

# UMMC biotech park to boost economy

A 25-acre research park planned to be built on the site of the old Farmer's Market in Jackson will pump tens of millions of dollars into the state's economy and employ up to 1,500.

Construction on the first building at the University of Mississippi Medical Center's Mississippi Biotechnology Research Park could start in little more than a year. Plans call for a 75,000-square-foot laboratory-and-office structure. The park will be located on land granted by the state near the intersection of Woodrow Wilson Avenue and West Street.

The Medical Center already has received \$13.8 million for the park through the National Institute of Standards and Technologies, funded through an omnibus bill. That money will pay for demolition and start of construction.

"This is innovation-based economic development," Dr. David Dzielak, associate vice chancellor for strategic research alliances, said of the planned park and the estimated 1,500 jobs it could create over the next 10- to 20 years. "These are jobs that are higher-paying and high skills-oriented."

In the long run, the park could house a parking garage and five buildings with a total of 400,000 square feet for private-company research, business incubator space, homes for Medical Center spin-off companies and technology-transfer programs.

The park likely will be a not-for-profit organization directed by a board that includes Medical Center leaders, park managers and possibly executives from anchor businesses.

## FUTURE GROWTH



Construction on the Mississippi Biotechnology Research Park could begin as soon as January 2011. The park will include state-of-the-art lab and business incubator space.

In the coming months, Dzielak said UMMC leadership hopes to enroll other entities for the project, including the City of Jackson and the Mississippi Development Authority.

"We're going to partner with as many state and local agencies as we can. We want to get buy-in to make this as successful because, really, what we're creating is a tremendous economic-development opportunity for the city," he said.

"The public-private environment offers the most attractive situation for technology innovation that you could possibly design,"

said Dr. H. Randall Goldsmith, president and CEO of the Mississippi Technology Alliance.

The alliance, a non-profit economic development organization, fosters growth of start-up technology business, connects promising companies with investor capital, backs work-force education and helps existing industries modernize.

For more information on UMMC and the research park, visit [http://publicaffairs.umm.edu/center\\_view/101209/research\\_park.html](http://publicaffairs.umm.edu/center_view/101209/research_park.html).

# LABS: Garden to create new jobs

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better chance for a company achieving a new product's first sales."

St. Louis-based Crosslink, a leader in the development of electroactive polymers, is already preparing to move into some of the lab space. For Crosslink, The Accelerator offers equipment and research expertise that the small company of 30 employees may not have access to otherwise.

"The relationship between our company and the university is mutually beneficial," said Don Landy, Crosslink's Vice President. "The technologies that Southern Miss is developing need to find a place in the marketplace and what better way to do that than to align the university with private businesses. The Accelerator gives us the opportunity – in an affordable way – to work with the best people and equipment."

Two other private companies, one made up of recent USM graduates, have shown interest.

In the future, after research has been completed, Crosslink hopes to expand operations

in Hattiesburg to include technical support, customer service and distribution of products that are developed.

"These companies have the potential to not only create new products, but also create new jobs in Mississippi," Accelerator Executive Director Sunny Corral said. "That's an exciting prospect, especially during these tough economic times."



**THE GARDEN**  
CULTIVATING INNOVATION  
FROM MIND TO MARKET

**FOR MORE INFORMATION**

For more information about The Accelerator visit [www.TheAcceleratorMS.com](http://www.TheAcceleratorMS.com).

## NOVEL H1N1 UPDATE

Nearly 2,500 bags filled with individual hand sanitizer and other informational items relating to flu prevention have been distributed to students across Mississippi's eight public universities.

The initiative, funded by the Mississippi Department of Health, is part of the State Institutions of Higher Learning's continuing efforts to help faculty, students and staff stay healthy and prevent the spread of novel H1N1 – commonly called Swine Flu – and other illnesses.

Business cards with campus health clinic phone numbers and hours of operation have also been distributed to students to make it easier to book appointments if they are feeling sick.

For more information visit [www.ihl.state.ms.us/rm/emergency.html](http://www.ihl.state.ms.us/rm/emergency.html).



