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PEPPERMINT
VENTURE PARTNERS

UPDATE °1

EDITORIAL

M-HEALTH IS THE WAVE OF THE FUTURE

A spider poised in a web is a very apt metaphor of Berlin as a location with respect to m-health. Not a week goes by that we do not receive several new business ideas from this sector, either developed in Berlin or brought in by entrepreneurs who want to come to Berlin.

It is a testimony to the attractiveness of the city that more and more international entrepreneurs are drawn to Berlin, where they can realize their ideas at the nexus of IT and healthcare. This includes excellent universities, such as the Charité University Hospital or the Berlin Free and Technical University, along with an international flair, an entrepreneurial energy and a pioneer spirit.

With Update °1, we wish to introduce current and exciting topics and trends from the healthcare sector, entrepreneurs, early-stage companies and the latest news from our portfolio. M-health is the key focus of this edition, an area in which our portfolio companies Emperra and Implandata are also active.

Interesting articles on the topic – one from the German Private Equity and Venture Capital Association (BVK), another from the auditing firm PricewaterhouseCoopers, and yet another from Dr. Müschenich, a visionary in the field of Internet medicine and managing partner of the start-up factory „Flying Health“, combine to make the Update complete.

The Peppermint VenturePartners-Team

IN THIS ISSUE

IN FOCUS

BERLIN – AN IDEAL LOCATION FOR M-HEALTH START-UPS

Berlin is the hotspot of the German and European start-up scene. All of Germany benefits from the dynamic, entrepreneurial environment in Germany's capital city. Venture capital plays an important role in this positive trend. Last year alone in Berlin, EUR 184 million in venture capital were invested in company start-ups.

Generating the most interest are the sectors IT, media and mobility, as the entrepreneurial activity in those sectors is particularly dynamic. Yet Berlin is also an outstanding location for other technology fields such as medical technology and healthcare. With its clinics and research institutions, the Charité, for example, Europe's largest university clinic, or the Deutsches Herzzentrum Berlin (DHZB, German Heart Institute Berlin), Germany's capital is ranked among the leading healthcare locations in the world.

That is why it is hardly surprising that both sectors – medical technology and IT – are reflected in numerous innovative business models in the melting pot of Berlin. One example of this is the m-health sector – linking medicine and mobile applications.

Peppermint VenturePartners has been an investor on the scene for many years, mentoring and investing in start-ups from the life science field, in particular in the sectors of medical technology and m-health, in the start-up and growth phase. We are pleased to have such an experienced early-stage investor in Berlin, above all in light of the numerous success stories that have emerged from the collaboration of Peppermint Venture Partners and the start-ups that have received funding.

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IN FOCUS

MOBILE HEALTH: REVOLUTION OR EVOLUTION OF FUTURE HEALTHCARE ?

Electronic patient files, imaging diagnostics, electronic medical records, picture archiving and communications systems, home care, as well as self-diagnostics: The healthcare system has long since arrived in the Digital Age. The ever more intensive use of digital information will completely revolutionize the healthcare system as we know it.

According to the PwC study, „Emerging m-health: Path for growth", already half of all German patients are convinced that mobile health (m-health) will improve the healthcare system with respect to costs and quality. Likewise, the main players in the healthcare system, such as doctors, health insurance funds, the pharmaceutical industry, med-tech companies and other stakeholders such as telecommunications and IT firms are evaluating the potential of mobile healthcare services and are searching for lucrative business models. Because despite great technological visions, the current level of implementation and distribution is falling short of the types of the opportunities envisioned just a few years ago.

