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University City Science Center deciding factor in tech firm's move to Philadelphia



Bernardo Cordovez cofounded technology firm Optofluidics Inc. with his mechanical-engineering professor at Cornell.

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Imagine a particle 1/10,000 of a cross-section of a human hair. That's the size of a protein, way smaller than a cell.

Bernardo Cordovez, 29, and his partners have come up with something they call a NanoTweezer that allows them to pick up and move that kind of teeny-tiny particle using a laser beam of light.

There's been a lot of talk about trying to bring high-tech, high-potential businesses to Philadelphia, and the story behind how Cordovez's very small company, Optofluidics Inc., landed here provides an object lesson.

The company was started by David Erickson, a Cornell University mechanical-engineering professor who invented the technology in his lab in Ithaca, N.Y.

Erickson brought Cordovez, his first graduate student, aboard. Cordovez and another partner, Robert Hart, both engineers and scientists, moved the company beyond the college laboratory.

But the question was: Move it where?

Philadelphia was the answer, because it has a relatively low cost of living, a direct flight to Ithaca, and the University City Science Center.

"The Science Center played a big part," said Cordovez, cofounder and chief executive of Optofluidics.

The center had labs and other physical facilities the fledgling company needed, but there was another element that was just as important, he said: "It was the community."

Shortly after Optofluidics arrived there in February 2011, staff at the Science Center offered to help the company write proposals for

funding. It worked: BioAdvance, a life-sciences investment fund backed by the Commonwealth of Pennsylvania, put \$50,000 into the company.

"We believe that their technology . . . could potentially be used to advance science in many areas, especially bio-discovery," said Shahram Hejazi, a venture partner at BioAdvance who joined Optofluidics' board after BioAdvance's investment.

"I think the management team is very impressive," he said. "They are somewhat young, but they are Ph.D.'s, so they are very well-educated, very passionate . . . and they seek advice when they don't have experience."

Cordovez emphasized that Erickson's technology forms the basis for Optofluidics. "I am the one who has the job of taking it to the market and finding meaning for it," he said.

It was Erickson's initial work that enabled the company to land a \$150,000 National Science Foundation grant when the business was still based in his lab at Cornell.

The company's university roots, Cordovez said, helped attract the government funding - an advantage, he noted, that other types of entrepreneurs may not have. Besides the partners, the company has two or three other employees.

The NanoTweezer technology has vast potential. Just in the basic research alone, it makes investigations much easier when scientists can examine a particle, even a small one, directly, Cordovez explained.

That's why the company is starting by marketing its NanoTweezer to college laboratories. Those customers will provide the opportunity to see how the technology might be applicable to other fields, such as manufacturing.

Cordovez, who grew up in Ecuador, said he always had a vague notion of wanting to be an entrepreneur, but didn't realize how strong it was until he ended up being one on behalf of his professor.

"I didn't envision starting a company," he said, "but when I started doing it, I knew it was what I always wanted to do."

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