Michael Plesha just received his doctorate in chemical engineering from UC Davis, and he's ready and eager to work for one of the nearby biotechnology companies. After all, some of the industry's giants — Genentech Inc., Novartis AG and Alza Corp. — have sites within short commutes from the university. Why not start his career in an area he's familiar with and enjoys?

But without students like 29-year-old Plesha, many of these companies might never have come to the area in the first place.

Since the late 1980s, the number of life science companies in Solano County has jumped to 16. With employment in the industry rising by 35 percent between 2000 and 2006 in Solano County, the area's biotechnology cluster is far outpacing life science companies in the rest of the Bay Area for growth, according to the California Employment Development Department.

The area has officially become a thriving biotech hub and many in the industry say the readily available talent in the region is one of the main reasons.
"We have a lot of people with a higher education living here and not enough jobs for them," says Mike Ammann, president of the Solano Economic Development Corp. "I think roughly 60 percent have some college or associate degrees or some certification. But overall the jobs we have are lower in qualification."

As a result, nearly 75,000 Solano County residents commute out of the area for employment, he says. But with the growth of area life science companies, that trend is starting to change, especially because it was Genentech and Novartis that put Solano County on the biotech map.

In 1998, Genentech, which is headquartered in South San Francisco, opened its manufacturing site in Vacaville and now employs about 940 people, according to its website.

"Vacaville offered proximity to Genentech's technology base in South San Francisco and a skilled labor pool from the University of California at Davis with which Genentech has a strong relationship and from which the company has historically hired many of its manufacturing employees," Genentech spokeswoman Kelli Wilder wrote in an email.

The company, which researches, develops and manufactures pharmaceutical proteins and biotherapeutic products, completed an expansion of its facility late last year by adding 380,000 additional square feet. It allows the company to begin production on three new products recently approved by the U.S. Food and Drug Administration.

Ten miles away in Dixon, Genentech is also constructing a new facility that will house technicians and research scientists and is expected to reach full operation by 2010.

Meanwhile, Novartis in Vacaville has three plans for expansion expected by 2010. By the end of this year, the first phase will have doubled the site's production capacity, according to Robert Carter, head of the Vacaville site.

"But our expansion is being done very mindfully," Carter wrote in an email. "We are also looking into how to incorporate a significant solar power installation into these plans, which is a part of our commitment to being a good corporate citizen and minimize our environmental impacts wherever possible."

The pharmaceutical company moved to the area in 2006 when it purchased Chiron Corp., another biotech company. It now has 150 employees, up from last year's 90.

"Its proximity to the world's largest concentration of biotechnology talent and community in and around the Bay Area is probably one of the biggest advantages." — Robert Carter, Vacaville site manager, Novartis AG

"Its proximity to the world's largest concentration of biotechnology talent and community in and around the Bay Area is probably one of the biggest advantages that made it desirable for Chiron to build here in 1994 and for Novartis as it looked to and eventually acquired Chiron in 2006," Carter wrote. "Other factors favoring biotechnology here include a business-friendly en-
environment and availability of land for growth.”

Biotech companies also move to the area because there is no earthquake fault, which obviously lessens the risk for losing products. Plus, there’s plenty of clean water available from nearby Lake Berryessa, and the area provides a good quality of life for employees, says Matt Gardner, president of BayBio, a nonprofit trade group.

A lot of biotech employees that work in the Bay Area commute from Solano County, he says. More life science companies moving to Solano means many employees can find jobs closer to home, Gardner says.

“These are very desirable jobs,” he says. “They’re clean, they pay well and you can move forward.”

Plesha, who graduated with an emphasis in biotechnology, is hoping he will be lucky enough to land one of these positions in either Solano County or Davis. While he has applied in other areas like his home state of Washington, both he and his wife would prefer to stay here because they like the area for its weather, recreational activities and proximity to regional attractions.

“I like the fact that we don’t have too much traffic here like the cities, and we’re 45 minutes to the wine country, one hour to the city and two hours to Tahoe,” says Plesha, who held an internship at Calgene Inc. in Davis where he worked on cloning projects.

