammation/clotting

Market Potential

- Traditional blood contacting devices both *ex vivo* and *in vivo*: >20M USD
- Regenerative Market (tissue engineering, cell therapies, vascular repair): >100M USD

Early development

Proof of concept

CE-marking

Commercialised



CHALLENGE

- Artificial as well as biological materials (decellularized tissue and cells) are regularly implanted in patients to offer treatment options for diabetes care, dialysis, soft tissue repair, inflammatory disease, kidney disease, etc.
- All such implanted foreign material will initiate a cascade of events starting with an inflammatory reaction which may lead to blood clotting and scar tissue formation around the implant
- This leads to a malfunctioning implant and non-satisfactory treatment efficacy

SOLUTION

- Corline offers a heparin coating technology CHS™ that significantly attenuates the inflammatory response and adds pro-healing functions, which results in an improved implant
- CHS™ is one of two best-in-class heparin coating products on the market (other owned by Gore Medical) and is unique in that it can be used on all surfaces including living cells (not the case for Gore)
- Key selling points: clinical efficacy, easy to integrate, non-leaching, can be used to protect cells, pro-healing by promoting re-modelling of soft tissue repair devices

BUSINESS MODEL

- Corline is a technology provider and integrates coating technology in partners' clinically approved products
- Corline license out the right to use technology in specific fields and maintains production rights to reagents and acts as sole supplier to customers
- Corline develops products together with partners, but maintains all coating development and mfg in-house
- IP and know-how on core technology and IP on use of core technology in application areas is vested in Corline

MARKET

- Global device and regenerative market, heavily US focused
- Device market grows with single digits, Regenerative market with double digits
- Competitors include Surmodics (US), Biointeractions (UK) and Gore Medical/Carmeda (US/SWE)



PROGRESS

Development

- Commercialized for lab market
- Commercialized for diagnostics market
- License agreement in place with large US based device manufacturer

Next steps

- Build volumes for diagnostics segment
- Launch on US market for vascular devices together with partner
- Develop soft tissue repair market through license deal
- Conclude clinical trial for first-in-man cell therapy study

OTHER INFORMATION

- 2011 Corline was granted funding for a 1.5 MEUR FP7 project to develop its technology for regenerative medicine. Project runs through mid 2013.
- Corline has established partnership projects with a number of research institutes including McGowans Institute for Regen Med (US), Yale (US), Wake Forest Institute (US), Beckman at City of Hope (US), Medizinische Hochschule Hannover,(GER), Karolinska Institute, Uppsala University (both SWE)

Financials (USD)	2011	2010	2009
Revenue	0.55M	0.75M	0.15M
EBIT	-0.43M	-0.26M	-0.83M
Balance sheet total	1.39M	0.58M	0.15M
Valuation (N/A -private)	-	-	-

Five Largest Owners	Shares (%)
Crafoord family	65
Sunnanväder family	25
Management	10

Other	
Founded	1991
Employees	7
How much funding in total has been raised in previous rounds?	Not disclosed



TRACK RECORD AND EXPERTISE

- Management group combines industry expertise from big pharma (Pharmacia) with research knowledge (UU) with serial entrepreneurial skills. Board members have unique backgrounds having created, build and divested a number of small, medium sized (Novalung, Jotec, Jostra) and very large medical device companies (Gambro)

BOARD OF DIRECTORS AND MANAGEMENT

Lars Sunnanväder	Chairman
Adam Dahlberg	Board member
Margareta Nilsson	Dep. Board member
Henrik Nittmar	CEO
Rolf Larsson	CSO
Kurt Jansson	COO

WHAT ARE WE LOOKING FOR?

- Corline is a privately held company with limited running costs. The company is interested in finding active financial investors with a view of taking the company public, or with experience of proactively and hands-on supporting and working towards industrial mergers with medical device companies (mergers in the US may be ideal).
- Operational investment need is currently very limited, however, if new expansion strategy is adopted together with new investor, 5-15 MUSD would suffice to take Corline further towards launching its own product offering in the market, thus increasing enterprise value.

Contact information

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Company name: **Diamyd Medical AB (publ)**
Category : **Drug Development**
Sub category: **Diabetes**
Location : **Stockholm**

Challenge

- Type 1 diabetes is a serious disease affecting children
- Current treatment paradigm is not addressing the root cause of disease

Our solution

- Diamyd Medical's diabetes vaccine Diamyd® is a disease modifying agent
- Good safety profile and ease of use

Market Potential

- 80,000 new patients per year
- Large savings potential for healthcare system
- No competitor on or close to market

Early development

Proof of concept

CE-marking

Commercialized



CHALLENGE

- Type 1 diabetes or childhood diabetes is a serious chronic disease that typically occurs in children and adolescents.
- In type 1 diabetes the body's own immune system attacks and destroys the beta cells in the pancreas which produce insulin and control the blood sugar level.
- Daily insulin injections are required for survival, but insulin replacement therapy does not represent a cure or even an ideal therapy as it does not address the autoimmunity.

SOLUTION

- Diamyd Medical is developing a diabetes vaccine called Diamyd® to intervene in, or prevent, the autoimmune attack on the beta cells in type 1 diabetes thereby preserving the body's capacity to regulate blood sugar.
- There is no treatment on the market against the autoimmune process that causes type 1 diabetes.
- Diamyd® has demonstrated a good safety profile in clinical trials and is very convenient and easy to use.

BUSINESS MODEL

- Diamyd Medical plans to outlicense or sell the diabetes vaccine Diamyd® to a leading pharmaceutical company who will market the product to specialist endocrinologists.
- To maintain high flexibility and a low cost base parts of Diamyd Medical's operations have been outsourced to qualified partners with expert knowledge. A small group of employees manage, lead and implement projects.
- Patent portfolio licensed from University of California (US 6,682,906).

MARKET

- 80,000 new patients per year develop type 1 diabetes in Europe and the US and the incidence is rising.
- Preservation of beta cell function reduces diabetes related complications by approximately 70%.
- Estimated annual healthcare savings per treated newly diagnosed type 1 diabetes patient exceeds 15,000 USD. Improved quality of life not included.
- Few other products in mid stage clinical development, e.g. Diapep277 (Andromeda), Teplizumab (Macrogenics), Otelixizumab (GSK).



PROGRESS

Development

- Currently in phase II development
- Did not meet primary endpoint in previous phase III study although a small positive effect was seen ($p=0.10$)

Next steps

- Pilot studies in prevention of type 1 diabetes (ongoing)
- Pilot studies in established type 1 diabetes combining Diamyd® with other treatments to boost the effect
- Larger prevention studies

OTHER INFORMATION

- Diamyd Medical shares are listed on Nasdaq OMX (segment Small Cap) in Stockholm (ticker: DIAM B).

Financials (USD)	2011	2010	2009
Revenue	1.6M	42.7M	19.5M
EBIT	-9,4M	16.5M	-0.4M
Balance sheet total	62.5M	77.0M	84.3M
Valuation	36M	-	-

Five Largest Owners	Shares (%)
Bertil Lindkvist	14.3
Avanza Pension	12.7
Östersjöstiftelsen	5.1
Anders Essen-Möller	5.0
Nordnet Pensionsförsäkring	3.9

Other	
Founded	1996
Employees	7
How much funding in total has been raised in previous rounds?	110M USD



TRACK RECORD AND EXPERTISE

- Experience of bringing complex biologics from preclinical phase through global phase III program.
- Concluded collaboration agreement with Johnson&Johnson providing 45M USD upfront and up to 580M USD in milestones plus royalty on sales.

BOARD OF DIRECTORS AND MANAGEMENT

Anders Essen-Möller	Chairman
Erik Nerpin	Board Member
Jonas Jendi	Board Member
Maria-Teresa Essen-Möller	Board Member
Peter Zerhouni	CEO
Anna Styrud	CFO
Erika Hillborg	COO

WHAT ARE WE LOOKING FOR?

- Collaborations with pharmaceutical companies
- Investors with pharmaceutical development expertise

Contact information

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Challenge

- Today there is no cure for osteoarthritis, the most common joint disease

Our solution

- Implant technology that halts osteoarthritis
- Fast, easy and cost-effective surgery

Market Potential

- Addressing the global market for knee replacement operations
- US, EU and Japanese markets estimated to USD 8.2 billion

Company name: **Episurf Medical (publ)**
Category : **Medtech**
Sub category: **Implants**
Location : **Stockholm**

Early development

Proof of concept

CE-marking

Commercialized



CHALLENGE

- More than 12% of the Western population above the age of 25 years suffer from osteoarthritis, a joint disease that is more common than diabetes. Symptoms involve severe pain, stiffness, and immobility. Today, there is no cure for osteoarthritis. The common praxis is pain relieving medication until joint replacement surgery becomes inevitable, an exhaustive surgery with long rehabilitation times and mediocre results.

