

Aptagen cultivates next move

Alternative business model has served it well, but now it is gearing for growth

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A York County biotechnology company grew steadily in the Great Recession by using a business model different than some others in its industry and is planning for further growth.

Walking into the [Aptagen](#) laboratory in Jacobus is like stepping into what looks at first like a high school or college classroom.

Many people working at Aptagen are students interning for nine months in exchange for a nominal financial compensation and hopefully a leg up in work experience as they later pursue graduate school and employment opportunities.

Aptagen is a contract research organization with about a dozen full-time staff members and interns. It accepts fees from companies and universities to perform services, said G. Thomas Caltagirone, president and CEO. The company incorporated in 2004 and the lab began operating in 2006.

It is a low-overhead operation, which has boded well for the company; others in the field throw large amounts of money into labs to find the next wonder drug, creating large amounts of overhead costs, including for personnel and facilities, Caltagirone said.

But Aptagen has passed maximum capacity with its five current clients and has to decide whether to continue on the low-overhead route or seek venture capital to expand, Caltagirone said.

The technology in which Aptagen specializes is called an aptamer. It is similar to an antibody, which is a protein that fights diseases.

Aptamer technology has been around since the early 1990s, and Caltagirone became interested in it early in his academic career.

Aptagen has developed a functionally enhanced aptamer technology called an aptabody.

"You can think of it as a molecular bullet" because of its capacity for targeting very specific molecules for diagnostic and therapeutic purposes, he said. It can be used in treatment of certain diseases, including cancer.

The interest in the technology and his predisposition for wanting to start his own business led him to return home to York County to start Aptagen.

"You can't beat the rent here," Caltagirone said.

However, it left him with a big issue with which to contend: Aptagen was outside traditional biotech corridors and therefore was off the radar screen for venture capital that usually feeds money into such operations, he said.

So he decided to develop Aptagen as a service in which others who are developing technologies pay a fee for projects.

The other problem was that without a lot of money to throw around, he couldn't pay a lot of full-time employees to do the work. So he decided to integrate an extensive internship program into the company, Caltagirone said.

Interns commit to nine months with the company and to work at least 20 hours per week. A shorter internship program would not let students to get up to speed and do the work they need to before their times with Aptagen were over.

"That doesn't pay off for us as a company," he said.

Students from area colleges such as [York College](#) and [Millersville University](#) participate in the program.



G. Thomas Caltagirone, center, president and CEO of Aptagen, holds a model of an aptabody, a patent-pending technology of the York County company. Working in the biotechnology company's main lab are scientist Archie Christian and intern Kristen Sheaffer. Photo/Amy Spangler

Aptagen is one of the local life sciences companies with which York College has placed interns who have come back with great reviews, said Debbie Ricker, dean of academic services.

The college emphasizes a hands-on approach to learning the sciences, so Aptagen is a good fit, she said. Some students have used what they learned with the company as part of their senior theses, Ricker said.

It is important to have local partnerships for students to get hands-on experience among their classes, and it also is important to link local college talent with the region's companies to help keep the talent in the region, she said.

In some ways, with a company that is trying to be innovative, having young students as workers has other advantages, Caltagirone said.

"They are willing to think of new ideas," he said. "They are young, energetic."

The fee model and interns have driven the small lab beyond capacity; it has five clients that work with Aptagen on one or more projects, Caltagirone said.

One of the interns, Millersville student Aaron Montani, said he has found the experience invaluable. The resident of Lancaster County is near the end of his internship.

Montani is also enrolled in classes at Millersville while he takes on the intensive internship, which he said is at a doctorate level, even though he is an undergraduate.

It is experience that will pay off down the road because of the advanced techniques and other skills that interns learn, he said.

"It's really the problem-solving that you take away from here," Montani said.