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BioTools brings biotech innovation to area

BYLINE: **Bill Church** correspondent

For evidence of the importance of attracting the Scripps Research Institute and possibly Torrey Pines Institute for Molecular Studies to the Treasure Coast, look no further than BioTools Inc.

A small, but fast-growing, company which moved its headquarters in late August to newly-refurbished quarters on Beeline Highway in Jupiter from its original home in north suburban Chicago. The company makes innovative instruments, which shine light at molecules to identify their structure. This information is key for pharmaceutical manufacturers to ensure the exact structure of their products, what effects they will have on the body and what side effects they might produce.

BioTools is now in Florida because the company's co-founder, president and chief executive, Rina Dukor, was chairing a 2003 conference of the General Federation of Analytical Chemistry and Spectroscopy in Fort Lauderdale. On the conference's last day, the news broke that Florida had landed Scripps Research Institute.

"A couple of my customers said, 'Rina, you should move to Florida,'" Dukor recalled. "I was intrigued and began to follow the Scripps saga. I knew we needed to be near a biotech cluster, I felt Scripps could be the beginning of one here, and so I decided, 'Why not Florida?'"

Her father and mother helped out by agreeing to move to Florida with Dukor and her two young children, and buy and renovate the 6,000 square foot vacant commercial building as the new home of BioTools, Inc.

The Business Development Board of Palm Beach County has helped Dukor get established, meet local leaders and find potential employees.

"Being here has raised Biotoools' profile," said Andrew Duffell, the Business Development Board's senior vice president for development.

The company has collaborated with several local companies, developed ties with Florida Atlantic University and become even more successful, Duffle said.

It's been a two-way street.

"Rina is a very strong advocate for the growth of the life science industry in Palm Beach County," Duffell said. "She also is

attempting to teach government officials what they need to do to attract life science companies and the importance of having these companies in our local area."

One of those lessons from Dukor is that Scripps is not enough. Local government must provide the necessary incentives to attract another major research institution and a number of small biotech companies and scientists,

"One company makes another company," Dukor said. "We must show the world that there will be a cluster for scientific people to work together, and to provide jobs for dual career scientific couples."

Areas like California, New Jersey and the Carolina Research Triangle work is because of the cluster that has been created, Dukor said. She predicts a five-to-10-year period for the life sciences to succeed here.

Because Dukor thinks Business Development Board officials are devoted to the biotech recruitment cause, she has attended major biotech meetings with them to sell other companies on the region.

Another goal in moving the company to Florida was to combine its far-flung operations in one place. Currently, BioTools manufactures machines in-house and at subcontractor plants in Illinois, Syracuse, N.Y., and Quebec, Canada. Dukor hopes to bring all manufacturing in-house on Beeline Highway and employ 10 people as soon as possible, depending on sales growth. She is predicting sales of \$1.5 million this year.

The chief scientist for one of BioTool's product lines has already moved to Florida along with a technician. Dukor has hired another key scientist to start this fall and is looking for another technician and a chief financial officer for the Jupiter headquarters. Only sales and marketing will remain in Illinois.

The company's co-founder and chief researcher, Laurence A. Nafie, is a professor at Syracuse University's department of chemistry.

The company is best known for bringing to market the first and only Vibrational Circular Dichroism instrument to determine the true form of chiral drugs, so-named because their molecules have the same chemical structure, but with left and right-handed forms.

The chiral drug industry began in earnest in the mid-1990s and such drugs are now the most prevalent pharmaceuticals. Seven of the 10 so-called "blockbuster" drugs are chiral.

"Think of chiral molecules in terms of a hand and a glove, with the correct glove needing to go on the correct hand," Dukor said. "If the molecule doesn't fit well it could cause side-effects, have the wrong effects, or even kill. An example is thalidomide, which caused many thousands of birth defects when taken by pregnant mothers in the 1950s and '60s."

Pharmaceutical companies must provide this information to federal regulators and must know early on that they are correctly making the drugs.

Several companies, including Brooker of Germany and Thermo of Madison, Wis., have begun reproducing BioTool's instruments and have replicated some parts of them. BioTools retains 90 percent of this market, however.

"We have a very loyal customer base," Dukor said. "We're known for helping customers know how to get the most out of the product and apply that knowledge to their own particular research. My partner and I are known as the leading experts in this field, and our competition can't match that."

A second key product line, unique to BioTools, is the Raman Optical Activity spectrometer, which looks at the structure of proteins and is the only instrument to tell the structure of viruses. This instrument won the prestigious R&D 100 award from R&D Magazine and has earned the company a \$750,000 Department of Defense grant.

BioTools owns all of this market.

Reaching top positions in the biotech world has not been easy for Dukor. In 1980, she emigrated with her family from Russia at the age of 15. She graduated from an inner-city Chicago high school, and earned bachelor, master and doctorate degrees in chemistry from the University of Illinois at Chicago in 1990.

Although she scored well on the admissions test for medical school, she fell in love with her university research, delivered a 250-page thesis and decided to make scientific study her career.

Dukor did research work at an Amoco lab in suburban Chicago, but learned early on there was no machine on the market like the one she and her professor developed and used in school.

She decided to build one herself. Although her professor had no interest in pursuing commercial development, his colleague at Syracuse, Nafie, the best known person in the field, was enthusiastic.

BioTools was born on New Year's Eve 2001 after Dukor, like many entrepreneurs, sold her house, maxed out her credit card and sought family help.

The company has increased revenues at rate of 20 percent per year since then, Dukor said.

The growth has been personally rewarding.

Financially, too. Last year she felt confident enough to begin paying herself a salary.

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