Healthy Ideas, Healthy Returns

Final Program

&

Summary propositions

Version 6 May 2019

8 May 2019, Ghent Belgium

Participating institutions

Preferred partner

Partners

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Final program of the afternoon

4th edition Healthy Ideas, Healthy Returns

Wednesday 8 May 2019, 12.00 – 18.00

Ghent Marriott, Korenlei 10, 9000 Gent, Belgium; rooms Korenlei 1 & 2, www.marriottghent.be

12.00 Registration desk open; welcome with coffee / tea and a small sandwich.

13.00 Start of programme; word of welcome and opening remarks - **room closes**

13.10	- **TRinCE™**	Stephan Stremersch	UGent
	- **ExoVectory**	Jetty van Ginkel	Erasmus MC
	- Elevator pitch: **Comunicare**	Alfred Attipoe	University of Liege
	- Elevator pitch: **Lab4All**	Finub James Shirley	IMEC
	- **Immagene**	Maarten Ligtenberg	Oncode institute
	- **IOVA Biopharmaceuticals**	Marc van Moorsel	Utrecht MC

14.30 Break (incl 5 min address J-Labs)

15.00	- **SPIOMET**	Bart Geers	KU Leuven
	- **Meliora Medical**	Martin Harries	TU Eindhoven
	- Elevator pitch: **Pan Cancer T**	Dora Hammerl	Erasmus MC
	- **Antelope DX**	Hilde Windels	UGent
	- **SparXells**	Karim Vermaelen	UGent
	- **Comforthod**	Arthur J. Kievit	Amsterdam UMC

16.25 Closing remarks

16.30 Networking drinks & bites

18.00 End of programme

Attendance is upon registration only.

Pitches will last for a maximum of 8 min. presentation, followed by 5 min Q&A (+ 2 min change)

Elevator pitches contain of a 5 min presentation plus 2 min Q&A (+2 min change)

Due to the density of the programme we must strictly adhere to the schedule. There will be plenty of time afterwards for further questions and for exchanging contact information to follow up at a later time.

TRinCE™

University: UGent

Presenter: Stephan Stremersch

Summery:

TRinCE™ is a Ghent University spinoff initiative (**establishment of the company is planned for Q4 2019**) dedicated to advancing cell-based science and therapeutics by facilitating delivery of compounds into cells in vitro or ex vivo. With a strong team of experts in intracellular delivery and its proprietary LumiPore™ platform, covered by a portfolio of pending patents, the company provides unpreceded control and accuracy over cell delivery issues. The technology allows to functionally deliver a broad spectrum of compounds, including proteins, RNA and QDots, in a plethora of cell types, including primary cells, with minimal toxicity and limited cell manipulation. In addition, with its unique CELLect technology, it is the first transfection platform that allows to image, identify and subsequently deliver a compound to specific cell subpopulations with single cell resolution.

Altering the phenotype/genotype by delivering synthetic compounds into cells is an important aspect in all biotech related activities ranging from basic cell research (e.g. structural imaging, gene function studies) to clinical applications (biomolecule production, CART-cell therapy, tissue engineering). The currently available delivery technologies lack efficiency in (clinically) relevant cell types. Given the many biotech applications hitting the clinical market we believe there is an important window of opportunity for a new, performant transfection technology.

TRinCE™ aims to position itself as a device and reagent provider in the global market of transfection technologies. Using a razor blade business model, it will launch two device types with dedicated reagents into the R&D life science market (Q1 2020), both for use in industrial as well as academic applications. For the mid-long term, TRinCE™ will further develop the technology towards implementation in the clinical production process of cell-based therapies.

TRinCE™ is seeking to **raise €2.9 million in a series A** by Q4 2019 to support the commercial launch of its product portfolio (devices and dedicated reagents) for the R&D market. Current investments in the technology are non-dilutive grants and sum up to €4.6million for research plus €620 000 valorization oriented funding.

