

Information

Ascenion Information
June 2015

Fighting Urinary Incontinence with Space Technology

Everyone is familiar with wireless technology these days – mostly from using Wi-Fi. Many people therefore associate it with data transfer, a few perhaps with energy, but no-one really associates it with incontinence – except for Dualis Medtech. This start-up from the German Aeronautics and Space Research Centre, DLR, develops innovative solutions for the wireless transmission of energy and data in various medical indications. A cardiac support device from development partner Reliant Heart is expected to reach the market next year. Two years after that, it could be joined by Dualis' new sphincter system for bladder weakness, a condition affecting a surprisingly large number of people (see box).

The sphincter principle

The system consists of three implanted elements: a fluid-filled cuff around the urethra, a fluid reservoir, and a stainless steel micropump. A small external unit containing controls and power supply can be worn comfortably on a belt. By pumping fluid into or out of the cuff, the pressure on the urethra can be adjusted automatically to prevailing physiological conditions. 'In the event of sneezing or coughing, the pressure is immediately increased,' comments Stephan Sagolla, CEO of Dualis. 'It is subsequently reduced again, to avoid tissue damage to the urethra.' It's easy to imagine what this means for incontinence sufferers: the ability to move freely and securely.

More than expected

It's hard to say exactly how many people suffer from urinary incontinence, as the subject is still very much taboo. Figures from various sources vary from 5 to over 50 per cent. In the largest population-based study to date, the EPINCONT study, over 25 per cent of women between 40 and 50 years of age reported suffering from light to significant incontinence. The problem is set to grow as the average age of the population increases.



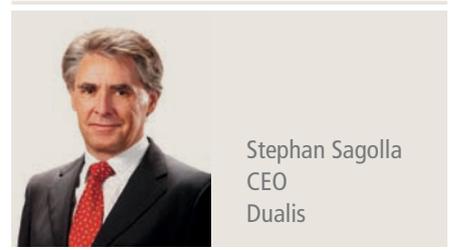
left: sphincter system closed, right: sphincter system open

From 30 milliwatt to 700 watt

The crucial innovation lies in the energy supply. 'An electric toothbrush can be charged wirelessly, but you still need direct contact to the charger,' explains Sagolla. With its Medbase technology, Dualis is the first company to solve the major challenge of transferring energy wirelessly over vertical distances of up to 7 cm – without energy loss. This works within a power range of 0.03 to 700 watt, even with horizontal displacement. 'People move around – this means that the system must be able to tolerate some variation in the relative positions of the implant and the external unit,' says Sagolla. A further advantage is that there is only minimal warming of the surrounding tissues: around 1 °C, which is significantly lower than the maximum stipulated by regulations.

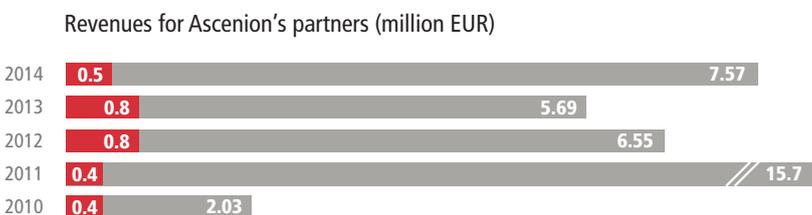
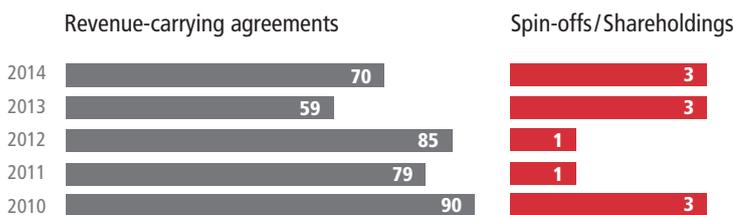
New applications

The Medbase technology could therefore be of use in all energy-dependent implants currently powered by microbatteries that, sooner or later, have to be replaced. Nerve stimulators and eye implants are just two examples. An implanted micropump, supplied with energy and controlled by a unit worn on a pair of glasses, could ensure optimal eye pressure in millions of glaucoma patients. Pill-sized endoscopy cameras are a further area of application. 'There are so many highly attractive possibilities – more than we can manage and finance,' concludes Sagolla.



