

Article from Asheville Citizens-Times

Group wants foothold for biotech firms in Western North Carolina

By [Paul Clark](#)

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FLETCHER - Every morning, Mike Richardson kisses his four children goodbye and begins the long drive to Spartanburg, S.C., to a job he couldn't find at home.

Two years ago, the chemical engineer searched Western North Carolina for a job in biotechnology. For 13 years he'd worked in BASF's corporate engineering department before the company closed its engineering division at its Enka plant.

Richardson sees more than a little irony in the Enka site being the place Friday where a group of residents and state officials unveil a plan for increasing WNC's presence in the cash-green field of biotechnology.

"Biotechnology is truly attracting the best minds of this generation, just like particle physics did in the 1930s." *David Clarke, assistant professor of biology at UNCA*

Biotech - the study of plant and animal molecular structures for genetic engineering purposes - was a \$22 billion industry in the United States in 2000. Currently, some 32,000 North Carolinians work at biotech companies or in those that do contract research work.

By the time a newborn in Franklin grows up, as many as 125,000 state residents will work in what will then be a \$24 billion industry in North Carolina, according to the N.C. Biotechnology Center.

North Carolina is the fifth hottest area for biotech in the country. Most of the research, development and manufacturing companies are in the Research Triangle Park area.

On the Net:

<http://www.ncbiotech.org/> The North Carolina Biotechnology Center homepage

But they could be here, according to the Steering Committee to Strengthen Biotechnology in Western North Carolina. From microorganisms deep in the soil to massive poplars deep in the forest, WNC is one of the most biodiverse areas in the world, scientists say.

As does Jack Cecil.

Region's forests are rich with solutions

On beautiful weekends, when skies over Mount Pisgah burst with sunshine, Cecil loves to take his four rambunctious sons hiking up the trail that leads to the tall WLOS-TV broadcast tower on top.

At the trailhead in the parking lot off the Blue Ridge Parkway, the boys tumble out of their father's car and dash up the rocky path, oblivious to the tender green plants growing no higher than the length of their littlest fingers.

But Cecil notices. When he pauses his attempts to keep up, he ponders what magic might lie in the leaves, stems and roots of the forest floor. Cures for cancer, he thinks. The solution for tomato rot here in the mountains. Ways to protect animals from disease, without the use of synthetics.

TURNING GREEN BIOMATTER INTO GREEN BIO-DOLLARS

- Because of a combination of climate, rainfall, altitude and other factors, 80 percent of the plants found in North America can be grown in Transylvania County.
- The continent's greatest diversity of plant life can be found within a 50-mile radius of Asheville.
- The most biodiverse areas in the world are thought to be the Amazon Valley, the Pacific Northwest and Western North Carolina.

Source: Members of the Steering Committee to Strengthen Biotechnology in Western North Carolina.

WNC's forests are like a bank account on the other side of an ATM - all we have to do is figure out the password, Cecil and supporters like to think.

Cecil, president of Biltmore Farms and a recognized visionary helping to expand WNC's Internet speed and traffic and crafts industry, is largely credited with pushing the area into biotechnology.

Not quite two years ago, he met with administrators of the N.C. Biotechnology Center in Research Triangle Park to get help creating what he calls a "sustainable community development model" through biotechnology.

Cecil's reasoning went something like this: Increased wages through jobs in biotech would create a security in people's lives. They'd want to protect that security by seeking better educational opportunities for themselves and their children.

The more people know, the more they want to take care of themselves, leading to better physical, mental and emotional health. Which makes them more employable and desirable to biotech companies that want to move here or that are already here. It comes full circle.

While Cecil can talk about what biotech can mean, Richardson can talk about what it's not.

What it's not is plentiful.

Motivating biotech businesses to come here

"I looked and looked, but I was not able to find anything even close to a job that challenged my chemical engineering experience and skill set," Richardson said Tuesday.

He works for Lockwood Greene, an engineering consulting firm that counts among its many national clients several biotechnology companies that need help with machine and process design. Richardson, manager of its process engineering department, supervises 25 engineers and other people.

Interstate 26 isn't a bad drive to Spartanburg, he said. Traffic is light, and he has time to think. But what he often finds himself thinking about is how great it would be if Lockwood Greene had more clients in WNC. Then he could spend more time here.

Maybe he would even have time to have lunch with his children at Asheville Christian Academy, like he did when he worked for BASF.

"We've got to create some motivating reasons for these companies to want to locate in Western North Carolina," he said. "And I don't think beautiful scenery is going to be enough to do it. We need places for these companies to relocate at a reasonable cost."

PharmAgra Labs Inc. has just that in Arden.

