

### **Banking on biotech**

**"The market could handle at least five times the amount of students we're putting out now," says one biotechnology professor, at a symposium highlighting the growing field.**

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PROVIDENCE -- Biotechnology made Jo Anne Nelson quit her job, sell her house and move in with her sister.

She couldn't resist the lure of a high-paying job, the possibility of more career options, the "diversity."

Biotechnology companies in Rhode Island are creating new varieties of garlic, working to cure blindness, developing vaccines to fight AIDS and coming up with drugs to treat Alzheimer's disease.

So Nelson sold her house to make tuition payments for the University of Rhode Island's biotechnology manufacturing program. She quit her job to make time for a demanding year of biology homework and chemistry labs. By the end of this year, she's hoping it'll all pay off with a job in the biotechnology field.

"It's a big risk," said Nelson, 46, of Providence. "But I know it's going to be worth it."

URI launched the intense program a couple of years ago, in an attempt to fill local biotech companies' need for employees. The first year of the program costs \$10,500 and all students must cap it off with an internship at a biotechnology company. The students take classes part-time for three more years to finish their bachelor's degrees.

Yesterday, Nelson and others in her program got the chance to meet with biotechnology companies from around the region at URI's first Northeast Regional Biotechnology Symposium. Executives made brief presentations about their companies in the morning, and seven companies conducted interviews in the afternoon.

If the 15 students score an internship from one of the 12 companies at the event, they could be well on their way to getting full-time jobs.

"The market could handle at least five times the amount of students we're putting out now," said Jeff Seemann, dean of the College of Environmental and Life Sciences at URI.

The life sciences sector in Rhode Island -- which is made up of companies focused on developing drugs from cells or other biological material, as well as medical device companies -- is about the same size as the state's shipbuilding industry, said Seemann. Both have about 4,600 employees, he said, but biotechnology has the potential to blow shipbuilding out of the water.



**Journal photo / Steve Szydlowski**

Jo Anne Nelson and Karen Barros, both of Providence, were among the students in the University of Rhode Island's biotechnology program who heard from representatives of local companies at yesterday's Northeast Regional Biotechnology Symposium.

The industry is expanding so fast that it not only needs molecular biologists and scientific researchers, it's also in need of drug manufacturing employees -- positions that need less training.

Rhode Island is banking on biotechnology to be the next big thing for the state's economy. URI is getting ready to build a \$50-million biotechnology center on its Kingston campus and the Rhode Island Economic Development Corporation is looking for General Assembly approval this year for a number of biotechnology-related spending programs.

Last summer, students in the URI program got internships at Amgen Inc.'s biotechnology manufacturing facility in West Greenwich and at smaller companies such as Spherics Inc. in Lincoln and Cambrex BioScience Hopkinton Inc. in Hopkinton, Mass.

All three companies gave presentations at yesterday's symposium, as did others. One URI professor talked about his start-up company, Ophios, which used genetic engineering to create a new form of garlic that grows like a green onion. He said it should be in supermarkets soon, with the tag line "fresh green garlic."

Dave Mantus, a vice president from Sention Pharmaceuticals Inc., in Providence, talked about the company's experiments with rats as it works to develop drugs for improving memory disorders, and about its recent round of \$10-million worth of venture capital financing.

In addition to providing internship opportunities, the university launched the symposium as a way to make local biotechnology companies aware of

each other and to "create crosstalk," said Albert Kauch, an associate professor in the cellular and molecular biology department at URI. He is also the professor with the garlic company.

"I think it's time to ring in the century of biotechnology," said Kauch. It's a future Nelson tries to keep in mind when she's doing homework until 1 a.m. and getting up at 5 a.m. to study for exams.

"I look forward to the opportunities," she said.