Healthy Ideas
Healthy Returns
HIHR

Program
&
Summary propositions

HIHR 8th edition

by online sessions

May 2021

Participating academic institutions in the Benelux, incl their UMC's

Preferred partner

Silver partners

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V-Bio Ventures | Novalis II | NLC Health | Thuja | Bioqube Ventures

Content

Program online pitch sessions, May 26, 2021

Program

8th edition Healthy Ideas, Healthy Returns

Wednesday May 26

by online sessions

To participate in the online edition of HIHR, please go to our website or sign up here directly via the investor registration form.
Each participant has to register separately, to sign up individually for the quickfire sessions

09.10	Presenters requested to connect for final testing				
09.20	Please connect to our online facility, test your settings and join the last instructions.				
09.30	Welcome	HIHR	Filip Goossens	Chair	
09.35	Short intro	JNJ-Innovation	Gideon Bevelander	Early Innovation Partnering	
09.40	**Stellascreen**	UCLouvain	Adil El Taghdouini	Co-founder	Therapeutics & Biotech
09.55	**Predica Diagnostics***	Radboud UMC	Marco de Boer	CEO	MedTech & Diagnostics
10.03	*5 min break*				
10.08	**RICE therapeutics***	Univ Hasselt	Elisabeth Piccart	Inventor	Therapeutics & Biotech
10.16	**Persuasive**	UMC Utrecht	Egbert Smit	CEO	MedTech & Diagnostics
10.30	End session I				
	Half an hour break				
10.55	Please connect again to the session				
11.00	**Scope Bioscience***	WageningenUR	Niek Savelkoul	CEO	MedTech & Diagnostics
11.08	**ikHerstel**	VU-VUmc	Jeroen de Wilde	CEO	eHealth & Datascience
11.23	**IUVENTA Biologicals**	Univ Ghent	Elisabeth van Aken	CMO	Therapeutics & Biotech
11.37	Closing remarks				
11.45	End of program				

Pitches will last for a maximum of 10 min presentation, followed by 4 min Q&A (+1 min change).
Elevator pitches* contain of a 5 min presentation plus 2 min Q&A (+1 min change).
Due to the density of the programme we must strictly adhere to the schedule. To compensate the loss of networking opportunities, quickfire sessions are scheduled for each pitch-presentation during one of the following days, see schedule on page 4.

Summaries of the pitch propositions can be found on page 6 and further.

Overview Quickfire sessions

HIHR offers new entrepreneurial teams/KTOs venture ideas, not pitch ready yet, the opportunity to test their idea / concept with investors, entrepreneurs and corporates in a 45 minute online session.
Hereto the following schedule has been set up:

Date	Time	Spin off initiative
Quick fire sessions only		
Tuesday, May 25	09.00 – 09.45	**2SIGNAL** - *Improving quality of life of women in cervical cancer screening* IXA VU - MedTech & Diagnostics
	12.00 – 12.45	**PREMOM** - *Remote monitoring follow-up of pregnancies complicated with gestational hypertensive disorders* UHasselt - eHealth & Datascience
	17.00 – 17.45	**MONA** - *Screening with AI for eye diseases leading to blindness* KU Leuven - MedTech & Diagnostics
Wednesday, May 26	09.30 – 12.00	Pitch sessions
	17.00 – 17.45	**Digi.Bio BV** - *lab-on-a-chip device platform to accelerate therapeutics development for immunotherapies* IXA VU - Therapeutics & Biotech, MedTech & Diagnostics
Thursday, May 27	09.00 – 09.45	**Mucovac** - *Gateway through the gut barrier* UGhent - Therapeutics & Biotech
	12.00 – 12.45	**Monoceros Analytics** - *Single-cell transcriptomic and intracellular proteins for drug efficacy screening* Radboud University - Therapeutics & Biotech
	17.00 – 17.45	**axSpA biomarkers** - *Immune biomarkers for diagnosis of Axial Spondyloarthritis* UHasselt - MedTech & Diagnostics
Friday, May 28	09.00 – 09.45	**weave.ly** - *No-code platform for safe and secure clinical trial apps* Vrije Universiteit Brussel - eHealth & Datascience
	12.00 – 12.45	**Griphingo Pharmaceuticals** - *Innovative inhalation therapy for COPD patients* Rijksuniversiteit Groningen - Therapeutics & Biotech
	17.00 – 17.45	**Lumabs BV** - *Novel solutions for monitoring antibodies in complex mixtures (e.g. blood).* Eindhoven University of Technology - MedTech & Diagnostics
Monday, May 31	09.00 – 09.45	**Taurion** - *Real-time NIR fluorescence imaging in life sciences and clinical applications.* Vrije Universiteit Brussel - MedTech & Diagnostics
	12.00 – 12.45	**UFO Biosciences,** Functional Single Cell Selection - *High-throughput screening and profiling of clinically relevant cancer-driving cells* Oncode Institute- Therapeutics & Biotech

Summaries of the Quickfire candidates can be found on page 13 and further.

