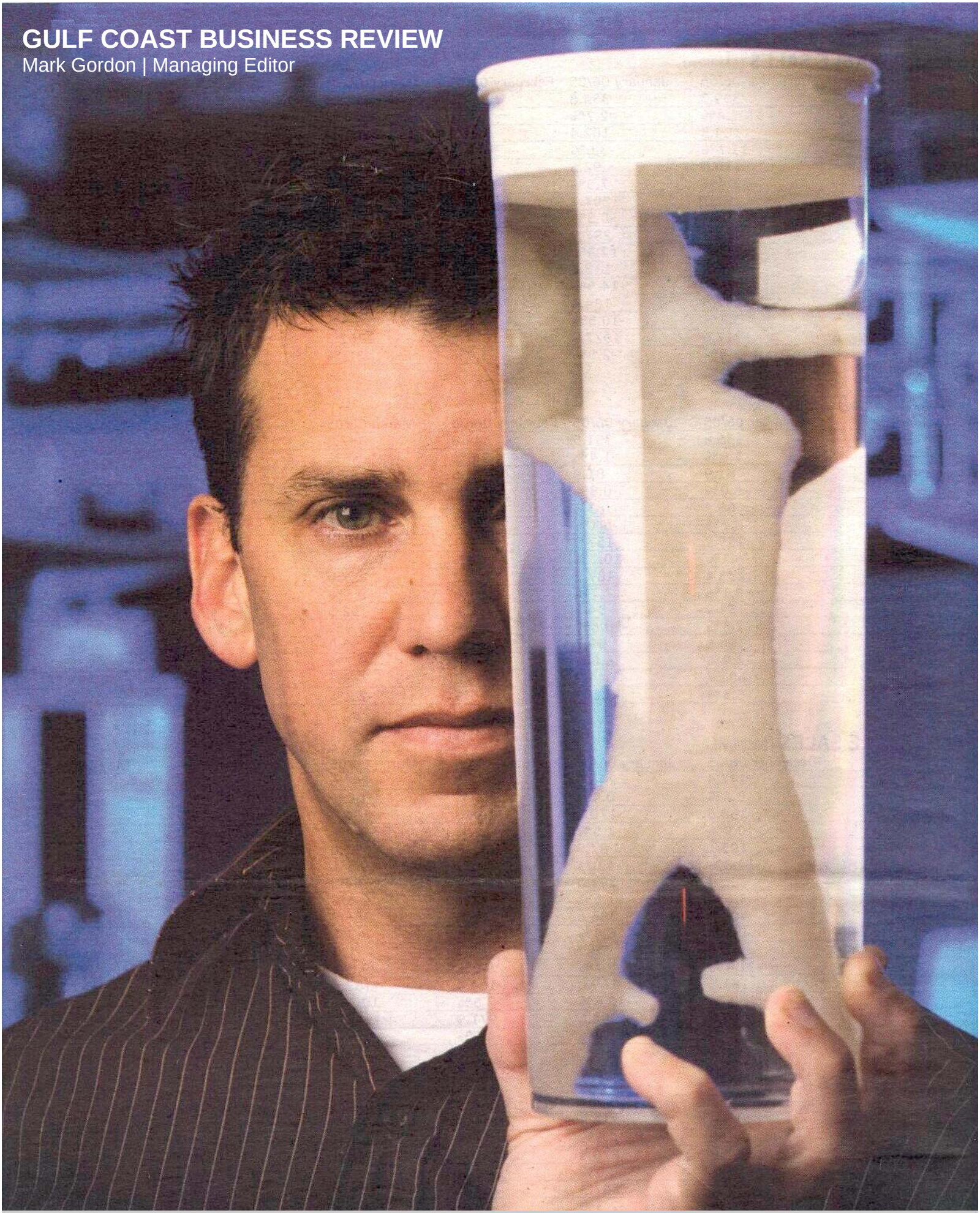
GULF COAST BUSINESS REVIEW
Mark Gordon | Managing Editor



Dr. Christopher Sakezles, President and Chief Technology Officer of SynDaver Labs uses patented technology to create synthetic human tissues and body parts. These products, made from water, fiber, and salt, are used for medical testing and surgical training.

