

**October 2017****Specialised in Growth**

## Ladies and gentlemen,



Foto: schreier.co

In August we invested in the cardiology firm CoreMedic. We spoke with heart surgeon Dr. Alberto Weber from the University Hospital Zurich about the company's innovative product. He

explained why the product has the potential to be used as the first treatment option for certain patients suffering from mitral heart valve problems.

With this investment we are promoting the current medical technology trend of minimally invasive surgery. The area is booming especially in the USA, as it offers easy procedures that usually involve less risk for patients. In an interview, our Partner André Zimmermann explains other trends and provides interesting insight into the differences between the medical technology markets in the US and Europe.

The medical technology industry will be meeting in Düsseldorf once again in November. Many of our portfolio companies will be there and we are excited about this opportunity for exchange. Maybe we'll see you there.

I hope you enjoy reading and look forward to your feedback.



Hubertus Leonhardt

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## ARTICLES

### Medical technology in the United States and Europe: SHS Partner Dr. André Zimmermann speaks about the two markets



Hardly any other industry is as complex as medical technology. Medical technology companies operate within the context of different market mechanisms and different regulations in nearly every country. There are particularly large differences between the European and the US markets. Dr. André Zimmermann is a Partner at SHS, where he is responsible for international business development with a focus on the United States. In this interview, the expert on the US market provides interesting insights into the industry and explains the differences between the American and the European medtech markets.

Dr. André Zimmermann, Partner at SHS

#### ***Mr. Zimmermann, many of the companies in your portfolio are active in the USA. What distinguishes the medical technology market in the USA from the one in Germany or Europe?***

To put it simply, the US market is just larger than the European market. This applies to both the supply and the demand sides. Most of the world's largest medtech companies are headquartered there or at least have significant branches. In 2015 the medical technology market had a total volume 220 billion dollars, of which the USA accounted for about 99 billion dollars and the EU accounted for approximately 66 billion dollars. The market is also much more dynamic. There are more IPOs and US investors are much more open to new technologies and less averse to risk. It is also significantly more likely there to find young technology companies and their technologies integrated in larger companies and corporations. This promotes innovation and provides an excellent foundation for a thriving medtech startup scene.

#### ***Is there anything else that separates the two markets?***

Yes, in terms of approval and reimbursement. The costs associated with approval in the United States are substantially higher, but the procedure is centralized. As the only approval authority, the FDA coordinates the entire process. A centralized procedure like this has its advantages as well as its disadvantages. In Europe, on the other hand, almost every country has its own notified bodies, which means products are approved by way of a decentralized procedure. This can be advantageous with regard to the speed of the approval process. At least this was the case in the past. The impact of the new Medical Device Regulation (MDR) remains to be seen. Many experts are predicting, however, that the CE approval process will tend to take longer in the future. As such, the approval requirements in the two markets are moving towards each other at the top level. When it comes to reimbursement, the US market is more uniform and less complicated. Europe is a real patchwork in this respect, because each of the countries (and sometimes even individual regions within these countries) has its own highly complex reimbursement system. Reimbursement prices are also much higher in the US, on average, much higher than in the EU. Germany in particular has a low-price market. This even represents the biggest hurdle for many companies. It is of course easier to achieve profitability when prices are higher in a market. On the other hand, those companies that successfully weather the reimbursement situation in Germany, will be well positioned to succeed in any other industrialized country. This is where the strength and innovation of the German medical technology industry lies.

#### ***As a medical technology investor, how can you help the companies in your portfolio be successful in the USA?***

Medical technology companies entering the US market are faced with many challenges. We help them overcome these challenges using our excellent time-tested network. When it comes time for product approval, we connect them with external service providers that know just which approach is right for a particular segment. When clinical trials are required, we have access to selected key opinion leaders and top clinics as well as FDA-experienced approval specialists. If they have questions pertaining to trends and developments in the market, we can refer them to the appropriate business

development managers. Access to the right contacts is particularly important, because companies can often not get far without this insider knowledge. It simply takes too long to find the right partner by trial and error.