We also offer these QF-sessions to pitchers, to compensate for the loss of networking opportunities in the online setting and to further discuss their investment opportunity more in depth.
The schedule of these additional QF-sessions is as follows:

Quick fire sessions in addition to their pitch		
Monday, May 31	17.00 – 17.45	**IUVENTA Biologicals** - *Non surgical enzymatic therapies for AGE-related ocular diseases* UGent - Therapeutics & Biotech
Tuesday, June 1	09.00 – 09.45	**Persuasive** - *Plasma extracellular vesicle-based blood test* UMC Utrecht - MedTech & Diagnostics
	12.00 – 12.45	**Stellascreen** - *Discovery and development of first-in-class anti-fibrotic drugs.* UCLouvain - Therapeutics & Biotech
	17.00 – 17.45	**ikHerstel** - *an eHealth app that helps patients recover faster after surgery* IXA A'dam - eHealth & Datascience
Wednesday, June 2	09.00 – 09.45	**Predica Diagnostics** - *Non-invasive predictive and prognostic diagnostics for cervical cancer* Radboud UMC - MedTech & Diagnostics
	12.00 – 12.45	**RICE therapeutics** - *Repair-inducing cognition enhancers in remyelination* Hasselt University - Therapeutics & Biotech
	17.00 – 17.45	**Scope Bioscience BV** - *Crispr Diagnostics* Wageningen University & Research - MedTech & Diagnostics

For additional information on the Pitch-candidate Quickfire sessions we kindly refer to their summaries directly hereafter.

Please mark your interest for QF-sessions at the registration-form **May 20 the latest**, for planning purposes. Registrations after May 20 are scheduled based on availability. We will tailor the audience as much as possible to the business area of the initiative at hand.
You will receive an Outlook invite with MS Teams link per QF-session.

Summaries of the **Pitch presentations**

Stellascreen

Founding date
Q3/Q4 2021.

Mission
Develop a pipeline of first-in-class small molecule drugs for the treatment of liver fibrosis.

Market
Liver fibrosis is a condition of uncontrolled scarring and the common clinical endpoint of any type of chronic liver injury (i.e. viral infections, autoimmune diseases, alcoholic & non-alcoholic steatohepatitis (NASH)). Every year it causes the death of >1 million people worldwide, representing a 35% increase compared to just 30 years ago. Liver fibrosis is a difficult therapeutic area for which there are currently no FDA- or EMA-approved drugs. As a result of this important unmet medical need, fibrosis of the liver emerges as a multibillion dollar market, concentrated mainly in Europe, the US and Asia. NASH-fibrosis, or fibrosis due to liver fat accumulation and lipotoxicity is expected to be the largest segment of the overall fibrosis market, both in terms of size and growth (> 28 Bio USD).

Competitive landscape
The vast majority of drug candidates under investigation seek to alleviate the source of liver injury as a strategy to halt fibrosis progression. However, at the exception of recently approved direct-acting antivirals for the treatment of HCV-fibrosis, published clinical trials have shown no or limited impact on the primary outcome measure of anti-fibrotic efficacy so far. As fibrosis puts patients at risk of liver failure and cancer, there is an urgent need for therapeutics that not only slow down fibrosis progression, but also actively stimulate fibrosis regression.

Opportunity
Recent data from preclinical models and clinical trials show that fibrosis is a highly dynamic process and that inactivation of fibrogenic cells is a promising approach to achieving fibrosis regression, independent of the underlying disease etiology. Today, identifying the pathways and effector molecules that drive inactivation of fibrogenic cells is the subject of many expert opinions in the field and regarded as one of the most promising therapeutic strategy to achieve anti-fibrotic efficacy.

Technology and value proposition
Our research has enabled the discovery and validation of novel markers associated with the inactivation of human liver fibrogenic cells. We developed a unique and versatile high-throughput screening platform to capitalize on this inherent plasticity and discovered small molecules that attenuate the fibrogenic character of the cells and induce fibrolytic, pro-resolution characteristics. Emerging, high-impact science recently published in top-tier journals validates our approach and puts us at the forefront of discovering new therapeutic targets and developing small molecule drugs in this new mode-of-action.

Equity funding to date
None.

Amount of funding sought
€6M to reach the key value-inflection milestone of an optimized lead with identified therapeutic targets & *in vivo* proof-of-concept.

Contact: Adil El Taghdouini, PhD | Adil.eltaghdouini@uclouvain.be | T : +32.494.29.44.12

Pitch session: Wednesday May 26, 09.40
Quick fire session: Tuesday June 1, 12.00 – 12.45

Predica Diagnostics BV

Cervical cancer is the third most common malignancy in women and fourth in mortality worldwide (500,000 new cases yearly, 50% are lethal). Current screening programs need refinement because, ***although more than 99% of cervical cancers are hrHPV positive, less than 0.5% of hrHPV infections actually lead to cervical cancer.*** Because of this, of the yearly 60,000 women who are diagnosed as hrHPV-positive in the Netherlands, only 2,000 need medical attention. The other 58,000 women have unnecessary worries, and all receive futile follow-up examination and sometimes even invasive treatment. This huge overdiagnosis and overtreatment is a major health, financial and social problem, which is recognized by the responsible authorities.

Predica Diagnostics B.V. is a spinoff from the Radboudumc, active in the field of diagnostics, prognostics and prediction of treatment response in oncology. Predica Diagnostics has an exclusive worldwide license for the RNA profiling technology patents (WO2018/162525 – pending, WO 2016/079194 Al - granted). Predica Diagnostics aims to bring its technology to patients in 1 to 2 years with a first focus on developing the CervicaDX test. This test allows non-invasive detection of cervical abnormalities in women who are at risk of developing cervical cancer, with unprecedented specificity.