SOLUTION

- Episurf develops a patient-specific implant technology that halts osteoarthritis and restores full joint mobility. The implants are coated with synthetic bone, replacing only the damaged area in the joint. Episurf's patient-specific surgical tools enables high precision, fast and simple surgery. The technology enables 4-5 faster procedures, shorter rehabilitation times, and cost reductions compared to traditional joint replacements.

BUSINESS MODEL

- A vital part of Episurf's model is to keep design and customization in-house, while production is conducted by external certified producers. Clinical studies are carried out at two highly reputed osteoarthritis clinics in Sweden. Sales and distribution will be conducted through Episurf's channels. Initial osteoarthritis users are in place.
- Patent family covers implant design methods, implant designs, implant materials and surgical tools. More than 20 patent applications filed, of which two are granted.

MARKET

- Episurf addresses a global market for knee replacement operations. The US, EU and Japanese markets are estimated to USD 8.2 billion with a growth rate of 12.9%. Globally, 1.2 million knee procedures are conducted each year.
- The one major competitor is Arthosurface (US). They offer non-personalized implants without the ability to halt the progression of osteoarthritis. Arthosurface has reached USD 1 billion in sales.



PROGRESS

Development

- Episurf is continuing clinical trials by testing the implants in humans as well as improving the patient-specific design procedures.

Next steps

- Episurf is planning to have the knee implant (as well as a toe implant) CE marked in 2014. Education of osteoarthritis surgeons will be performed and pre-marketing activities will increase.

OTHER INFORMATION

- Episurf Medical AB was founded in 2008 as a spinoff from Diamorph AB. By 2010, Episurf had completed two pre-clinical pilot studies together with Swedish University of Agriculture Sciences and Karolinska University Hospital. Episurf is listed on Nasdaq OMX First North.

Financials (SEK)	2011	2010	2009
Revenue	5.178M	-	-
EBIT	-4 459	-	-
Balance sheet total	-	-	-
Valuation	-	-	-

Five Largest Owners	Shares (%)
Serendipity Ixora Fund AB	29.2
Mikael Rosenlew	6.97
Verdis HF	5.22
Gile Medicinkonsult	4.71
Mikael Lönn	4.2

Other	
Founded	2008
Employees	6
How much funding in total has been raised in previous rounds?	-



TRACK RECORD AND EXPERTISE

Thomas Nortoft has over 10 years of experience from leading positions within Nobel Biocare, such as CEO Canada, CEO US, and VP Business Area Manager Dental Implants.

Leif Ryd is an orthopaedic surgeon and researcher in orthopaedics at the Karolinska University Hospital. Leif's main clinical expertise includes degenerative joint disease of hip and knee. Leif is the project manager and coordinator of Episurf's clinical trials.

Jeppe Magnusson has over 30 years of experience from leading positions within Mölnlycke, SCA Hygiene Products and Nobel Biocare, with expertise within i.e. clinical research and R&D management.

BOARD OF DIRECTORS AND MANAGEMENT

Prof. Saeid Esmaeilzadeh	Chairman
Thomas Nortoft	Board member
Dr. Leif Ryd	Board member
Dr. Jeppe Magnusson	Board member
Ashkan Pouya	Board member
Nina Bake	CEO
Lena Lones	CFO
Jeanette Spångberg	COO

WHAT ARE WE LOOKING FOR?

Episurf is looking for distribution partners and potential investors for expansion.

Contact information

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Challenge

- Spasticity causes pain and difficulties to move for people with e.g. CP and stroke
- Available treatments are expensive and associated with pain and heavy side effects

Our solution

- A body suit system that reduces spasticity and increases patient activity and quality of life
- Cost-efficient and less side-effects compared to existing options for spasticity management

Market Potential

- 3.5M patients in US and Western Europe
- On average 10 000 EUR spent on spasticity management per patient per year in these countries

Company name: **Inerventions AB**
Category : **Medtech**
Sub category: **Assistive Devices**
Location : **Stockholm**

Early development
Proof of concept
CE-marking
Commercialised



CHALLENGE

- People with neurological disorders such as CP, stroke and multiple sclerosis (MS) suffer from spasticity and difficulties to move. This leads to pain, reduced function and reduced activity level for the individual.
- Spasticity management is expensive for healthcare and society (on average 10 000 EUR/patient/year in US and Western Europe).
- Related costs due to spasticity include cost of care, assistive devices, adjusted living and work loss.

SOLUTION

- A electrotherapy system that reduces spasticity by giving individualized therapy to selected muscles.
- 340 patients are currently using our solution all report some improvements, and many has improved function enough to avoid surgery (10%), botulinum toxin injections (25% of patients and 90 % of patients with planned injections) or stop using assistive devices (25%) such as wheelchair and walker.
- The Elektrodress can safely be used at home by the patient and be washed in a regular washing machine.
- Elektrodress offers a pain free, low risk therapy option. A study together with Karolinska Institute indicates cost efficiency compared to available options.

BUSINESS MODEL

- We intend to sell Elektrodress as an assistive device to healthcare providers and to private customers.
- As the product wear, tear and is outgrown by the patient, we expect at least 50% of our costumers to need a replacement garment every year, thus our long-term revenues are based on recurring sales.
- Our development is performed in-house and our team combines skills within clothing design, electrical engineering, software development, regulatory expertise, therapists and patients.
- One granted concept patent and one pending patent application (covering technical solutions).

MARKET

- Our market is focused on Western Europe and the US, where therapies and assistive devices are covered by the reimbursement system. On average, these countries spend 10 000 EUR per patient per year on spasticity management, not including costs of assistive devices, care, pain management, etc. The market for spasticity reduction is approximately 35000 MEUR.
- As of today, there is no comparable product on the market. Available treatment options include botulinum toxin injections, surgery and drugs with heavy side effects.



PROGRESS

Development

- We have started and established sales of our therapy solution (2010) and currently 340 patients are using the system. We are currently waiting for the CE-certificate (all tests passed) and we will hopefully launch our improved product in early 2013 on the Scandinavian market (0-series).

Next steps

- Ensure reimbursement through sales, marketing and research activities directed towards healthcare organizations
- Prepare for International launch and scale up

OTHER INFORMATION

- Winner of Medtech Investment Day Award Nordic 2012.
- Seed Investment from the Swedish television program Draknästet (the Dragons Den)
- 0.5M USD in grants and soft money funding
- Strategic partners for development include; Royal Institute of Technology, University of Borås Textile Engineering, Center for Technology in Medicine and Health (KI-KTH-SLL), Medtech West (the Sahlgrenska Hospital with collaborators)

Financials (USD)	2011	2010	2009
Revenue	0.56M	0.2M	-
EBIT	-40K	0	-
Balance sheet total	0.2M	0.1M	-
Valuation	2.5M	1.2M	0.8M

Five Largest Owners	Shares (%)
Fredrik Lundqvist (CEO)	57%
Andreas Halldén (designer)	9%
GIAB	6%
Bertil Guve	5%
TMD Sweden	5%

Other	
Founded	2010
Employees	6
How much funding in total has been raised in previous rounds?	0.75M USD



TRACK RECORD AND EXPERTISE

- Management combines skills, knowledge and many years of experience in; entrepreneurship; sales and marketing of assistive devices; clinical experience; medical device engineering; regulatory requirements and economics.
- Since the foundation of Inerventions in 2010 the company has had an accumulated turnover of 1.1M USD and soft money funding of 0.5M USD.

BOARD OF DIRECTORS AND MANAGEMENT

Bertil Guve	Director
Clas Runnberg	Board member
Douglas Roos	Board member
Susanna Falkengren	Board
Fredrik Lundqvist	CEO
Emma Sjöberg	COO/CFO
Gunilla Granberger	CMO

WHAT ARE WE LOOKING FOR?

- Partners for distribution and International scale up.
- Committed Investors, preferably with knowhow or connections in any of the following fields: clothing manufacturing; electronics manufacturing; international sales and distribution of Life Science products; clinical research; US-market.
- In 2013 we are looking for means to expand and establish in new markets.

Contact information

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Challenge

- Mortality rate from Hemorrhagic stroke is larger than 50% (1,23Mln deaths yearly)

Our solution

- Prototype tested on 70 patients – low mortality, low morbidity and 50% decreased time in ICU stay
- Technology platform provide a broad portfolio of products for niche applications

Market Potential

- Sales to be initiated Q1 2013
- Annual global market estimated to 11 billion EUR

Company name: **IRRAS AB**
Category : **Medtech**
Sub category: **Catheter Systems**
Location : **Stockholm**

Early development
Proof of concept
CE-marking
Commercialised



CHALLENGE

- Hemorrhagic stroke: mortality rate larger than 50% (1,23Mln deaths yearly), long-term disability 15% (WHO)
- Cancer and infections are two leading causes of death.
- Drug resistance and side effects are major problems of chemotherapy for cancer and infections of body and brain.