Today, mobile applications encompass mostly the digitization of existing administrative processes, a direct customer dialogue through dissemination of information by means of mobile devices or the playful influencing of patient behavior. The focus is on the streamlining of processes and cost savings, for example, by enabling policyholders to administer their address details themselves and making available to them the latest information about illnesses, treatment methods or insurance rates. This will fundamentally change in the future. A study of the medium-term growth potential within the next five years predicted a more than fivefold increase in revenues generated with m-health between the years 2013 and

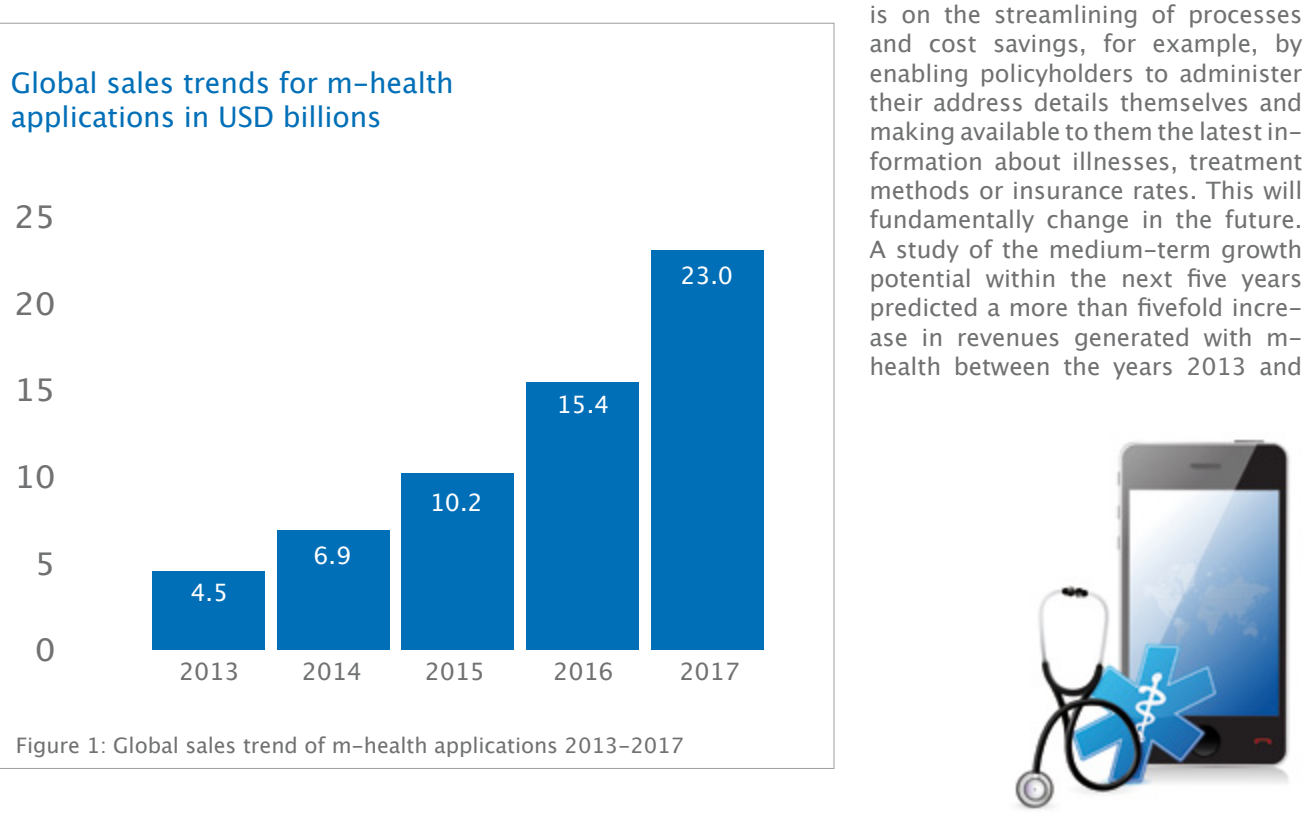

Figure 1: Global sales trend of m-health applications 2013-2017

Global market for m-health
by market shares

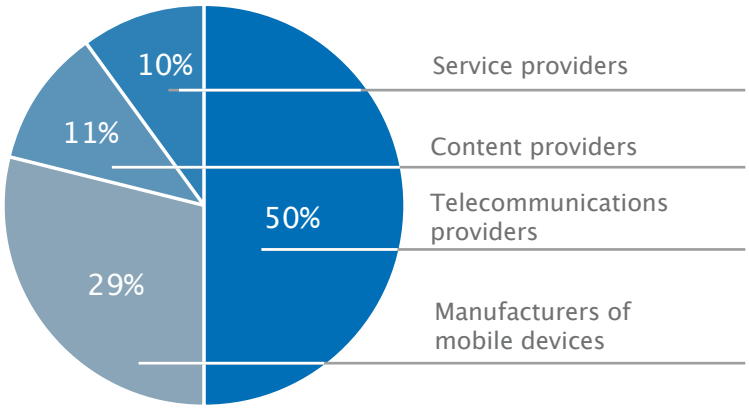

Figure 2: Global market shares by player in the year 2017

2017, which are increasingly attributable to diagnostics applications . Some of the growth drivers in particular are the aging societies in industrial nations, as well as the high prevalence of chronic illnesses in newly-industrialized countries. Accordingly, the worldwide market for m-health applications in the year 2017 will reach USD 23.0 billion, whereby approx. 65 % of applications for monitoring vital signs and patient levels will become obsolete. For mobile services to treat chronic illnesses and symptom-based patient monitoring in the aftermath of acute symptoms, a market potential in the amount of USD 10.7 billion is anticipated, supplemented by USD 4.3 billion in sales potential for mobile solutions that can ensure and facilitate the personal independence of the elderly. Interestingly enough, it will not be the established players in the healthcare system such as insurance companies, physicians, hospitals or pharmaceutical companies that will benefit the most from this trend. Rather, telecommunications providers will command half the market potential for themselves and thus develop into formidable players in the healthcare system. In addition, manufacturers of mobile devices will achieve 29 % of the sales potential in the year 2017, followed by content providers (11 %) and traditional service providers.

M-HEALTH SERVICES AND NETWORKS ARE MORE THAN SIMPLY TECHNICAL GADGETRY

