

The Emergence of the BIOSCIENCE CLUSTER

New biotechnology centers of excellence are forming,
and these clusters are growing to
include members from **all facets of the life-sciences industry.**

All drug development is local, to borrow from a popular phrase. Although pharma and biotech companies have to be focused on global issues, they still are firmly rooted in the communities in which they reside.

State and local governments recognize the benefits to the local economic environment of attracting life-sciences research companies. By 2010, researchers expect that more than 18% of the U.S. gross domestic product will be driven by healthcare, biotechnology, and the life sciences, according to New Economy Strategies.

Local leaders are working to attract established and emerging biotech and pharma companies by increasing funding of research centers, providing tax incentives, and developing initiatives to educate and attract skilled workers. To meet the needs of this developing market, at least 41 states — up from just a handful a few

Growing the Cluster

While biotechnology is mostly centered in major metropolitan areas, 41 U.S. states have undertaken initiatives to support and grow this sector of the industry. The following are some of the strategies that regions are focusing on to grow a biotech cluster.

BUFFALO, N.Y.

Leaders from New York state's economic development organizations have created **Empire Zones** to provide for sales-tax exemption — property and business tax credits — for businesses locating and expanding in such zones. The purpose of the Empire Zones program is to give companies that are creating or retaining jobs or making capital investments the opportunity to operate on an almost tax-free basis for up to 15 years. Businesses new to New York state are entitled to a 50% cash refund of certain unused credits. A Zone Capital Credit is a 25% tax credit against personal or corporate income taxes that is available for a direct equity investment in a certified zone business. The business may offer a potential investor an immediate 25% New York state tax

credit for the amount of his/her investment into the business.

The **New York Small Business Technology Investment Fund** provides financial assistance in the form of venture capital for emerging businesses located in New York state. Investments are normally in the \$50,000 to \$300,000 range with matching funds from other sources. Buffalo also has the **Niagara Region Ventures Fund**, a quasi-venture tool that provides between \$100,000 and \$500,000 to life-sciences companies that have their principal business location near Buffalo.

Incubator programs, such as the **University of Buffalo Technology Incubator**, assist start-up technology companies in becoming independent, thriving businesses.

Groups such as **The Buffalo Niagara Enterprise** and **BuffLink** provide access to research institutions, workforce training, and available sites.

"In Buffalo and in New York State, our public and private leadership is very strong, and this has resulted in significant new research and life-sciences projects being created in the region, including a new \$300 million Center of Excellence in Bioinformatics," says Angelo M. Fatta, Ph.D., president of BuffLink.

GEORGIA

Three key programs reflect the state of Georgia's commitment to growing its biotech industry.

Georgia's QuickStart Program offers high-quality training services at no cost to new or expanding businesses. The program is financed by the state and offers a supporting network of technical institutes throughout the state.

The Georgia Research



Georgia leadership understands the industry and that each company's needs are unique. We custom design packages based on individual company needs, rather than providing canned solutions.

years ago — have initiated biotech strategies during the last few years, according to a report by Battelle Memorial Institute for the Biotechnology Industry Organization (BIO).

Still, biotechnology development in the United States typically is concentrated largely within nine metropolitan areas: Boston, Los Angeles, New York, Philadelphia, Raleigh-Durham, N.C., San Diego, San Francisco, Seattle, and the Washington D.C./Baltimore area. According to a report published by The Brookings Institution, these nine areas account for more than three-fifths of all National Institutes of Health (NIH) spending on research and for slightly less than two-thirds of all biotechnology-related patents. Biotechnology commercialization is even more concentrated within these areas: more than three-fourths of all biotech firms with 100 or more employees and those firms founded in the past decade are in one of these nine areas; these areas account for eight of

every nine dollars in venture capital for biopharmaceuticals and for 95% of the dollars in research alliances.

Part of the strength behind the growth of biotech clusters throughout the country is the expansion beyond that of companies that develop biotechnology drugs. Biotech clusters are extending to include companies that support the development of biotechnology drugs, such as contract research organizations, technology companies, genomic and proteomic companies, and medical-device companies.