Existing solutions

- Standard drainage catheters block due to high viscosity of blood and stop functioning thus put patients life at risk
- Cancer and infections can be addressed by local drug administration but today there are no drug delivery systems able to deliver therapeutic concentrations.

SOLUTION

Drainage

- Double-lumen catheter that performs fluid flows, i.e. controlled simultaneous infusion and aspiration of fluids, enabling no blockage of catheter, decreased mortality, low morbidity and up to 50% decreased time in ICU stay.

Drug-delivery

- Catheter system for local drug delivery enabling high drug volume to a restricted area, thus able to achieve therapeutic drug concentrations restricting the potential side effects of treatment.

BUSINESS MODEL

- Using its technology platform, IRRAS is developing a portfolio of products for each respective application area
- Control units will be provided to customers, while consumables (catheter kit) are sold traditionally (one per operation)
- Sales and marketing: IRRAS niche products will be sold through in-house sales force on the EU and US markets. Distributor agreements will be signed for remaining markets.
- Patents: two patent families covering design, method and mechanism (granted in Europe, Japan and Russia). Pending patents in remaining markets.

MARKET

- 11 billion €/annum for consumables (catheter kit)

Competitors

- Drainage: standard drainage catheters that are insufficient (see 2. The Challenge above)
- Drug delivery: systemically administered medications, either orally or by injection, and locally administered medications in small amounts either by injection or local small volume pump



PROGRESS

Development

Drainage Catheter System

- Commercial prototype to be delivered Q3 2012
- Productification and CE mark to be completed Q1 2013
- Market entry will be initiated in Q1 – Q4 2013

Next steps

Drug delivery application

- Product development of drug delivery application during 2013

OTHER INFORMATION

- Product development conducted with life science venture capitalist with 15yrs experience
- Published article in Asian Journal of Neurosurgery
- Case report presented at 14th European Congress for Neurosurgery

Five Largest Owners

Shares (%)

Serendipity Ixora Fund AB	32.3
Vandel Medical Equipment Ltd	33.3
Jaymore Enterprises Ltd	33.3
Erik Björkegren	1

Other

Founded	2011
Employees	2
How much funding in total has been raised in previous rounds?	2.5M EUR



TRACK RECORD AND EXPERTISE

Ashkan Pouya is an experienced serial entrepreneur. He has been involved in the establishment of several research-intensive companies, both in executive and non-executive positions. Furthermore, he has been a successful sports athlete and was awarded world champion in Combat Jujutsu in year 2000.

Marios Fotiadis has 15 years of experience from venture capital investments in life science. He is currently CEO of Vandel Group a privately held investment group. Prior to joining Vandel Group, Mr. Fotiadis was the Managing Director of TVM Capital MENA. He holds an M.B.A. from Columbia University.

BOARD OF DIRECTORS AND MANAGEMENT

Ashkan Pouya	Chairman
Marios Fotiadis	Board member
Christos Panotopoulos	Board member
Erik Bjjörkegren	CEO
Christos Panotopoulos	CMO

WHAT ARE WE LOOKING FOR?

- Partnering hospitals to launch clinical research for drug-delivery application (oncology, septic surgery, etc)
- Partnering pharmaceutical companies willing to co-develop drug-device combinations for above-mentioned pathologies

Contact information

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Company name: **KeytoLead AB (K2L)**
Category : **Preclinical Pharmaceutical Research**
Sub category: **Lead Generation *and* Medicinal Chemistry**
Location : **Södertälje (Stockholm area)**

Challenge

- Gap between the innovative academic research and the pharmaceutical industry
- Lack of medicinal chemistry expertise in the early phase of Drug Discovery (DD) especially in academia and small biotechs
- Disappearance of such expertise in Big Pharma (“virtual” research areas, etc.)

Our solution

- KeytoLead = bridge between the academic like world and Big Pharma
- High focus of K2L on the early DD phase
- Delivery of **Turnkey Lead Packages** and compound libraries with high structural and physical quality in short timelines

Market Potential

- Pharma/Biotech/DD institute
- Collection screening initiatives (IMI, NIH, ...)
- Modular approach

Early development
Proof of concept
CE-marking
Commercialised



CHALLENGE

- Many of today's best selling drugs have a direct link to academic research. Unfortunately, in Drug Discovery (DD) there is a tremendous time gap between when a basic discovery in academia is made and when a subsequent drug reaches the market. This is due to that academic groups usually do not have the resources, the drug discovery expertise and the marketing skills of pharmaceutical companies.
- One of the first crucial steps of the DD process is Lead Generation (LG), which can be considered as the foundation of drug discovery. However, this step is often performed in a suboptimal fashion with respect to quality, cost or timeline in academia and small biotech.

SOLUTION

- K2L will bridge the gap between a pharmacological discovery and drug commercialization by delivering high quality lead series and compound libraries.
- K2L's fully integrated platform (CADD, medicinal chemistry, Design/Synthesis/Purification) will generate focused compound collections with maximum information content and the highest compound quality (lead/drug like) in the minimum amount of time.
- K2L staff are experts in *Iterative Design and Synthesis* (IDAS) and in handling compound libraries.

BUSINESS MODEL

K2L will deliver two main products:

- *Step Changes for Lead Generation*
K2L will collaborate closely with academic groups, start-ups and biotechs to identify high value targets and deliver turnkey lead packages to biotech and big Pharma.
- *High standard screening sets or focused libraries*
will be delivered to the clients described above as well as screening collection customers such as IMI, NIH, MMV.
- Profit will be generated by either milestone payments (e.g. for delivery of lead series) or by fee-for-service (e.g. FTE- based project work or price for library delivery). Discussions with a customer in big pharma are underway.

MARKET

- The market is potentially wide with customers spanning from academic groups with financial support to Big Pharma, including biotechs and start-ups nationally and internationally.
- Few competitors that can deliver turnkey Lead packages have been identified. This is even more true nationally.
- A first set of possible customers that would perfectly balance K2L's portfolio has been identified through the co-founders' network.



PROGRESS

Development

- Detailed requirements for necessary laboratories and equipment are ready.
- Discussions with stakeholders, network and key opinion leaders are on-going.

Next steps

- A number of possible customers, investors and collaborators within KeytoLead's network will be invited for discussions.

OTHER INFORMATION

- KeytoLead has been invited to participate in the *UIC Business Lab* (Uppsala Innovation Centre).
- Discussions with the consortium negotiating the takeover of AstraZeneca's research facilities in Södertälje have been initiated regarding the use of laboratories and equipment.
- Members of KeytoLead have been extensively engaged in the closure of AstraZeneca's site.
- During the past 10 years the founders of KeytoLead have been significantly involved in building AstraZeneca's current compound screening collection.

Financials (USD)	2011	2010	2009
Revenue	-	-	-
EBIT	-	-	-
Balance sheet total	-	-	-
Valuation	-	-	-

Owners	Shares (%)
Jan Blid	25 %
Ismet Dorange	25 %
Karin Johnson	25 %
Dirk Weigelt	25 %

Other	
Founded	Dec 2012
Employees	4
How much funding in total has been raised in previous rounds?	n/a



TRACK RECORD AND EXPERTISE

- The founders of Key_{to}Lead are medicinal, computational, synthetic and analytical chemists earlier employed by AstraZeneca R&D Södertälje, Sweden.
- World-class expertise in target modelling, library design, library synthesis and automated purification.
- Collective experience from more than 30 projects in Lead Generation (50 % ion channel, but also protease, kinase, transporter, transferase, epigenetics, GPCR).
- Highly proficient in project management, international collaborations, intellectual property and continuous improvement.

BOARD OF DIRECTORS AND MANAGEMENT

Dr. Dirk Weigelt	Chairman
Dr. Ismet Dorange	Board member
Dr. Karin Johnson	Board member
Dr. Jan Blid	Board member

Dr. Dirk Weigelt	CEO
Dr. Ismet Dorange	CSO
Dr. Karin Johnson	CFO
Dr. Jan Blid	COO

WHAT ARE WE LOOKING FOR?

- A cash injection of € 1.0 M will jump-start Key_{to}Lead and ensure that the technical platform is built sufficiently. This will cover investments in equipment and facilities as well as running costs like consumables and salaries for additional employees.
- A possible exit point would be at the time of the first Turnkey Lead Package sale after 3-4 years.
- On top of their expertise and their scientific network, the four founders of Key_{to}Lead will contribute with more than two thirds of their own salaries during 2013.