The advantages of m-health solutions are intuitively obvious. The use of mobile devices in the hospital environment, for example, could lower treatment and healthcare costs by making internal processes virtual or by supplementing inpatient treatment with outpatient prevention measures and effective aftercare. This leads not only to an improvement in the operative bottom line, for example, through avoidance of costly mis- and follow-up treatments. This enables clinics to cater more closely to individual patient needs and thereby boost the quality of medical and care treatment. Lean administration processes would

SUCCESS FACTORS AND CHALLENGES

To our knowledge, however, it may be some time before mobile applications, most certainly differentiated according to regional circumstances, will have reached the third phase of the adoption model. For Germany, we have identified essentially six major challenges:

1. Resistance to change in the healthcare system is slowing down propagation: Innovators must overcome obstacles caused by a conservative culture and somewhat contradictory incentive systems in the healthcare system that lead to conflicts of interest. A new technology alone does not suffice. The industry must undergo fundamental change and define the new nature of collaboration between physicians, patients, and other players in the healthcare system.

2. The interests of physicians and patients are divergent: While it is true that patients want more convenient healthcare services, at the same time they want greater personal responsibility. For physicians, administrative processes would be facilitated, and at the same time, the quality of healthcare would be improved, to the extent they could relinquish influence, given the increased personal responsibility of the patient.

3. A vast number of unresolved legal issues (approval, data protection, industrial property rights, laws governing professions, Law on Advertising in the Field of Healthcare (HWG), etc.) also obstruct diffusion: With the publishing of the FDA Guideline, many of the mobile health apps offered in Germany are classified as a medical product, at least according to Class II. This will cause the costs for the development and maintenance to

further spiral, so that companies will have to know precisely for which target groups and at which level of expense further developments are to be pursued. In the scope of a roll-out of m-health solutions, additional topics are to be taken into consideration in the context of „Digital Governance". Off-label requirements or information also classified for healthcare specialists need to be addressed in a transparent compliance system.

4. The routine reimbursement of m-health services by health insurance funds does not yet exist: The breakthrough of m-health will come as soon as there are verifiable medical successes and the services are reimbursable. Generally speaking, today we are still a long way off from that moment.

