

Applied Spine

WHERE SCIENCE LEADS

H I G H L I G H T S . . .

Contacts and Key Information...

Headquarters:	Applied Spine Technologies 300 George Street, #511 New Haven, CT 06511
Web site:	www.appliedspine.com
Employees:	25, full-time
Financing:	\$19 million; privately held
Sector:	Medical device—spine
Investors:	Oxford Bioscience Partners, Bioventure Investors, InterWest Partners, De Novo Ventures
Contact, Investors:	Thomas E. Wood, Pres./CEO Applied Spine Technologies 203-503-0280, x10
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Experienced Management Team...

- Thomas E. Wood
President and Chief Executive Officer
- Terry Brennan
Chief Financial Officer
- Linda Golob
Director, Clinical Education
- Michele Lucey
Vice President, Regulatory Affairs &
Quality Assurance
- Jens Peter Timm
Vice President, Research & Development

'All-Star' Scientific Advisory Board...

- Edward C. Benzel, MD
Chairman, Cleveland Clinic Spine Institute
- Rudolph Bertagnoli, MD
The most experienced Motion Preservation
surgeon in the world.
- John Abbott Byrd III, MD
Co-inventor, one of the early Pedicle Screw systems.
- Larry Teik-man Khoo, MD
Recognized thought leader in minimally invasive
spine techniques.
- Manohar M. Panjabi, PhD
World-renowned for his work in spinal joint
function; scientific founder of AST.
- Kenneth S. Yonemura, MD
Leading spine surgeon.
- Hansen A. Yuan, MD (Chairman)
Director, Spine Arthroplasty Society, and preeminent
spine surgeon.
- James J. Yue, MD
A leading expert in disc replacement surgery of the
lumbar and cervical spine.
- Jack E. Zigler, MD
Noted author and speaker on latest surgical
treatments for low back pain.

■ SPINE FUSION USED TO BE THE ONLY OPTION FOR PATIENTS SUFFERING FROM CHRONIC BACK PAIN.

Now, the market is moving rapidly to adopt new *motion-preserving* implants, including *artificial discs* and *dynamic stabilization* implants. **Stabilimax™**, a platform technology developed by Applied Spine Technologies (AST), is a posterior dynamic stabilization system designed to support an injured or degenerated spine while preserving spine motion. Requiring no tissue removal or replacement, *Stabilimax* is a substantially less-invasive option for many patients who are currently limited to fusion or the new artificial disc implants. The Company recently received 510(k) approval for its *Stabilimax™ BAR* device as an adjunct to fusion. AST's flagship product, *Stabilimax NZ™*, is expected to begin U.S. clinical trials in Q4/06.

■ BACK PAIN IS THE LARGEST CAUSE OF DOCTORS' OFFICE VISITS IN THE UNITED STATES.

The Spine Implant segment has emerged as the most dynamic in the medical device market, fueled by emergence of alternatives for back pain patients who have historically been offered only one surgical solution: fusion. *Motion-preserving* alternatives collectively offer better, more indication-specific treatment than fusion. Less-invasive solutions like *Stabilimax* will encourage many patients, who have previously lived with their pain, to opt for one of these more conservative surgical solutions.

■ NEW ALTERNATIVES TO FUSION SURGERY ARE BROADLY REFERRED TO AS 'MOTION PRESERVATION' AND FALL INTO TWO CATEGORIES.

(1) Replacing the entire disc or nucleus with an artificial joint; the first non-fusion device was approved in the U.S. in 10/04: the Charité® Artificial Disc from DePuy Spine (J&J), which replaces an entire spinal disc; in 8/06, the Synthes Spine Prodisc®-L Total Disc Replacement also was approved for sale in the U.S. Or, (2) stabilizing and supporting the existing joint tissues with implants that provide motion. AST's *Stabilimax NZ*, for example, stabilizes the spine by supporting bony and soft tissues without radically invasive techniques.

■ STABILIMAX BAR IS AN IMPROVEMENT OVER THE EXISTING DYNAMIC STABILIZATION DEVICES; AND STABILIMAX NZ REPRESENTS A DRAMATIC ADVANCE IN BACK PAIN TREATMENT

by preserving range-of-motion with a therapy that (a) is far less invasive than fusion or disc replacement, (b) uses traditional surgical techniques, and (c) is easily adopted by most spine surgeons. Patients can garner the benefits of *Stabilimax NZ* and delay or prevent progression of degenerative spine disease, while leaving the door open to future treatments, such as fusion, should they become necessary. *Stabilimax NZ* therefore represents an important new addition to the spine surgeon's armamentarium.

■ **STABILIMAX NZ IS THE CULMINATION OF 30⁺ YEARS OF FOCUSED RESEARCH.** The underlying premise of *Stabilimax NZ* is that painful spine motion increases in an injured spine and that this abnormal motion is most pronounced in the 'Neutral Zone'—the area of laxity in the center portion of the spine's range of motion (ROM). *Stabilimax NZ* utilizes a novel dual-spring mechanism with a uniquely variable dynamic feature that maximizes stiffness and support in the Neutral Zone, where the spine needs it most, thus returning the Neutral Zone to its normal, limited range. By eliminating abnormal motion, *Stabilimax NZ* alleviates abnormal load on surrounding muscles and tissues that would otherwise compensate, allowing for preservation of motion and function and, thus, tissue-healing.

■ **AST'S SCIENTIFIC FOUNDER, ONE OF THE WORLD'S FOREMOST SPINE AUTHORITIES DR. MANOHAR PANJABI,** was a professor of Orthopedics & Rehabilitation, as well as Mechanical Engineering, at Yale Univ. School of Medicine. As Director of Yale's Biomechanics Research Laboratory, Dr. Panjabi established himself as a world-renowned spine authority for his work on spinal joint function and its implications for motion-preserving implants. Dr. Panjabi has published 267 research papers and written two text books.

■ **THE AST MANAGEMENT TEAM INCLUDES EXPERIENCED SPINE INDUSTRY EXECUTIVES.** Co-founder, President and CEO, Tom Wood, spent 17 years at U.S. Surgical, and has been CEO of two medical device start-ups. Jens Peter Timm, VP of R&D, previously directed development of the artificial disc and interbody fusion products at Interpore Cross. Michele Lucey, VP/Regulatory Affairs & Quality Assurance, spent 13 years at U.S. Surgical, the last five years as Director of Corporate Quality Control. Linda Golob, Director of Clinical Education, has 20 years of experience in medical devices focused on spine. Terry Brennan, CFO, has 10 years of start-up experience with two consecutive start-up successes. ■



Stabilimax NZ is a scientifically validated posterior dynamic stabilization device designed to support the spine at a single level or multiple levels while preserving range of motion (ROM).

Stabilimax NZ offers numerous advantages over current spinal fixation products and new artificial disc products: (1) a less invasive, less traumatic implant procedure; (2) maintenance of normal spine motion and disc function; and (3) potential to prevent or slow adjacent-level segment disease.