Contact information

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Company name: **ModPro AB**
Category : **Pharmaceuticals**
Sub category: **Therapeutic antibody replacement**
Location : **Uppsala**

Challenge

- Side effects/poor selectivity in small molecule drugs
- High failure rate in drug development
- High costs for therapeutic antibody development

Our solution

- Modify drug molecules in development and on the market to increase selectivity and affinity (safety and efficacy) for the benefit of the patient
- Use small molecule drug candidates to make synthetic alternatives to therapeutic antibodies with equal or better performance but at lower cost

Market Potential

- Conservatively speaking, each successful project will generate 20-50 MUSD annually

Early development

Proof of concept

CE-marking

Commercialised

CHALLENGE

- Small molecule drug projects are cancelled in 95-97% of the cases, never to reach the clinic. Many of the ones that do, are haunted by bad side effects, This seems to be particularly true for cancer therapies . Therapeutic antibodies become more and more frequent on the top ten list of big sellers, but are extremely costly to produce. New concepts are badly needed in the pharmaceutical industry due to the high cost/high risk of current work strategies.

SOLUTION

- ModPro takes advantage of small molecule drugs/drug candidates, enhance performance dramatically by improving selectivity (safety) and affinity (efficacy). We focus on targets to be treated by therapeutic antibodies that are normally not addressable by small molecule drugs.
- The concept is to our knowledge unique.
- ModPro molecules while addressing antibody targets are prepared by synthesis thus offering a dramatic reduction in cost of goods, no risk for biological contamination while delivering equal or better performance.

BUSINESS MODEL

- ModPro develops candidate drugs, in partnership with Pharma industry, or independently, The IP situation is unique as every small molecule drug, including those on the market, is in principle patentable when modified according to the ModPro concept.
- The ModPro customer is a large pharmaceutical company, and ModPro approaches Big Pharma, typically AstraZeneca, Novartis or Pfizer.
- ModPro IP has 9 patents/applications covering the enhancement concept (3), a set of cancer biomarkers (2) and protein modification technology (4).

MARKET

- Cancer therapeutics for late stage treatment has been estimated to be worth billions of Euro in annual sales per drug .
- Therapeutic antibodies are increasingly appearing on the top ten list of therapeutics on the market.
- Other innovative pharmaceutical companies are competitors.

PROGRESS

Development

- ModPros first cancer therapeutic product is currently in preclinical evaluation in primates, following a successful study in mouse model. If successful, a commercial process will be initiated.
- Feasibility studies with Pharma industry

Next steps

- Two more projects are being pursued at the in vitro stage (diabetes), and shall be developed to advanced pre-clinical or even phase 1 clinical stage to form the ModPro pipeline and give a high probability of success.
- The company is seeking partnership with Pharma industry.

Financials (USD)	2011	2010	2009
Revenue	0 M	0.03M	0.1 M
EBIT	-0.6M	-0.3M	- 0.1M
Balance sheet total	1.06M	0.8M	0.8M

Five Largest Owners	Shares (%)
Lars Baltzer	45.1
Nexttobe AB	33.9
Bo Liedberg	6.4%
UUAB	4.9%
UAF	2.8%

Other	
Founded	2002
Employees	5
How much funding in total has been raised in previous rounds?	2 M USD

TRACK RECORD AND EXPERTISE

- Lars Jonsson, managing director of the Uppsala University Holding Company (UUAB), has expertise in the commercialization of academic research.
- Bengt Ågerup, founder of Q-Med AB, and more recently of the investment company Nexttobe AB. He has expertise in investments and building successful companies in biotech.
- Lars Baltzer, Prof in organic chemistry at Uppsala University. He is the founder of ModPro AB.
- Björn Ekström, was the CEO of Pyrosequencing AB and Olink AB. He has expertise in managing startup companies.
- Bengt-Harald Jonsson, Prof in molecular biotechnology at Linköping University.
- Björn Wallmark was the VP of R&D CVGI, AstraZeneca. He has expertise in drug discovery and development.
- Christer Wikner, co-founder of Valueguard and Electroengine. He has expertise in developing startup companies.

BOARD OF DIRECTORS AND MANAGEMENT

Lars Jonsson, M.D.	Chairman
Bengt Ågerup, M.D.	Board member
Lars Baltzer, Prof, Ph D	Board member
Björn Ekström, Prof	Board member
Bengt-Harald Jonsson, Prof	Board member
Björn Wallmark, Ph D	Board member
Christer Wikner, M.D.	Board member
Lars Baltzer	CEO
Johan Viljanen	CSO

WHAT ARE WE LOOKING FOR?

- We seek 4-6 M USD for the development of two drug projects to advanced pre-clinical stage.
- Partnering in the development of two drug projects to advanced pre-clinical stage

Contact information

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NeoDynamics

Medical Equipment for Cancer Management

Challenge

- Improve accuracy of breast biopsies
- Increase patient comfort during biopsies
- Decrease health care costs

Our solution

- High-end biopsy device

Market Potential

- 1.7 million breast biopsies performed in US alone
- Reimbursed market place
- High single digit growth (~9%)

Company name: **NeoDynamics**
Category : **Medtech**
Sub category: **Diagnostic Technologies**
Location : **Stockholm**

Early development

Proof of concept

CE-marking

Commercialised

NeoDynamics

Medical Equipment for Cancer Management

CHALLENGE

Current breast biopsy procedures have numerous issues:

- Difficulty to accurately place the needle inside the tumor
- Frequent problems to obtain high quality samples
- Patient trauma due to needle shooting mechanism
- Possible dissemination of tumor cells
- Occurrence of bleeding

SOLUTION

- NeoDynamics has developed technologies that tackle these problems and is currently developing a high-end biopsy product incorporating these technologies
- A unique driving mechanism enables a precision placement of large-diameter sampling needles. The physician is able to accurately maneuver the needle inside the tissue aided by mechanical pulses. A novel needle design ensures high quality of samples and minimal risk of tumor cell dissemination and bleeding
- The product will ensure a more patient-friendly procedure. Better samples and accurate needle placement reduces need for re-sampling and leads to cost savings.

BUSINESS MODEL

- Biopsy needles are sold as disposables, i.e. single use item sales
- Launch markets are Germany and Sweden where NeoDynamics will use a dedicated sales force
- Product development is performed in close collaboration with a large specialist engineering company
- The complete technology portfolio has strong patent protection (Five patent families with 27 patents granted, and 12 patents pending)

MARKET

- Around 1.7 million breast biopsies are performed annually in the US alone
- High single digit growth (~9%) driven by screening programs and improvements of imaging technologies
- Reimbursed marketplace
- Competitors include Bard, Hologic and Devicor Medical Products

NeoDynamics

Medical Equipment for Cancer Management

PROGRESS

Development

- In final product development phase
- Strong clinical network both in Sweden and Germany, deeply involved in both product development as well as preparing for a clinical evaluation study which will commence second half of 2013

Next steps

- Market launch 2014
- Perform multi-centre clinical evaluation study and obtain CE-marking (planned for mid 2014)

OTHER INFORMATION

- NeoDynamics has been awarded one of the 20 most innovative companies in Sweden by the Swedish Institute, currently exhibited on a world wide tour
- Awarded 4 MSEK for product development by VINNOVA, a swedish government agency promoting innovation

Financials (USD)	2011	2010	2009
Revenue	0 M	0 M	0 M
EBIT	-0.3 M	-0.4 M	-0.2 M
Balance sheet total	2.7 M	2.3 M	1.7 M
Valuation	15 M	-	-

Five Largest Owners	Shares (%)
Brommaporten KB	20.86
Karolinska Development & KI Holding	20.72
Comair AB	20.19
Ramab Iggesund AB	15.85
Lars-Ove Håkansson	9.09

Other	
Founded	2004
Employees	6
How much funding in total has been raised in previous rounds?	5.5 M USD

TRACK RECORD AND EXPERTISE

- Peter Sellei was previously Head of Health Care Investments at Investor AB, previous board member of Biovtrum, Carmeda and deputy board member of Neuronova
- Magnus Olsen was previously head of Project Management Office at St. Jude Medical AB. More than 10 years experience in the field of MedTech R&D, Program Management, Process Development and Portfolio Management
- Jörgen Vrenning was previously CEO and manager of a hedge fund, numerous positions as fund manager, vast experience of small companies

BOARD OF DIRECTORS AND MANAGEMENT

Lars-Ove Håkansson	Chairman
Bengt Falk	Board member
Otto Skolling	Board member
Mats Carlsson	Board member
Hans Wiksell	Board member
Peter Sellei	CEO
Jörgen Vrenning	CFO
Magnus Olsen	CDO

WHAT ARE WE LOOKING FOR?