5. It is not so much technology but solutions that will usher in the breakthrough: A consistent and sustainable distribution of m-health requires services that above all comply with the needs of the payers. In this, the relevant technology constitutes a necessary, yet by no means sufficient, prerequisite.

6. Limited knowledge about opportunities and safety concerns: Patients currently know little about the opportunities of m-health. Moreover, there are concerns with respect to security and data protection. Here regulators are called upon to develop standards and to prescribe clear guidelines for m-health solutions.

take the burden off hospital personnel and free up more opportunities for actual face time with patients. Regions suffering from a shortage of physicians or affected by a scarcity of care and hospital personnel can guarantee access to medical care through telemedicine, even in sparsely developed areas. In the Netherlands, for example, there is current discussion of so-called Regional Health Information Organizations (RHIO), which function as service companies for regions by networking hospitals and physicians in private practice, in addition to providing patient data, hospital resources, DRG structures, and disease patterns, etc.

For pharmaceutical and medtech companies, m-health provides the option of evolving from a pure seller of pharmaceuticals and medical equipment into an integrated provider of healthcare services and thus into a solution provider. Traditionally, the business model of both industries was characterized by a focus on product sales. More recently, the technical opportunities of m-health applications have enabled the care of a patient group holistically and from a single source, and could supplant patients' one-off, incident-driven consultation of various players in the healthcare system. Chronically ill patients in particular, whose numbers are expected to double over the next two decades, can also be helped through integrated care. In this way, diabetes patients, for example, can be motivated through interactive diabetes diary apps to eat healthier foods, get regular exercise and, where necessary, be reminded to take their medicines or to keep their doctor's appointments.

Compared to many traditional therapies, m-health thus combats not only the symptoms of the disease but also begins to take a preventive approach by modifying the behavior of the patient, in order to mitigate the onset of an illness or, in the best of cases, to prevent it outright. This could help totally prevent severe sequelae such as kidney disease, blindness or heart attacks, or at least delay their onset. This creates a significantly higher quality of life for those affected, and, what's more, it saves treatment costs. If these apps also transmit vital signs, and if the treating physician and specialist are well networked, the competent physician can recognize at an early stage any anomaly in the trend of the cardiovascular sinusoidal curve as an indication for a heart attack and promptly initiate corrective measures.

In addition to the traditional healthcare service providers, there are now a number of innovative start-ups in the marketplace that are seeking to take the market by storm with niche services such as healthcare apps. Interestingly enough, more than 80 % of apps offered are based on the iOS operating system, and only approx. 17 % on the Android operating system. This is all the more remarkable because the Android operating system has an overall market share of 80 %. Moreover, the current products and services offered in many places can be characterized more as value-added services, for which the interactive network component does not yet exist. This trend is also mirrored in the PwC adoption model, which in its first phase categorizes m-health solutions as „sending". In a second phase, the interaction with the end-user comes into play, involving „sending and receiving". The third phase of an m-health solution seeks to target acceptance by the reimbursement process and ultimately creates a new standard of care.

FIELDS OF APPLICATION AND BUSINESS MODELS

The current situation in the field of m-health is characterized by a large degree of heterogeneity with respect to the aim and functionality of existing applications. Thus, there currently exist over 24,000 medical apps for mobile devices (essentially Phase 1 value-added services), which in the broadest sense are intended to improve medical care and are geared not only towards specialists in the healthcare field but also to patients. In this, the fields of application range from provision of healthcare-specific information, through so-called vital and health apps, on to facilitation of self-diagnosis and reminders to take medications, right down to support of the overall patient care process. It is striking, however, that the number of health apps dominates the market by far, and mobile solutions that facilitate the patient care process have only been implemented sporadically up to now.

This begs the question as to whether there is indeed a genuine and quantifiable added value for the various players in the healthcare system to utilize mobile technologies. Which business models of providers, health insurance schemes, pharmaceutical companies, med-tech firms or service providers such as telecommunications and software companies are imaginable and can close the gap between existing fields of application and fundamentally conceivable integrated solutions towards goal-driven treatment of patients along the entire value-added chain?