### ***Which medical technology trends are currently in particular demand in the USA?***

Minimally invasive and robot-assisted surgery is currently trending. We are also interested in promoting these trends and have already invested in companies in these areas, including the heart valve repair specialist CoreMedic and the robotic surgery company AOT. Precision medicine continues to be a hot topic as well. The aim to provide individual treatment that matches each patient will shape the discourse on future treatment options. The home care sector is also booming, as its goal is to keep the time patients spend in the hospital to a minimum. This not only saves costs, but increases patient satisfaction as they feel much more comfortable in their own home than in the hospital. And speaking of minimizing costs, the pay for performance (P4P) payment model is also currently being tested in the US. In this method, the amount of remuneration for medical services depends on whether or not defined health targets are achieved for the patient. This model is intended to prevent potential false incentives associated with the current flat-rate payments based on Diagnosis Related Groups (DRG), which can cause lucrative procedures to be carried out more often than necessary, for example. If this is implemented successfully in the United States, then I could easily imagine it being used in Europe as well. In the past few years, Europe has often lead the way with regard to market launches of innovative medtech products. This could change, however, due to the tightening of European regulatory policy in the future, especially since the FDA is currently lowering approval hurdles and accelerating authorization procedures. Should this be the case, then the US market will become even more attractive, especially due to the size of the market, and offer a wide variety of application possibilities for new technologies. Successful medical technology companies in most of the segments cannot afford to forgo a significant market presence in the USA. The potential is tremendous!

## PORTFOLIO COMPANIES NEWS

### **SHS expands its portfolio to include heart valve repair specialist CoreMedic: interview with heart surgeon Dr. Alberto Weber about this innovative technology**



PD Dr. med. Alberto Weber, cardiac surgeon, senior heart surgeon at the University Hospital Zurich

**SHS:**

Dr. Weber, as a heart surgeon you operate on patients suffering from mitral insufficiency among other things. This is still a serious surgical procedure, both for the patient and for the surgeon. How will ChordArt™ change the lives of patients and surgeons?

**Dr. Alberto Weber:**

ChordArt™ represents a revolutionary change in how we treat leaking mitral valves caused by weakened or torn tendon chords (which affects up to 2% of the population). Due to the severity of the procedure, it is only possible to operate on some of the patients today. The operation would be too risky for some, whereas others don't yet have the symptoms warranting the risk of an operation.

ChordArt™ does away with the necessity of performing heart surgery on patients with leaking mitral valves. This means that patients both young and old, who have very leaky valves, can be treated using an exceptionally gentle procedure through the groin, in some cases even without anesthesia. This form of therapy can be performed even before symptoms occur and the risk of heart surgery increase dramatically.

**SHS:**

How is ChordArt™ different from other systems and developments?

**Dr. Alberto Weber:**

In addition to the minimally invasive application that can be performed on a beating heart, the ChordArt™ implant consists of very little material, which means it requires very little space. As a result, this technology allows for additional measures that may be needed in the future.

Following implantation of ChordArt™, the valve can still be surgically repaired and even replaced if necessary.

The technology is also groundbreaking in the sense that it is perfectly compatible with other catheter-based reconstruction methods, which could be necessary for more complicated repairs.

**SHS:**

What role can/will ChordArt™ play in future treatment of mitral valves?

**Dr. Alberto Weber:**

This technology is a real breakthrough in heart valve treatment, not only for physicians, but as a truly safe and gentle method for patients.

**SHS:**

Dr. Weber, thank you for your time.

**About the interviewee:**

Heart surgeon and senior physician at the University Hospital Zurich. Swiss specialist for thoracic and cardiovascular surgery, European Board of Thoracic and Cardiovascular Surgeons. Senior physician for heart and vascular surgery in Zurich since 2007 and at Inselspital Bern since 2009. Senior heart surgeon at the University Hospital Zurich since 2015. Clinical focus: complex reconstructive cardiac surgery on adults, reoperations, minimally invasive valve surgery, cardiac surgery with miniaturized heart-lung machine, coronary revascularization. Research focus: development of minimally invasive valve reconstruction technologies and extracorporeal circulation systems. Dr. Weber is an initiator and co-inventor of the ChordArt™ system developed by CoreMedic.

**KEY FACTS**

**Year established:** 2012

**Business purpose:** Development of devices and therapies to address the treatment of heart valve diseases: repair system that replaces ruptured or elongated chordae tendineae by applying a minimally invasive approach

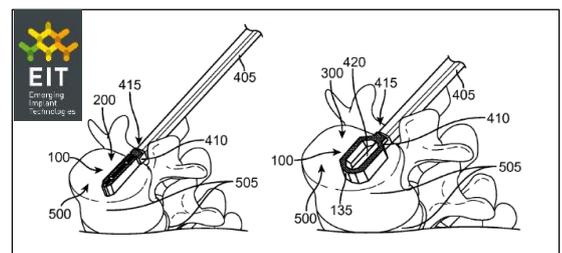
**Products:** ChordArt™ System

**Location:** Tuebingen, Biel (CH)

**EIT continues development of its product portfolio by acquiring patents**

EIT is a German medical device manufacturer focused on 3D printed devices for spinal applications. With this acquisition EIT is prepared to offer a complete product range of fully 3D printed expandable cages in the United States, Europe and many other global markets.