- To raise 5M USD in equity prior to market launch mid 2014 for clinical trials and build-up of sales and marketing infrastructure

Contact information

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Challenge

- To deliver cost efficient, fast and reliable quality control and health diagnoses

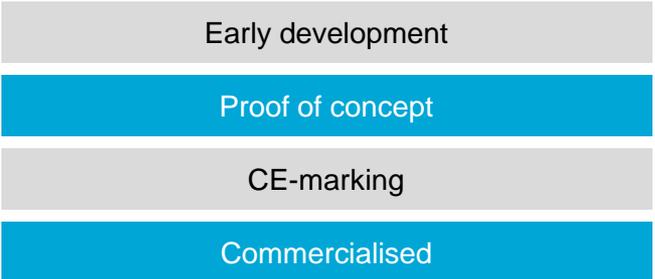
Our solution

- NoseLabs has developed an unique electronic nose that, like for example a man's and dog's sense of smell, detects and identifies various substances

Market Potential

- NoseLabs' electronic nose has been tested on a range of different scents, such as e.g. ovarian cancer with remarkably good results - it can save lives!

Company name: **NoseLabs AB**
Category : **Medtech and Quality Diagnostics**
Sub category: **Cancer Diagnostics**
Location : **Stockholm**





CHALLENGE

- Almost everyone and everything emits scents which can be used to identify and analyze the materials, objects and people.
- Today, it is complicated to analyze this scent. Gas chromatography is an excellent way to identify the composition of a gas or material.
- Unfortunately, the cost for gas chromatography is significant (often over one million dollars for a complete solution) and the diagnosis can be slow (takes approximately 10-30 min per run).

SOLUTION

- Another way to identify volatile compounds is via a so-called electronic nose.
- An electronic nose is a system of sensors, signal processing system and advanced algorithms which is used to identify different scents / smells – with the idea is to mimic the human olfactory system.
- NoseLabs has developed an electronic nose with superior capabilities
- The technology has a multitude of application areas (of which several tested) e.g. production quality control, food quality, detection of explosive, health diagnostics.

BUSINESS MODEL

- All development have so far been financed by the entrepreneurs
- Currently NoseLabs is engaged in developing a solution for a larger listed company, thus financing preparation for market launch
- NoseLabs is planning to license technology in application areas not in focus of the company
- In other areas, such as cancer diagnostics, NoseLabs intend to carry out the solution by partnering with other medtech company

MARKET AND TECHNOLOGY

- The technology is flexible and easy adoptable for a variety of application areas
- Our solution has a multitude of application areas (of which several tested) e.g. production quality control, food quality, detection of explosive, health diagnostics



PROGRESS

Development

- NoseLabs' electronic nose has been tested on a range of different scents, such as explosives, ovarian cancer and whiskey with remarkably good results.
- NoseLabs are currently developing a specialized electronic nose solution for a major food production and listed company

Next steps

- To continue trials in the cancer diagnostics area to get more proof of concepts
- Attract and contract partners and customers for various applications

OTHER INFORMATION

- NoseLabs selected as a Rising Star by Swedish American Life Science Summit, 2011
- Regional Winner Venture Cup, 2011
- NoseLab has been covered in the national news program "SVT Rapport", the medical journal "Dagens Medicin", the news magazine "Metro Teknik" and the scientific journal "Allt Om Vetenskap".
- Internationally, for example the Arab television station "Al Jazeera" (which reaches 220 million households), "Future Oncology" and "Bioscience Technology" have covered the innovation.

Five Largest Owners

Shares (%)

Thomas Lindblad	24.4
Stefan Rydström	18.9
Mattias Holmström	18.9
Tobias Olsson	18.9
Anacot AB	18.9

Other

Founded	2011
Employees	-
How much funding in total has been raised in previous rounds?	Financed by owners



TRACK RECORD AND EXPERTISE

- Professor Emeritus Thomas Lindblad at the Royal Institute of Technology in Stockholm, Sweden, is the innovator behind the electronic nose. Thomas has an impressive academical track-record and unique knowledge within the space of analysis with electronic nose
- The team also consists of entrepreneurs, with experience from management consultancies, law firms, running startups and raising capital (previously brought in +20 million SEK in fund-raisings).

BOARD OF DIRECTORS AND MANAGEMENT

Thomas Lindblad
Stefan Rydström
Solveig Rosenlind Armiento

WHAT ARE WE LOOKING FOR?

- Partnerships and collaborations
- Venture capital

Contact information

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Company name: **Oss-Q AB**
Category : **Medtech**
Sub category: **Implants for complex bone defects**
Location : **Uppsala**

Challenge

- High failure rate using conventional, inert implants for complex bone defects
- Inert implants is a life-long risk for complications for the patient, increasing hospital costs

Our solution

- Mosaik is bioactive: leads to effective integration implant - tissues
- Effective integration reduces rates of failures and late complications and reduces hospital costs

Market Potential

- Market potential for the lead indication is 500 MSEK
- The market potential for the Mosaik technology platform is several billion SEK

Early development

Proof of concept

CE-marking

Commercialised



CHALLENGE

- Cranial defects, eg due to trauma, tumour, failed bone flaps after neurosurgery, are today treated with implants based on inert materials such as PEEK, PMMA and titanium.
- The failure rate is high particularly in patients with risk factors, eg size of defect, presence of scar tissue, exposure to radiation, smoker.
- The problem with the inert materials is that they don't integrate with adjacent tissue and remains a risk for failure throughout the patient's life. If an implant fails, the risk for further failures increase significantly.
- Failed implants increases treatment cost by several times. Quality of life is severely diminished.

SOLUTION

- Oss-Q provides implants for complex bone defects
- Bone tissue grows onto the Mosaik material, thus it is osteoconductive.
- Bone ingrowth leads to effective integration of the implant in adjacent materials. This reduces the risk of complications. This improves quality of life for the patient and reduces costs for hospitals.

BUSINESS MODEL

- A combination of sales, from our lead CMF market, and royalties/license-milestone fees, from other orthopedic markets.
- Direct sales on our lead CMF market and through a strategic partner on other orthopedic markets.
- Based on our technology platform, we develop products with internal resources and close collaborations with academic partners (primarily the Karolinska University Hospital and Uppsala University Ångström Laboratory).
- Our technology platform is protected by patents covering the design, the material and process.

MARKET

- CMF market. Lead indication market size: 500 MSEK. Follow-up products market size: 2,000 MSEK.
- Other orthopedic market opportunities: several million SEK.
- The market is growing with the rest of the medtech market based eg on demographic change.
- Main competitors: J&J/Synthes, Stryker, Biomet, KLS Martin? The CMF market is of strategic importance for KLS Martin but not the others.

PROGRESS

Development

- Quality system
- Technical file
- Registration as custom-made product with competent authority (MDD, Annex VIII)
- First pilot patients with 2.5 years follow-up; excellent results
- Now developing clinical plan as a basis for expanded clinical testing

Next steps

- In Q1 2013, start expanded clinical testing in cranial defects according to clinical plan.
- Launch in Scandinavia and Germany in Q4 2014

Financials (SEK)	2011	2010	2009
Revenue	1.1M	NA	NA
EBIT	(0.3M)	NA	NA)
Balance sheet total	NA	NA	NA
Valuation	16.5M	NA	NA

Five Largest Owners	Shares (%)
Håkan Engqvist	18.05
Thomas Engstrand	18.05
Karolinska Development	14.26
Almi Invest	13.67
Bo Qwarnström	..9.41

Other	
Founded	2011
Employees	4 FTE´s
How much funding in total has been raised in previous rounds?	9 MSEK in first financing



TRACK RECORD AND EXPERTISE

- The board and management represents a wide, international experience and track record within business, development, clinical and regulatory aspects of orthopedics markets.

BOARD OF DIRECTORS AND MANAGEMENT

Anders Nordström	Chairman
Otto Skolling	Board member
Karin Meyer-Rosberg	Board member
Håkan Engqvist	Board member
Thomas Engstrand	Board member
Sten Dahlborg	Advisor
Bo Qwarnström	CEO
Håkan Engqvist	CSO
Thomas Engstrand	CMO

WHAT ARE WE LOOKING FOR?

- We are looking for one additional investor for the second financing round, to close in April/May 2013. The level of investment is 8-10 MSEK. This investment round will finance the launch in Scandinavia and Germany. Exit around 2017, probably based on a trade sale.
- We are looking for a strategic partner that is interested in collaborating in the development of orthopedic projects based on the Mosaik technology.