Not only health insurance companies but also service providers are currently still very reserved in their introduction of mobile technologies. Whereas for health insurance companies in particular, the argument of a missing legal framework as a prerequisite for funding and reimbursement is at the forefront, many service providers shy away from potential investments and organizational changes that go along with the implementation of mobile technologies.

The FONTANE Project in northern Brandenburg is an innovative example for blanket-coverage introduction of m-health in the sense of an RHIO. Diverse stakeholders are working hand-in-hand here: health insurance funds, healthcare providers, as well as telecommunications and software companies. FONTANE is a telemedicine m-health-based early warning system for care of patients in rural areas who are suffering from severe cardiac insufficiency. In the scope of the project, which is embedded in a study running until 2015, participating patients at home are provided with scales and a blood pressure and ECG monitoring device. They use the devices to take measurements daily. The measured values are subsequently sent via a mobile phone link to a university clinic. In transmitting and utilizing this data, it is essential to adhere to strict data protection guidelines. In the university clinic, the received measurement data are stored and evaluated daily around-the-clock in an electronic patient history. In case of anomalies, a fine-tuned medical response is initiated.

This example manifests the fact that innovative and needs-oriented m-health solutions are possible in principle. Yet amid the many technological possibilities already in existence today, there is a need to evaluate what still remains a distant dream of tomorrow and what can be already realized today.

Successful m-health projects are mainly not those pursuing the most innovative idea. They are also seldom those with the state-

1	COMPATIBILITY	Compatibility with sensors and other mobile devices in order to enable the smooth exchange of healthcare data
2	INTEGRATION	Integrated in existing solutions and treatment processes, in order to guarantee the necessary support for new applications
3	SOLUTION	High-quality, real-time solutions based on existing data, in order to achieve gains in productivity
4	NETWORKING	Networking for joint use of information from various providers of healthcare services, in order to ensure facilitation, recommendations and coaching
5	FEASIBILITY	Positive return for invested capital or positive cost-benefit ratio with respect to the quality of the healthcare services offered
6	ENGAGEMENT	Involvement of the patient and immediate feedback on his behavior, in order to promote new behaviors and thus achieve better health in the long term

Figure 3: Successful m-health applications are characterized by six basic principles

of-the-art and unique adherence character. Because most projects fail shortly before they reach the finish line. Successful m-health projects pursue their objective in a clear governance structure and already take into account in the beginning any relevant pitfalls. Therefore, at an early stage, business cases need to be made plausible, feasibility checks carried out and compliance requirements taken into consideration. The main objective is not to achieve what is technically possible, but rather to develop long-term sustainable business models. The example concerning the usability on operating systems such as iOS and Android demonstrates that the market still has much to learn in this respect.

Furthermore, m-health projects without a solution focus or involvement of the users, whether it be healthcare professionals or patients, for example, cannot be successful in the medium to long term. Adherence and patient programs must ensure, for example, that they are tailored to the needs of the target group and that they provide value in everyday use. If you are not capable of clearly featuring the added value and solutions rather than merely offering technical gadgetry, you'll very quickly lose potential users.

The main focus from technological perspective are the key concepts of compatibility, integration and networking. An m-health solution that in an initial phase is conceived in the scope of the first adoption phase should also offer added value when networked in an RHIO. Thus far in German hospitals and physicians' practices, there has been a very heterogeneous mix of various IT systems and databases, so that smooth integration comes with certain challenges.

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CONCLUSION

The opportunities of m-health are vast, and the challenges are enormous. If m-health projects are approached constructively, the benefits from m-health projects can be achieved not only for the stakeholders involved, but also for the economy as a whole. Ultimately,
m-health solutions will usher in a comprehensive change of the healthcare market and new standards of care. Successful implementation requires intelligent business models, however, in which the diverse interest groups are involved. This not only fosters broad-based acceptance, but also appears to be a key factor for balanced, medically sufficient solutions offering the patient genuine added value.
According to the today's status, there is currently remuneration of m-health solutions only in the scope of private sector investments or by utilizing the parameters of existing social legislation. In this, consortia pursuant to § 219 Social Security Code (SGB) V or model projects pursuant to § 63 Social Security Code (SGB) V are currently available for an interdisciplinary evaluation of m-health potential. They can help improve the quality and efficiency of care in the sophisticated environment of the healthcare sector. The stakeholders must currently continuously analyze uncertainties with respect to potential future regulations and address them in relevant governance and compliance structures. Policymakers are also called upon here to ensure in a timely manner the required clarity concerning reimbursement models and any liability conditions.