EIT's CEO Guntmar Eisen says: "This IP is our platform to take fully 3D printed fusion cages to the next level by adding functionality to our EIT cellular titanium® cages. This will give the surgeon more options intraoperatively, reduce inventory and support MIS techniques, while at the same time reducing the cost of expandable cages."



Functional principal of implant expansion

Morgan Lorio, MD believes 3D printed cellular structures are a game changing technology and will provide better tools for restoring patients' spinal balance.

No later than 2018 EIT will launch the first functional spinal fusion cage based on the acquired patents.

## KEY FACTS

**Year established:** 2014

**Business purpose:** Development and marketing of 3-D printed fusion implants and instruments for spinal surgery applications. External implant production based on selective laser melting (SLM 3-D printing) and regional distribution cooperations.

**Products:** Cervical cage, lumbar cages as well as an innovation portfolio comprising minimal-invasive access, customizability and other spine innovation projects.

**Location:** Wurmlingen (2016, D), established in Tuttlingen (D)

## INSIDE NEWS

### SHS at MEDICA/COMPAMED 2017



As an industry investor for medical technology, we will once again be visiting MEDICA/COMPAMED, which is taking place this year from November 13th to 16th in Düsseldorf. Are you interested in an exchange with our colleagues Uwe Steinbacher or Cornelius Maas? If so, please don't hesitate to contact us.

You can also see several of our portfolio companies at MEDICA/COMPAMED:

GNA Biosolutions GmbH: Hall 3 / E93

puracon GmbH: Hall 8b / L18

SIS medical AG: at the trade specialist congresses

Spiegelberg GmbH & Co. KG: Hall 15 / F40

TNI medical AG: Hall 10 / C22

Tyromotion GmbH: Hall 4 / F05.

### SACHS Forum 2017: SHS Investment Manager Cornelius Maas discusses current trends in the diagnostics industry

SHS Investment Manager Cornelius Maas discussed the latest industry developments with representatives of medical device and diagnostic companies at the SACHS Forum in Basel in late September. The panel discussion included topics ranging from point-of-care testing and enabling precision medicine to cooperation between the industry and startups.

[Find out more >>](#)



Cornelius Maas at this year's SACHS Forum

## Workshop on "successful management of innovation projects in medical technology" on 23 November 2017 in Nuernberg with SHS



The medical technology market is one of the most promising and stable segments for high-tech companies. Manufacturers of medical technology have to develop specific expertise and establish effective partnerships to remain successful in this environment.

Forum MedTech Pharma e.V. is organizing a workshop on the topic of "successful management in medical technology". It will take place on November 23rd in Nuernberg. Experienced experts will indicate the key challenges and opportunities for appropriate approaches in the individual process steps. SHS Managing Director

Hubertus Leonhardt will be speaking about financing of innovation projects. [Find out more >>](#)

## CAREER

### Jobs at SHS

#### Junior Investment Manager (m/f)

Have you recently received your Master's degree in the field of business, business law, engineering or science? Are you also interested in corporate finance and have you gained practical experience in this area as part of your studies? Would you like to be involved in challenging, dynamic, and entrepreneurial activity as part of an experienced team? Then apply today. We look forward to hearing from you. [Read more >>](#)

#### Managing Director / MBI candidate (m/f) for medical technology, succession solution

We are regularly seeking executives who would like to become entrepreneurs with us and drive the performance of companies. Together we develop a corporate vision and strategy, which you then put into action with our support. [Read more >>](#)

#### Internships for students

Are you studying business, economics or engineering? We offer you the opportunity to apply your previously acquired knowledge as part of an experienced team of SHS professionals. You will benefit from a project-oriented, flexible working atmosphere, a flat hierarchy and diverse employment opportunities offered by SHS throughout the entire investment activity cycle. [Read more >>](#)

#### Master's thesis at SHS

Are you writing your master's thesis in business, economics or engineering? We offer you the opportunity to write it as part of a six-month internship with our company. We would be happy to help you define a current topic in the area of venture capital / private equity. Contact us. [Read more >>](#)