After successful implementation of the CervicaDx test Predica Diagnostics intends to expand its portfolio with diagnostic tests for lung cancer (PulmoDx), prostate cancer (ProcaDx), renal cancer (RenoDx), colon cancer (ColCaDx) and brain cancer (GlioDx). These tests that will be offered as a service to hospitals and patients, generate a histology-independent molecular diagnosis, predict a prognosis and produce a list of potentially successful precision medicines, thus aiding in development of personalized treatment plans for cancer patients.

As per September 24 2019, Predica Diagnostics BV has been founded by Dr. Marco de Boer (CEO), molecular biologist and entrepreneur, Dr. William Leenders (CSO), a tumour biologist with more than 25 years of experience in cancer research and inventor of the technology used by Predica Diagnostics, Dr. Hans van Leeuwen (Chair Advisory Board) experienced pharmaceutical industry professional with experience in statistics and regulatory operations and Dr. Mike Martens (Future Diagnostics – Advisory Board). In July 2020, the UMC St Radboud Holding BV has joined as shareholder and seed investor.

For our 2 year development program we require **1,8M,- Euro**. So far we have secured **270,- kEuro in nondilutive funding (RedMedTech + MIT**) plus **150,- kEuro** (convertible loan shareholders).

In this first investment round, we are looking to raise **500,- kEuro,** which will allow us to clinically validate our technology, and will gear us towards a next investment round of 1 ME.

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W: www.predica-diagnostics.com

Pitch session: Wednesday May 26, 09.55
Quick fire session: Wednesday June 2, 09.00 – 09.45

RICE therapeutics

Repair-inducing cognition enhancers in remyelination

Founding date
expected Q4 2021

Equity funding to date
Up until now, no equity funding has been raised, we are still incubated at University

Short description of product / service including value proposition
Worldwide, about 2.5 million people are diagnosed with MS of which about 85% represents relapsing remitting MS (RRMS). Even though the latest therapies for RRMS have improved efficacy and delay the onset of progressive MS (pMS) in treated patients, they are not 100% effective. Therefore, a significant amount of RRMS patients will still transition to a progressive phase at some point during aging. The subpopulation of pMS patients (currently 1 million people worldwide) remains significantly underserved, this represents a clear unmet need. Although the current MS market is highly competitive, most of the available treatment options are considered to be immunomodulatory agents. The treatment of RRMS remains the primary focus of currently available disease-modifying therapies by addressing the inflammatory and systemic origins of the disease but with few neuroprotective effects and thus an insufficient impact on the underlying neurologic deterioration caused by MS.

RICE therapeutics builds upon convincing in vitro and in vivo data that inhibition of PDE4D can, at least partially, reverse pMS pathology without inducing the side-effects, like emesis, which has been reported for full PDE4 inhibitors. The lead program is currently in the phase of IND-enabling studies. Furthermore, a second candidate is being evaluated in vitro and in vivo and in the meantime in silico efforts are ongoing for the discovery of new chemical entities.

Our new approach offers a considerable opportunity in the MS field. Only few treatments are marketed for early (primary) progressive MS (ocrelizumab, siponimod). Several development programs have also been stopped (e.g. MD1003, anti-Lingo-1). A dozen of disclosed programs are currently in the discovery or preclinical phase. In the 7 major pharmaceutical markets (US, France, Germany, Italy, Spain, UK, Japan) the estimated sales for MS disease-modifying therapies were higher than 21 billion USD in 2020 and expected to grow to more than 25 billion USD in 2026 (compound annual growth rate of 2.9%). The total addressable market for pMS is estimated at 3-4 billion USD.

Amount of funding sought
RICE therapeutics aims to raise 6 M€ for the 'first-in-man' trial with its lead program, which will be reached within three years from starting the funding. Simultaneously, candidates for new development programs will be evaluated.

Contact
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Tim Vanmierlo, principal investigator/inventor – tim.vanmierlo@uhasselt.be
Lize Piccart, RICE Therapeutics project manager - elisabeth.piccart@uhasselt.be

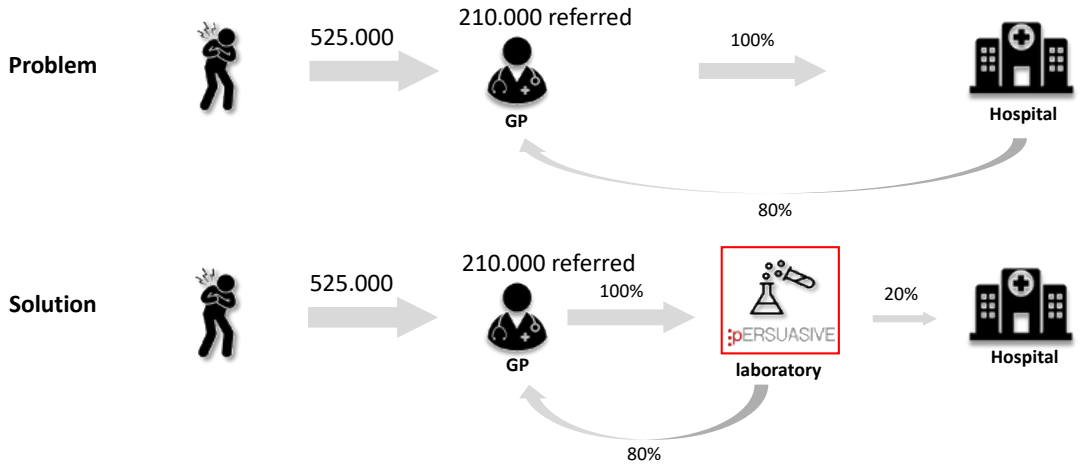
Pitch session: Wednesday May 26, 10.08
Quick fire session: Wednesday June 2, 12.00 – 12.45

Persuasive

Founding date
PERSUASIVE is a spin-off company of UMCU on June 5th, 2019.