Growth Snatchers

A Gulf Coast startup company creates a niche in synthetic human tissues and body parts for medical testing and surgical training.

Chris Sakezles has enough body parts scattered around his office to make cops nervous and coroners jealous — but it's all in the name of research.

Not for a whodunit crime novel, but for the business of creating synthetic human tissues and body parts for the medical device and surgical training industries. The idea is that these detailed, so-real-it's-scary parts, from a thigh to an eyeball, can replace traditional models, cadavers and even live animals in testing laboratories. Military manufacturers developing new weapons and armor systems can even use the parts, Sakezles says.

REVIEW SUMMARY

Company: SynDaver Labs (www.syndaver.com)

Industry: Biomedical research

Key: Company manufactures and markets synthetic human tissues and body parts for medical device testing and surgical training.

"Our technology basically involves copying human anatomy," says Sakezles, whose name rhymes with Hercules. "And we plan on using it to revolutionize the medical testing and surgical training worldwide."

Sakezles has been working on this technology since 2005 through his company, SynDaver Labs. He founded the firm while working as an independent consultant in the medical device industry in Princeton, N.J. His contacts in the New Jersey medical research community led to the company's first, and so far biggest, client: Medical device giant Johnson & Johnson.

Since then, using about $500,000 in capital from friends and family, Sakezles, a Tampa native, has moved the company home and hired several employees. He declined to release revenues, saying only the company is now operating on cash flow."

That said, Sakezles is now focusing his attention on growth. He has plans to open a $1 million equity offering. The firm is seeking a minimum of $10,000 from individual investors and at least $50,000 from corporations.

These funds, Sakezles says, will go toward a combination of projects, including more staff and opening a new showroom and training facility in the bay area. What's more, Sakezles hopes to have several hundered employees within the next few years, and if his ambitions are realized, would consider taking the company public in the near future.

Innovative recognition

In addition to cash from new sales, Sakezles, the company's president and chief technology officer, has been relying on validation, admiration, and acceptance as a source of equity.

The recognition by Johnson & Johnson has spawned a host of new customers, for instance. Those include Tampa General Hospital; University of South Florida, Cook Medical (Bloomington, IN); St. Jude Medical (St. Paul, MN), and many others.

In February, the U.S. Department of Commerce presented the company with an Excellence in Innovation award during a ceremony at the Pepin Heart Hospital in Tampa. Robert Cresanti, the Commerce Department's under secretary for technology, presented the award to Sakezles.

The Gulf Coast medical community has also been tracking the company. Dr. Deborah Sutherland, the associate vice president of the Health Sciences Center at the University of South Florida and the medical school's associate dean, learned about SynDaver Labs through a professor in the schools' neonatal department.

Dr. Sutherland says the school uses cadavers, which can be costly due to scarcity, and animals, such as pigs and dogs, in a variety of simulations and classes. But those don't "feel like flesh and perform like flesh," she says, such as the products from SynDaver Labs. Adds Dr. Sutherland: "Chris' are more lifelike and realistic."

The school has also recently become a client, adding the products to its other testing tools.