ExoVectory - Optimal delivery to ensure effective treatment of cancer & more

Expected founding date: Q2 2019

Equity funding to date: € 0,-

Cells of our body secrete tiny vesicles, called exosomes, with powerful properties to deliver biological payload over long distances. ExoVectory (spin-out from the Erasmus MC, Rotterdam) uses unique packaging technology to load exosomes with therapeutic DNA. Proofs-of-concept have been obtained for cancer treatment, including deep delivery towards glioblastoma cells into the brain.

Incredibly long DNA constructs can be delivered, including full genomes of cancer-killing (oncolytic) viruses. ExoVectory's ability to incorporate long DNA also opens unique opportunities in the field of genome engineering, enabling better delivery of molecular scissor tools, such as CRISPR-Cas. ExoVectory's mission is to translate its technology towards improved treatment of cancers and genetic diseases. We currently target glioblastoma, metastasized prostate cancer and pancreatic cancer.

To target these diseases, ExoVectory is currently exploring and comparing two product lines:

- Purified loaded exosomes, for local and systemic delivery
- Loaded exosome producing cell patches for local implantation

ExoVectory will require an initial investment of € 1 million to reach *in vivo* proof of concept for which we identified the following milestones:

- *In vitro* comparison, in 2D and 3D, of delivery of payload by purified exosomes and implantable exosome producer cells to traditional viral vectors
- *In vivo* comparison of viral vector delivery and ExoVectory exosome delivery system
- Show improvement of treatment in glioblastoma, metastasized prostate cancer and pancreatic cancer mouse models

We expect to an additional investment of € 1.5 million will be needed to get the product ready for a phase I/II clinical trial. The total budget required to prepare our product for out-licensing is expected to remain under € 7 million. The income generated through out-licensing will feed into the further development of ExoVectory's platform technology.

Comunicare

Comunicare Solutions SA is a spin-off of the University of Liege. The company develops COMUNICARE, a **software solution** that enables a **better communication between patients and care givers** by enforcing patient education, literacy, therapeutic compliance. The solution leverages on a mobile application for patients and the entourage to provide data analytics to care givers based on patient reported outcomes. COMUNICARE is the ideal solution for patient support programs and quality of life in the context of chronic diseases. The ultimate goal is to provide data analytics to care providers and to medical/pharmaceutical research. The first pilot projects are carried out in oncology and cardiology at the University Hospital of Liège and the University Hospital Saint-Pierre of Brussels.

PRESENTATION	
Legal form	SA
Constitution date	December 28, 2017
Location	Rue Bois Saint-Jean 15, B-4130 Seraing
FTE	3
Shareholders	• 34% Founders • 37% Private investors • 28% Institutional investors (Meusinvest/Spinventure, University of Liège)
Share capital	350 k€
Web site	www.comunicare.be
Management team and competences	• Alfred ATTIPOE, CEO (Ph.D, MBA, previously consultant in information technology management, data analytics, decision automation, head of IT and project manager in the healthcare) • Philippe de BROCQUEVILLE, president of the board (Head of Asset Management, Degroof Petercam) • Professor Philippe COUCKE, scientific advisor (Head of radiotherapy, University Hospital of Liege) • Joanna TYREKIDIS, administrator (Meusinvest)

KEY ACHIEVEMENTS
• Design of the solution, in collaboration with Liege University Hospital • Development of a **functional prototype** (supported by Walloon Region) • Launch of partly financed pilot projects (Solidaris, Brussels Saint-Pierre Hospital, CHIREC) • Uprising market traction • Development of partnerships with different actors (Abrumet, RSW, EORTC, Cancer Foundation, Solidaris, etc.)