# THE **U** REVIEW

## Jet project up next at State's CAVS

### REAL-WORLD EXPERIENCE

Safer. Stronger. Cheaper. Faster.

A team at Mississippi State University's Center for Advanced Vehicular Systems (CAVS) is working now with the Department of Defense to better predict failure in jet airplanes.

Students recently wrapped up another project crafting a bearing cap for Ford engines that is 10 percent lighter and 25 percent stronger than many of its kind in use today.

The next frontier may be developing Mississippi's nuclear industry.

Using multi-scale materials, the CAVS Computational Manufacturing and Design division is transforming the manufacturing business and helping place students who come through the program in high-paying, and oftentimes, Mississippi-based jobs.

"Because of the work here at Mississippi State, manufacturing is based less on trial and error and more on a simulation methodology," said Dr. Mark Horstemeyer, CAVS Chair of Computational Solid Mechanics and Professor of Mechanical Engineering. "In other words, you can design things correctly the first time, which makes them less expensive and more accurate."

Since Dr. Horstemeyer joined CAVS in 2002, the number of graduate students in the mechanical engineering has grown from a few to 75. Many of these students, and others from a variety of other disciplines, come through the center to build their portfolios and work side-by-side with engineers and analysts from some of the world's foremost



Students who come through MSU's Center for Advanced Vehicular Systems work side-by-side with professional design engineers and analysts on real-world projects.

companies to optimize the design of almost any imaginable part or product.

"The big question is, 'Why does this research matter?'" Dr. Horstemeyer said. "If you can reduce the weight of a vehicle, for instance, just 25 percent, you get 75 miles per gallon instead of 25. That means less reliance on foreign oil and less CO2 emissions."

At CAVS, the sky isn't even a limit, said Dr. Roger King, CAVS Director and Giles Distinguished Professor of the Bagley Col-

lege of Engineering.

"The research our students and faculty are conducting directly impacts our state economy and the day-to-day lives of Mississippians," Dr. King said. "Dr. Horstemeyer's research demonstrates that well in the products that they have improved and continue to improve through their innovative work."

For more information on Mississippi State University's CAVS, visit <http://www.cavs.msstate.edu/>.

## ASU field day helps farmers

Mississippi farmers looking for ways to protect and grow their businesses in an uncertain economy are receiving free help through a program at Alcorn State University.

The university offers an annual field day for farmers that is growing in popularity. More than 200 farmers attended this year's event.

Farmers learn the results of the university's latest research, and they receive training opportunities that offer a hands-on approach.

"They can come and see what we are doing so they can do it on their own backyard," said Dr. Girish Panicker, Director of Conservation Research at Alcorn State University.


Farmers can receive training on fruit, vegetable, swine and goat production. Highly experienced scientists from the fields of fruit and vegetable production and swine and goat husbandry attend the field day to assist in training programs.

In addition, farmers can learn about pro-

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# Prep begins for JSU for Power Lab

Turning one of Jackson State University’s engineering research spaces into a state-of-the-art Power Systems Lab is causing faculty to dig in this semester.

Dr. Mahmoud Manzoul, Chair of the Department of Computer Engineering, and his colleagues are ordering equipment like small generator-motor sets, power electronics devices, power supplies, and simulation software. They are studying up on the new curriculum that will accompany the three upper-level classes that will be offered in the new lab. Soon, they will begin recruiting students to enroll in courses.

“We have space for 24 students, but we will probably accept between 10 and 15 for fall 2010,” Dr. Manzoul said.

In October, Entergy and the Entergy Charitable Foundation gave \$400,000 to JSU’s College of Science, Engineering and Technology that will go toward establishing the lab. The company also gave \$100,000 to provide scholarships for Jackson State engineering students who choose to specialize in power systems engineering.

Modeled after a similar program at the University of Minnesota, the JSU Power Systems Laboratory will allow students to conduct experiments in power simulations, power electronics, electrical machines and other subjects related to managing and modernizing the nation’s energy transmission systems. Students will also learn about energy conservation and renewable energy.