Equity funding to date
No equity funding to date. Total non-dilutive funding to date ~ 300K EUR.

Short description of product/service including value proposition



PROBLEM: Chest pain is a very common phenomenon responsible for 4% of the Dutch general practitioner (GP) visits. When chest pain is a result of arterial clogging of the heart and occurs only during exercise/stress, this is referred to as chronic coronary syndrome or stable angina (SA). SA is a serious but treatable pathology with a 4-6 times higher chance of having a myocardial infarction. However, about 80-90% of chest pain patients are referred to the hospital unnecessarily as it turns out they do not suffer from SA. Currently, a diagnostic test for identifying SA patients in the GP setting is lacking. This results in a tremendous burden on health care with respect to patient management, efficiency and costs.

SOLUTION: PERSUASIVE is developing a novel early diagnostic blood test that can distinguish chest-pain patients with SA from patients that have chest pain due to non-cardiac causes. Cardiologists and scientists of the UMC Utrecht have discovered that a blood plasma-derived extracellular vesicle protein signature can identify SA. The novel diagnostic test is based on this patented diagnostic method, that needs only very small samples volumes with high reliability in a parallelised format.

IMPACT: The PERSUASIVE test will allow medical care practitioners to stratify non-acute chest pain patients into patients with and without actual underlying chronic coronary artery disease. In the Netherlands over 200.000 patients are referred to a cardiologist for expensive diagnostic testing, 80-90% unnecessarily so. This inefficiency costs the Netherlands over 170 million EURO every year.

Amount of funding sought
For the coming 2-2.5 years we are seeking an investment of in total 2 Million EURO in order to finalise the development of our patented EV-based diagnostic method and obtain CE mark.

Contact
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Pitch session: Wednesday May 26, 10.16
Quick fire session: Tuesday June 1, 09.00 – 09.45

Scope Bioscience BV

Founding date:
The Scope Biosciences project was started at Wageningen University in January 2019. The legal entity Scope Biosciences B.V. was founded on the 27th of September 2020.

Equity funding to date:
Until now, no equity-based funding has been raised. This project was internally incubated at Wageningen University & Research.

Description of product/service including value proposition:
Scope Biosciences B.V. developed a CRISPR-Cas based diagnostic solution entitled ScopeDx. This technology offers highly accurate molecular diagnostic results in a mere 25 minutes.

CRISPR diagnostics (CRISPR-Dx), combined with a pre-amplification step, are faster than (q)PCR, the current golden standard, whilst obtaining results of the same quality. Due to its relative simplicity, CRISPR-Dx presents the opportunity to take Dx out of the lab, opening up a range of new markets. In collaboration with the John van der Oost lab at the Wageningen University we have developed our unique CRISPR-Dx technology: ScopeDx.

PCR Golden Standard	Slow	Accurate
Antigen Rapid Test	Fast	Inaccurate
Scope Biosciences ScopeDx	Fast	Accurate

We have successfully detected SARS-CoV-2 (COVID-19) from over 100 clinically relevant human samples within 45 minutes at 0.8% FP rate and 0% FN rate, on par with the golden standard qPCR. Moreover, we have performed proof of concept studies on several AgriFood applications. Since, we have reduced the time to detection to 25 minutes.
We have filed multiple patents on our ScopeDx IP in collaboration with WUR, for which we have an exclusive licence. This IP allows for the development of a diagnostics platform, for which we have proof of principle results in human, veterinary and food pathogens. We have extensive knowledge on CRISPR-Dx development, and have, next to COVID-19, multiple running partnerships in healthcare and agri-food applications to develop ScopeDx for multiple applications.

Amount of Funding sought:
Scope Biosciences B.V. aims to raise a €1.000.000 seed round to set up ISO certified production facilities, in order to bring multiple RUO products to market to bring the company to the point where it can start CE validation of the first human diagnostic product.

Contact:
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scopebio.com

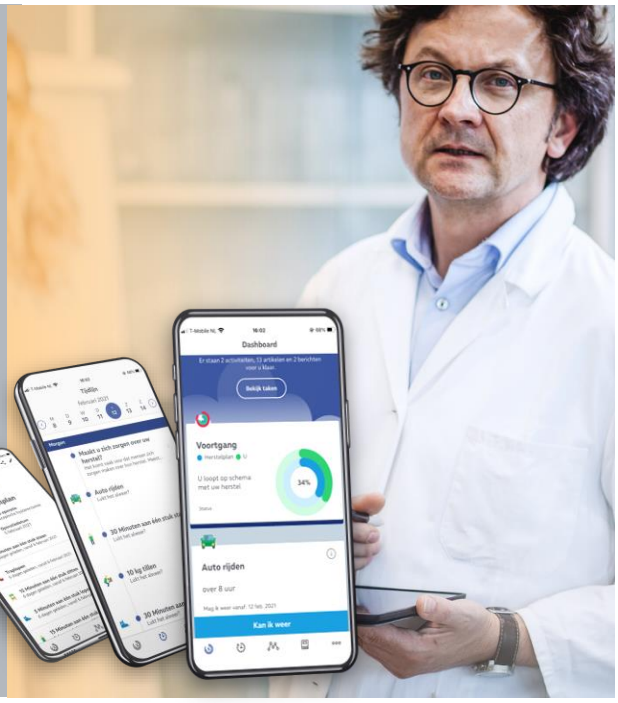
Pitch session: Wednesday May 26, 11.00
Quick fire session: Wednesday June 2, 17.00 – 17.45

