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Father and son start business to cure cancer, earn lots of support

Ghanbaris set to become newest graduates of the Maryland Technology Development Center

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The Ghanbaris don't run your average family business. They don't peddle an antique shop or the friendly general store at the corner.

Instead, Hossein A. Ghanbari and his son, Kasra, run Panacea Pharmaceuticals, a Rockville company that's working to cure cancer among other things.

The Ghanbaris must be doing something right — with a new \$80 million deal with MedImmune Inc. under their belts, they're moving their 3-year-old company out of the incubator and into the real world at the end of the summer.

"This is the classic incubator success story," said Kasra Ghanbari, Panacea's chief operating officer.

Hossein Ghanbari, a biochemist, and his son formed the company in 1999 in the Maryland Technology Development Center in Rockville, based on technology they licensed from Brown University.

Specifically, the technology is based on the idea that the "over-expression" of a certain enzyme causes healthy cells to transform into cancer cells.



ERIC STOCKLIN

Hossein A. Ghanbari and his son, Kasra, run Panacea Pharmaceuticals, a Rockville company that's working to cure cancer among other things. They recently struck an \$80 million deal with MedImmune Inc. And later this summer they're moving from the incubator into their own space.

Panacea has found the enzyme, called Human Aspartyl (Asparaginy) Beta-Hydroxylase, or HAAH, in all 18 of the tumor types the company so far has tested — from colon cancer to breast cancer to liver cancer, said Kasra Ghanbari.

But that's not all.

"When we explored the underlying biology of the enzyme, we found it was not just involved in the transformation [of healthy cells to malignant], but it is involved

in the motility [that is, ability to move] and invasiveness of tumor cells as well," Kasra Ghanbari said.

That is where the possible therapeutic applications of the technology come in.

"We were able to show that if we could stop the expression of the enzyme, we could stop the growth of the tumor cells," he explained.

The technology, the Ghanbaris said, has applications in both the treatment and diagnosis of a variety of

cancers. Panacea holds 13 patents on its work and maintains five licensing agreements and six collaborative research agreements with respected institutions including Brown and the Massachusetts Institute of Technology.

The deal with Gaithersburg-based MedImmune, announced last month, gives MedImmune an exclusive, worldwide license for therapeutic products aimed at HAAH in exchange for an equity investment in Panacea, an up-front payment to the smaller company and funding for its research for three years.

Panacea also will receive milestone payments and royalties on product sales.

"What we got out of this [deal with MedImmune] are really welcome financial rewards," said Hossein Ghanbari. "But it is more than that for us. One, it is a validation of our business model, and it is a validation of the technology, of the whole scientific breakthrough that we have made."

The Ghanbaris' business model certainly is unique, as is their extensive knowledge of business. Both have started companies before, one of which — Montreal-based Nymox Pharmaceutical Corp.

— has gone public and trades on the Nasdaq.

Panacea is Hossein Ghanbari's third company and his son's second. The father-son team added another entrepreneurial endeavor to their resumes last month when they spun off from Panacea a new company called Proteus Imaging to handle *in vivo* studies of their work — studies conducting in a living organism.

The basic principle behind Panacea's business model, the Ghanbaris said, is to create a small company with a long reach.

"I don't consider us to be small," Hossein Ghanbari said. "We are a very big force to be reckoned with. Although we are viewed from the outside as a small company, with our collaborative research agreements we have the best people in the field aligned with us. We have advisors that are among the best in the field we are working on."

Between the new deal with MedImmune and the research agreements, Panacea has the resources of a much larger company, Hossein Ghanbari said, though it has only 15 employees.

Established entrepreneurs

Both father and son have previous experience in entrepreneurship, beginning with Hossein Ghanbari's first company, based on his work as a biochemist for Abbott Laboratories in Illinois.

When Ghanbari and one of his associates at Abbott made a discovery for which much research and development work was needed, they approached the director of R&D at the company to discuss it.

The director confided in Ghanbari that Abbott was reluctant to overhaul its laboratories to facilitate their research for fear another company would catch wind of it and steal their discovery.

That's when, Ghanbari said, he realized the limitation a large company can present to a scientist.

"Big companies now are promoting mediocrity," he explained. "If you're in the middle, you just do your job. If you want to change the world, you'll be kicked out or not be funded. I realized that in order to do things, I'd have to be on my own."

In starting his first company after leaving Abbott, Ghanbari encountered problems when one of his financiers got into trouble with the Securities & Exchange Commission.

A roster of new recruits against cancer

Cancer doctors are hopeful about a class of drugs known as epidermal growth factor receptor blockers. They come in two basic forms: antibodies that cover the growth factor receptor so it cannot be stimulated and small molecule drugs that enter the cell to block signals sent by the receptor. Here are four drugs in wide testing.

	DRUG	CODE NAME	DEVELOPER	STATUS	TEST GROUP	TYPE
Iressa could be on the market by later this year.	Iressa	ZD1839	AstraZeneca	Applied for FDA approval in December	About 10,000 patients	Oral small molecule
	Tarceva	OSI-774	ISI Pharmaceuticals, Genentech and Roche	Still in testing	About 900 patients	Oral small molecule
	Erbix	IMC-C225	Imclone Systems and Bristol-Myers Squibb	FDA refused to accept application for approval	About 900 patients	Injected antibody
	ABX-EGF	ABX-EGF	Abgenix	Still in testing	About 500 patients	Injected antibody



SOURCES: Associated Press; AstraZeneca

AP

"I eventually decided to do things mostly on my own," he said. "My son and I started this company with no help and no money from anyone else, [then] with angel investors — family and friends."

Kasra Ghanbari's background is highly diverse. Though he now stands with his father professionally, his path has been rather roundabout.

The 29-year-old studied biology, economics and religion in his academic career. He began officially in science as an intern, then a lab technician. His professional life in science and business came about rather unconventionally.

"I was looking to do something that I found value in, that was more tangible," Ghanbari said. As a laboratory technician, "I felt that I was contributing to something that was important. I was at that point where I could have gone to school another seven or eight years, but I preferred to be out in the real world doing real things."

It is the relationship between business and science in his career that makes him feel fulfilled, Ghanbari added. "The interplay between them is wonderful."

Especially sweet

Duc Duong, manager of the MTDC, said Panacea — soon to be the incubator's newest graduate — has terrific management in the Ghanbaris.

In choosing companies for the incubator, Duong said, MTDC looks for those that "have management that has both technology know-how as well as business savvy. Dr. Ghanbari already has a background in growing companies — that was the most compelling reason for us to select the company. Not many

startup companies that apply for space in here are in that category, with seasoned entrepreneurs [at the helm]."

Panacea is moving out on its own at the beginning of August. The company expects to finalize a lease for 9,000 square feet of space in Rockville this week.

"Panacea represents the model biotech tenant," Duong said. "They move in here with only two people and one lab. They take more labs and more office space. After three years of our program, they succeeded in getting this kind of partnership [with MedImmune], and now they are working on graduating. This is a model operation."

The Ghanbaris have big things planned for their little company. Besides the agreement with MedImmune, Panacea is working on treatments for Alzheimer's, Parkinson's and other diseases of the central nervous system.

The success is especially sweet for the Ghanbaris because they achieved it together, they say.

"We have an incredible working relationship," said Kasra Ghanbari. "We are literally partners. We know each others' strengths and weaknesses. We are incredibly efficient. When we bring people in, they almost invariably love the dynamic between us. That's part of the reason we have been able to recruit so many good people."

"There is are the unwritten rules that when we're at the company, we don't feel he's my son or I'm his father," Hossein Ghanbari said. "It's so commonplace for us."

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