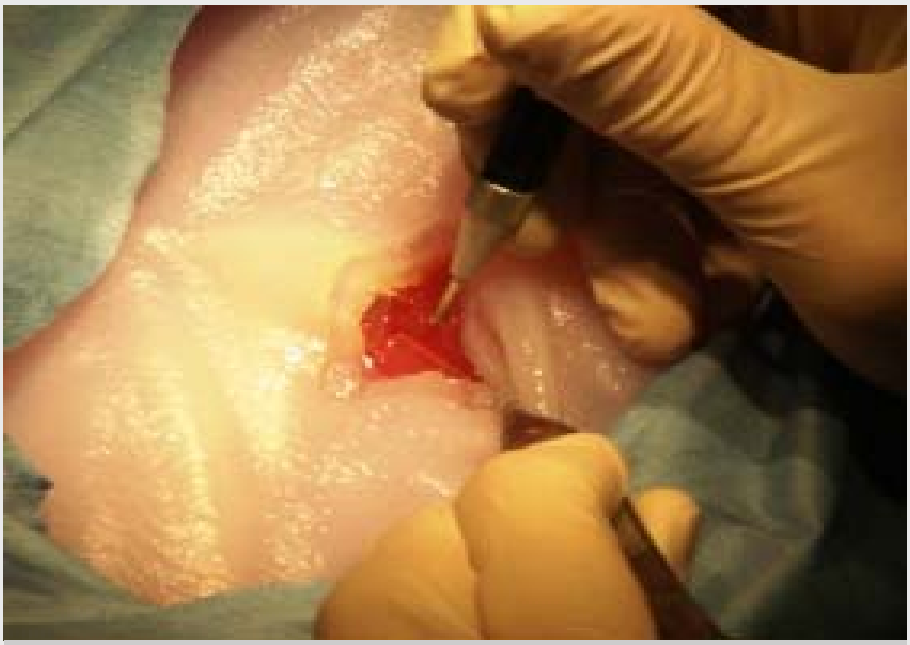
In a final piece of validation, over the past few months various medical companies and private investor groups have started making offers to buy SynDaver Labs. Sakezles has turned down the offers though, saying he wants to see the company through its expected growth stage first.

"This will be a disruptive technology," Sakezles says. "and we will be making a lot of noise in the marketplace."

Diligence and determination

Sakezles brings a weighty academic background to his company. He has a mechanical engineering degree from USF as well as M.S. and Ph.D. degrees in polymer science from the University of Florida. Since graduating from UF in 1998 his work has revolved around designing medical devices for use in interventional cardiology and neurology.

After working in Florida for a few years post-Ph.D., Sakezles moved to southern New Jersey, near a cluster of medical device firms, including Johnson & Johnson. He founded a consulting firm there, Princeton Product Innovation (www.ppimedical.com).



A local surgeon is trained on a new laser scalpel using the latest human abdominal tissue simulator provided by SynDaver Labs.

Sakezles' first entrepreneurial lesson with his new business was that competition breeds innovation. More specifically, he noticed that development tests for medical devices, be it for basic catheters or stents for heart surgery, were deficient in the quality of models used in the tests. Cadavers, for example, besides being costly and scarce, don't really provide a realistic environment for simulating medical procedures because the dead bodies have no reactive tissue or blood vessels.

Sakezles thought there had to be a less costly and more accurate way of testing medical devices. So, using patented materials made primarily of water, salts and fibers, he began recreating human anatomy.

Interestingly enough, despite his extensive science and engineering-based education, Sakezles knew had no formal education in anatomy when he graduated. He actually learned it on his own as he worked in the medical device industry.

And as the products he was creating morphed from idea to reality, Sakezles also learned his second entrepreneurial lesson: Diligence and determination. He filed paperwork for his first patent in early 2005, for example, but it took more than two years to be issued. Sakezles now has several U.S. patents issued and pending, with two additional international patent applications pending.

While Sakezles says there are no companies doing exactly what SynDaver Labs does, the medical testing industry is still highly competitive, as well as fragmented. One company, while not a direct competitor but one with a related mission of improving medical training, is Sarasota-based Medical Education Technologies Inc., a runner-up for the Review's 2005 Technology Innovation Awards.

The company manufactures computerized medical mannequins that replicate the basic physiological responses of a human being. Its simulators, better known as Stan, for Standard Man, have a pulse, a heartbeat and can even breathe in oxygen. The company has sold the mannequins to hospitals and medical schools, among other clients.

Sakezles has plans to target medical schools as potential clients, too, and has already begun selling product to Tampa General Hospital and the medical school at USF.

In addition to uniqueness and efficiency, Sakezles plugs one other aspect of the company's products: Everything made by SynDaver Labs is replaceable. A client can buy a thigh, for example, and later buy replacement muscles, tendons, veins and arteries for it.

As for the company name, it sounds much more idealistic than Sakezles says he truly is. The goal is to build a business around bringing medical testing and training into the twenty-first century. That includes, but isn't limited to, animal testing. "I am an animal lover," he says, "but that isn't why I do this."