“The lines are blurring between disciplines that previously were separate and are now merging,” says Barry Teater, director of corporate communications at North Carolina Biotechnology Center. “For example, high-performance computing and software now are merging with biology and genetics because of the genomics and bioinformatics revolution. There now is a lot of genomic data and there



Patrick Kelly

Regions need to diversify.

Right now the biotech community is a significant component of the technology community — technologies are feeding on one another, helping to streamline and improve research processes and bring the research time frame down.

needs to be a way to store it, annotate it, and make sense of it. This trend is going to draw

Alliance (GRA) is a strategic partnership of Georgia’s research universities, the business community, and state government. The GRA has invested \$350 million in R&D and commercialization.

“One of the GRA’s strategic investments in the future of the state’s biotechnology industry is the creation of the Eminent Scholar program,” says Carol Henderson, senior project manager, Georgia Department of Industry, Trade and Tourism, Office of Science and Technology. “The program functions to build the state’s knowledge base by bringing eminent scholars to Georgia from throughout the world. The scholars are being recruited to endowed chairs with the latest state-of-the-art equipment and new laboratory facilities.”

A third program to support biotechnology growth in Georgia is the Intellectual Capital Partnership Program (ICAPP), a public-private partnership between the University System of Georgia

and private industry. ICAPP is Georgia’s economic development incentive aimed at helping companies meet human resource needs and securing new investments in knowledge jobs for the state.

INDIANA

In 1999, the state of Indiana started the 21st century Research and Technology Fund, a state administered fund that grants \$75 million — biannually — to fund early-stage research to move ideas closer to commercialization. Since its inception, more than half of the projects have been health and life-sciences related.

The Central Indiana Life Sciences Initiative (CILSI) was launched in February 2002 and one of its many projects is an Indianapolis-specific opportunity. The city of Indianapolis, in partnership with The CILSI has completed a land-use study with the intent of creating a research community in downtown Indianapolis.

“Our expectation is that if we are able to create an environment where

emerging companies and research labs can be located in a similar area, we will realize the synergies that exist in research parks in other parts of the country” says Wade Lange, president of Indiana Health Industry Forum and cofounder of the CILSI.

Toward this goal, in March the first phase of an incubator associated with Indiana University, called the Emerging Technologies Center, was completed in Indianapolis.

NEW JERSEY

The Biotechnology Council of New Jersey (BCNJ) is a founding member of the New Jersey Biotechnology and Life Sciences Coalition. The coalition is working on advertising, public relations, a Website, and other marketing vehicles, as well as working closely with state government, to develop programs to help the industry.

Debbie Hart, president of the
...continued



Wade Lange

Companies realize that the deep talent they need is here, and at a much lower cost — especially at a time when money is tight for start-up companies — dollars go a lot further here than they might on the coasts.



Debbie Hart

Whether growth comes from within by spinning out new companies and growing those that already are here, or from outside, this is something that we think is important.

on high-performance computing and software and other related disciplines.”

Patrick M. Kelly, VP of state government relations at BIO, says the definition of biotech relating to cluster formation and growth needs to be expanded.

“What a lot of states are doing with biotech encompasses all of the life sciences, including medical devices, agriculture, industrial, and other applications of technology,” he says. “The life sciences are a significant component of what states are looking at, but there has not been a redefinition of what biotech is.”

Economic pressures and industry forces are playing a role in the changing dynamics of the biotech cluster.

“Given the recent downsizing in the biotech industry, state and regional leaders will need to shift their focus on supporting other related areas of life sciences, such as medical devices and key suppliers to the life-sciences industry,” says Angelo M. Fatta, Ph.D., president of BuffLink. “For smaller regions to compete with larger ones, other related industries need to be targeted. It is important, however, for regions to play to their strengths and not try to be all things to all companies.”

But not all in the industry view the biotech cluster evolving in this way. Although clusters

State Biotechnology Strategies

According to a study conducted by Battelle Memorial Institute in 2001 on behalf of the Biotechnology Industry Organization, 10 states reported having developed a biotechnology or life-sciences strategic plan. All but one of these were developed in the past four years. Four states reported having developed a science and technology or economic development strategic plan that includes a focus on the biosciences.