Contact information

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Company name: **Premune**
Category : **Biotechnology**
Sub category: **Allergy prevention**
Location : **Stockholm**

Challenge

- A rising allergy epidemic is evolving among both humans and companion animals. Today, an estimated 20-25% of all veterinary visits are related to allergies

Our solution

- Premune has identified a bacterial protein that activates the immune system during the first weeks of life, preventing future development of allergies

Market Potential

Veterinary application:

- 12 million dogs born annually in USA, EU, Japan. 10-15 percent of all dogs develop allergies, requiring a lifelong treatment. Among high-risk breeds, 35-50 percent develop allergy.

Human application:

- 30-40 percent of the world population is affected by one or more allergic disorders.

Early development

Proof of concept

CE-marking

Commercialised



CHALLENGE

- Today's hygienic lifestyle with a reduced exposure to bacteria during infancy causes a rising allergy epidemic
- 30-40 percent of the world population is affected by one or more allergic disorders¹. By 2015 half of all Europeans are estimated to suffer from allergies².
- Factors associated with increasing incidence in humans are commonly found in the environment of dogs. The last 7 years, dog allergy diagnoses have increased by 90%. An estimated 20-25% of all veterinary visits are related to allergies³.
- Dog allergies require lifelong treatment.

SOLUTION

- Premune has identified a bacterial protein that replicates exposure to hundreds of bacteria, compensating for an all too sterile environment.
- Oral administration of the protein in the first weeks after birth demonstrates an activation of immunological tolerance which prevents future allergy development
- On-going clinical trials on dogs, in collaboration with SLU (Swedish University of Agricultural Sciences)
- Mechanism also expected to prevent autoimmune and inflammatory diseases, such as type I diabetes and gluten intolerance

BUSINESS MODEL

Veterinary application

- Development of veterinary products (initially for dogs).
- Industrial partnerships for licensing agreements.
- Patents cover the use of any bacterial superantigen for prevention of allergy, autoimmune and inflammatory diseases in companion animals. Filed in 2012, currently awaiting first office action.

Human applications

- Focus on human applications of the technology
- Patent covering the use of any bacterial superantigen for prevention of allergy, autoimmune and inflammatory diseases. Patent approved in the EU, awaiting final office action in the US and Canada.

MARKET

- Approx. 12 million puppies born annually in the US, EU and Japan, providing a market of 4 billion EUR.
- 10-15%⁴ of all dogs, irrespective of breed, develop allergies.
- Among high-risk breeds⁵ veterinarians estimate between 35-50 percent⁶ develop allergy. 6 out of Top10 breeds in the USA are classified as high-risk to develop allergy⁷.
- Veterinarians estimate the additional cost of owning an allergic dog exceeds 6000€ over the lifetime of the dog⁸.
- Premune aims to provide dog owners with the world's first sustainable insurance of canine allergy development



PROGRESS

Veterinary application:

- Clinical safety and dose finding study (dog) finalized in Q1-2013
- Production of GMP material in 2013
- Clinical field trials (safety and efficiency) finalized in 2016
- Market authorization through EMA and USDA in 2016
- Estimated market launch 2016-2017

Human application:

- Human application to be initiated in 2013

OTHER INFORMATION

- Founded by Serendipity Innovations and researchers from Gothenburg University and Sahlgrenska University Hospital
- Discovery based from 15 years of research mapping the colonization patterns of infant gut bacterial flora.
- Collaborating with Swedish University of Agricultural Science and Western Animal Hospital, leading veterinary hospital in Sweden

Financial (USD)	2012	2011	2009
Revenue	-	n/a	n/a
EBIT	(0.2M)	n/a	n/a
Balance sheet total	0.6M	n/a	n/a
Valuation	8.2M	n/a	n/a

Five Largest Owners	Shares (%)
Serendipity Ixora	79.7
Viktor Karlsson, CEO	5.2
Anders Wall through foundation	2.6
Annika Bergström, COO	1.8
Amin Omrani, Boardmember	1.8

Other	
Founded	2011-12-01
Employees	2
How much funding in total has been raised in previous rounds?	0.9M USD



TRACK RECORD AND EXPERTISE

Premune is building on leading research in Bacteriology and Immunology at Sahlgrenska University Hospital and University of Gothenburg. Discovery from 15 years of human birth cohort studies. Animal studies confirming the protein's effect on allergy prevention.

- Dr. Agnes Wold is a chief physician and professor in Clinical Bacteriology at University of Gothenburg. In 2012 Dr. Wold was awarded the Gothenburg Medal of Merit, for her research on allergy prevention.
- Dr. Ingegerd Adlerberth is chief physician and adjunct professor in Clinical Bacteriology at University of Gothenburg
- Dr. Anna Rudin is an adjunct professor in Rheumatology and Inflammatory Research at University of Gothenburg. Dr. Rudin is both immunologist and consultant in rheumatology

BOARD OF DIRECTORS AND MANAGEMENT

Saeid Esmaeilzadeh, Ph.D.	Chairman
Alf Lindberg, M.D., Ph.D.	Board member
Jeppe Magnusson, Ph.D.	Board member
Agnes Wold, M.D., Ph.D.	Board member
Amin Omrani	Board member

Viktor Karlsson	CEO
Annika Bergström	COO

WHAT ARE WE LOOKING FOR?

- Premune intends to work in close collaboration with industrial partners in order to develop next generation of allergy products.
- Potential project partners should have expertise in the field of human- or veterinary pharmaceuticals. Nutritional supplements as well as pet therapeutic nutrition are other interesting areas.

Contact information

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Challenge

- Sepsis kills people in hours
- Diagnostic methods of today require days

Our solution

- Q-linea's method will give answer in hours

Market Potential

- European market > 1 billion Euro
- US market > 1 billion USD

Company name: **Q-linea AB**
Category : **Medtech**
Sub category: **Human diagnostics, BSI**
Location : **Uppsala**

Early development

Proof of concept

CE-marking

Commercialised



CHALLENGE

- Sepsis is a mortal condition where time to targeted treatment is crucial; mortality increases with 7% per hour for untreated severe sepsis. Hence fast diagnostics is highly important in order to give the patient targeted treatment.
- The current gold standard method available for diagnosing sepsis requires 2-3 days for analysis.
- Sepsis treatment is also challenged by the increasing number of antibiotics resistant pathogens.

SOLUTION

- The Q-linea diagnostic method will give reliable information on pathogen species and its susceptibility to antimicrobial substances within a working day, faster than any competitor on the market today. This will enable the physician to target the treatment significantly faster than today.
- The Q-linea instrument will be fully automated with a sample throughput matching the needs of a medium sized hospital.

BUSINESS MODEL

- The Q-linea revenue will mainly be generated by sales of diagnostic kits. Instrument sale models will likely differ between markets.
- Product marketing and distribution strategies will be defined during 2013.
- The instrument and kits are developed in-house, manufacturing will be performed by 3rd party suppliers.
- The molecular biology core technology is exclusively licensed from Olink AB. Q-linea is currently preparing several system/instrument patents.

MARKET

- The estimated net sales in the market for pathogen identification and antibiotics susceptibility testing (AST) within the area of sepsis in Europe is estimated to more than 1 billion Euros. USA more than 1 bUSD.
- Main competitors are
 - bioMérieux, BD
 - Gold standard, 2-3 days analysis time
 - Roche, Seegene and SIRS-lab.
 - Pathogen ID in 6-12 hours, no AST
 - Manual operation

PROGRESS

Development

- Q-linea is currently performing a business and technology proof-of-concept on the method.
- Q-linea has previously supplied genetic identification systems for security applications

Next steps

- The product development phase is planned to be started in early 2013.



OTHER INFORMATION

- Q-linea has since 2008 been active in the area of biosecurity, delivering technology and competence to national and international customers.
- Q-linea was in 2011 awarded Deloitte Rising star and made it into the 2012 NyTeknik list of 33 most promising innovators.
- Q-linea has been self financed until 2012 when the company extended its business areas to include human diagnostics. Prior, the company worked within major defence and security contracts.

Other

Founded	2008
Employees	14
How much funding in total has been raised in previous rounds?	1,8M USD



TRACK RECORD AND EXPERTISE

- Prof. Ulf Landegren has previously founded several biotech companies including, Olink AB, Parallel Bioscience
- *Prof. Mats Nilsson* has previously founded several biotech companies including, Olink AB, Halo Genomics and Q-linea AB
- Dr. Jonas Jarvius has previously founded Olink AB and Q-linea AB
- Jon Heimer and Erika Kjellberg Eriksson has previously had top position within Q-med and are now partners of nxt2b a private venture capital company founded by Dr. Bengt Ågerup

BOARD OF DIRECTORS AND MANAGEMENT

Prof. Mats Nilsson	Chairman
Pror. Ulf Landegren	Board member
Jon Heimer	Board member
Erika Kjellberg-Eriksson	Board member
Dr. Jonas Jarvius	Board member
Dr. Jonas Jarvius	CEO
Ulrika Stolpe	CFO

WHAT ARE WE LOOKING FOR?