BUSINESS MODEL
• Direct **sale to hospitals** with a revenue model based on integration and licenses > reduction of administrative costs and strong improvement of patients' services • Contribution of **third-party**, e.g. health insurances > proposition of higher-added value services to patients • Revenue model to be created with pharmaceutical companies and research institutions in order to provide relevant information for research activities > improvement of drug compliance and data collection • Revenues coming from consulting and data-analysis

FINANCIAL NEED AND REQUIRED EXPERTISE
• Total financial need: **800 k€** • Looking for partnership of different types: - Co-development of disease-specific patient information and empowerment programs based on COMUNICAI - White-labelling of COMUNICARE to support pharmacological studies - Co-marketing activities to promote COMUNICARE towards hospitals - Data analysis and report based on COMUNICARE patient outcomes

Lab4All Summary

A wide variety of life saving protein drugs, like therapeutic antibodies to treat cancer and diabetes drugs such as insulin, are produced in bioreactors. The key to achieving high yields and minimizing batch to batch variability has been the use of identical clones as the starting cells and strict monitoring of the production process. Therefore, in the traditional bioprocess, as long as the physical and chemical conditions within the bioreactor are maintained constant, the produced therapeutics should be consistent as well. While simply monitoring the physical and chemical conditions within the bioreactor has been adequate to control these bioprocesses reliably, it is complemented with immunoassays checking the quality of the therapeutic proteins. However, to date no solution exists to measure the quantity and quality of the therapeutic proteins within the bioreactor itself.

The advent of personalized medicine has thrown a wrench into the traditional bioprocess methodology because the starting cells come from the patient and cells from different patients behave differently. Therefore, simply monitoring the physical and chemical conditions of the bioreactor contents isn't enough anymore, and the offline testing of the produce quality is no longer sufficient/desirable. It has become important to understand the condition that the cells are in at any given moment of time. Measuring the relative concentrations of a few proteins secreted by these cells gives a good indication of their condition. However, current techniques that are used to make these protein measurements are mostly manual and take from a few hours to an entire day to generate results. This is too slow and doesn't give the user much time to react to changes. Moreover, their large footprint and therefore the inability to deploy these devices next to each bioreactor hampers the ability to fully automate the entire process. Poor automation will become a significant bottleneck when thousands of patient cells will be processed in thousands of bioreactors simultaneously..

