

INSIDE OKLAHOMA BUSINESS AND COMMUNITY DEVELOPMENT ★ OKLAHOMA DEPARTMENT OF COMMERCE

OKLAHOMA PASSES RIGHT-TO-WORK — LANDMARK DECISION SOLIDIFIES PRO-BUSINESS ATTITUDE



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Governor Frank Keating celebrates the passage of right-to-work.

“Oklahoma is open for business,” said Governor Frank Keating upon passage of State Question 695. The victory marked Oklahoma as the 22nd state to adopt right-to-work and the first state to pass such a law since 1986. Right-to-work prohibits requiring an employee to pay dues or a bargaining service fee

“Now that right-to-work is a reality, the Commerce department will conduct meetings with our allies at chambers of commerce statewide to plan and strategize an integrated approach,” said Bussert.

“Right now we are adding right-to-work as a major component to our marketing efforts which will include a mix of advertising, direct mail and public relations. We are sending the rest of the nation a clear, positive message that we are a pro-business state,” said Commerce’s Promotions Manager Tracy Alford. Site location is



The Journal Record

Russell Perry

to a union as a condition of employment.

“Oklahoma has taken the next step from contender to the head of the pack. Our people have sent a clear message — business is welcome, we are eager for new jobs — we are up to any challenge,” said Governor Keating.

Russell Perry, the Governor’s Special Assistant for Economic Development, said right-to-work is about freedom. “No one should be forced to pay union dues in order to keep a job. This right-to-work victory is good news for the state’s economic future. It will mean more businesses and industries coming to Oklahoma, bringing more jobs and better wages.”

Commerce’s Executive Director Ron Bussert, said he will keep his agency busy spreading the news to corporate executives and business recruiters around the world.

“NO ONE SHOULD BE FORCED TO PAY UNION DUES IN ORDER TO KEEP A JOB.”

RUSSELL PERRY

a process of elimination, said John Reid, Deputy Director of the Commerce Department’s Office of Business Location. “Site locators and corporate executives look at several key issues such as access to the marketplace, availability of labor and the cost of doing business when determining where to relocate or expand their business,” Reid explained. “Passage of this issue puts Oklahoma on a more level playing field with our competing states.”

Commerce officials said that combining right-to-work with other incentives the state offers, makes Oklahoma the most attractive business destination in America. ▲

EAST JORDAN IRON WORKS HOLDS GRAND OPENING



Ann Sherman

East Jordan Iron Works recently held a grand opening of its newest facility in Ardmore. The foundry will manufacture gray and ductile iron castings, including manhole covers and drainage grates. The plant could employ more than 140 skilled and semi-skilled workers. The new plant is located at the Ardmore Industrial Airpark, which has been undergoing significant capital improvement to attract new industry. East Jordan representatives said locating in Ardmore will allow the company to increase its manufacturing capacity and grow as a leader in the construction products industry.

“We chose to locate our new foundry in Ardmore, Okla. for several reasons,” said East Jordan’s Executive Vice President Tad Malpass. “For one, during the site selection process, we received a tremendous response and support from the Ardmore Development Authority (ADA), the Ardmore community, the Oklahoma Department of Commerce and the Governor’s office.

“Our management group visited Ardmore, and they all were impressed with the organized recruitment efforts of the ADA’s Wes Stucky, Commerce, the city of Ardmore and the cooperation of the regulatory agencies,” said Malpass.

In addition, Ardmore’s location in the U.S. was another positive in East Jordan’s decision. “Ardmore is a great place for us to serve expanding markets,” Malpass added.

Oklahoma Governor Frank Keating said the family-owned firm is the type of company that will thrive in Ardmore. “This was an extremely competitive site location process involving several other states. The grand opening culminates many hours of work by a state and local recruitment team led by the ADA, the Oklahoma Department of Commerce, CareerTech, major local employers and others,” said Governor Keating.

