

Affordable Europe  [Check out these money-saving tips for the European traveler](#)

BUFFALO JOURNAL

What Does Bioinformatics Mean? To an Ailing Industrial Region, the Answer Is Jobs

More Art

Today's

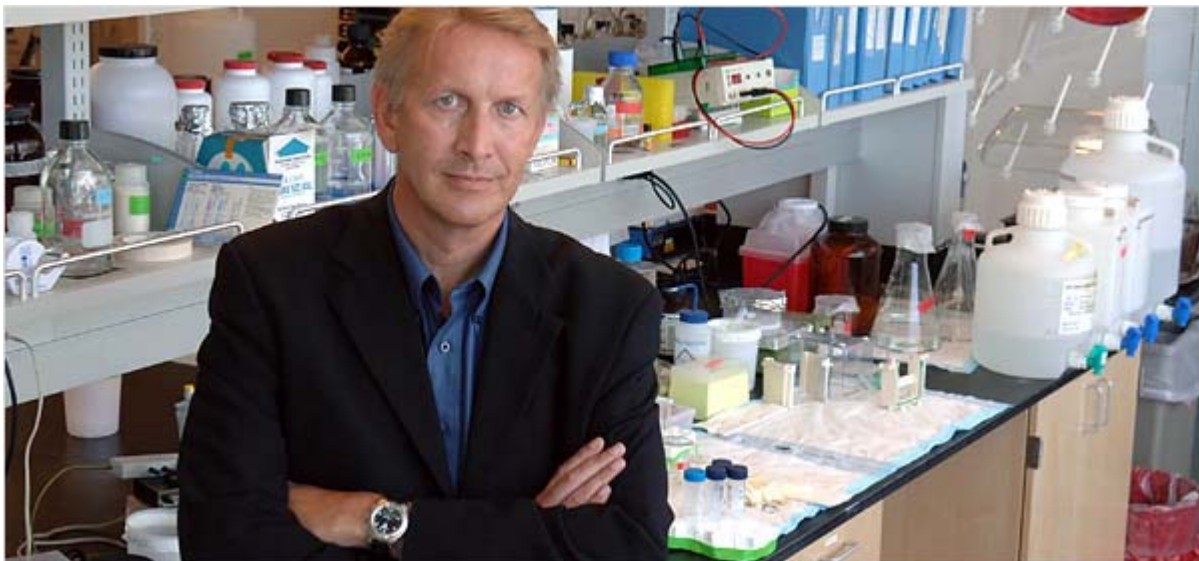


A
Prac



MOST PC

1. T
L
2. C
tl
3. M
H
4. T



Mike Groll for The New York Times

Bruce A. Holm says economic development is a crucial component of the Buffalo research center he leads.

By DAVID STABA
Published: July 9, 2006

BUFFALO, July 8 — In the bright sterility of a laboratory, a robotic arm moves almost imperceptibly over a rack of minuscule vials, each holding one-billionth of a liter of genetic material.

Researchers at the [New York State](#) Center of Excellence in Bioinformatics and Life Sciences are looking for clues to who may be most susceptible to diseases like Alzheimer's and cancer, as well as for ways to treat or prevent such illnesses.

For a region struggling to rebound from decades of decline, those microscopic specks — and the technology that allows scientists to analyze in an hour what used to take a year — symbolize the hope for an economy built on science rather than steel.

"Maybe what we can do is take a little rust off the Rust Belt," said L. Wayne Schultz, a research scientist at the Hauptman-Woodward Medical Research Institute, across the street from the Center of Excellence. Mr. Schultz also founded Buckler Biodefense, a spinoff company that is developing treatments for anthrax and other bioterrorism threats.

Hauptman-Woodward, whose president is Herbert A. Hauptman, a Nobel laureate, opened its headquarters in 2005. The Center of Excellence, a venture of the University at Buffalo, opened in 2001 and moved into its new home in June. The center shares space in the new building with the Roswell Park Cancer Institute, which was founded in 1898 and also occupies several other buildings nearby. The three centers, along with Buffalo General Hospital, make up the Buffalo Niagara Medical Campus, a gleaming collection of aluminum, glass and brick just north of the city's downtown.

A six-story building that covers a full city block just south of the campus once housed Trico Products, a homegrown company that started making windshield wipers in 1917 and once had three plants in the area. But Trico transferred thousands of jobs to Mexico and Texas and closed its last Buffalo factory in 2004.

Many companies, especially steel makers and other manufacturers, plied a similar route, with people following jobs out of Buffalo. The city's population plummeted to 282,864 in 2004 from 580,132 in 1950. According to the State Department of Labor, the region lost 21,300 manufacturing jobs from 2001 to 2005.

While no one expects the new biotechnology sector to fill the gaping job void left by heavy industry, the Center of Excellence has already yielded dividends. By the end of last year, 2,386 jobs had been created at the center or with new spinoff companies, according to the center.

Marnie LaVigne, the center's director of business development, said 1,667 jobs had been retained because the center helped keep some companies in Buffalo or recruited new companies to replace those that left.