More information and contact details:
www.dualis-medtech.de

Ascenion in Figures: Review of 2014



■ Proceeds forwarded by Ascenion to the LifeScience Foundation ■ Revenues from agreements

Proceeds in 2014 from agreements at our partner institutes rose by EUR 1.88 million compared to the previous year, generating a total sum of EUR 7.57 million. In addition, EUR 500,000 Euro from Ascenion's operating profit and investment proceeds were distributed to the LifeScience Foundation, which in turn makes them available to fund further research.

Among the highlights of 2014 were:

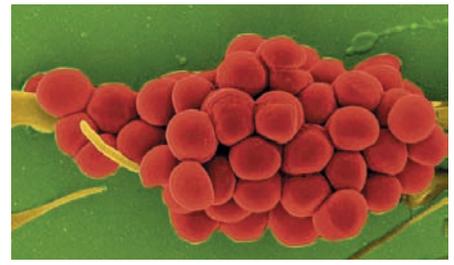
- The acquisition of Activaero GmbH by the Vectura Group
The two companies joined forces to provide new possibilities for respiratory disease patients. Activaero, which originated from the Helmholtz Zentrum München, sold for EUR 130 million.
- The acquisition of Trianta Immunotherapies GmbH by Medigene AG
This merger provides a basis for the targeted development of three new approaches to T-cell therapy of cancer developed by Prof. Dolores Schendel at the Helmholtz Zentrum München. Ascenion received shares in Medigene.
- FDA approval for BLINCYTO™
This has made a novel immunotherapy available to patients suffering from a particular form of leukaemia. Ascenion's partner, the Max Delbrück Center, is benefitting from the product's commercial success via license payments.
- Expansion of Ascenion's activities at European level
Dr Christian Stein currently holds the Presidency of ASTP-Proton. In addition, Ascenion has gained European research institutes as new clients. As with Ascenion's German partners, the LifeScience Foundation will benefit directly from any commercially successful exploitation.

Two of a Kind: Anti-infectives from the HZI and HIPS

'We want new drugs that are effective against resistant bacteria to become available as soon as possible,' says Dr Sabina Heim, Technology Manager at Ascenion. 'The number of infections that can no longer be treated with traditional antibiotics is rising – particularly in hospitals and nursing homes.' Dr Heim and her colleagues have already negotiated two agreements in this research area in the first quarter of 2015: one between the Helmholtz Institute for Pharmaceutical Research Saarland (HIPS) and the US firm Spero Therapeutics, the other between the Helmholtz Centre for Infection Research (HZI) and the Lead Discovery Center (LDC). Both projects are pursuing innovative therapeutic strategies: rather than being killed, the bacteria are disabled so that they are no longer able to cause disease.

'This has two advantages,' says Sabina Heim. 'The new compounds avoid further selection pressure that would lead to the development of new resistant strains. Furthermore, they don't affect the patient's natural bacterial flora, and are therefore likely to be better tolerated.'

The two agreements differ considerably in structure. Milestone payments and a proportional share of revenues have been agreed with Spero Therapeutics, with revenue flowing to the HIPS if the project develops successfully. In addition, Ascenion has acquired shares in the US company. In the agreement with the LDC, the emphasis is on early project development. Drug candidates will be identified and optimized in cooperation. As and when a validated lead compound emerges, a licensing partner for



further pharmaceutical development will be sought. The Helmholtz Validation Fund and the HZI are providing financial support for the initial development stages.

Networks

Review

Record number of participants at BioVaria 2015

'This year's BioVaria was particularly lively and inspiring,' summarizes Esther Lange, the BioVaria coordinator at Ascenion. Industry representatives and investors agree. 'It was a tremendous opportunity to discover a large number of promising technologies and meet innovative minds from all over Europe,' says Pfizer's Dr Maria Flocco.

In addition to the presentations and exhibition, this year's BioVaria saw the return of the Spin-off Panel. 'In our experience, spin-offs are becoming a favoured project development route,' explains Dr Christian Stein, CEO of Ascenion. This makes them a source of comparatively advanced technologies and would explain the Panel's high level of resonance – not just with investors, but also with industry representatives.

