

Dr. Bill Marras' original exoskeleton is a mechanical device intended to fit over clothing. Lanx Diagnostic added computer chips to the concept, shirtlike product it will commercialize.

LANX®

A Colorado company has selected central Ohio over other Midwestern options for its new division. Three compelling reasons drove that decision.

For one, Lanx Diagnostic will be near its collaborators at The Ohio State University Biodynamics Laboratory, central Ohio-based OrthoNeuro and the Cleveland Clinic Center for Spine Health, said Stuart Born, director of Lanx Diagnostic, the new company.

"Bill Marras and the team are all there," Born said of OSU's Biodynamics Lab director and the creator of its featured product, the Lumbar Motion Monitor. "Obviously, that's a major reason to be there. The collaborators, OrthoNeuro and Cleveland Clinic are great partners to have."

Second, the Ohio Third Frontier program in June awarded Lanx Diagnostic \$1 million for its Lumbar Motion Monitor Commercialization project, he said.

"The Third Frontier support was huge," Born said. "There's the opportunity to work with the Third Frontier and Ohio and its commitment to orthopedics and the biomedical industry. There is a lot in central Ohio and another cluster near the Cleveland Clinic."

"When you start to centralize all these companies, it feeds into the growth of that industry," he said. "The Third Frontier

Central Ohio lures new medical product division from Colorado

is behind a lot of these clusters."

For example, central Ohio is home to existing biomedical giants Cardinal Health and Abbott, as well as emerging companies such as MID, SyberMed, Traycer and EXCMR.

Third, Lanx Diagnostic will locate at TechColumbus, which will give it a foothold in central Ohio's burgeoning biomedical industry.

"TechColumbus' incubator allows us to get settled," Born said. "We don't need to invest in real estate initially. It allows us to utilize what we need when we need it. The location is great to OSU."

TechColumbus' incubator also supplies resources such as coaching from the TechColumbus team, and connects Lanx Diagnostic to the regional tech community.

"To be able to have that infrastructure available to us is huge," Born said. "We're not a software company; we make hardware for the medical industry. When we're on our feet, we can step out into other space."

John Griffin, director of the Technology and Innovation Division at the Ohio Department of Development, said Lanx Diagnostic will be surrounded at TechColumbus by individuals who can help it build connections throughout the state, from researchers to providers.

Lanx Inc., the Broomfield, Colorado-based parent company of Lanx Diagnostic, is a privately held medical-device company which develops and commercializes innovative devices for spinal surgery.

"Anytime we can attract companies from out of state into Ohio demonstrates we're creating this environment that transcends state boundaries," Griffin said. "It reinforces ... Ohio's reputation."

"The Ohio Third Frontier, from day one, has recognized biomedical as one of the major platforms," Griffin said. "In the

past few years we've made progress in a strong (biomedical) field: medical imaging, cardiovascular, neurostimulation and orthopedics."



Bill Marras

MAN AT THE CENTER

Marras is the man at the center of the story.

"He's the inventor of the technology," said George Proicou, director Life Science

Commercialization at TechColumbus.

"He's a smart and prolific researcher, who has been the principal investigator in ergonomic and occupational medicine studies at Ohio State. He developed the Lumbar Motion Monitor," Proicou said.

Marras began work on the device in the late 1980s, and it was patented in the early 1990s, Marras said.

"It's a device that was developed to assess exposures of the back for industrial purposes," he said. "Over the years we found it also has some ability to quantify the extent of a lower-back disorder."

Back problems are currently diagnosed in a very subjective manner, Marras said. For example, a doctor might ask his patient, "How bad does your back hurt."

The Lumbar Motion Monitor takes an objective path, measuring function.

"If you were 50 percent (function) the last time, and now you're 65 percent, that's

that capture nine degrees of motion.

"We're using electronic chips to track that motion" he said.

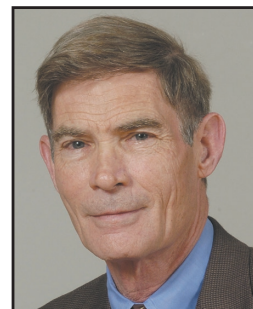
The monitor has two purposes, Marras said: industrial use in which companies evaluate risks associated with jobs, and for back evaluation in clinical use.

"I think its going to be a field changer," Marras said.

"It will change the way people treat and think about lower-back pain. I've written a book on lower-back pain, and I hope this will bring more engineering science to the clinic."



Stuart Born



John Griffin



George Proicou

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- Bill Marras, creator of the lumbar motion monitor

an objective benchmark," he said, adding the monitor can help determine who is a candidate for surgery.

"Basically, it's an exoskeleton of the spine, worn on top of your clothes. That's the original configuration," Marras said. "Lanx has changed the configuration to two boxes, one at the base of the spine and the other at the middle of the back. The two boxes communicate back and forth."

Born said the monitor was converted from a mechanical device to an electronic device through fairly sophisticated chips

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