State	Bioscience Strategic Plan	Technology Strategic Plan, Including Bioscience Focus	Year Adopted
Arkansas	X		2000
Connecticut		X	1998
Florida	X		1998
Hawaii	X		1999
Louisiana		X	2000
Maryland	X		1991
Massachusetts		X	1993
Michigan	X		2000
Minnesota	X		2001
Missouri	X		2000
New Mexico	X		1999
New York	X		NA
Oregon	X		1999
Vermont		X	1996

Source: Battelle Memorial Institute, Columbus, Ohio. For more information, visit battelle.com.

may need to evolve to compete, investors may not feel as confident investing in the expanded biotech cluster.

“While the sequencing of the human genome has spawned the development of a number of genomics, proteomics, and other companies that provide research tools, there is still a strong focus on traditional therapeutic-products companies, probably because this is a

business model that investors have faith in,” says David F. Hale, chairman of BIOCUM and president and CEO of CancerVax Corp. “There will continue to be a convergence of scientific disciplines as well as a convergence between life-sciences and technology companies.”

CLUSTER ESSENTIALS

Experts from most biotech clusters, as well as experts in the industry, believe that the most essential component to a successful biotech region is a strong university infrastructure.

“All of the trends that we have seen and all the clusters that have been established seem to indicate that the first significant component is a major research university or research institution,” Mr. Kelly says. “Universities provide technology-transfer potential as well as a talent pool of potential employees.”

Mr. Teater says excellent universities and strong life-science programs are the engines that drive the industry with new technologies and trained graduates.

Another essential component of a biotech cluster, according to industry experts, is access to capital.

“If there is an indigenous venture capital

Growing the Cluster ...

BCNJ, was recently named by New Jersey Governor James E. McGreevey to serve on the Jobs, Growth and Economic Development Commission that, among other tasks, will consider strategies for growing the life-sciences sector.

In addition, at the request of Governor McGreevey, the BCNJ, Prosperity New Jersey, and the HealthCare Institute of New Jersey have underwritten the New Jersey Life Science Super-Cluster Initiative, which began in October 2002.

The goals of the initiative include the assessment of the current competitive position of N.J.'s pharmaceutical, medical technology, and biotechnology cluster; the identification of key strengths and weaknesses, challenges, and opportunities for this cluster in comparison with similar clusters in other selected

regions; the development of an action agenda for the cluster, higher education, and state government in an effort to improve the cluster's competitive position; and building the capabilities needed to successfully implement the action agenda.

NORTH CAROLINA



We help companies with referrals to lawyers, accountants, consultants, real estate, lab space, and so on. We know all these people and can make the connections. We also help with networking.

The North Carolina Biotechnology Center is working on three core programs to attract regional biotech growth. The first is the development of the area's universities through grants for research, equipment, intellectual exchange meetings, seminars, and symposia, as well as for the recruitment of faculty. The state has invested more than \$50 million in its universities during the past 20 years to strengthen biotechnology capabilities.

The second program is business development, which provides support to new, young companies. The program provides early-stage financial assistance in the form of low-interest loans. The state has invested \$9 million

in low-interest loans to 62 small companies, which have gone on to raise about \$460 million in follow-on funding.

“By providing the right amount of money to the right people at the right time, good things will come from this investment, and this is what this program is all about,” says Barry Teater, director of corporate communications at the North Carolina Biotechnology Center.

The state's third program is education and workforce training in the form of grants to colleges, universities, and other schools to improve the teaching and training of biotechnology.

OHIO

Ohio's efforts to retain and attract biotech companies



One of the things we want to do is raise the visibility of biotech companies in Ohio with fund managers — The Mid-America VentureForum is a good example of that effort.