There are currently 2,301 life science jobs in Solano County. Northern California has the largest cluster of biotech companies in the nation with more than 1,377 employing 90,000 people. Unfortunately, the average annual salary for these positions in Solano County is $75,582, according to the EDD, while in the rest of the Bay Area the salary is $112,235.

Doug Henton, president and co-founder of Collaborative Economics Inc., which provided a report for Solano County analyzing the growth of its life science cluster, says the salary is lower in Solano because many of the jobs are in manufacturing, which pay less than research. But the thriving life science industry, Henton says, is contributing to an increase in employment.

In 2007, employment growth in Solano County jumped by 30 percent compared to 9 percent for the rest of the Bay Area and 18 percent for the state, according to EDD figures.

“Healthcare and life science are the fastest-growing industries; even with the economy we’re in,” Henton says. “Solano is a good place to open up manufacturing because there are already biotechs there. They have opportunity to expand because of the land.”

With so many new drugs being researched and developed, Ammann is convinced the area will see even more growth in this industry.
“My bold prediction is life science is going to double in the next 10 years in Solano County.”

— Mike Ammann, president, Solano Economic Development Corp.

City officials in the county are doing what they can to make sure this happens.

The city of Vacaville, for example, has allowed some of the biotech companies there to hold off on paying property taxes until they are done with construction and buildings are in use, according to Vacaville Councilman Steve Wilkins.

But in the end, he says, the city is the biggest beneficiary of these companies setting up shop.

Genentech generates $10.5 million in property taxes; Alza, which is part of Johnson and Johnson Services Inc., provides $1.8 million; and Novartis brings in $550,000, all of which is divided between the city and county, Wilkins says.

Also, more biotechs opening in Vacaville helps other businesses like restaurants, he says. Some chain restaurants, Wilkins says, hesitate to set up shop because the noon business isn’t very good since would-be patrons commute out of the area for work. If they can boost the number of people working in the community it may help this problem, he says.

Some of these companies contribute to the community in other ways as well, he says.

Genentech, for example, donated $500,000 to help with the construction of a new emergency room at Valley Hospital in 2005, and Novartis has a program in which employees spruce up the homes of senior citizens who cannot do the repairs themselves.

“They want to be good neighbors, and they put a positive effort into doing that,” Wilkins says.

But Michael Eck, president, CEO and founder of AcroMetrix Corp. in Benicia, says the cities and county need to do a better job of offering incentives for smaller biotechs.

While larger life science companies get tax breaks, he says the cities tend not to offer such deals to the smaller businesses. Furthermore, he says more of these companies might open up if...
the cities or county built a biotech incubator where startups could lease out laboratory space. One of the hardest things for smaller life science businesses is finding lab space, he says.

"[Biotechs] bring in high-paying jobs, and they have little effect on the environment," Eck says. "I think [local governments] should do a better job at offering incentives. I think they're missing a real opportunity."

Now a company of 55 employees, AcroMetrix opened in Berkeley in 1999 and specializes in medical diagnostic products, scientific support and systems for biomedical technologies. The company moved to Benicia because it was closer to where its work force lived, and there was inexpensive office space.

While AcroMetrix is smaller than some other biotech companies, Eck says his is growing fast. "When we first started we were in a 3,500-square-foot suite, now we're in 30,000 square feet," he says. "We're growing in excess of 20 percent each year."

While the life science industry continues to inflate, so do the educational opportunities.

In 1997, Solano Community College launched a program that trains students to work as production technicians in the biotechnology industry, and four high schools in the area offer biotech programs.

At UC Davis, located in neighboring Yolo County, Dr. Judith Kjelstrom is the director of a biotechnology program focusing on research, teaching and public education. It offers an advanced degree program that helps corporate employees earn a life science doctorate with an emphasis on biotechnology.

Under this program, students spend three to six months interning at a life science company and completing a research project. Many complete their internships at one of the local companies, and some even get job offers when they are finished, Kjelstrom says.

"This is a very high-level program. This is to groom a young Ph.D. into a vice president or high-level executive," she says.