The center's growth has often been obscured by the continued decline of the industrial sector. Last month, a bankruptcy judge approved a plan by the region's largest private employer, Delphi Corporation, the auto-parts maker, to reduce the work force at its plant in nearby Lockport, which employs about 3,800.

- Me
- 5. Th
- 6. A.
- 7. Ru
In
- 8. A:
- 9. Of
- 10. Gc
- [Go to Con](#)

[HD-DVI
you?](#)

- Also in T
- [Davi](#)
- [Hom](#)
- [Mos](#)

Advertiser



The complexity of the science itself, which involves collecting and analyzing genetic and molecular data using supercomputers, also makes the venture somewhat abstract to many in a traditionally blue-collar city.

"Bioinformatics seems to be a word people remember because they don't know what it means," said Bruce A. Holm, the executive director of the Center of Excellence and a senior vice provost at the University at Buffalo, part of the [State University of New York](#).

The center, proposed by Gov. [George E. Pataki](#) in his 2001 State of the State address, has received \$89.4 million from the state, \$27.7 million from the federal government, and \$60 million in private investment.

Conceived as a research facility, it has expanded into what Dr. Holm called a "lab-bench-to-bedside approach."

That includes pairing research scientists with physicians.

"You approach the questions from a different viewpoint: you see what impact the research has on actual patients," said Steven R. Gill, an associate professor at the university who studies bacteria that cause diseases and those occurring naturally in the human body. "And that's what the research is really for: to help. Geneticists and researchers get trapped in looking at a very small question; they can have blinders on. Working with a clinician, you see the big picture."

The center also strives to combine science and business. Differences over its philosophy contributed to the departure of its first executive director, Jeffrey Skolnick, whom Mr. Pataki called a "superstar" in announcing his appointment in 2002. Late last year, Mr. Skolnick left for [Georgia Tech](#), taking 20 top researchers with him. As a result, a new recruiting campaign opened to attract 20 top scientists and their research teams.

Dr. Holm said combining research and business had always been a goal of the center. "If you just focus in that one area," Dr. Holm said of research, "you're not going to get economic development."

The center's staff helps scientists and doctors to seek financing for their research and to set up their own companies to market the resulting products.

"Scientists tend not to be very good at running a business, and a lot of times, not very interested in it," Dr. Holm said. "Once they discover something, they think the whole world will just adopt it."

So far, 15 new companies have grown out of the center, including Empire Genomics,

founded by the center's director of science and technology, Norma J. Nowak, to create tests for genetic abnormalities; Buffalo BioBlower, which received a \$3 million appropriation from the Defense Department to develop a system to clean contaminated air by heating and compressing it as it is blown through a rotary pump; and Pneuma Partners, a company founded by Dr. Holm that is developing an inhalant to combat respiratory failure.

Several more companies are in the works.

Officials said that by stressing commercialization of scientific advances, the Buffalo region could realize the benefits of discoveries. Before the center's creation, the leading medication for the treatment of multiple sclerosis was developed and tested at the University at Buffalo, but licensed to an outside company.

"We're not trying to be all things to everyone," said Ms. LaVigne, the center's business development director. "What we're attempting to do is not only bring these technologies to market sooner, but try to retain as much economic impact as possible."

[More Articles in New York Region »](#)

Need to know more? 50% off home delivery of The Times.

Ads by Google

[what's this?](#)

[Free Trip To Buffalo NY](#)

Free \$1000 Trip To Buffalo New York Sponsor Survey Required Act Now!

[FreeBuffaloNY.Traveller-Offer.com](#)

[28 New York State Offices](#)

Largest consumer bankruptcy firm in New York State. Free Consultation

[www.grubealaw.com](#)

[Buffalo Restaurants](#)


Every Restaurant, Every Cuisine. Enjoy Buffalo Dining Tonight.

[HelloBuffalo.com](#)

Related Articles

 [Political Memo; The Upstate Economy, the Problem That Still Plagues Politicians and Their Promises \(June 11, 2006\)](#)

 [Is Upstate 'Like Appalachia'? Well, Part of It Is Appalachia \(March 23, 2006\)](#)

 [Upstate 'Looks Like Appalachia' to Spitzer, and He Has Plans to Fix It \(March 22, 2006\)](#)

 [Income Gap in New York Is Called Nation's Highest \(January 27, 2006\)](#)

Related Searches

[Economic Conditions and Trends](#)

[New York State](#)

[Science and Technology](#)

ARTS »



Kyra Sedgwick, a Study in Nuance

MAGAZINE »

The Minots Write (and Rewrite) Their Family Saga

TimesSelect



Chayes: Care and Feeding of the Taliban

TECHNOLOGY »



AOL's Free Future

Ti

No
Fi
The
tryi
the
wri

[Home](#) | [World](#) | [U.S.](#) | [N.Y./Region](#) | [Business](#) | [Technology](#) | [Science](#) | [Health](#) | [Sports](#) | [Opinion](#) | [Arts](#) | [Style](#) | [Travel](#)

Copyright 2006 The New York Times Company | [Privacy Policy](#) | [Search](#) | [Corrections](#) | [XML](#) | [Help](#) | [Contact Us](#)