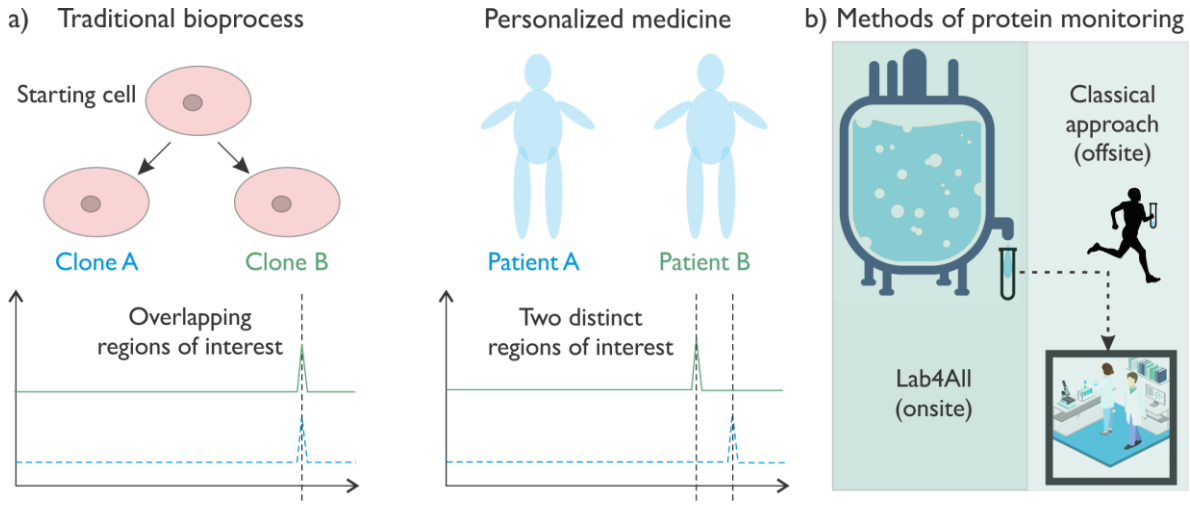

Figure 1. a) Difference between the traditional bioprocess and personalized medicine. In the traditional bioprocess, once the process is optimized for a specific cell, the clones behave in the same way as long as the process conditions are maintained accurately. In personalized medicine, the difference in cells from different individuals also causes the process to behave differently. b) Difference between current methods of protein monitoring and the proposed Lab4All technique.

The field of personalized medicine is projected to explode into a billion dollar industry in the next few years. We have a novel patented technology to create a fluorescence biosensor that is small, inexpensive, sensitive with high specificity, fully automated, multiplexed and can return results in about 5 minutes, while measuring the quality of the produce within the bioreactor instead of in a separate lab.

Founding date: Not applicable

Equity funding to date: None. Seeking funding

Amount of funding sought: 9 million Euros in 2 financing rounds (5 + 4)

Immagene

Immagene is a spin-off from the Netherlands Cancer Institute and Oncode Institute, focusing on unleashing the full potential of immunotherapy in cancer patients. Whereas immunotherapy has shown great potential, it only leads to curative effects in a small proportion of patients, due in part to common intrinsic and acquired resistance to therapy. These potent curative effects have launched the immune-oncology (IO) therapeutics space into a multi-billion-dollar market, with many new indications being added yearly. However, after the introduction of immune checkpoint blockade therapy, further significant progress has been stalled. One of the major limitations is the lack of novel IO therapeutic targets and their successful clinical implementation.

The three founders of Immagene have built a set of powerful Immune Oncology (IO) genome-wide screening and panning platforms, which they combine with a robust bio-informatic pipeline to identify novel therapeutic targets, both in tumor and immune cells. The technology was developed in the laboratories of Prof. Daniel Peeper and Prof. Christian Blank, and they have already successfully uncovered several next-generation IO targets. Immagene will develop the corresponding medicines and implement them clinically.

Currently, four next-generation IO targets have been selected for clinical development from over 100 validated targets from a first series of ten genetic screens. The first therapeutic will be an agonistic antibody specific for a tumor cell surface protein that leads to degradation of the target protein, thereby sensitizing tumors to T cell killing. The second is an intracellular immune cell target, for which a small molecule inhibitor will be developed that leads to increased functional capacity of T cells in the tumor microenvironment. The third target is an intracellular tumor protein for which we will develop (in partnership) an RNAi therapeutic to kickstart the cancer immunity cycle. The final target, when knocked out, will generate CAR-T cells (in partnership) with increased life span and clinical effect.

These targets have been prioritized not only by bio-informatic ranking but also based on clinical parameters. Indeed, pre-clinical development and de-risking of the targets and therapeutics are implemented at several layers, namely in vitro, in vivo (mouse), in tumor explants (human), and in window/phase 0 trials to ensure that only highly validated products will be developed further towards larger clinical trials. These will be run by co-founder Blank in a neo-adjuvant setting, allowing for stringent relevant patient selection as well as early biomarker-driven validation. This combination of approaches will de-risk both pre-clinical and early stage clinical development.

To launch these activities, Immagene is actively raising 25M with a targeted incorporation date at the end of Q3 2019. Immagene has already obtained the support of the Oncode Bridge Fund (100K), that will enable the first steps of towards drug development. At Immagene we will launch direly needed next-generation IO products that synergize with standard of care modalities like anti-PD-1 for more durable and effective clinical responses in cancer patients.