IN FOCUS

THE PERSONAL PHYSICIAN FROM THE WORLD WIDE WEB

There is no doubt among e-health aficionados: The development of medical services via the Internet will have no less an impact on healthcare provision than the introduction of the iPhone had on our daily communication. The healthcare system is still at a very formative stage in terms of Internet medicine.

But the speed of implementation of Internet-based services surrounding all aspects of medicine and health has increased enormously over the past few years.

At the very beginning, there was telemedicine in which the analog world was largely mirrored digitally 1:1. Radiologists were suddenly examining x-rays not only from their own practice but also those transmitted via data lines from hospitals which no longer had their own radiologist. Letters from physicians were no longer sent via stamped envelope but conveyed via e-mail instead. The product idea was essentially analog and was digitally presented.

At the next stage of evolution, the term e-health was added. This already involved the monitoring of vital signs. Patients with cardiac insufficiency transmitted their pulse, blood pressure and weight to a centralized control center which then advised the patients and responded to pathological values more or less in real time. Yet here as well, the patient was mostly dependent upon medical and non-medical experts.

In the meantime, the future of healthcare provision now belongs to Internet medicine. And in isolated cases, we can already catch glimpses of this future in the present. Anyone who wants to know what is already possible today in terms of future patient care needs to only take a look into the world of venture capital and the ranks of health start-ups. A future scout will find what he is seeking, for example, at the company Emperra. Peppermint VenturePartners invested in Emperra in May 2013. With its ESYSTA system, the company has set a goal to revolutionize the treatment of diabetics. It offers the world's only insulin pen capable of automatically transmitting the dose of insulin injected onto an Internet platform.

An expert system prepares the transmitted amount of insulin with the just previously measured glucose level and the ingested carbohydrates in such a way that the patient is informed in real time whether he has administered his individual insulin therapy correctly. The treating diabetologist, after being granted access rights by the patient, simultaneously has access to this information, so that the specialist can interact with the patient.

The world of modern information and communication technology has arrived in our healthcare system via Emperra. It offers the patient a level of healthcare akin to having one's own personal physician. Today, we consider that to be medicine perfectly geared towards the patient. Yet that is only the beginning of the age of Internet medicine.

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CURRENT EQUITY POSITIONS

Emperra®
E-Health Technologies

The most recent investment in medical technology / m-health by Peppermint VenturePartners (PVP) is the company Emperra GmbH E Health Technologies. As lead investor, PVP, along with other investors, took a stake in this Potsdam medical technology company in May 2013.

Emperra is characterized by a „connected health" approach that allows various stakeholders to join up with one another in an ever-increasing networked environment of medical care. With its ESYSTA system, the company has managed for the first time to make all relevant data vital to the scope of successful disease management of the chronically severe forms of diabetes mellitus available at all times and in a mobile format telemedically for the patient (and where necessary, for his family) and the treating physician in private practice and/or clinics. All the stakeholders can network via a web-based platform, the ESYSTA portal.

The components of the ESYSTA system are the proprietary insulin pen, a blood glucose monitoring device, as well as a proprietary web-based platform. The pen is capable of utilizing insulins from all standard insulin providers (no change of therapy), recording, saving and transmitting the dose of insulin, together with blood glucose data recorded by the ESYSTA glucose monitoring device, to the ESYSTA portal. The entire individual profile of values (current, longitudinal and retrospective) can be reviewed not only on a PC but also on mobile devices (iOS and Android).

The „closed-loop interoperability" of the ESYSTA system allows it to be used not only for younger, but also for older patients who are afflicted with severe and thus cost-intensive forms of diabetes mellitus requiring insulin.