Entergy will also offer a summer internship to help give students practical experience, said Dr. Robert Whalin, Associate Dean of the School of Engineering at Jackson State.

With many engineers in the utility industry ready for retirement, Dr. Whalin said the new program “will help the state meet a critical workforce need.”

Dr. Manzoul agrees.

“Power systems engineering has been around for a long time, but people are really paying attention to it now,” he said. “We anticipate that there will be a lot of interest among students once the specialty is established.”

## FOR MORE INFORMATION

Visit [www.jsu.edu/cset/engineering.htm](http://www.jsu.edu/cset/engineering.htm) for more info about Jackson State University’s School of Engineering.

# USM ‘Accelerator’ to open in Jan.

In January, 10 laboratories, a pilot production facility and the only National Formulation Science Laboratory custom-built for polymer science will open under one roof in the University of Southern Mississippi’s new research park, The Garden.

Much of the space, known as “The Accelerator,” will be available to private, small and early-stage businesses that have an interest in ground-breaking research, as well as the practical application and commercialization of their discoveries. The renowned

Mississippi Polymer Institute at USM will occupy one-third of the building.

“We have a lot of great ideas coming out of the university. The challenge is to move those ideas into the marketplace,” said Dr. Les Goff, President and CEO of Noetic Technologies Inc., the principle technology marketing and commercialization arm of the university’s research foundation. “The Accelerator adds the capability to scale the technologies for customer sampling and feedback. This process always provides a

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## ACCELERATING RESEARCH



The ‘Accelerator’ — open in January — will feature 10 labs, a pilot production facility and the only custom-built National Formulation Science Laboratory for polymer science.

# Businesses turn to ‘W’ for training

The rocky economy is prompting some Mississippians to consider ways to start or improve their own businesses, and they’re receiving help from a free program offered at Mississippi University for Women.

The Women’s Center for Entrepreneurship offers hands-on assistance for residents trying to launch small businesses or promote existing ones. The program focuses on businesses that employ 5 people or fewer, and it’s helped almost 200 entrepreneurs begin or improve operations ranging from child care and alterations to cosmetology schools.

“Historically, hard times have actually been the catalyst for entrepreneurship,” said Dr. Marion Wesley, Interim Director of the Center. “We’re here and ready to answer the questions from folks wanting to take that step.”

Although the Center offers a special focus on women and other under served entrepreneurs, it offers help to other entrepreneurial endeavor as well.

Participants can receive one-on-one counseling and can use the Center’s computer lab,

extensive resource library and group training and workshops. They learn skills such as time management, business and phone etiquette and creating resumes.

The Center has been a big help to residents in Noxubee, Lowndes and Clay counties—areas that have seen high unemployment rates as the result of a national recession, said Julie Kennedy, the Center’s business counselor program coordinator. Finding funding for a business in an uncertain economy can be difficult, so the Center works to help entrepreneurs become more credit-worthy.

“We can offer support so that it’s not quite as big a risk for people borrowing money,” Kennedy said. “Sometimes the answer is not to borrow the money, but help people manage the money they have.”

The Center is funded through a \$100,000 grant from the Appalachian Regional Commission, a federal-state partnership established to help create jobs in the Appalachian region. MUW provides housing and electricity for the Center, which is located in Shattuck Hall.

# Enrollment up at DSU mapping Center

One former student is working on a defense project contracted out to Northrop Grumman. Another is managing mapping technology for a city in North Carolina.

Many others are spread out across the state developing precision farming techniques.

In just four short years, enrollment in classes at Delta State University’s Center for Interdisciplinary Geospatial Information Technologies has climbed from about 20 students to more than 170 this semester alone.

Among those who have graduated with a minor or concentration in Geographic Information Systems (GIS) there is a nearly 100 percent job placement rate.

“Everyone who wants a job in the field has

one – and many of them have stayed in Mississippi,” Center Director Talbot Brooks said.

The high percentage is the result of one key ingredient, Brooks said. Students who come through the center leave with a portfolio of real world experience gained through grants and contracts that support cooperative education and student internship opportunities with businesses, organizations, and governmental agencies. The arrangement helps keep the center self-sustaining and provides students with practical application.