IOVA Biopharmaceuticals

		Based in	Utrecht, the Netherlands
Pitcher	Marc van Moorsel, PhD(c)	**Founded in**	Utrecht Medical Centre
Job	Founder / Business Developer	**Founding date**	November 2018

Background (company)
IOVA is founded in September 2018 and is currently developing one pharmaceutical product: MICROLYSE. MICROLYSE allows for the enzymatic breakdown of blood clots in smaller vessels (microvasculature), for which to date, no treatment exists. For MICROLYSE, IOVA pursues to receive market authorization for an orphan disease that is characterized by life threatening attacks of microvascular thrombosis. Subsequently, IOVA will aim to expand to other diseases that include microvascular thrombosis. Meanwhile, IOVA investigates the applicability of its platform for diagnostic purposes. By coupling their nanobodies to imaging enhancers, IOVA believes to enable visualization of microthrombi. This project is named MICROVIEW.

Technology
The formation and degradation of microthrombi is a dynamic process, involving the adherence of platelets to VonWillebrand Factor (VWF). MICROLYSE is a recombinant fusion protein comprised of two functional subunits: (1) a small antibody (i.e. 'nanobody') that targets VWF in the microthrombus, and (2) an enzyme that actively cleaves existing microthrombi into harmless monomers. IOVA filed patent on the platform underlying MICROLYSE (P6074456EP).

Equity funding to date
None

Amount of funding sought
EUR450k

Contact details
IOVA (contact person: Marc van Moorsel)
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Website: www.iovabiopharmaceuticals.com (launched per March 2019)

SPIOMET

SPIOMET focuses on the clinical development of a new treatment of Polycystic ovary syndrome (PCOS) with a patented low-dose combination of repurposed drugs.

PCOS has long been seen as a gynaecological disorder. Recent evidence provided by the team of prof. Francis de Zegher and prof. Lourdes Ibanez (at the UZ Leuven and Hospital San Juan de Deu respectively), clearly shows that the pathophysiology of PCOS is related to metabolic changes in females in early puberty. Both have shown that a low-dose combination of used drugs with a well-known safety and efficacy profile (spironolactone, pioglitazone and metformin) allows reversing this metabolic malfunctioning and restores ovulation (de Zegher et al. Trends in Endocrinology and Metabolism, 2018). This concept has been patented and if FDA and EMA agree on the clinical endpoints, the team wishes to initiate a phase II clinical trial with the combination. Needless to say that a therapeutic for a condition (for which no drug exists in the market today) that affects 10% of females of reproductive age offers might become a breakthrough therapy.

Currently the clinical program is run by the involved investigators and a first phase 1 trial with a commercial grade formulation (developed by a generics company) has been finalized. The team now aims to start a Phase 2 clinical program. The involved teams have been discussing the design of the phase 2 studies with FDA and EMA and currently the teams are optimizing this program.

The teams foresees to finish these discussions within a relatively short period of time (Q1 2020) and upon this point in time the assets can be spun-out into a dedicated semi-virtual vehicle/spin-off. In a first financing round we aim to secure 3 million Euro to fund the initial program.

Meliora Medical

Meliora Medical

Inspired by Nature

Company over;

Meliora Medical BV mission is to develop and market pioneering healthcare solutions to prevent or treat spine related diseases and disorders. The imesis - C, is the first technology to be commercialised. The imesis was originally developed at the Eindhoven University of Technology, under the name BioAID. It was exclusively licensed to LifeTec Group BV, a MedTech-driven bioengineering firm that focuses on accelerating innovations and creating new business in healthcare. A start-up venture was established with LifeTec group holding BV [85%] and Eindhoven University holding BV [15%] as shareholders. The technology and licenses were transferred to Meliora Medical BV – the name of the start-up venture. Meliora Medical BV was incorporated in May 2015.

imesis Product description;

imesis is an innovative cervical disc replacement based on a biomimetic concept, which is radically different from the established motion preserving options but addresses the limitations of these current designs.
imesis is designed to emulate the behaviour of the natural healthy disc and consists of a hydrogel core surrounded by multiple layers of woven polymer jacket, wherein ring endplates containing primary fixation pins are placed, which secure the imesis to the vertebral body. The imesis is implanted using the well-established anterior approach pioneered by Smith Robinson.
The one-piece design is biomimetic, wear resistant, mechanically safe, biocompatible, easy to implant, and offers stability and shock absorption while maintaining 6° of freedom of movement. The revolutionary new concept gives imesis several unique features that are unparalleled by existing motion preserving technology. This is bound to lead to significantly better clinical results and high levels of patient and surgeon satisfaction.