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U.S. Dollars Raised by Life-Sciences Sector Companies by State

State	Total Life-Science \$ Raised (\$ in millions)	Life Science % of Total \$ Raised
California	\$2,128.38	22.5%
Massachusetts	716.65	30.3
North Carolina	284.77	50.2
Maryland	217.40	34.9
New Jersey	188.78	33.2
Washington	175.24	29.3
Pennsylvania	154.00	36.7
Georgia	132.28	22.5
New York	129.80	16.2
Colorado	101.85	18.6
Texas	77.14	6.0
Florida	50.25	14.1
Virginia	7.27	1.8
Total U.S.	\$5,054.00	24.1%

Source: Council for Entrepreneurial Development, Research Triangle Park, N.C. For more information, visit cednc.org.

or investment community in the area, chances are this has played a large part in the development of the particular cluster,” Mr. Kelly says. “There has to be money available to take the technology out of the university environment and begin to build the infrastructure required to continue the research in a private setting.”

One of the biggest obstacles facing many emerging biotech companies is the availability, or lack, of financing. While initial funding may be available, biotech-related companies can struggle to find investors later in their development.

“Another major factor that can be a financial obstacle for regions seeking to develop a biotech cluster is the lack of successful entrepreneurs,” Mr. Hale says. “Building a successful biotech company is very complicated and very difficult.”

The recent down swing in the economic cycle has put additional pressure on biotech clusters to get the venture-capital funding needed to operate successfully.

“Virtually every state in the union is experiencing some type of economic crisis,” says Anthony Dennis, Ph.D., president of Omeris. “The economy definitely is having an impact; state officials are

having to make hard decisions about how they will support their initiatives going forward.”

According to Richard Seline, principal and founder of New Economy Strategies, the overall venture-capital market went through a huge ramp up, which now appears artificial given the sudden rise and fall of the dot.coms.

“The overall venture-capital market is back to levels before the ramp up,” Mr. Seline says. “While the money in today’s venture-capital market isn’t as free flowing as it was during that run there is about \$8 billion in cash that has been accumulated in new funds for investment. There is no money for a bad business

model. Venture capitalists might be a little skittish about where to invest in biotechnology and life sciences right now, but compared with the numbers before the artificial bump, the fact is the industry is not that badly off.”

Even in the best of economic times, money is always an issue for the biotech industry because of the great expense to bring a biotechnology product to market.

“One of the realities that this industry deals with is the sheer cost of bringing companies to fruition,” Mr. Kelly says. “To successfully bring a healthcare biologic product to the market, a company can incur costs anywhere from \$500 million to \$800 million. For a company that employs maybe a few hundred people, that is a lot of money.”

ATTRACTING FINANCE

Different regions are taking different initiatives to attract companies and venture capital into their life-science clusters (see box starting on page 36). One strategy that is being implemented is the use of public-relations firms, which are expressively focused on biotech.

Atkins and Associates, which has its roots in the San Diego region, home to one of the

Growing the Cluster ...

include the **Third Frontier Project**, a \$1.6 billion initiative of which almost a third is devoted to life sciences.

One of the strategies that Ohio leaders are using is the recruitment of companies from other countries. The companies generally have significantly advanced technology but relatively small markets.

According to Anthony Dennis, Ph.D., president of Omeris, three Israeli companies recently relocated to Cleveland, and another four or five are looking to relocate to the state.

“We’ve also relocated a Russian company to Cleveland and are currently in negotiations with a number of Asian companies about relocation into the Columbus area,” Dr. Dennis says. “This strategy transplants skills and technologies directly into the region, and doesn’t put us in the position of having to be competitive with San Francisco or Boston.”



Fritz Bittenbender

We have the resources in Pennsylvania to grow this important sector of our economy. It is critical for our economic future, for our job base, and for the health and welfare of people throughout the world.

PENNSYLVANIA

Pennsylvania is supporting the state’s life-sciences using funds from its \$11.3 billion share of the tobacco settlement funds. Pennsylvania has invested more than \$100 million to develop three life-sciences greenhouses that will be incubators for new companies, as well as creating a \$60 million venture fund.