Delta State does not yet offer a bachelor’s or master’s degree in GIS, so students come from a range of disciplines on campus, Brooks said.

Andrew Steele, 26, graduated from Delta

State in 2007 with a bachelor’s degree in Business Administration and a minor in GIS. Now he’s working with Northrop Grumman to correct satellite imagery for a defense contract.

“Employers are always looking for experience and I had it when I graduated,” he said. “That’s been the most beneficial thing.”

For more information on DSU’s Center for Interdisciplinary Geospatial Information Technologies visit <http://gis.deltastate.edu>.

## WHAT IS IT?

Geographic Information Systems (GIS) is the capture, storage, processing, management, and visualization of information on a spatial (location) basis.

# UM advances new program

The University of Mississippi is reviewing applications for a new program that aims to give students an edge over the competition when it comes to looking for jobs in rough economic times.

University officials say they are having success recruiting students for the first class at the Center for Manufacturing Excellence. The Center is under construction and on target to host its first class in the fall of 2010.

One of the Center’s main goals is to keep jobs in Mississippi by educating the nation’s future manufacturing professionals.

CME Programs Manager Ryan Miller said between 20 to 30 students are expected to participate in the first class. It could expand to include more students by the time construction is completed, he said. Rain delays have delayed completion of the building, and it’s now estimated that the university will be able to take ownership in January 2011.

# FARM: Alcorn’s AREAS plays vital role

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duction practices of muscadine, blueberry, shiitake mushroom, Asian vegetables, organic vegetables, medicinal crops and other alternative crops. Some programs include training on fish and meat seasoning, development of spices, wines and other products.

Dr. Maifan Silitonga, Interim Director of the Mississippi River Research Center at Alcorn, said she shares environmental information that can save farmers money.

“If they don’t have a good quality of water, it will be costly to them to clean it up and irrigate,” she said. “A lot of USDA programs offer incentives to farmers who implement environmental protection.”

Dr. Alfred Rankins, Interim Assistant Commissioner for Academic and Student Affairs at IHL, said the field day at Alcorn State is a

big help to Mississippi.

“Their program is in line with their land grant mission to provide research-based educational activities for producers so that they can utilize the latest technologies in agriculture to make their farming operations more efficient and sustainable,” Rankins said.

“Alcorn plays a vital role in serving limited-resource farmers in Mississippi,” he added.

## FOR MORE INFORMATION

For more information about Alcorn State University’s School of Research, Agriculture, Extension & Applied Sciences (AREAS) visit [www.alcorn.edu/AREAS/deptdetails.asp?deptid=19](http://www.alcorn.edu/AREAS/deptdetails.asp?deptid=19).

# Miss. Valley looks to expand unique technology track

A relatively new technology concentration at Mississippi Valley State University could help employ more students and contribute to the security and success of businesses around the state.

In the next few years, MVSU is hoping to expand its Automatic Identification Technology (AIT) concentration so that more students have a better chance of finding a job after graduation.

“It’s one that we think is going to make a major difference in the employability of our students, and also the viability of some of the companies using the technology,” said Dr. Moses Newsome, MVSU’s Vice President of Economic Development and Public Service.

Students who concentrate in AIT help companies identify ways to improve their security systems, such as beefing up electronic identification requirements. They could also be responsible for mapping warehouses, stored goods and storage facilities. The track is part of the university’s Applied Technologies baccalaureate program.

Dr. Lidong Wang, the program’s director, said more than 30 students are currently moving through the program. AIT is used in homeland security missions and business. The FBI and U.S. Navy also benefit from it, he said.

A grant from the U.S. Department of Labor helped begin the program, and now MVSU officials are hoping that businesses around the state take advantage of AIT.

Some of the businesses the university is working with include Northrop Grumman and Dollar General.

AIT “has a lot of potential for the military, for public safety, for any of our companies as it relates to attracting and the monitoring of their equipment and personnel,” Newsome said.