The Panel offered an excellent opportunity for the participating spin-offs to present themselves to industry and investors, and to obtain 'expert feedback', according to Dr Oliver Thorn-Seshold, CEO from CytoSwitch. 'It was a fascinating day here at BioVaria,' he adds. Not surprisingly, as it was his company that convinced the jury and won the BioVaria Spin-off Award. Along with the increased awareness, the award also brings EUR 1,000 in prize money and a professional consultancy package from Pinsent Masons.

You can find more about the technologies and start-ups presented under:
www.biovaria.org

BioVaria 2015 in numbers:

190 participants

16 technology transfer organizations

58 licensable life-science projects

7 selected spin-offs

from 50 academic institutions

from 10 European countries



Save the date for BioVaria 2016:
17 May 2016, Munich

Top-level coaching for innovative minds

Around 50 participants met at the Evangelische Akademie Tutzing for this year's Biotech NetWorkshop for current and aspiring entrepreneurs. Just over half the attendees were experts, investors or managers with long-term experience in the branch. 'That's what's so exceptional about this workshop,' says Ascenion's Dr Anja Zimmermann, who organizes the event every other year. 'Entrepreneurs meet top decision-makers in a confidential setting for individual coaching on issues that concern them, as well as receiving plenty of practical tips.' A number of business angels also

attended this year's meeting. They see the workshop as a chance to make contact with innovative minds and their entrepreneurial ideas at a very early stage.

Next year it is once again the turn of Max Planck Innovation to organize the Biotech NetWorkshop, which will take place 20 – 22 January 2016 at Schloss Ringberg in Kreuth.

Interested?

Further information at

www.biotech-networkshop.de.



More than just licensing

There's a clear trend – worldwide. At international IP conferences and professional association* meetings such as AUTM (USA), ASTP-Proton (Europe), ATTP (global) und UNITT (Japan) the branch is developing a new self-understanding: the central role of technology transfer is shifting from the licensing and start-up businesses into project development.

In other words, technology transfer organizations are increasingly concerned with advancing academic projects to the point at which licensing negotiations and the founding of sustainable start-ups first become possible. A prominent example of the large degree of commitment in this area is the new Oxford Sciences Innovation Fund, with a target volume of around GBP 300 million (EUR 424 million). The aim of the fund is to support very early-stage start-up projects from the Oxford cluster. 'It's gratifying that more and more tools

are being created worldwide to help us get promising projects underway,' says Dr Christian Stein, CEO of Ascenion.

'It still isn't sufficient, though. Apart from effective instruments, technology transfer needs above all good people and more recognition for their work.'

The professional associations are therefore working at various levels to build up project development infrastructure and know-how, and to bring about a change in awareness. A key element is the ATTP certification programme, which is progressing well. There are already

over 300 Registered Technology Transfer Professionals (RTTPs). In addition, a formal European qualification is planned. 'We also need to redefine the criteria according to which success is measured in technology transfer: away from financial parameters towards those that define transfer performance,' Stein explained in his opening address at this year's ASTP-Proton conference in Istanbul.

* AUTM: Association of University Technology Managers (USA),
ASTP-Proton: European Knowledge Transfer Association,
ATTP: Alliance of Technology Transfer Professionals (global),
UNITT: University Technology Transfer Association (Japan)



News in Brief

Ascenion Hamburg now neighbours with Life Science Nord



Ascenion's Hamburg office has moved to the Centre for Innovative Medicine (CiM) in Eppendorf. It is now a direct neighbour of Life Science Nord, the biomedical industry cluster in the north of Germany that links and supports around 500 biotechnology, pharmaceutical and medical technology companies in the region, as well as numerous research institutes. 'Here we can profit from many interesting interactions,' says Dr Torsten Stachelhaus, Ascenion's Technology Manager in Hamburg. The average distance from the new office to Ascenion's partners in the region remains the same. The new telephone number is +49 40 47196-530.



New funding and a new CEO for OMEICOS

Omeicos, a spin-off from the Max Delbrück Center for Molecular Medicine (MDC) in Berlin,

announced this April that it has secured Series A financing worth EUR 6.2 million. EUR 550,000 of this came from Ascenion's Spinnovator programme, which is supported by the German Federal Ministry of Education and Research (BMBF). The company will use the funds to advance its innovative approach to the treatment of heart disease. Now OMEICOS has been able to attract the experienced life-science manager Dr Ulrich Dauer as its new CEO. Dr Dauer was co-founder and long-serving CEO of 4SC AG. Most recently he was responsible for strategic development at Activaero GmbH.