Equity Funding to date;

We received no equity funding to date but Meliora has received Loans and Grants to the value of €1M.

Funding required;

In order to accomplish our goals, we need €16M for sustainability and maintaining a proper cash flow. This capital is subdivided as €950,000 for seed money, €3M for series A expected in Q2 of year 3, and €11M for series B expected in Q1 of year 5. We predict strong returns for our investors with ROIs of 200%, 121%, and 120% per year for seed, series A, and series B, respectively.

Pan Cancer T (PCT) - safe and effective T cell therapeutics

Definition of challenge

Adoptive T cell therapies have demonstrated significant successes in the treatment of patients with tumors, yet further development of these therapies is limited by treatment-related toxicities as well as lack of durable anti-tumor responses. Importantly, there is no uniform selection process to identify safe and effective T cell products.

PCT's solutions

PCT will select and clinically develop safe and effective (combination) T cell treatments directed against multiple cancers using a unique and uniform platform. The end-products are considered 'off-the shelf' therapeutics, such as anti-CGA TCRs that are introduced into patient's own blood-derived T cells; and do not need to be retrieved or customized per patient.

Concept: target a selected set of Cancer Germline Antigens (CGAs) that demonstrate preferential expression in multiple types of tumors; no expression in healthy tissue; immunogenicity; druggable expression in tumors; and sharing between patients.

Novelty: Standard, stepwise approach using in silico and laboratory tools to select therapeutics for T cell treatments (epitopes, TCRs, drugs).

Marketability: Products (epitopes, TCRs and drugs) feed into clinical immune therapy trials, particularly adoptive T cell therapies (TCRs), but also vaccinations (epitopes) and combination treatments involving chemotherapy (drugs).

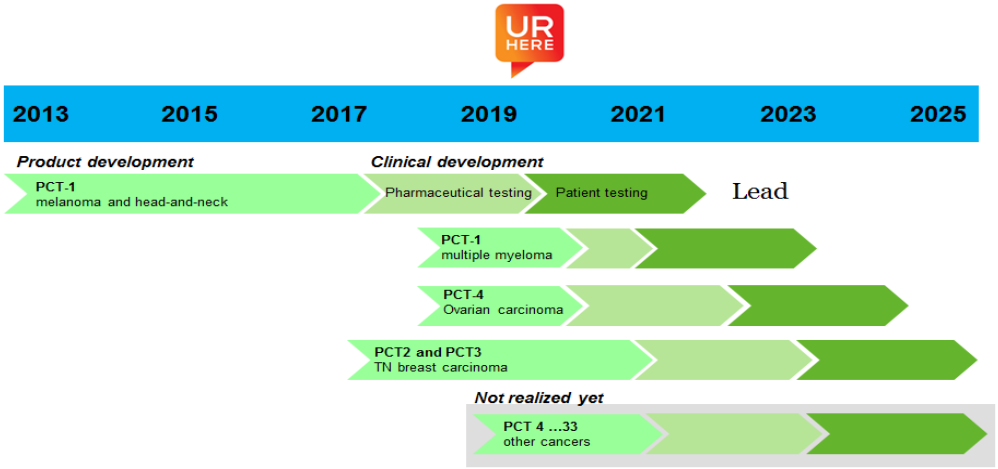
Investments

Product development (budget: 0.5M Euro; timelines: 2 years)