ikHerstel

ikHerstel (*Dutch for I-Recover*) is an eHealth application developed by healthcare professionals to help patients recover faster after elective surgery and to unburden healthcare professionals at the same time. The app has proven to deliver value to ALL stakeholders in the care-path based on the principles Value Based Healthcare.

The app provides patients before and after the operation with relevant information and a personalised recovery plan generated by an operation specific algorithm. The app takes on the role of a " digital personal coach" for the patient throughout the carepath, while giving healthcare professionals the opportunity to monitor the patients recovery progress remotely.

Scientific research has shown that patients using the app recover 5-14 day faster, while also saving costs for the hospital.
These results have recently been published in The Lancet.



Founding date

After 10 years of academic research at the Vrije University medical centre (VUmc) ikHerstel bv was founded in 2019.

Current status

ikHerstel is currently available for 11 different treatments (Gynaecology & Surgery) and has just gone live in two hospitals, to "test" the product in a commercial environment following which further roll-out will start by end Q2 2021.

Awards & recognition

Last year ikHerstel was nominated for the Value Based Healthcare prize, won the Healthcare Innovation Award and this year is nominated for the prestigious "Zinnige Zorg Award".

Funding

Funding for Proof Of Concept phase (€400k) was provided by IXA & IFNH.
For further development of new algorithms for new treatments and for the next steps in software development to facilitate scale-up and internationalisation we are looking to secure €500k.

Team / Contact

The ikHerstel team consist of a balanced group of experienced medical experts, software professionals and seasoned entrepreneurs.

ikHerstel bv
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Pitch session: Wednesday May 26, 11.08
Quick fire session: Tuesday June 1, 17.00 – 17.45

IUVENTA Biologicals

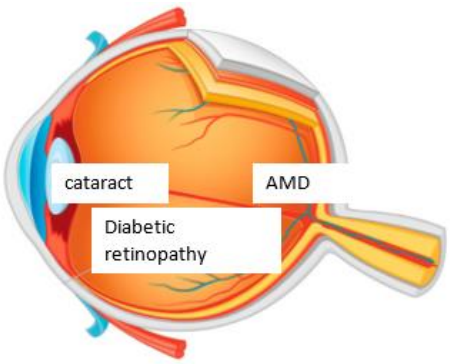
"innovative treatments towards prevention of incurable blindness"

Founding date: 2022
Iuventa Biologicals is currently a spin-off incubation project of Ghent University

Equity funding to date
Until now, no equity funding has been raised yet.

Description of product / service including value proposition
Market: Ophthalmology: The number 1 cause of blindness in the world is the aging eye. Advanced glycation products (AGEs) progressively accumulate in the aging eye, causing age-related macular degeneration (AMD, 196 million people), diabetic retinopathy (93 million people) and cataract (200 million people). As an example of products in this market: "Eylea", the leading branded anti-VEGF therapy used to treat wet AMD (late stage, only 10% of AMD) generated 5.5 billion $ in the US in 2016.

Problem: Current ophthalmological treatments consist of surgery or injections into the eye in a late stage of disease, such as diabetic retinopathy and wet AMD with bleedings. For 90% of AMD patients ("dry" AMD without bleedings), there is currently no treatment at all. Cataract surgery is performed in only 2.5% of people, as the rest of them reside in underdeveloped countries. There is an unmet need to intervene early, prevent irreversible blindness and seriously improve quality of life.



Our solution: IUVENTA Biologicals is a gamechanger in developing biological therapeutics that degrade the AGEs, tackling the root of the aging process in the eye. These biologicals can be given in a topical manner (eyedrops) for front of the eye applications or through intravitreal injection in the back of the eye applications (diabetic retinopathy, dry AMD). Preclinical in vitro/ ex-vivo human eye studies show breakdown of AGEs in the eye in early stage in AMD, diabetic retinopathy and cataract. Preclinical in vivo studies in mice and in a non-rodent model (dogs) demonstrate effective breakdown of AGEs and restoration of sight was demonstrated in dogs in a small pilot clinical study showing no clinical side effects.

IUVENTA Biologicals aims to bring these therapeutics further to the market, work with CROS towards completing an IND file, cGMP production and complete a clinical study plan and validate the therapy in a clinical setting. The venture will develop a pipeline of therapeutics either in drop formulation or intravitreal injection for at least 3 indications in the ophthalmology market.

Amount of funding sought: A round of 4 Mio EUR would be needed to bring a first therapy to the stage of IND filing and cGMP production.