“There has been a commitment from the state level that life sciences and biotechnology are going to be key economic drivers for Pennsylvania’s future,” says Fritz Bittenbender, president, **Pennsylvania Biotech Association**. “There has been a very

significant investment in time, energy, and dollars to show that. A much better tax policy also has been created during the last five years to help with the creation and formation of early-stage, capital-intensive research and development companies.”

Other initiatives include the Governor’s recently proposed expansion of the research and develop-

ment tax credit from \$15 million to \$60 million. He also proposed allowing small companies to trade tax credits with profitable companies for equity.

SACRAMENTO, CALIF.

The **Sacramento Area Commerce and Trade Organization** (SACTO) recruits companies from around the world. To accomplish this, SACTO facilitates site selection needs; represents the six-county region through marketing to other regions within California, throughout the nation, and to the Pacific Rim and Europe; and generates interest in the region through the publication and distribution of marketing materials and data.

According to Barbara



Barbara Hayes

Interest in the Sacramento region continues to be very strong. Companies often are more comfortable locating to an area where other similar companies have located and are successful. This will likely continue, regardless of the economic and political climate.

largest biotech clusters in the country, has established a Midwest office in Wisconsin to capitalize on its West Coast roots to grow clusters in the region.

“Clearly there is a need to increase venture-capital funding in biotech companies in the area, and that has been a challenge for this region,” says Virginia Amann, account and regional supervisor, Atkins and Associates. “Companies such as ours that have relationships with venture capitalists on the coast are coming to the Midwest and making connections for biotechnology firms here.”

Another region that is employing public-relations and marketing tactics to draw the attention of investors is New Jersey.

“We have the tremendous support of specialists from around the industry,” says Debbie Hart, president of the Biotechnology Council of New Jersey. “There will be a much more focused recruitment effort and marketing effort to tell the terrific story we have in New Jersey. Growing the biotech industry is one of our chief goals.”

Because most biotech companies are almost entirely dependent on investment, angel, and venture capital, state governments also can be helpful in raising additional cash and attracting investors.

Venture Capital Investments by State

Venture investments nationwide declined more than 48% from \$44 billion in 2001 to \$21 billion in 2002, according to figures from the MoneyTree equity investment report completed by PricewaterhouseCoopers, Venture Economics, and the National Venture Capital Association.

Nat'l Rank	State	2002 Venture Investments (\$ in millions)	% Chg. from 2001	2002 Deals	% Chg. from 2001
1	California	\$9,467.26	(45.5)%	1,037	(36.1)%
2	Massachusetts	2,362.66	(49.0)	337	(39.3)
3	Texas	1,284.16	(72.8)	170	(56.0)
4	New York	803.24	(66.5)	151	(54.4)
5	Maryland	624.75	(38.3)	92	(10.7)
6	Washington	599.05	(45.2)	114	(24.0)
7	Georgia	587.66	(34.4)	85	(46.5)
8	New Jersey	567.79	(63.6)	88	(39.3)
9	North Carolina	567.44	(18.6)	97	(6.7)
10	Colorado	547.28	(66.0)	78	(43.9)
11	Pennsylvania	419.72	(58.9)	82	(46.1)
12	Virginia	408.72	(61.0)	91	(45.5)
13	Florida	356.75	(60.6)	53	(58.9)
Total U.S.		21,179.0	(49.2)	3,011	(36.1)

Source: Council for Entrepreneurial Development, Research Triangle Park, N.C. For more information, visit cednc.org.

“One of the trends that BIO has identified is the use of the tobacco settlement dollars for biotech initiatives,” Mr. Kelly says. “The states control about \$25 billion of this fund, which they are allocating toward cancer prevention and smoking cessation. In addition, a lot of that money also is being invested in building life-sciences companies. The justification is that if a state develops a biotech cluster, it is going to create a rich research environment and begin to improve public health for its citizens.”

According to a report prepared by the Technology Partnership Practice of the Battelle Memorial Institute for BIO in 2001, about 16 states are partially funding biotech-cluster efforts with money from their multi-billion-dollar tobacco industry settlement funds.