- isolation and sequence-identification of 10 new TCRs directed against each PCT antigen
- selection of 2-3 TCRs directed against each PCT antigen that are highly cancer-specific
- selection of 1-2 drugs that enhance anti-PCT activity of TCRs

Clinical development (budget: 1.5M Euro; timelines: 2 years)

- certification of clinical vector batch of anti-PCT TCR
- finalization of documentation/IMPD/clinical protocol of treatment with anti-PCT TCR T cells
- determine safety and efficacy of treatment with anti-PCT TCR T cells in phase I/II study (n=10 patients)



Antelope DX

Antelope Dx

The Antelope technology is the result of ten years of research at the photonic research group of Ghent University and funding made available via two VLAIO innovation mandates and a grant from UGent. The Antelope technology has been further incubated within MyCartis since mid- last year and newco Antelope Diagnostics BV will be established in 2019 as a spin-off of the UGent and a subsidiary of MyCartis.

Antelope DX develops a point-of-need diagnostic platform that allows consumers and healthcare professionals to have on-the-spot access to key health parameters. **The Antelope technology aims to offer clinical lab performance with the ease-of-use of a pregnancy test at a consumer price tag**. The platform is based on an innovative lab-on-chip technology that can perform a sensitive test on any bodily fluid, without requiring complex user operations or sample preparation.

The system has two parts: a disposable sensor cartridge containing a novel silicon photonics chip and a simple read-out device in which the disposable can be inserted. The diagnostic test (the assay) takes place by applying only a small droplet of a bodily fluid on the disposable sensor. The results of the assay are available to the user less than ten minutes after inserting the disposable in the readout device. Offering clinical lab performance in that time frame makes the platform very valuable for use in all decentralized care settings such as home, general practitioner's (GP's) office - as it can easily be included within the workflow and time window of a doctor's appointment - and retail clinics.

The five key domains where the technology can be disruptive are: 1°Home-monitoring of chronic diseases; 2° Tests that benefit from short turnaround times - retail clinics, GPs, ambulatory care; 3° Consumer over-the-counter healthcare or lifestyle; 4° Veterinary testing and 5° Support for clinical studies for big pharma.

The first two product choices are:

- A bacterial test to differentiate between a viral and a bacterial infection at the doctor's office to help reduce the over-prescription of antibiotics
- A rapid test for sexually transmitted infections (STI): urine-based test for *chlamydia trachomatis* and *gonorrhea neisseria*: for home-use and use in STI centers

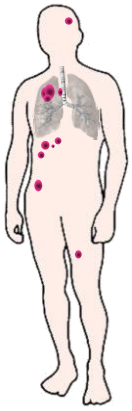
Expected funding date: Q2 2019

Expected founding date: Q2 2019

Funding rounds: 5M in 2019, 8M in 2020 and 9M in 2022

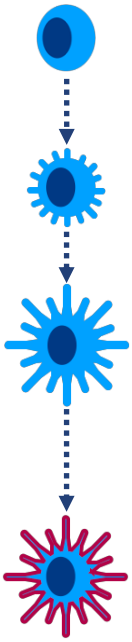
SparXells – igniting immunity

Founding date: expected Q2 2019
Equity funding to date: minimum capital + non-diluting funds (soft money)
Funding sought: € 3M



The problem

- Non-small cell lung cancer (NSCLC) is the biggest cancer killer worldwide.
- Immunotherapy, in the shape of immune checkpoint inhibitors, has taken the field of lung cancer by storm.
- However, immune checkpoint inhibitors only benefit a minority of lung cancer patients.
- Dendritic cell therapy can potentially correct cancer-induced immune dysfunction at stages where checkpoint inhibitors fall short.
- Still, to this day no dendritic cell-based vaccine has been successfully designed to address the unmet need in today's complex treatment landscape of lung cancer