Diabetes mellitus is among the largest cost drivers in the healthcare system worldwide. In 2012, approx. 285 million people were afflicted with this metabolic disease. In 2030, that number is expected to reach 439 million. The direct costs associated with this illness, not to mention the many co-prevalences caused by diabetes mellitus, will continue to place an even stronger, and thus extreme, burden on relevant healthcare systems. The necessary level of care, however, will no longer be feasible unless the diagnosis and treatment and therapy loyalty („compliance") of diabetes patients do not rapidly improve.

With the help of the ESYSTA system and its hardware and software components, it is possible to assist diabetics in their illness („self-empowerment"), to make the prognosis diagnostics and therapy more certain, and to also increase therapy loyalty by networking with physicians and family members.

All components of the ESYSTA system are CE certified and for the most part have now become adopted in the list of medical aids by the National Association of Statutory Health Insurance Funds (GKV). Emperra is currently conducting a pilot study with the northeastern German Local Health Insurance Fund (AOK Nordost), in order to demonstrate the benefits of the ESYSTA system under real-life conditions. A recent initial intermediate evaluation of 150 patients with chronic diabetes mellitus and severe cases resulted in a corresponding statistically significant reduction in the HbA1c value (long-term lab parameter for diabetes mellitus) and blood glucose levels. The study is being continued on a total of 250 patients.

www.emperra.com

CURRENT EQUITY POSITIONS CONTINUED

HUMEDICS GMBH

Humedics
redefining liver function analysis

The liver plays a decisive role in the body's metabolism. An impairment, be it due to various forms of hepatitis or also tumors, can be life-threatening. Precisely determining liver function can help indicate therapeutic pathways for the patient and the treating physician.

The company Humedics, a spin-off from the Charité and the Free University of Berlin, is developing the new „gold standard" in functional liver diagnostics. Up until now, it has not been possible to reliably determine the liver function. With the LiMAx test, which has since been used on more than 3,000 patients, it is possible to record the precise liver function in real time. The mobile breath test is easy to perform. Seven hospitals in Germany and abroad have been using it in the meantime. It has been demonstrated that the test can significantly lower mortality in difficult liver operations. What's more, patient management of liver patients was significantly improved.

PVP has been working with the company since 2009 and in 2011 took an equity position in the company as lead investor, along with other investors. In June 2013, PD Dr. Stockmann, one of the founders, was awarded the Langenbeck Prize from the German Society of Surgery for his work on the LiMAx test. By 2015, the LiMAx test is expected to be available throughout Europe.

www.humedics.de

IMPLANDATA OPHTHALMIC PRODUCTS GMBH

IOP
Implandata Ophthalmic Products GmbH

Glaucoma is the second-most frequent cause of blindness in the world. Estimates suggest that worldwide in the year 2020, there will be some 11.2 million cases of blindness caused by glaucoma and some 79.6 million persons afflicted with glaucoma-related visual field defects. The frequency of glaucoma increases with age and has a prevalence of approximately 2-4 percent among persons over 65. Each year in Germany, there are more than 1,000 new cases of blindness due to glaucoma.

The increased internal pressure in the eye is the most important risk factor in the development of glaucoma. A treatment that lowers the eye pressure offers a favorable prognosis for the illness. Up to now, there has been no practical solution for regularly measuring internal pressure in the eye. The therapy loyalty is very poor, as the patient in question only becomes aware of his illness once his field of vision has been impaired. Because the internal pressure in the eye fluctuates, however, an optimal reduction down to normal levels is extremely difficult without continuous measurement.

As the first company worldwide, IOP has developed an implantable sensor with which the internal pressure of the eye can be measured. This wireless sensor transmits the internal high-pressure readings to a small portable hand-held device, so that for the first time the recorded values can be integrated into a mobile patient management system. The physician and patient can thus be linked to one another in the future.

The functionality and principal safety of the sensor implant was examined and validated in an initial study including six patients in Germany. In addition, there have been several years of treatment monitoring of three additional patients abroad.