Contact
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Joris Delanghe joris.delanghe@UGent.be 09 3322956

Pitch session: Wednesday May 26, 11.28
Quick fire session: Monday May 31, 17.00 – 17.45

Short summaries of single **Quickfire session** initiatives

2SIGNAL

Improving quality of life of women in cervical cancer screening

In population screening programmes for cervical cancer, at any suspicion of abnormality, women are referred for a cervical biopsy, an examination in which a small piece of tissue is removed from the cervix and sent to the lab for analysis. The tests are expensive and time consuming, and they can be painful to the patient, both physically and psychologically.

More than half of those biopsies eventually turn out negative, meaning that there was no cancer to start with.

2SIGNAL is developing an endoscope that can be used to image the cervix via a quick, cost effective, and non-invasive approach. This diagnostic device obtains two known indicators of (pre)cancerous lesions: a subsurface 3D image of the cervix, and its stiffness. The new endoscope could function as a 'filter' in the screening process, helping to reduce the unnecessary biopsies by excluding (pre)cancerous lesions at an earlier stage. Moreover, if a biopsy is deemed necessary, this device may also be used to suggest the ideal sampling site.

Contact: l.bartolini@vu.nl
Quick fire session: Tuesday May 25, 09.00 – 09.45

The Pregnancy REmote MOnitoring project - PREMOM

Remote monitoring follow-up of pregnancies complicated with gestational hypertensive disorders

The Pregnancy REmote MOnitoring (PREMOM) project is clinical care path in which pregnant women with an elevated risk on the development of gestational hypertensive disorders (GHD) are additionally followed-up by remote monitoring (RM). They need to measure their blood pressure twice a day (in the morning and in the evening). Those measurements will be send by Wi-Fi and Bluetooth to an online platform, on which the obstetricians and the midwife in the hospital can review those data.

When the blood pressure is too high, the obstetrician can instruct the pregnant woman to perform some interventions (like the start/adjustment of antihypertensive medications, bedrest, ..), to become better gestational outcomes for both the mother and child.

From prior studies it became clear that the adjustment of RM in the clinical care path for women at risk for GHD has several advantages, when compared to women with GHD but without RM.

There is a reduced risk for:

- a hospitalisation from 70% to 27%
- an induction from 46% to 32%
- the development of pre-eclampsia from 42% to 15%
- the risk for severe ill new-borns from 17% to 9%
- the number of prenatal consultations from three times a week to once a month The pain relievers are:

1) the pregnant women can stay longer at home because her pregnancy has a natural attrition without (unnecessary) interventions. The pregnant woman and their neonate are less (sever) ill and are less needed to come to the hospital.

2) The healthcare have to pay less prenatal consultations, hospitalizations and expensive treatments for the neonates

3) The obstetricians will receive a good status

Contact: dorien.lanssens@uhasselt.be
Quick fire session: Tuesday May 25, 12.00 – 12.45

MONA

Screening with AI for eye diseases leading to blindness

MONA is a spin off from 2 major research institutes in Belgium : VITO and the University of Leuven (KUL), with co-founder Pr Ingeborg Stalmans, worldwide expert in glaucoma and artificial intelligence.

MONA has developed an AI to detect main eye disease leading to blindness like diabetic retinopathy or glaucoma.

MONA will develop a fully automated solution allowing patient to self screen and get an immediate answer if they need to be referred to an ophthalmologist.

Also MONA wants to promote the eye as a window to the body, from retinal scan there is more than just eye diseases that can be diagnosed. In particular our co-founder Pr Ingeborg Stalmans is working on the detection of early signs of Alzheimer disease from retinal picture analyzed with AI.

Contact: olivier.menage@vito.be
Quick fire session: Tuesday May 25, 17.00 – 17.45

Digi.Bio BV

lab-on-a-chip device platform to accelerate therapeutics development for immunotherapies

Benchtop platform that executes key steps in the cell-based therapeutics development process in weeks instead of months.

This is possible thanks to miniaturizing and automating process in a lab-on-a-chip system based on highly scalable Digi.Bio digital microfluidic platform (no pump, electric control of liquids) with computational biology platform to extract and analyze imaging data.

Business model: sale of device (200k) and consumable cartridges (2k/single use). For small customers we offer access to our product as a service (in house cell line development for cell immunotherapies, 50-100k per project of 1-2 months).

Our proprietary technology is composed to lab-on-a-chip for specific therapeutics devlopment, AI methods to automate process and extract cell drug phenotypes, product design, molecular assays that execute processes in microfluidic environment

Contact: federico@digi.bio
Quick fire session: Wednesday May 26, 17.00 – 17.45

Mucovac

Gateway through the gut barrier

With our technology we enable smart intestinal delivery of drugs and biologicals (human and veterinary).

The primary applications that we envisage are situated in the domain of oral vaccination. The number of oral vaccines on the market is extremely limited and most of these vaccines are live attenuated vaccines, with the risk of residual virulence and/or reversion to virulence. This entails a risk on side effects to use said vaccines in young animals or children with possibly an immature immune system. Live attenuated strains also showed decreased immunogenicity in developing countries in all age groups and especially in children.

We can overcome the difficulties encountered with oral immunisation by targeting antigens to a receptor (APN) on the enterocytes of the intestinal mucosa, which leads to endocytosis of the antigens, transcytosis through the epithelial barrier and appropriate presentation to the mucosal immune system.