Examples of states with such initiatives include Michigan, which has allocated \$1 billion to life-sciences development, primarily for universities, and Pennsylvania, which is using \$100 million of its tobacco-settlement dollars to develop life-sciences greenhouses and has set aside \$60 million for a venture-capital fund.

Strong research institutions, access to funding, and a supportive public policy are all important factors in the development and growth of a biotechnology center of excellence.

“Public policy does play an important role in spurring economic development and can have a significant impact on building biotech clusters,” says Ruth M. Scott, president of the Washington Biotechnology and Biomedical Association.

She says state governments can support clusters by creating a tax structure that encourages research and development as well

Hayes, executive director of SACTO, the state of California offers a R&D tax credit as an incentive to attract biotech business to the state.

SAN DIEGO

The San Diego region promotes its large talent pool as a way to attract new companies.

“The fact that San Diego is one of the largest biotech clusters in the nation is a large part of its appeal,” says David Hale, chairman of BIOCUM, and president and CEO of CancerVax Corp. “A lot of companies come here because of the talent pool and the top research being conducted at our institutions. Large pharmaceutical companies also are taking notice of these traits and many have recently established offices here, including Pfizer, Johnson & Johnson, Merck, and Novartis.”

There are programs through BIOCUM, the San Diego Regional Economic Development Corp., and the UCSD CONNECT Program in Technology and Entrepreneurship that support the growth and development of companies.

The venture-capital community supported the San Diego biotech cluster, with \$1.5 billion in first-half 2002 — more than in the entire previous year.

TENNESSEE

The Tennessee Biotechnology Association (TBA), Vanderbilt University, and BIO have partnered to offer a unique biotech-management certificate program.

“A partnership between industry and educational and research institutions is an important factor in building a biotech center of excellence in a region,” says Caroline Ragsdale Young, executive director of the TBA.

The Growing and Managing the Biotech Enterprise Certificate Program, beginning in August, is a series of four two-day sessions to be held on the Vanderbilt campus and conducted by the Owen Graduate School of Management faculty.

A six-story, 165,000-square-foot facility for biotechnology research activities for multiple tenants, is being built as the first phase in the development of the UT/Baptist Biotechnology Research Park, which is expected to be an economic development engine for the Memphis community. The site, given to the Memphis Biotech Foundation in 2001, will be redeveloped into a 1.2 million-square-foot campus-style research and development park.

WASHINGTON

Washington state has several tax incentives geared to the bioscience sector, including a high-technology sales and use-tax deferral/exemption, a high-technology business and occupation tax credit, and a sales and use-tax exemption on machinery and equipment. The state also supports two organizations that promote the development of technology-based companies — the Washington Technology Center (WTC) and the Spokane Intercollegiate Research and Technology Institute (SIRTI).

“In building a strong bioscience sector, it’s just as important to pay attention to the companies that are already located here as it is to attract new ones,” says Ruth M. Scott, president of the Washington Biotechnology and Biomedical Association. “Partnering with economic-development offices, academic and research institutions, and core companies, we make the most of opportunities to promote the state through the media, BIO’s annual convention, and a strong industry association.”

as technological innovation, which allows for ease in transferring technology from academia to the private sector for product commercialization and rewards private investments in research.

LOOKING AHEAD

Industry experts believe that global economic conditions, in addition to homeland security issues, will impact the amount of capital that is available to clusters in the future.

“As a result, companies are more cautious than ever about expanding, moving to new

markets, and launching new products,” says Carol Henderson, senior project manager, Georgia Department of Industry, Trade and Tourism, Office of Science and Technology.

The biotech industry, however, may benefit from homeland security measures that call for the development of defenses against biological weapons.

“Biotechnology has been enlisted in federal efforts surrounding homeland defense and national security,” Ms. Scott says. “New funding sources are available for biotech companies and research institutions to develop defenses against biological warfare, providing a viable opportunity for further cluster

growth and or alternative product development within existing companies.”