Our solution

- **SparXells** has developed a proprietary, clinical-grade production platform offering a unique, efficient and rapid way to produce highly active autologous dendritic cells ex vivo for cancer immunotherapy.
- In addition, we identified four highly cancer-specific antigens in lung cancer (undisclosed): when combined into our DC vaccine, these targets cover more than 90% of all NSCLC cases. **MIDRIX^4-LUNG is world's first tetravalent DC vaccine candidate in lung cancer** and is moving into phase 1 by Q2-Q3 2019.
- The clinical development roadmap will strongly focus on MIDRIX as add-on therapy in the **growing patient group who experience disease progression after chemotherapy and immune checkpoint inhibition**. In these patients, who are left with few or no therapeutic options, we will evaluate whether addition of MIDRIX4-LUNG can "spark" the anti-cancer immune response again and deflect the curve of tumor progression, potentially translating into a survival benefit.
- In addition SparXells plans to explore MIDRIX in **additional solid tumor indications** in which current immunotherapies offer limited benefit

Selling points

- proprietary and efficient production process leading to highly immunogenic cells
- every patient eligible regardless of HLA restriction
- combined targeting of highly relevant lung cancer patients
- SparXells: in-house established clinical and scientific expertise in clinical oncology and dendritic cell biology

Comforthod – Diagnosing loosening of joint protheses

Amsterdam, 28-02-2019, AUMC-IXA
A.J. Kievit , M.U. Schafroth, L. Blankevoort, W. Schouten, I. Aarninkhof

Founding date

We plan to found the company by this year together with an investor, dividing the shares appropriately.

Equity funding to date

No external equity funding has so far been received. No shares have been given out.
So far the program has been supported by:

- ZonMW/NGI pre-seed grant of €250.000, developing new diagnostic techniques for knee arthroplasty loosening
- As well as unrestricted research grant Zimmer Biomet, Warsaw, approximately €250.000
- Fastforward meeting Deloitte en Pontes: winner best pitch & business plan €10.000

Short description of product / service including value proposition

Medical specialists are currently lost when it comes to diagnosing total knee arthroplasty (TKA) loosening in patients. TKAs are implanted 1.8 million times per year, worldwide. It is estimated that of all those patients, 450000 (25%) return to the hospital with symptoms. Of these patients about 180000 (40%) are diagnosed with prosthetic loosening annually, by using current diagnostic modalities. About 50% (90000) are subsequently treated surgically, usually resulting in costly revision procedures in excess of €25000-€50000 per patient. During surgery, the loose prosthesis is removed and replaced with a new prosthesis.
However, in 25-30% of those undergoing surgery, the prosthesis is actually found to still be fixed. Therefore, for a third of patients have unnecessarily been put at risk and at high cost.

Comforthod dramatically improves the diagnostic process at lower radiation levels than current modalities. *Comforthod* is a patented knee-loading device with software that analyses and reports movement of the TKA in the tibial bone in patients who return with symptoms to the orthopaedic surgeon. *Comforthod* has an accuracy of 0.1mm (invisible to the naked eye) by analyzing CT-scans using dedicated software. If motion is above a certain threshold, the prosthesis can be diagnosed as loose, below it is fixed. Due to ease of use as well as accuracy and speed, the *Comforthod* reduces diagnostic time and can ensure patients have a solid treatment plan. It can effectively replace the use of regular CT-scans, expensive bonescintigraphy and PET-CT.

Moreover, patients with symptoms who are wrongfully sent home and not diagnosed as having loosening can now be correctly diagnosed as having a loose prosthesis and can thus be offered effective adequate treatment in an early fase of symptoms The potential monetary value of a *Comforthod* analysis is the difference between the cost of nuclear imaging (€ 800) and of CT imaging (€150) per examination. On a societal level, unnecessary costly and risky surgery can be avoided, redistributing money to health care where it is needed most. Furthermore, this makes it an attractive option for health care insurers in an increasingly costly health care system.

Amount of funding sought

€490.000