- We currently do not need additional funding , but are of course interested in creating long term financial collaborations
- We are actively looking for collaborative development with companies with expertise within sample preparation & reagent formulation
- We are interested in extended collaboration with hospitals for future clinical trials within sepsis diagnostics.

Contact information

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Company name: **Senzime AB**
Category : **Medtech**
Sub category: **Monitoring Devices/Hospital Equipment**
Location : **Uppsala**

Challenge

- Patients benefit if blood glucose can be kept at normal levels during critical care surgery
- Hospitals implement Tight Glycemic Control schemes, but lack the measurement tools

Our solution

- Device/instrument to measure glucose continuously in whole blood
- A proprietary enzyme-based measuring platform technology

Market Potential

- More than 55 000 patients at critical care units every day in the US
- Multi billion US dollar market potential

Early development

Proof of concept

CE-marking

Commercialised

Senzime

CHALLENGE

- Van de Berge (2001) showed that patients undergoing thoracic surgery benefitted greatly if their blood glucose levels were kept in a narrow 'normal' band.
- Consequently, tight glycemic control (TGC) is being implemented at hospitals all over the world
- Current technologies (finger pricking, continuous non-blood measurement) do not meet the requirements of surgeons. Challenge is to monitor glucose continuously *and* in whole blood.

SOLUTION

- Senzime has developed an enzyme based measurement platform that can monitor glucose continuously during the whole patient cycle.
- *Specific* monitoring of glucose with *no interference* from pharmaceuticals. *Fully automatic* with minimal handling for staff. Providing values *every 5 minutes for +8hrs*.
- We have solved the problem of measuring continuously in whole blood.

BUSINESS MODEL

- Traditional hospital model with bench-top instrument using disposable sensors and auxiliary equipment. Disposables drive revenue stream.
- Commercialization through partners and distributors
- In-house development, out-sourced production and assembly
- IP around measurement platform. FOP analysis of IP has been made with good results.

MARKET

- Market potential in the multi billion US dollar range
- Hospital segment is where growth is happening for glucose measurements today
- Competitors include major medical device and hospital equipment manufacturers, such as Medtronic, Edwards, etc. but they are also potential future partners. Many small technology based companies have developed their own unique solution. Nothing has yet hit the market.



PROGRESS

Development

- Commercialized in the bioreactor segment through distributors (Dutch company Applikon)
- Data from 25 patients and volunteers
- 18-24 month plan for developing a stand alone CE marked device to be launched in hospital market.

Next steps

- Further leverage distributor relationship
- Present clinical data to partners
- Develop stand-alone hospital market instrument

OTHER INFORMATION

- Senzime is listed on Swedish small cap exchange Aktietorget
- Business development consultant Tech Gen Intl. UK has been commissioned to drive partnership discussions for clinical market

Financials (USD)	2011	2010	2009
Revenue	0.27M	0.25M	0.25M
EBIT	-0.31M	-0.35M	-0.25M
Balance sheet total	4.7M	3.86M	3.1M
Valuation (Oct 31 2012)	5.1M	-	-

Five Largest Owners	Shares (%)
Danica	17.8
Adam Dahlberg (C)	15.1
Ebba Fischer (C)	11.1
Margareta Nilsson (C)	7.3
Anna Manhausen (C)	6.7

Other	
Founded	1999
Employees	5
How much funding in total has been raised in previous rounds?	Not disclosed

(C) = member of the Crafoord family



BOARD OF DIRECTORS AND MANAGEMENT

Adam Dahlberg	Chairman
Ulf Lindskog	Board member
Prof Lars Wiklund	Board member
Dr Henrik Nittmar	Board member
Staffan Boström	CEO
Thomas Carlsson	CSO

WHAT ARE WE LOOKING FOR?

- Senzime is looking for both new investors and industrial partners with knowledge and resources to support the market launch of SENZ-200G (continuous glucose measurement in the hospital setting)
- Investment need of 5-10M USD to finalize clinical trial of SENZ-200G and initiate the launch in the EU. Senzime is listed on Swedish small cap list. Exit through industrial acquisition or through re-listing on mid-cap.

Contact information

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Challenge

- Unsolved issues in Life Science require new Biomaterial

Our solution

- Recombinant Spider Silk in fiber, film or foam format
- Functionization technology of Spiber material for application optimization
- Biocompatible, chemically stable and mechanically strong material

Market Potential

- Enabling for Stem Cell Research and Therapies
- Enabling for Diabetes Transplantation of Islets of Langerhans and Betacells
- Enabling in Wound care, Implant s and many more

Company name: **Spiber Technologies AB**
Category : **Life Science**
Sub category: **Biomaterial**
Location : **Uppsala**

Early development

Proof of concept

CE-marking

Commercialised



CHALLENGE

- Numerous unsolved issues in life science and healthcare require a biomaterial that is mechanically strong, yet elastic, biocompatible, and adaptable to various formats and functions. In spite of enormous efforts no such material fulfilling all of the needs has yet been developed.

SOLUTION

- Spiber Technologies can produce recombinant spider silk in several formats such as fibres, films or foam. The material has outstanding mechanical strength and elasticity, as well as chemical stability combined with biocompatibility. Furthermore Spiber has developed technology for functionalization of the material with additional molecules such as growth factors, cell binding motifs and generally any peptides or proteins. This makes the material uniquely adoptable to numerous applications. and enable solutions to yet unsolved issues and bottlenecks.

BUSINESS MODEL

- Spibers recombinant spider silk is developed and adapted to the specific needs of each application in close collaboration with worlds leading experts in respective field. When POC has been established Spiber will out licence selected applications to leading players per field, enabling early revenues in terms of upfront and milestone payments followed by royalties. A few of the highest value applications will be kept for maximum value creation through in-house development and commercialization.

MARKET

- Spibers material is currently developed in several application projects aiming for POC in the following fields:
- Stem Cell Culture for regenerative medicine: A billion USD market
- Treatment of Type 1 diabetics: A billion USD market
- Wound care, Coating of implants, Sensitivity enhancement in diagnostics are additional market being addressed by POC studies and collaborations.



PROGRESS

Development

- Reproducible production for application projects in place. Scaleup to GMP process underway
- >10 major application projects for POC in collaborations and/or inhouse

Next steps

- Complete the ongoing application projects
- Package selected applications for out licensing
- Focus internally on few highest value applications
- Expand into more application projects

OTHER INFORMATION

- Company works in close integration with founding academic institutions enabling a significant additional number of key resources contributing to Spiber Technologies development.
- Key strategic collaboration partners include Karolinska Institutet, Biocrine AB, Medizinische Hochschule Hannover, Rockefeller University, Immunovia AB, Create Health Translational Cancer Center in Lund and others

Financials (USD)	2011	2010	2009
Revenue	0,05M	0M	0,15M
EBIT	-0,6M	-0,6M	-0,1M
Balance sheet total	2M	2,7M	0,3M
Valuation	15M	-	-

Five Largest Owners	Shares (%)
Kenth Petersson	30,5%
Nordea Luxemburg	10,1%
Stena Finans AB	9,9%
Staffan Rasjö	9,9%
My Hedhammar	4,0%

Other	
Founded	2008
Employees	7
How much funding in total has been raised in previous rounds?	3,2M USD



TRACK RECORD AND EXPERTISE

- Mats Grahn, COO Previously Corporate Vice President, Global Marketing at Dako A/S and Vice President, GE Healthcare Life Sciences. More than 20 years' experience of senior positions in the biotechnological and biopharmaceutical industries.
- My Hedhammar, Co-Founder and CSO Associate Professor at the Swedish University of Agricultural Sciences (SLU). Ph.D. in Biotechnology. M.Sc. in Chemistry. More than 10 years' experience of academic research and project management.
- Kristina Martinell, Head of Production More than 20 years' experience of biotech processes of which 13 years in Pharmacia/BioVitrum/Octopharma AB

BOARD OF DIRECTORS AND MANAGEMENT

Kenth Petersson	Chairman
Peter Benson	Board member
My Hedhammar	Board member
Andreas Claesson	Board member
Monika Hagman	CEO/CFO
Mats Grahn	COO
My Hedhammar	CSO

WHAT ARE WE LOOKING FOR?