PVP took an equity position as lead investor in the A2 round in the year 2012.

www.implandata.com
www.implandata.com/videos.html

CURRENT EQUITY POSITIONS CONTINUED

CEVEC PHARMACEUTICALS GMBH
CAP-CMV GMBH

The production of complex biopharmaceuticals that play an extremely vital role in today's medicine requires efficient and ethically-safe cell systems. With its CAP® cell expression system, the company CEVEC working in this field boasts a unique and patented platform technology on the basis of human cells, which satisfies ethical standards and is now used worldwide by renowned pharmaceutical and biotechnology companies. Because the CAP® cells involve human cells, they are also superbly suited for growing human viruses and producing vaccines.

In September 2012, as part of a consortium in the C round, PVP invested in CEVEC and in June 2013 took an active role as lead investor in the funding of CAP-CMV GmbH. CAP-CMV GmbH is the spin-off of a joint development project by CEVEC and Vaccine Project Management for combating infections with the human cytomegalovirus (HCMV).

Infections with the cytomegalovirus (HCMV) are responsible for many physical handicaps in newborn infants and can lead to tissue rejection in organ transplants. CAP-CMV is developing a very effective new vaccine on the basis of the so-called „HCMV Dense Bodies (DB)", which cells develop during an infection. Due to their structure, the dense bodies are not infectious themselves, yet they are highly immunogenic.

www.cevec.com

CRYOTHERAPEUTICS GMBH

Cardiovascular diseases remain one of the most frequent causes of death in the Western world. The development of new treatment options in the field of interventional cardiology, by means of modern catheter systems for opening (thrombolysis) and stabilizing affected arteries (stenting) has significantly reduced fatalities after heart attacks. The global market for products in interventional cardiology is estimated at over EUR 10 billion today.

The focus of CryoTherapeutics GmbH is on patients after a heart attack or with unstable angina pectoris, who after removal of a thrombus still show partial obstruction of the artery (< 70 %). To date, there is no gold standard for treatment here. That is why CryoTherapeutics developed an innovative treatment option in which inflammation can be clearly reduced through brief cold treatment of the afflicted lesions. The therapy offers an alternative for this indication compared to the established stents.

With the anti-inflammatory effect of the cryogenic treatment, the injury responsible for heart attacks can be stabilized and an optimal healing process facilitated.

A team of experienced entrepreneurs from Great Britain, the United States and Canada established CryoTherapeutics in Germany in 2010. PVP has been working with the company since it was established, first as a coach for the „high-tech Gründer Fund" and also as an investor in the course of the A round since 2013.

www.cryotherapeutics.com

ABOUT US

Peppermint VenturePartners (PVP) is a private venture capital investor headquartered in Berlin, investing in early-stage healthcare companies in Europe. The main focus of these investments are companies with innovative ideas in the field of medical technology, diagnostics and m-health, along with platform technologies in biotechnology. Target companies should develop patent-protected technologies and products or innovative business models in the healthcare sector. In doing so, the key criteria involve addressing unmet medical needs towards improving the diagnostics and therapy of illnesses, while simultaneously achieving cost savings.

Peppermint VenturePartners was established in 2008 by Ingeborg Neumann, Dr. Joachim Rautter and Dr. Klaus Stöckemann. At the end of 2010, in cooperation with Charité Foundation, PVP launched the Peppermint Charité Biomedical Fund 1 (CBF). In the scope of a partnership with the Charité University Hospital in Berlin, PVP has a unique network through the medical expertise of one of the largest and most renowned University clinics in Europe, along with its international partners.

As an active investor, PVP guides companies through all crucial phases, from company start-up, all the way to the strategic exit. Since the beginning of 2011, CBF has taken equity positions in a total of six companies in the target segments and built up a promising portfolio. Up to four additional investments are planned by the end of 2016.

In addition to management of the CBF, in 2011 PVP assumed responsibility for the external management of the newly-issued Helmholtz Validation Fund (HVF) on behalf of the Helmholtz Association. In the scope of this collaboration, PVP enjoys superb access to one of the largest research associations in Germany. In addition to this excellent network in the field of research institutions, PVP also enjoys longstanding industry contacts.

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