#### Master's thesis at SHS – Digital Health

Are you a student in the field of Economic Sciences or Engineering or one of the Natural Sciences? We offer you the opportunity to write your Master's thesis on the exciting topic of Digital Health as part of a six-month internship with our company. [Read more >>](#)

## Jobs at SHS portfolio companies

### **CFO (m/f) member of the management board**

Your area of responsibility will include monitoring of growth, internal and external accounting, controlling, taxes and legal issues. You will co-ordinate contact with investors, banks and auditors. You will also support the company in negotiating strategic business agreements. [Read more >>](#)

### **Senior Development Engineer (m/f) for Medical Technology**

SIS MEDICAL AG is a globally active, innovative and fast-growing medical technology company. To strengthen its research and development department in Frauenfeld, SIS is looking for a solution oriented and creative personality for the position of Senior Development Engineer. [Read more >>](#)

### **International Sales Manager (m/f)**

TRI Dental Implants AG is one of the fastest growing providers of high quality dental implants in Switzerland. In the role of International Sales Manager you will be responsible for the international distributor network of TRI Dental Implants, both in revenue and business development. You will be supported by an Assistant for International Sales. [Read more >>](#)

You can find further vacancies at TRI here: <https://www.tri-implants.com/de-de/content/comp-jobs/jobs.aspx>

### **CEO (m/f) Focus: Research and Development, Clinical Affairs and/or Regulatory in medical technology**

Do you have experience as a managing director or are you currently in the "second row" and want to make the next step. Experience with project management of product developments, clinical trials, and/or approvals in the cardiovascular environment are desired. You should speak fluent English. [Read more >>](#)

## PRESS REVIEW

### **Selected press starting August 2017**

A selection of relevant articles about us and our portfolio companies:

#### **Business – The Chamber of Commerce magazine for Munich and Upper Bavaria, issue 08/2017, pages 40-41: "Diese Stoffe gehen unter die Haut" (These substances go under the skin)**

The August issue of the Chamber of Commerce magazine for Munich and Upper Bavaria is dedicated to the impressive development of the SHS portfolio company AMW. The company based in Warngau focuses on the licensing and production of drug patches as well as development collaborations with pharmaceutical companies. With the help of fresh financing, AMW will further drive its transition toward becoming a developer and producer. [Read more >>](#)

#### **medtech zwo, August 1, 2017: "SHS invests in heart valve repair startup"**

SHS has expanded its portfolio to include the heart valve repair specialist CoreMedic. medtech zwo included this in its report. CoreMedic develops minimally invasive repair kits for the treatment of heart valve disease. SHS sees great potential in CoreMedic's technology. The investment firm has provided the company with capital to further develop its innovative products. [Read more >>](#)

#### **International journals also reported on SHS's investment in CoreMedic:**

##### **Diagnostic and Interventional Cardiology:**

<https://www.dicardiology.com/content/transcatheter-mitral-valve-repair-start-coremedic-gets-financing>

**Cardiac Vascular News:**

<http://cardiovascularnews.com/shs-invests-in-innovative-heart-valve-repair-start-up-coremedic/>

**privateequitywire:**

<https://www.privateequitywire.co.uk/2017/08/01/254583/shs-invests-heart-valve-repair-start-coremedic>

**unquote, September 21: "German election: PE assesses likely coalitions"**

Within the context of the German election in 2017, the renowned media outlet unquote asked experts about their opinions on the impact of the election results on private equity. Hubertus Leonhardt voiced his views for SHS. Although the political parties CDU and SPD see innovation as the foundation for sustainable economic growth, Leonhardt hopes the parties will be more committed to investment in innovation in the future. [Read more >>](#)

**Investment Focus**

<b>Sector:</b>	life sciences (medical technology, diagnostics, applied technologies, industrial biotechnology/pharmaceutical industry; no drug development)
<b>Geographical Focus:</b>	Germany, Austria, Switzerland
<b>Reasons for investment:</b>	growth capital, strengthening equity, MBO/MBI, change of shareholders/succession, M&A financing, spin-off
<b>Company situation:</b>	growth/expansion, succession/company sale, internationalization; operating profit may be negative for growth, or for technology-related reasons
<b>Transaction value and Investment size:</b>	transaction value: up to € 100 mn; investment amount SHS IV: € 2-20 mn, with a co-investor from the SHS-network up to € 50 mn
<b>Investment types:</b>	majorities or minorities, equity & financial instruments similar to equity