

# UAlbany spinoff begins to map its way in growing bioinformatics sector

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DONNA ABBOTT VLAHOS | THE BUSINESS REVIEW

At Hocus Locus, Aijish George (foreground) holds a gene chip, as CEO Scott Tenenbaum (back left) and Timothy Baroni look on.

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The state University at Albany is spinning off its first biotech company, Hocus Locus, which is built around software developed at the university.

Hocus Locus, located in the \$45 million Gen\*NY\*Sis Center for Excellence in Cancer Genomics on the university's East Campus, is a bioinformatics company. Its product is designed to help small drug discovery companies speed up development of new drugs.

CEO Scott Tenenbaum, who is also on UAlbany's faculty, envisions work as a subcontractor to those companies on contracts that could range from \$250,000 to \$1 million.

Tenenbaum says the software makes understanding the human genome--the sequences of the chemical base pairs that make up human DNA--more manageable. It mines information within the genome and maps it with positional coordinates. The software maps all 3 billion bases--much like a Global Positioning System for the body's genes.

Hocus Locus has three primary sources of revenue: analysis services for researchers, software licensing--it charges \$5,000 per user--and access to its database. Target users are both academic and commercial researchers.

The National Institutes of Health, the SUNY Research Foundation and UAlbany have backed the company with a total of \$1 million in funds.

Tenenbaum has been making the rounds with venture capitalists to raise \$500,000. He made a pitch in May at the SmartStart Venture Forum in Albany. That money would be used primarily to pay salaries during the five-person company's start-up phase. In that pitch, Tenenbaum told venture capitalists he expected Hocus Locus to break even by 2009 and have revenue of \$20 million by 2012.

Hocus Locus is looking for a slice of the \$20 billion life sciences and analytical instrumentation market, a market that has been growing by 5 percent to 10 percent a year. Bioinformatics, the sector Hocus Locus targets, stands at \$1.5 billion and is expected to hit \$3 billion by 2010.

Marvin Fritzler of the University of Calgary said he used Hocus Locus software to identify a newly discovered protein. That paved the way for new research areas to be explored.

The Pharmaceutical Research Institute of the Albany College of Pharmacy is in contract negotiations with Hocus Locus on a project that would improve treatment for cancer patients.

"We're working on chemo resistances and drugs that make cells more sensitive to chemotherapy. We want to see if we can understand these genes more and of course with their software, we're hoping they will be able to tell us how these genes are affected by other proteins," said Ahmad Aljada, assistant director of the institute.

The software also homogenizes research data and converts it into a common denominator so researchers can better compare data. Hocus Locus is filing an application for a patent on the technology this week.

Tenenbaum, who is also a chef, compares the work researchers do to cooking.

"Most of what we understand about genomics can be classified as ingredients. The genome gave us a list of ingredients but we know little about the recipes," said Tenenbaum.

Japanese, American and French dishes may have the exact same ingredients but it's the recipes that make the foods different. Too often, researchers are comparing ingredient to ingredient when they should be comparing recipe to recipe, he said.

The software helps researchers compare "recipes" of what genes look like in healthy tissue and in a tumor, for example.

A destination for biotech research

Tenenbaum was recruited to the area in 2003, following a post-doctoral fellowship in microbiology at Duke University, the heart of the Research Triangle. He helped pioneer work in ribonomics, which is a way to identify genes involved in specific diseases.

He holds five patents and has two startups under his belt.

Tenenbaum wants to make UAlbany a destination for biotech research and spin-offs in the same way UAlbany's College of Nanoscale Science and Engineering is becoming the place for nanotech researchers.

Tenenbaum hopes to build the company to a point where in a year he will be able to turn the reins over to a new CEO and pursue ideas for a new spinoff.

Hocus Locus' employees are: Chris Zaleski, Tenenbaum's first hire, a 35-year-old computer scientist who left a job at a software startup downstate and went back to school to study biology; Ajish George, a 22-year-old who started attending Rensselaer Polytechnic Institute when he was 16 and graduated a year early; David Tuck, a pathology professor at Yale University School of Medicine, which owns about 5 percent of Hocus Locus; and Tim Baroni, 37, who has a doctoral degree in chemistry.

Tenenbaum said the heart of the team is Zaleski and George, whom he said are like musicians. Zaleski is the classically trained musician who reads sheet music--or, in this case, writes code. George can't read music, but feels it and isn't limited by traditional programming.

An engine for innovation

The giant in the industry is Agilent Technologies Inc. (NYSE: A), a \$5 billion HP spinoff in Santa Clara, Calif. It reported revenue of \$1.3 billion for its life sciences work. In the past three years, Agilent has acquired three companies working on products similar to Hocus Locus.

California is a hotbed for biotech software because of an increase in drug discovery companies--following Genentech Inc., which was founded more than 30 years ago in San Francisco--and the abundance of software companies in Silicon Valley.

"Software and biotech are merging," said Stu Matlow, an Agilent spokesman. "Silicon Valley offers the right combination of a lot of major institutions such as Stanford, and highly technical people."

Matlow said companies like Hocus Locus are coming out of universities more frequently.

"It's a good engine for innovation," he said. "Quite a lot of innovation and useful products result from these spinoffs. Agilent is actively acquiring companies that are a good fit for our portfolio."

Tenenbaum said he isn't interested in Hocus Locus being acquired just yet. The goal is to build the company so it will start a healthy track record of biotech startups for UAlbany.

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