An additional advantage of our strategy is that APN is not only expressed by small intestinal enterocytes, but also by intestinal dendritic cells, the most important antigen-presenting cell in the gut. This might explain the rapid induction of immune responses following this immunisation strategy (demonstrated in pigs) with antibodies already detected 7 days upon administration and high IgA titres at 14 days upon immunisation.

Other applications of the Mucovac-technology focus on treatment of intestinal inflammation.

Contact: sven.arnouts@ugent.be
Quick fire session: Thursday May 27, 09.00 – 09.45

Monoceros Analytics

Single-cell transcriptomic and intracellular proteins for drug efficacy screening

Complex diseases, such as cancer, originate from cells with aberrant molecular networks. Fortunately, drugs can target aberrant networks to eradicate diseased cells. However, this is challenging as molecular networks are intricately wired and drugs have complex modes of action.

The drug development process is extremely costly, time consuming and faces a high attrition rate. A key bottleneck is the lack of understanding how drug compounds interact with the complex networks in the cell.

Monoceros Analytics with experimental and computational expertise is going to revolutionize the drug development process by providing more precise insight in the mode of action of drugs. Our key aim is to offer a service to pharmaceutical companies providing high-resolution molecular insights into modes of action of their candidate drug molecules. We will offer full experimental (cutting-edge high-throughput technology developed in our laboratories)

and bioinformatic analysis and we will deliver a report (in semi-publication format) describing the full mechanism of action of the drug molecule. The unique aspects of our technology are high-throughput combined single-cell transcriptome and intracellular (phospho)proteins measurement.
By understanding the mode of action of drug molecules we can help pharma companies in: exploring new drug combinations, patent busting, predicting side and toxic effects. Successful use of the knowledge provided by our company will allow repurposing of already commercialised drugs for different diseases, more patients will be receiving effective treatments during clinical trials and decrease the number of animal tests in testing non-effective drugs in the preclinical phase.

Contact: kinga.matula@ru.nl
Quick fire session: Thursday May 27, 12.00 – 12.45

axSpA biomarkers - immune biomarkers for diagnosis of Axial Spondyloarthritis

Biomarker panel, autoimmune disease, diagnostic delay, increased therapeutic market

Spondyloarthritis (SpA) is a group of rheumatic diseases with a heterogeneous clinical presentation, which can be classified as axial (ax) and peripheral SpA.
AxSpa, predominantly characterized by inflammatory back pain, has an estimated prevalence of 0.7%. However, due the lack of an appropriate serological test, there is a diagnostic delay of 5-10 years. Patients with a delay in diagnosis may have missed the window of opportunity for adequate treatment, which results in poor long-term outcome, including irreversible loss of spinal function. Moreover, at present it is challenging to distinguish between axSpA patients and per¬sons with chronic low back pain at an early stage, as diag¬nostic criteria are lacking.
While treatment of axSpA has been largely improved in the last decennia, diagnostics remain very limited. With a compound annual growth rate (CAGR) of 7% for the therapeutic market, better and earlier diagnosis is key. Hasselt University and KU Leuven have discovered and validated 3 new biomarkers in plasma/serum for diagnosis of axSpA.
The 3 UHasselt biomarkers have a sensitivity of 14% and a corresponding specificity of 95% in chronic low back pain patients.
Combined with the presence of inflammatory back pain, and the currently used laboratory markers HLA-B27 and CRP, the 3 UHasselt biomarkers increase the probability of correct axSpA diagnosis.
In addition, UHasselt has recently identified additional isotype biomarkers that could lead to a significant increase of the sensitivity when used in combination with the described biomarkers. Further validation is ongoing.
Using our biomarkers, axSpA patients can be diagnosed better and earlier, resulting in earlier and correct treatment.

Contact: Veerle.Somers@uhasselt.be
Quick fire session: Thursday May 27, 17.00 – 17.45

Weave.ly

No-code platform for safe and secure clinical trial apps

The use of mobile applications in clinical trials offers a wide range of potential benefits: shorter study durations, improved retention rates through increased participant intimacy (e.g. through push notifications, reminders, etc.), increased data accuracy, etc. However, there is no one-size-fits-all solution to develop mobile apps that support clinical trials. Depending on the trial the requirements for such applications vary significantly (e.g. collection of wearable data, surveys, video and audio sampling, etc.). Developing apps from scratch for each trial incurs a significant cost that hampers the adoption of mobile technology in clinical trials.
Weave.ly is a no-code platform that enables experts and laypeople alike to build mobile data collection systems. Users drag and drop components that represent atomic logic (e.g. reading data from a wearable, asking users a question, aggregating received data, etc.) onto a canvas after which our platform automatically generates the necessary mobile applications, cloud data processing logic and real-time web dashboards. This enables all stakeholders of clinical trials to easily co-create and develop the mobile application needed to support their trials for a fraction of the cost and in a fraction of the time required by traditional development approaches.

Contact: fmyter@vub.be
Quick fire session: Friday May 28, 09.00 – 09.45

Griphingo Pharmaceuticals

Innovative inhalation therapy for COPD patients

Griphingo Pharmaceuticals is a University of Groningen spin-off that aims to improve the quality of life of thousands of patients with chronic obstructive pulmonary disease (COPD), by local administration of our proprietary lead compound. COPD is a chronic, progressive and ultimately fatal disease, for which currently no adequate therapy is available.