While the Boston, Seattle, San Diego, and San Francisco areas are most recognized for their cluster excellence, new regions are beginning to emerge as significant areas of innovation. According to Mr. Seline, North Carolina, Atlanta, and Colorado’s Denver/Boulder region are emerging as strong areas of cluster growth. In addition, regions that lean less toward biotechnology will begin to impact the cluster landscape.

“There are regions where medical devices and nanotechnology are starting to emerge in a big way,” he says. “Worth watching is what

Holding on to a Cluster

THE SOUTHWEST MICHIGAN REGION, an area that already has established a growing life-science center of excellence, is working to retain the largest player in its cluster. Kalamazoo, Mich., is home to Pharmacia’s largest research and development operations. Pfizer’s acquisition of Pharmacia has put the future of the location’s facilities in question and Southwest Michigan community leaders and officials are working to convince Pfizer to retain the Kalamazoo facility.

Life sciences is an important industry to the Kalamazoo region; it accounts for 15% of the region’s workforce, 23% of the community’s wealth, and 50% of the state’s life-sciences economy.

Southwest Michigan community leaders, Southwest Michigan First, city of Kalamazoo officials, and the Michigan Economic Development Corp. have teamed up to put a full-court press on Pfizer to retain and expand the soon-to-be acquired Kalamazoo County operations.

According to Barry Broome, CEO and executive director of Southwest Michigan First, the Kalamazoo community has been working on three tactics to keep Pfizer in the area, as well as other initiatives to promote the growth of life-sciences activities in the region.

“We offered a \$635 million incentive package to Pfizer, which is the



Barry Broome

Obviously, Kalamazoo is going to take some cuts and the goal is to make sure that we keep our core business in the community so that over time, through performance, the area can grow.

largest incentive package ever offered by a community in Michigan,” Mr. Broome says.

After Pfizer’s acquisition of Pharmacia was announced, the group asked Booz Allen Hamilton to provide an independent analysis of the output of Pharmacia’s Kalamazoo County operations, based on publicly available data. The firm found that the Kalamazoo campus is the only Pharmacia site able to take a pharmaceutical compound from the preclinical stage to production and distribution. Research also showed that the Kalamazoo operations have issued more patents and approved more new drug applications than any other Pharmacia facility in the United States. In addition, Ernst & Young was retained to perform a cost analysis, which found that the Kalamazoo site is a low-cost provider of services to Pfizer.

Another strategy the group is working on is an advertising campaign called “Stick Around.” The campaign is targeted at science leaders who may not be provided job opportunities within Pfizer, to keep them in the community to launch a company in the bioscience corridor.

The Michigan team also has unveiled details of an incentive package valued at up to \$635 million over a 20-year period based on the company investing \$784 million in four expansion projects and creating 2,100

new jobs in the Kalamazoo area. The majority of the incentives offered are only available to Pfizer if it maintains 8,500 jobs in Michigan, including 5,000 in research and development.

is about to happen in Texas and New York as it relates to nanotechnology, biotechnology, and life sciences, as well as microelectronics.”

Mr. Dennis believes advances in technology will change the existing model of cluster development and new strategies will have to be adopted.

“There is a strategy that espouses that a region has to emulate the Boston area or the Bay area to be able to generate a cluster and that is no longer true,” he says. “Technology has matured substantially and a lot of the fundamental skills previously available only at universities, such as Harvard and MIT, are now available off the shelf. Emerging clusters are not going to be as dependent on universities for basic research technology. Robust and emerging clusters will be able to take off-the-shelf technology and use it in clever ways.”

Regardless of the strategies employed by regions, the biotechnology industry is expected to shrink during the year.

“Today, there are about 1,700 biotechnology companies in the United States; we predict that by the first quarter of 2004 that number will

“This is largest incentive any community can possibly give,” Mr. Broome says. “It is called a pharmaceutical renaissance zone and it was special legislation that Southwest Michigan First wrote and had passed and signed by the governor in October.”

Another strategy Southwest Michigan First is using to retain Pfizer is working with the governor to revamp the formulary and prescription drug program in Michigan. The group is trying to alter the programs to give Pfizer the ability to have unrestricted access to sell its drugs in Michigan.

