

SPOTLIGHT ON...

Orthopaedic device investing



Anthony G. Viscogliosi, Principal, Viscogliosi Bros. LLC (VB)

Anthony G. Viscogliosi, a pioneer in the \$43 billion global market for orthopaedic and other medical devices, talks to Finance Monthly about sourcing, developing and funding innovative orthopaedic device technologies

Q Since we last talked in 2012 how are things in the world of orthopaedics investing?

During the two years since our last interview with Finance Monthly, VB has completed two ground-breaking exits in orthopaedics. Small Bone Innovations, Inc., a firm we created in 2005 to specialize in joint replacement implants for the upper and lower limbs, was acquired by Stryker Corp. in June, 2014, for \$375 million.

We also sold our majority stake in Knee Creations, LLC to Zimmer Holdings, Inc. Knee Creations is a developmental company specializing in treating knee bone lesions that can help patients avoid total knee replacement.

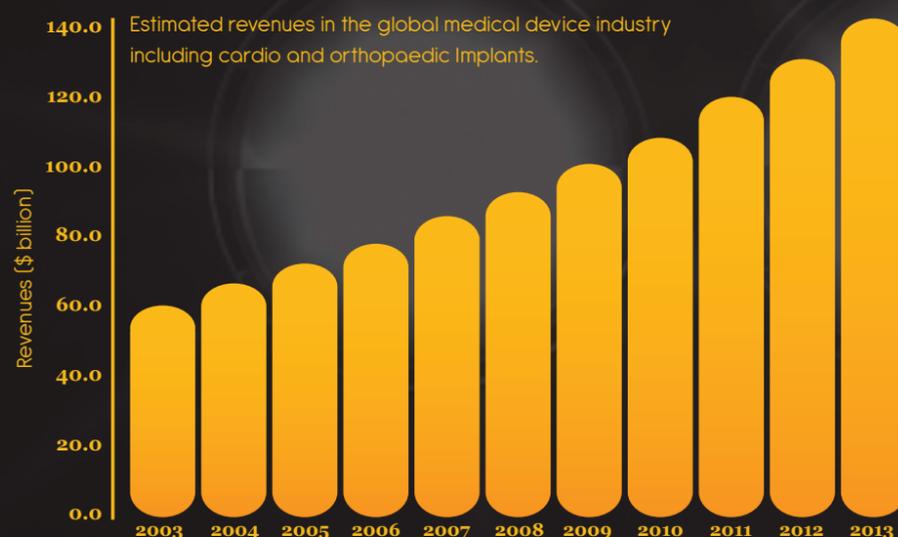
These transactions are classic examples of our strategic approach to this market. We look for truly outstanding concepts capable of disrupting traditional approaches to the treatment of diseased or damaged bones and joints. We raise the capital

to develop an infrastructure around the concept and bring it to market with the ultimate goal of selling to major manufacturers like Stryker and Zimmer at very favourable multiples.

Q How did you arrive at this strategy? Isn't orthopaedic innovation driven by surgeons?

In addition to the financial success we've achieved for our investors, it is important to point out that virtually all of the products and technologies acquired from VB by major manufacturers have evolved from surgeon-inspired ideas into mainstream platforms for improving or revolutionizing treatment of the spine, knee, ankle and other joints. Our expertise is in picking winners and demonstrating their effectiveness.

During our formative years, one or more of us attended just about every medical convention worldwide in the search for opportunities. Europe has long been the richest source of orthopaedic innovation so our focus was primarily on France and Germany. Some of our most successful investments were in product platforms that were quite far along. The development of the ProDisc spinal disc replacement platform was done primarily in France, for example, under circumstances that would be impossible to duplicate in the US due to the complexity of the regulatory environment.



Source Frost & Sullivan

Q Would it be reasonable to assert that the major US manufacturers you mention have actually depended upon European surgeons to establish the orthopaedic device market?

I think that's fair to the extent that thousands of US clinicians have been trained in procedures developed in Europe. The US manufacturers have done what they do best, which is to market and distribute devices under the highest possible standards. Surgeon training is obviously crucial to the success of a product or procedure. We have funded the training of several thousand orthopaedic surgeons, including US foot and ankle surgeons in the salvage of 'diabetic' feet courtesy of the renowned Ilizarov Institute in Kurgan, Siberia. This has contributed to a sharp decline in lower limb amputations in the US. So orthopaedics is truly a global industry with solid growth potential – possibly reaching \$100 billion by 2020.

Q What are the keys to success in finding and bringing a venture capital funded company to market?

In the US, and to a similar extent elsewhere in the world, a medical innovation be it a device or drug, will have to do more than treat a disease or injury. There is a huge investment in clinical trials to satisfy regulatory authorities such as the US Food & Drug Administration (FDA). It must be surgeon-friendly in the sense that it doesn't cause significant investment in post-operative care, auxiliary equipment, facilities and supporting expertise.

It must be affordable to payers, including public health agencies, patients, hospitals and medical insurers, and, of course, be widely available. It is worth noting that the growth of online medical information and resources can rapidly educate and stimulate demand from patients seeking immediate treatment.

The rising cost of this process is beyond the capacity of most venture capitalists that lack the kind of expertise and network contacts required to bring a product to market. The major manufacturers do not have the resources to investigate or fund thousands of candidate projects and rely heavily on the kind of resources offered by VB in narrowing the field.

Q Don't these pressures on time and money deter most entrepreneurial physicians who may have breakthrough products?

In short, yes. But medicine is like most other businesses, there are always a few thousand determined souls with the self-belief and drive to pursue their dream no matter what. It would be unusual for genuine breakthroughs never to see the light of day.

When we decided to pursue development of the ProDisc technology 15 years ago, several others had passed on it or did not want to tackle a major 'disruptive' process in such a conservative climate. It was a life-changing learning process for us – especially the fund raising that required millions more than we'd ever attempted previously. But our commitment was total and ultimately it won through when Synthes (now part of Johnson & Johnson DePuy) came forward with \$350 million to acquire the technology. This experience provided both the capital and a template for VB's subsequent growth.

Q Who are some of the major investors in VB funds?

Due to the global interest in advanced health care technology, we have so far been able to generate more than \$1.8 billion in proceeds from all transactions, spread evenly across the past decade.

Contact:
 Anthony G. Viscogliosi, Principal, Viscogliosi Bros. LLC
 505 Park Avenue, 14th floor, New York NY 10022
 Tel: +1 (212) 583-9700 ext. 2101
 Email: aviscogliosi@vbllc.com

Folio companies:
www.WovenOrthopedics.com
www.CentinelSpine.com
www.ParadigmSpine.com

Q What is the composition of your current portfolio?

Our major holdings include Paradigm Spine LLC, with operations in the US and Germany, which markets the coflex stabilization device for patients with spinal stenosis. It was approved by the FDA in late 2012 and now is sold in more than 50 countries.

Another familiar name in spine treatment is Centinel Spine LLC. VB is a long-term investor in Centinel and its Stalif C devices to treat degenerative disc disease.

A recent early stage investment was made in Woven Orthopaedics Technologies LLC, a company that is leveraging advances in engineered fabrics for prophylactic use in orthopaedic procedures using screws and locking plates to repair bone and joint damage. The opportunity rests in the firm's ability to help manufacturers offer screws to surgeons that will not loosen or fail post-operatively. Currently, the high failure rate of screws leads to revised surgery that often is not reimbursed by insurers – citing errors by the surgeon.

In summary, our continued success depends on finding products that are clinically superior but can also pass the litmus test of affordability and availability. This is the essence of our investing strategy.

