



TORAX MEDICAL GETS \$18M IN VENTURE CAPITAL

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Torax Medical Inc., which is developing a medical device to treat acid-reflux disease, has raised \$18 million in venture capital as it prepares to break into a market that's historically eluded med-tech giants such as Medtronic Inc. and Boston Scientific Corp.

The Shoreview-based company will use the capital to fund ongoing clinical trials and seek regulatory approval of its device, dubbed Lynx. New investors in the company include Accuitive Medical Ventures, of Duluth, Ga., which led the round, and Oakland, Calif.-based Kaiser Permanente Ventures. Those firms put a combined \$7.5 million into the recent round. Previous backers, including Minneapolis-based Thomas, McNerney & Partners and San Mateo, Calif.-based Sanderling Ventures, also participated.

Torax may raise an additional \$3 million by the end of the month, bringing the total round to about \$21 million, said CEO Todd Berg.

Opportunities exist:

Berg, a former vice president of emerging technology for St. Jude Medical Inc., co-founded Torax in 2002. He was drawn to the acid-reflux market in part because it was less saturated with competitors than other areas, such as cardiology. "Everywhere you turned, people were doing the same thing. I felt like there were big markets outside cardiology that had not received more sophisticated device attention."

Torax's Lynx is akin to a ring made of magnetic beads. The ring is placed around the lower esophageal sphincter, a muscle that sits where the esophagus and stomach intersect. The energy created by the magnets supports and strengthens the muscle, preventing acid from seeping into the throat.

The device also is flexible enough to comfortably allow food to pass through to the stomach, Berg said.

Torax is now conducting clinical trials to test the device on patients suffering from acid-reflux disease, which affects an estimated 20 million people in the United States. About 5 percent of those patients haven't been helped by drugs, making them strong candidates for Lynx, Berg said. He expects to apply for U.S. Food and Drug Administration approval in 2011.

A tough market

While the acid-reflux market is large, it's been a tough one for medical-device companies to swallow.

Boston Scientific, for instance, took a product for treating acid-reflux off the market in 2005, citing safety concerns. The Natick, Mass.-based company's technology used a polymer to reinforce the area between the esophagus and the stomach to keep acid from escaping.

Medtronic also gave up on its own acid-reflux-fighting technology, dubbed the Gatekeeper System. The system inserted a dry material that expanded when wet near the sphincter, establishing a partial barrier between the stomach and throat. Although the device had been approved for sale in Europe in 2003, the Fridley-based company later abandoned efforts to seek regulatory approval in the United States, citing concerns that it did not work as well as expected.

Despite those failures, Berg is confident Torax will succeed, partly because its device helps the sphincter muscle work properly, while other technologies have simply focused on bulking up the area between the stomach and throat.

"With our device, you create a barrier that's dynamic in nature," Berg said. "Without restoring that barrier function, you're not going to be successful."

John Deedrick, managing director at Accuitive Medical Ventures, agreed that Torax's technology is unique, which is partly why his firm invested in the company.



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"The previous technologies did not address the key problem. While there certainly are going to be realistic hurdles, we find this approach is so different and the data is so compelling, we'll be able to get over it," said Deedrick, who also led Mayo Clinic's venture-capital arm when it invested in Torax several years ago.

Torax also faces competition from the pharmaceutical industry, as patients who suffer from acid-reflux disease are most often treated with drugs. Sales of drugs that treat acid reflux totalled \$14.1 billion in 2008, up from \$13.7 billion in 2006, according to market research conducted by Norwalk, Conn.-based IMS Health Inc.

"Drugs are a starting point, but they don't fix the defect," Berg said. "Many of these patients need something more than drugs."

About Kaiser Permanente Ventures:

Kaiser Permanente Ventures, the corporate venture capital arm of Kaiser Permanente, makes investments in medical devices, healthcare services and information technology companies. Kaiser Permanente Ventures is dedicated to partnering with entrepreneurial companies to build innovative and enduring businesses that advance the quality and affordability of health care. Since its inception in 1997, Kaiser Permanente Ventures has invested in more than 25 venture-capital backed companies at all stages of development, and contributed organizational expertise, time and resources to the success of these companies. For additional information please visit www.kpventures.com.