PharmAgra is a three-year-old company with five employees, all organic chemists, working out of 1,800 square feet at Arden Business Place. On one side of their Glen Bridge Road lab is Dixie Sporting Goods. On the other is Air Systems Equipment Co.

QUICK FACTS ABOUT BIOTECH

1. North Carolina ranks among the top five biotech regions in the United States, along with San Francisco, Boston, San Diego and Maryland.
2. The state has 143 biotech companies that generate more than \$2.5 billion in annual revenues.
3. These companies employ about 17,000 North Carolinians and pay them more than \$850 million a year.
4. There are 78 contract research organizations in North Carolina - the largest concentration in the world.
5. With \$4.5 billion in annual revenues, these companies employ about 15,000 state residents and have an annual payroll of about \$750 million.

Source: The North Carolina Biotechnology Center, Research Triangle Park

Pharmaceutical and biotech companies contract with PharmAgra to do some of the chemical research they have neither the time nor resources to do. Typically, what they're after is a molecule. That chemical compound might be the pain reliever in a headache medicine or the bonding agent that allows dissimilar plastics to join, for instance.

Like a lot of contract chemical researchers, PharmAgra builds all or part of the molecule - a Tinker Toy-looking form of balls connected by rods - then ships the product off by overnight express. All across America, panel delivery trucks are ferrying the balls and rods that make up products we use every day. And PharmAgra builds many of those enabling substances.

Attracting and keeping talented workers

Inside PharmAgra is a toy box of equipment that defy easy explanation -- gas chromatographs, high-performance liquid chromatographs, nuclear magnetic resonance spectrometers - the tools of scientists found in greater numbers in the Research Triangle Park than in Arden.

"Why not Arden?" said Peter Newsome, co-president of PharmAgra. "When we were looking (for space), we looked all over the place. I used to live in Research Triangle Park, and it was getting too out of hand - too crowded, too expensive. . I wanted to live here. I like the outdoors."

And he likes the rent.

"As far as our customers are concerned, they don't care where you're at, since everything we do we FedEx," he said.

PharmAgra just hired another chemist, and will likely hire another soon, Newsome said. It has all the business it can handle and could take on more if it could find qualified people.

"That's probably been the main thing limiting growth -- finding employees," he said. "It's difficult to be able to afford anybody because they're being snapped up by other companies. Research Triangle Park, when they want to hire down there, the sky's the limit.

"We're just a start-up," he said, "so we don't have a lot of money."

But PharmAgra does need parts and supplies. Even though they may not have money for personnel, it does buy from local businesses. It bought an air compressor from Lowe's

hardware in Asheville. Its air system was installed by a heating and air conditioning business in town. Its landlord is local, as was the company that installed its cabinets and electrical works.

Those trickle-down dollars are part of why biotechnology could be so good for the area, project organizers maintain. People in white lab coats need people in convenience store tunics. They need cargo drivers, waiters and cooks, brake installers and art gallery owners.

Help one and you help them all, Cecil contends.

Richardson fills his gas tank in South Carolina, where the gas is cheaper. He often sees the same faces, people driving cars from North Carolina. He doubts that many are in biotechnology. But he knows that a lot of people evidently can't find challenging work at home.

"Day after day, you recognize the vehicles and the tags, and it seems like they're doing the same thing you're doing," he said. "When you're competing with South Carolina, which has a very aggressive (industrial location) incentive program, that's pretty tough competition."

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REPORTS FROM THE FIELD:

For months, area educators, business, research and economic development leaders have been working on a plan to broaden the area's economic base through biotechnology, a white-hot branch of science whose application is natural in an area rich in plant life, project organizers contend.

The leaders will present their plan Friday at the Haynes Corporate Technology and Conference Center, Asheville- Buncombe Technical Community College's facility in Enka. The Citizen-Times will explain the plan in Saturday's paper.

The report seeks to answer these questions:

AGRICULTURE: How can the technology help growers and food processors in the area?

HEALTH: How can it help area hospitals, health care providers and medical services and supply companies?

MANUFACTURING: How can the manufacturing industry benefit from the technology?

TRAINING AND SUPPORT: How can the area develop the specialized work force companies need?

ENVIRONMENT AND CULTURE: What ecological, cultural and institutional factors help or hurt to attract biotech companies?

Speaking will be:

John Bardo, chancellor of Western Carolina University, on how the future can be improved through biotechnology.

Lt. Gov. Beverly Perdue, on the value of combined practical and visionary thinking.

Steven Burke of the North Carolina Biotechnology Center, on 11 recommendations to broaden WNC's biotech industry.

James Fain, state Commerce Secretary, on what the region can gain by growing its biotech industry.

K. Ray Bailey, president of A-B Tech, on how the community college is helping train workers for biotechnology.

Jack Cecil, president of Biltmore Farms, on taking the recommendations and making them work.