Our lead compound inhibits HDAC1, 2, 3 and 6 with a novel dual warhead and partial prodrug strategy, which leads to attenuation of pulmonary inflammation and fibrosis. Our disease-modifying approach has first-in-class potential in restoring lung function. The observed positive effects are connected to a decrease in neutrophil influx in the lungs as a result of a decrease in IL-8. The effects are also associated with the restoration of the expression of the anti-inflammatory cytokine IL-10 and a reduction in fibronectin.

Research on COPD is traditionally strong in the University of Groningen and the University Medical Centre Groningen. Griphingo Pharmaceuticals' development of HDAC inhibitors (HDACi) for COPD treatment capitalizes on this local strength. Our team and partner network is poised to continue with the pre-clinical studies to progress our in-house developed dual HDACi to a Phase I clinical trial. This should provide a steppingstone for future clinical trials to bring our novel inhalation therapy for COPD patients closer to practice.

Contact: info@griphingo.com
Quick fire session: Friday May 28, 12.00 – 12.45

Lumabs BV

Novel solutions for monitoring antibodies in complex mixtures (e.g. blood).

Lumabs BV is a start-up high tech company spun out of Prof. Maarten Merkx's lab at TU/e with the support of the NLC network. Our team includes highly experienced entrepreneurs with successful track records in pharma/biotech and the commercial role out of novel technologies.

Our technology is a solution for quantifying a given antibody in a complex mixture such as blood. The primary applications are BioAnalysis for therapeutic antibodies, e.g. in support of clinical trials, and Therapeutic Dose monitoring. The novel design of the proprietary reagent enables a simple mix and measure test format, which combined with the built in controls, makes Lumabs highly amenable to point of care testing. We also anticipate that the development phase will also offer our partners time savings compared to current practices enabling them to start clinical trials more rapidly.

Lumabs BV is currently seeking early adopters and development partners who have a need to quantify therapeutic antibodies in biological samples. We welcome all enquiries from potential partners and investors alike.

Contact: a.kinkaid@lumabs.com
Quick fire session: Friday May 28, 17.00 – 17.45

TAURION

Real-time NIR fluorescence imaging in life sciences and clinical applications.

Taurion will pioneer real- time Near-Infrared (NIR) time-domain fluorescence imaging in biophotonics, life sciences and clinical applications.

Taurion's CAPS image sensors and cameras are built from the ground up for to meet today's optical imaging challenges and are the key to enable real-time Fluorescence lifetime (FLT) imaging by virtue of high NIR quantum efficiency and high-speed time-gating. They are a leap improvement from the existing NIR camera technology today.

Currently there is no time-domain system available for macroscopic life sciences application and we plan to start to lead the preclinical fluorescence imaging field by providing the solutions for the current limitations in NIR sensitivity, specificity, and multiplexing the detection of NIR contrast agents. We are currently building a minimum viable product for preclinical use and want to continue to develop the imaging system towards a certified clinical system. The main Unique Selling Points (USPs) of these systems will be: Distinguish real from unreal fluorescence, multiplex in the NIR range and able to sense molecular and the physiological conditions of contrast agents in real-time.

Fluorescence-guided surgery (FGS) has already proven to improve patient care by giving a surgeon a real-time view of blood flow by fluorescent dyes and detecting the sentinel lymph nodes in direct proximity of a tumor.

We believe that we can extend the multiplexing capability and add better sensitivity and specificity towards the clinical FGS practice. Assisting surgeons in better tumor re-sectioning, will contribute to the progress of the treatment of cancer patients and save lives.

Contact: hingelbe@etrovub.be
Quick fire session: Monday May 31, 09.00 – 09.45

UFO Biosciences – Functional Single Cell Selection

High-throughput screening and profiling of clinically relevant cancer-driving cells

Global Challenge: 50% of cancer patients still die, due to incomplete eradication of heterogeneous tumors. Rare, aggressive, cancer-driving cells can cause therapy resistance and treatment failure. As it is not possible to accurately identify and isolate these rare cells with current technologies, a huge knowledge gap remains, thereby severely hampering development of effective cancer treatments.
Solution: Our patented functional single cell selection and isolation technology, FUNsice, allows automated selection of specific single cells exhibiting dynamic cancer-driving phenotypes. We can select and isolate cells from complex and heterogenous samples, based on any functional characteristics, no matter how rare the cell type.
Value proposition: FUNsice enables identification of meaningful genetic or transcriptomic signatures that are missed with current technologies, to support discovery of new targets and cancer-driving pathways, driving development of new diagnostics and therapeutics for better cancer care.
Development stage: We demonstrated robustness and successful identification, selection and profiling in cell lines and clinical samples. Proof-of-Concept studies demonstrating successful identification and validation of variant genes from patient material is close to completion. We have started offering FUNsice through an in-house facility, in preparation of commercialization through a spin-off.
Business opportunity:
- Services: offering FUNsice screening, identification and isolation of cells of interest, followed by profiling by scSEQ and bioinformatics analysis, to identify genetic or transcriptomic signatures for biomarker and target discovery.
- Drug discovery: potential to build a data library, providing an invaluable resource for target and biomarker discovery. Business opportunity through (a) sales of findings, or (ii) internal proprietary drug discovery/ development.

Contact: veerle.fleskens@oncode.nl
Quick fire session: Monday May 31, 12.00 – 12.45

Contact

For additional information and inquiries please contact:

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