Growing need for Chikungunya test



of Latin America.

In 2009, Ascenion had already negotiated a licensing agreement for a diagnostic test developed at the Bernhard Nocht Institute for Tropical Medicine (BNITM) in Hamburg. The licensee is the NovaTec Immundiagnostica GmbH, situated in Dietzenbach near Frankfurt. Due to rising demand, the existing agreement was extended at the beginning of this year.

The Chikungunya virus, a dangerous pathogen that mainly originated in Africa and Asia, is currently also spreading at an alarming rate in the more humid regions

Meet us

Best of Hamburg
13 July 2015
Hamburg
Gregor Lichtfuss

BioJapan 2015
14 – 16 October 2015
Yokohama, Japan
Esther Lange and Christian Stein

LES 2015 Annual Meeting
25 – 28 October 2015
New York, USA
Thieß Matzke

BIO-Europe 2015
2 – 4 November 2015
Munich
Esther Lange and others

ASTP-Proton Fall Meeting
11 – 13 November 2015
Amsterdam, The Netherlands
Anja Zimmermann and Christian Stein

BioFIT 2015
1 – 2 December 2015
Straßburg, France
Esther Lange

Noteworthy

VIP+ validation funding programme

In March this year, the German Federal Ministry of Education and Research (BMBF) launched a new phase of its VIP programme. This provides funds for evaluating the potential applications of early-stage projects – up to EUR 1.5 million per project over a period of 3 years. Early developmental stages such as validation and feasibility studies, prototype development, and IP protection, will be supported. The total volume of the VIP+ programme is EUR 150 million.

Wondering if your project is eligible for VIP+ support? If you work at one of our partner institutes, please get in touch with your designated Technology Manager. You can find their contact details under www.ascenion.de/en/service/our-technology-managers/

Further information and application guidelines can be found directly on the BMBF website: www.bmbf.de/de/2391.php



Technology Offers

- [TO 02-00311](#) Cystobactamides – novel antibacterials against gram-negative pathogens
- [TO 02-00317](#) Neosoraphens for treatment of Th17 associated inflammatory and autoimmune diseases
- [TO 02-00324](#) Innovative DOTA-linkers for bacterial targeting
- [TO 02-00328](#) Determination of biofilm dynamics via impedance
- [TO 03-00352](#) Niclosamide as inhibitor of colon cancer metastasis
- [TO 03-00397](#) Plasma cell-specific antibodies targeting BCMA for the treatment of multiple myeloma and autoimmune diseases
- [TO 03-00399](#) Novel method for expansion of human satellite cells and muscle regeneration
- [TO 03-00400](#) Novel method for isolation and cultivation of ground state human embryonic stem cells
- [TO 10-00088](#) Bixiamycines – novel natural compounds with broad-spectrum antibiotic activity
- [TO 15-00096](#) Laser hearing aid
- [TO 15-00199](#) The “i-scoop” – a new type of laryngoscope for normal and difficult airways
- [TO 15-00293](#) MYDGF – a therapeutic protein candidate for ischemic tissue repair
- [TO 15-00297](#) Patient stratification for adult-onset Still’s disease
- [TO 15-00302](#) Novel inhibitor of mutated IDH1 in cancer therapy
- [TO 15-00337](#) Circulating microRNAs for diagnosis of Takotsubo cardiomyopathy
- [TO 15-00356](#) Analysis of myostatin in serum
- [TO 15-00358](#) COAT – an exceptionally efficient tumor vaccination approach
- [TO 15-00366](#) Long non-coding RNA (lncRNA) LIPCAR predicts survival in heart failure patients
- [TO 15-00371](#) lncRNAs as new diagnostics for disease related angiogenesis
- [TO 15-00379](#) Mutation leading to type 1 diabetes mellitus and corresponding animal model
- [TO 16-00012](#) SUCLG2 as determinant of CSF A β 1-42 levels and attenuator of cognitive decline in Alzheimer’s disease



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Europe’s Next Top Technologies

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www.BioVaria.org

Editorial

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