As of press time a final decision hadn’t been made, but Pfizer executives have shown their support of the Kalamazoo community through the company’s recent announcement that it will support start-up companies in the region. In the event of Pfizer job cuts in Kalamazoo, the company believes it can help workers find new employment by supporting aspiring entrepreneurs and spin-off companies. Pfizer’s Chairman and CEO, Hank McKinnell, has said the company’s first objective is to make sure any employees that are displaced have access to jobs elsewhere.

Mr. McKinnell also has announced Pfizer’s intention to help fund spin-off companies in the Kalamazoo area. This fits in with Southwest Michigan First’s plan to aid in the development of such companies. The group has been working to develop The Southwest Michigan Innovation Center (SMIC), which is slated to open this month. The SMIC is a 58,000-square-foot facility featuring state-of-the-art wet labs. It has been designed to nurture private and university technologies into viable start-up companies. The center will offer a resource package that includes professional business support services as well as shared equipment and office services. This will sustain and speed the growth of life-sciences innovations and high-tech early-stage businesses.

decline to between 1,300 and 1,400,” Mr. Seline says. “Not only are some of these companies going to run out of cash, but some companies have a very narrow band of science or technology. During the next 18 months there will be a lot of mergers and acquisitions,

and that is not a bad thing for this marketplace.”

He warns that although many regions are working to promote biotechnology and life-sciences growth in their communities, not every area in the country is going to be, or

should be, a drug development or biotech cluster. ♦

PharmaVoice welcomes comments about this article. E-mail us at feedback@pharmavoice.com.

Experts on this topic

VIRGINIA AMANN. Account and regional supervisor, Atkins and Associates, San Diego; Atkins and Associates provides strategic public and investor relations exclusively for bio-businesses. For more information, visit atkinsassociates.com.

Fritz BITTENBENDER. President, Pennsylvania Biotechnology Association, Malvern, Pa.; Pennsylvania Biotechnology Association’s mission is to advance the life sciences by creating commercial opportunities and public-policy strategies that lead to greater understanding, growth, and community support of biotechnology. For more information, visit pabiotech.org.

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ANGELO M. FATTA, PH.D. President, BuffLink Inc.; Buffalo, N.Y.; BuffLink is a private, nonprofit corporation founded by private sector and university leaders to promote the creation of a life-sciences economy in the Buffalo-Niagara region. For more information, visit bufflink.org.

DAVID F. HALE. David F. Hale. Chairman of BIOCOM and president and CEO of Cancer-Vax Corp., San Diego; BIOCOM is a trade association for the life-sciences industry that promotes the growth of all sectors of

through creation of member value in the areas of public policy, member services, education, and business networking. For more information, visit biocom.org. CancerVax develops biological products for the treatment of cancer. For more information visit cancervax.com.

DEBBIE HART. President, Biotechnology Council of New Jersey Inc., Trenton, N.J.; BCNJ’s mission is to promote a business and public-policy environment in the state and enhance the growth and prosperity of New Jersey’s biotechnology companies. For more information, visit newjerseybiotech.org.

BARBARA HAYES. Executive director of the Sacramento Area Commerce and Trade Organization, Sacramento, Calif.; SACTO is a private, nonprofit economic development organization established to encourage top-quality businesses to place job-generating investment in the greater Sacramento area. For more information, visit sactoedc.org.

CAROL HENDERSON. Senior project manager, Georgia Department of Industry, Trade and Tourism, Office of Science and Technology, Atlanta; Georgia’s Office of Science and Technology, part of the Georgia Department of Industry, Trade and Tourism, provides the foundation to help information-technology and life-sciences companies grow. For more information, visit georgia.org.

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WADE LANGE. President, Indiana Health Industry Forum and cofounder of the Central Indiana Life Sciences Initiative, Indianapolis; CILSI works

to attract and create jobs, companies, and entrepreneurial opportunities in its life-sciences industry, using world-class research capabilities to make Central Indiana a center of innovation in the business of enhancing health. For more information, visit cils.com.

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