Industrial or Academic Centre of Excellence collaborations within the following areas:

- Stem Cell Culture Applications
- Nerve Regeneration
- Coating of Implants
- Wound care

Contact information

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Company name: **Xbrane Bioscience**
Category : **Biotech**
Sub category: **Protein Expression**
Location : **Stockholm**

Challenge

- Expression of hard-to-express proteins
- Maximize the production quantity (yield)
- Production costs

Our solution

- Tunable Protein Expression System
- Inclusion Body Tag (makes proteins form inclusion bodies)

Market Potential

- Over 50% of new pharmaceuticals are based on proteins
- Biopharmaceuticals market \$125B in 2009
- The biologics contract manufacturing market was in 2009 estimated to \$2.6 billion with an annual growth rate of 16%
- The market for protein production systems is rapidly increasing and is estimated to 400 million USD

Early development

Proof of concept

CE-marking

Commercialised



CHALLENGE

More than 50% of all pharmaceuticals target proteins, and the majority of all new pharmaceuticals and vaccines are protein based. In research and development and production of these protein-based therapeutics, finding the optimal conditions for protein production is often a time-consuming and difficult process.

Protein based industries are seeking to streamline, make production of proteins more efficient and lower the costs of production.

SOLUTION

Xbrane Bioscience has two tightly controlled bacterial protein expression systems that enable expression of host-toxic and challenging proteins as well as high yields of soluble proteins.

The unique tuneable feature of the systems allow the user to optimize the system for different proteins.

Maximized yields equals a more cost-effective production.

BUSINESS MODEL

Xbrane's proprietary technologies are licenced academic, commercial research, and production purposes.

Xbrane provides protein expression services and consulting.

The company distributes its products via New England Biolabs, DNA 2.0 and directly from Xbrane itself.

Xbrane has a granted patent for its Protein Expression System which covers EU and the US, one patent pending, and one patent application under construction.

Xbrane has also a licenced patent for a complementary product from Vaxiion Therapeutics.

MARKET

The market value for biopharmaceuticals was \$125 billion in 2009. The production industry turnover equaled \$21 billion in 2008 with an annual growth of 12%.

The market for human biological medicines was estimated to \$80 billion in 2008 with growth rate of 13%.

The biologics contract manufacturing market was in 2009 estimated to \$2.6 billion with an annual growth rate of 16%.

Major competitors are companies like Life Technologies, Qiagen and Lonza.



PROGRESS

Development

- Xbrane is continuously working to improve its products and portfolio. This is reflected in new patent applications being filed for novel technologies within protein expression.

Next steps

- Xbrane is looking to extend its offer to its customers by providing them with production services and world-leading expertise within the field of protein expression.
- Develop further the licensing business together with the partners

OTHER INFORMATION

- Xbrane Bioscience AB was founded in early 2008 and is a spin-off from Center for Biomembrane Research at the Arrhenius Laboratories at Stockholm University.
- The company has distribution agreements with New England Biolabs and DNA 2.0.

<i>Financials (USD)</i>	2011	2010	2009
Revenue	21 000	16 600	7 000
EBIT	-528000	-153750	1500
Balance sheet total	676000	200680	367000
Valuation	7.5M	-	-

<i>Five Largest Owners</i>	Shares (%)
Serendipity Innovations	32.7
Jan-Willem de Gier	15.5
Sjouke Luirink	15.5
Samuel Wagner	6.1
Mårten Hellberg	6.1

<i>Other</i>	
Founded	2008
Employees	2
How much funding in total has been raised in previous rounds?	1M USD PE 1M USD in Grants



TRACK RECORD AND EXPERTISE

Through Prof. Alf Lindberg Xbrane has access to extensive experience in vaccine development. Alf has held positions like CSO and Director of R&D at Wyeth Vaccines and Sanofi Pasteur.

Dr. Joakim Tedroff is Medical Doctor and Professor in neurology. He was the co-founder of the successful research company Carlsson Research which was acquired by NeuroSearch in 2006.

Prof. Jan-Willem de Gier is an internationally recognized scientist in the field of membrane protein research and co-founder of Xbrane.

BOARD OF DIRECTORS AND MANAGEMENT

Prof. Saeid Esmaeilzadeh	Chairman
Prof. Alf Lindberg	Board member
Dr. Joakim Tedroff	Board member
Prof. Jan-Willem de Gier	Board member

Siavash Bashiri	CEO
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WHAT ARE WE LOOKING FOR?

- Xbrane is looking for funding as well as strategic partners to expand its services in protein production.
- The company is planning to raise 1-2MUSD to finance further development and investments in equipment.

Contact information

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Company name: **XSpray**
Category : **Pharmaceutical dry particle formulation**
Sub category: **Protein Kinase Inhibitor formulation**
Location : **Stockholm**

Challenge

- Protein Kinase Inhibitors (PKIs) are poorly soluble and consequently often plagued by variable absorption, low and erratic bioavailability and unpredictable therapeutic outcome.

Our solution

XSpray's RightSize technology is able to formulate these compounds with:

- Significantly better oral bioavailability over a broad pH range
- Less pH-dependent absorption & bioavailability
- Potential to enable a lower oral doses

Market Potential

- Global PKI market was nearly B\$29 in 2011
- There are 935 open clinical studies for PKIs
- The majority of PKIs are poorly soluble, proving difficult, slow and expensive to formulate successful pharmaceuticals today.

Early development

Proof of concept

CE-marking

Commercialized

CHALLENGE

- PKIs are an important class of pharmaceuticals that have proved themselves in cancer and show promise in other indications. However their inherent low and variable oral bioavailability when formulated with existing technologies presents a significant challenge to drug development.
- Recent studies estimate that 25 -75 % of patients treated with PKI drugs do not get full therapeutic effect because of pH dependent absorption caused by drug-drug interactions with medications altering the stomach pH.

SOLUTION

- XSpray's RightSize™ platform technology.
- Compatibility with high boiling point solvents enables formulation of PKIs that challenge other technologies it also enables faster development of more soluble PKIs that demonstrate better oral bioavailability.
- RightSize technology has formulated 7 different PKIs quickly, has demonstrated improved bioavailability for nilotinib *in-vivo* and improved solubility for all 7 *in-vitro*.

BUSINESS MODEL

- RightSize technology is available
 - For PKI development through a limited number of collaborations and partnerships .
 - For sale as a platform technology
- Business development of Tadalafil and Tiotropium is currently ongoing through a partnership with Cerbios.
- Patents have been issued for the RightSize technology. Two complementary technology and a PKI platform IP patents have been filed .

MARKET

- The global kinase inhibitors market reached nearly \$29.1 billion in 2011. The market is expected to reach \$40.2 billion by 2016, a compound annual growth rate (CAGR) of 6.7%
- Each year, 6.5 million people are diagnosed with cancer (Ekman et al., Acta Oncologica, 50(3): p. 441-7., 2011.
- Most big pharma are developing PKIs and require a technology that will help to speed up the development of a better product.
- There are 935 open clinical studies for kinase inhibitors.

PROGRESS

Development

- The technology is available for evaluation by partners or purchase as a technology based product platform.

Next steps

- Further dog studies to confirm a gastric pH independent absorption profile.
- *In-vivo* proof for PKI product 2 .
- Four NCE PKI feasibility projects with pharmaceutical companies by Q1 2014
- Proof of principle in man, XSpray Nilotinib vs. Tassigna in a single dose cross over study.

Five Largest Owners

Shares (%)

Karolinska Development	59,3
Östersjöstiftelsen	18.7
KCIF Co-investment Fund KB	9.8
Founders and private	12,2

Other

Founded	2003
Employees	6

TRACK RECORD AND EXPERTISE

- Per Andersson, Ph.D. joined XSpray in September 2006 as CEO. He has more than 10 years successful executive management experience in research, development and commercial operations. Previously, he was Science Director of Gyros and a senior scientist at Amersham Pharmacia Biotech. His commercial experience includes business development and management of long term international partnerships.
- Mustafa Demirbüker, Ph.D. co-founded XSpray in November 2003 and is CSO, he has over 15 years broad experience in the international pharmaceutical industry, including 10 years as a senior consultant for Astra Zeneca where he was responsible for the early development of industrial pharmaceutical particle formation using Supercritical Fluids.

BOARD OF DIRECTORS AND MANAGEMENT

Ingmar Aldén	Chairman
Otto Skolling	Board member
Hans Arwidsson, Ph.D.	Board member
Håkan Nykvist, Ph.D.	Board member
Bill Tunbrant	Board member
Mikael Bisrat, Ph.D.	Board member
Per Andersson, PhD	CEO

WHAT ARE WE LOOKING FOR?

- Investment in the range of 5M USD to exit the PKI product platform within 3 years and to exit developed inhalation products and added value generic products

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