

U's transfer problem

By THOMAS LEE, Star Tribune

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The anti-AIDS drug Ziagen has been good to the University of Minnesota. Maybe a little too good.

Since 1999, Ziagen, manufactured by GlaxoSmithKline, has generated \$290 million in royalties for the university. But take away Ziagen and the university is left with very little else to show for its recent intellectual property investments.

The drug generates 95 percent of the school's annual licensing income. To make matters worse, Ziagen's patents expire overseas next year and in the United States in 2013. That leaves the U scrambling to replace the more than \$50 million in annual royalty payments that Ziagen now generates.

"We are coming in at the bottom of the eighth," said Jay Schrankler, a former Honeywell executive who was recently tapped to lead the school's Office for Technology Commercialization. "We've got to work hard and fast to turn this around."

Judging from the university's recent track record of converting its vast reservoir of research into cash, the U faces an uphill climb. The school that's known for inventing the pacemaker, the heart valve and one of the Web's first Internet browsers is desperate for a hit.

At a time when the state's economy is slowing and its medical device sector is maturing, the U's long commercialization slump has attracted the urgent attention of lawmakers, venture capitalists and others concerned about where Minnesota's next Medtronic or St. Jude will come from.

One blockbuster product or start-up could reverse the university's fortunes. The school has high hopes for Orasi Medical, a recent university spinoff that's developing technology to help quickly diagnose neurological diseases like Alzheimer's.

But compared with leading national universities and its regional peers, the U's commercialization efforts lag significantly. From 1984 to 2004, the university spun off 101 companies but only three went public, according to a study conducted by MBA students at the University's Carlson School of Management.

That translates to a 3 percent success rate, compared with 8 percent for public universities and 14 percent for "premier" universities like the Massachusetts Institute of Technology and Stanford, the study says.

The three start-ups generated just \$9 million in income for the university, with \$8 million from just one -- Net Perceptions, an Edina-based tech company that went public in 1999 with great fanfare

but struggled after the tech bubble burst and moved out of state in 2004.

"The U is one of the greatest assets the state has," said Vance Opperman, president and chief executive of Key Investment Inc., a Minneapolis-based venture capital firm that funds real estate, publishing and young technology companies. "But there has not been as much [start-up activity] as I would like to see."

Since he arrived in 2005 as the university's vice president of research, Tim Mulcahy has won praise for his efforts to professionalize the university's tech transfer office. And the U continues to invest in research. In 2006, it spent \$595 million on research, placing ninth among all public universities.

An immense challenge

But the school generated only \$56 million in license income that year, most of it from Ziagen, according to an annual survey by the Association of University Technology Managers. In a field where commercialization lead times are measured in years, the U's challenge is immense.

"The university has had success in research and fundraising but less success in translating that research into an ongoing revenue stream," said Michael Gorman, a managing director with Split Rock Partners, an Eden Prairie-based venture capital firm that specializes in start-ups.

Research universities are critical to a region's economic development because they produce the cutting-edge technology that attracts investors. California's Silicon Valley and Route 128 near Boston owe much of their economic vitality to the presence of Stanford and MIT.

But some venture capitalists view the University of Minnesota as a liability rather than an asset to the state.

The university "provides all sorts of disincentives to new technology," John Alexander, president of Twin Cities Angels, a local investor group, recently told the state's House Committee on Biosciences and Emerging Technology.

The school is more interested in protecting its intellectual property than collaborating with the business community, he said: "It is a pleasure working with MIT; the same can't be said of Minnesota. I think that's the widely held consensus of the business and venture capital community."

Stifling innovation?

Alexander, who is also chief executive of Plymouth-based Chameleon Scientific, suggested that the university's near monopoly on high-tech research in the region is stifling innovation. The state should think about dividing the school or creating a second research university, he said.

Faced with shrinking state budgets and declines in federal research money, universities have aggressively pursued licensing deals and start-ups, hoping to find the next Google or Gatorade.

Midwest states, in particular, have tapped their public universities hoping to produce high-tech industries to replace lost manufacturing jobs, said Leslie Norins, editor and publisher of Technology Transfer Tactics, an industry newsletter based in Naples, Fla.

Business and scholarship

Historically, the U has been uncomfortable mixing business with academia, fearing that the quest for profits could sully the school's mission to educate students, observers say.

That ambivalence has translated into "mixed signals about whether the university is serious about entrepreneurship," said Stephen Parente, an associate professor of finance at the Carlson School who is also director of the Medical Industry Leadership Institute. "The university has gone back and forth over on this over the years."

A scandal at the university's renowned medical school in the 1990s only deepened that ambivalence. In 1995, a federal grand jury indicted Dr. John Najarian, a renowned transplant surgeon, on charges of fraud, theft and tax evasion relating to the illegal sale of ALG, an experimental anti-rejection drug.

Although the Food and Drug Administration never approved ALG, the school's surgery department, which Najarian chaired, sold \$80 million worth of ALG throughout the 1970s and 1980s, with much of that money benefiting the U.

A jury acquitted Najarian the following year, but the damage was done. The school paid \$32 million in fines, and the National Institutes of Health placed severe restrictions on the university's freedom to use research money.

After the scandal, the school instituted new accounting controls but ultimately shied away from technology transfer, said Rep. Tim Mahoney, DFL-St. Paul, chairman of the House Committee on Biosciences and Emerging Technology.

"The U erred on the side of caution," Mahoney said. "Now it has become institutionalized."

Some blame university policies that jealously guard intellectual property, making deals unattractive to firms interested in licensing technology or collaborating on research.

"It was difficult to get access to intellectual property," said Dale Wahlstrom, a former Medtronic executive who is now chief executive of the BioBusiness Alliance of Minnesota. "It was a one-sided discussion. If they couldn't get the optimal deal, they wouldn't do anything."

Roadblocks to cooperation

For example, companies that want to use the school's animal research labs to test products like medical devices must cede at least some ownership of the technology to the university. As a result, companies have fled to private facilities in Coon Rapids and Wisconsin, Mike Berman, a prominent medical device entrepreneur, recently told the House Committee on Biosciences and Emerging Technology.

Doug Johnson, a former investment banker who runs the Carlson School's Venture Center, said the U's protective attitude stems from its belief that it never received proper financial compensation from technologies it helped invent, like the pacemaker and the heart valve.

"The U has been very instrumental in developing the technology behind very successful companies [like Medtronic or St. Jude] but hasn't gotten paid for it" because the school failed to protect its inventions, he said.

Could have been a gold mine

But Johnson also said that the university traditionally lacked the necessary money and managerial talent to turn promising research into viable companies. That's resulted in several missed opportunities.

In 1991, the university unveiled Gopher, at the time the world's most powerful Web browser. The school unsuccessfully tried to license Gopher, and the technology faded into obscurity after the University of Illinois released Mosaic in 1993.

The team at the University of Illinois that developed Mosaic subsequently formed Netscape Communications. Under chief executive Jim Clark, Netscape launched the Internet era with Navigator, the first commercial Web browser.

"They won," Johnson said. "It was a massive success and revolutionized the world. You can imagine that this would have had a profound impact on [our] area" if the U had maintained its lead and continued to develop Gopher.

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