“Ardmore now has a broad spectrum of manufacturing companies,” said Wes Stucky, President of the ADA. “This is a unique and impressive addition to an expanding and diversifying business base.” ▲

folio snapshot - INTELLECTUAL PROPERTY

Mark Kachigan (right), managing attorney of the intellectual law firm of Head, Johnson and Kachigan was the featured speaker at a luncheon hosted by the Oklahoma Investment Forum. He shared his knowledge regarding current trends and issues in the area of intellectual property law.



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CENTRAL TECH PRODUCES AWARD-WINNING TELECOM PROGRAM



In economic development, high technology has been enjoying gold rush status. This highly desirable sector promises well-paying jobs, strong growth and a solid future.

In this highly competitive arena, it's crucial to be ahead of everyone else. That's exactly where the Central Technology Center in Drumright finds itself with its telecommunications training program. Foresight, careful planning and partnering with industry have helped Central Tech achieve both national recognition and extraordinary job placement success for its students.

The U.S. Department of Education's National Research/Dissemination Center for Career and Technology Education recently recognized Central Tech's telecommunications program as a national exemplary model for post-secondary education. The program was selected from among 53 universities, colleges and technology centers.

Central Tech's success is due in part to telecommunications companies who have donated at least \$2 million in training equipment.

Of course, none of this happened by luck. When program architects sat down in the early 1990s, they had a clear idea of their goals.

"What we were looking to do was develop a program that would lead to high-paying jobs," said Central Tech's Superintendent Phil Waul. "We met with industry leaders like WorldCom, Williams Communications and Southwestern Bell. They told us there would be an exploding need for these jobs in the future.

"They donated equipment to get us started. Since then, they've continued to meet our needs. It's a great partnership between business, industry and education."

It's a decided advantage for the program to have the luxury of utilizing \$2 million in telecommunications equipment for training purposes. Other industry partners donating to the cause include Central Telephone and Cimarron Telephone.

In fact, industry has been supportive in innumerable ways. Agreements are in place allowing Central Tech instructors to work in high technology companies to keep their skills and knowledge current.

Potential jobs include telephony/switch installers, telecommunication technicians, switch and relay, installation and maintenance technicians. Training ranges from several months to two years, preparing students to earn good salaries. Starting wages range from \$32,000 to \$55,000 annually.

The program has grown from one instructor and 18 students in 1992 to 140 students and five instructors in 2001.

There is a new home, too. Workers are putting finishing touches on a 14,000-square-foot telecommunications training center on the Central Tech campus.

And regarding employment placements, administrators say last year 97 percent of the program's students found jobs in their chosen fields.

"The placement rate has been outstanding," Waul said. "Anyone coming out of this program who wants a job will get one." ▲



The training program at Central Tech prepares students for jobs paying \$32,000-\$55,000 annually.

OKLAHOMA SCHOOL OF SCIENCE AND MATHEMATICS — NURTURING THE MINDS OF TOMORROW'S LEADERS



Launching a new company requires a belief in its potential, a commitment to nurturing its growth and development, as well as creating a fertile environment in which it can thrive.

The same principles apply when it comes to nurturing promising young minds. Just ask Dr. Edna McDuffie Manning, president of the Oklahoma School of Science and Mathematics (OSSM). She has created just such an environment at the high school for juniors and seniors gifted in math and science and incredible things are happening.

In two of the last three years, the OSSM has held the highest composite ACT score in the United States. Additionally, the typical OSSM senior class is brimming with National Merit Scholars, distinguished SAT scores and many other honors. The first nine graduating classes were offered college scholarships totaling more than \$29 million.

Dr. Manning has dreams for these young people — and for the state of Oklahoma. She believes many are destined to become leading researchers, physicians, scientists and entrepreneurs — and many will stay or return to Oklahoma to do it.

"At alumni gatherings, I tell some of them they need to come back to Oklahoma and help start the Silicon Prairie," Manning said. "I think it's just a matter of time before they come back and create jobs."

There is no doubt that Oklahoma will inevitably profit from this intellectual capital developing under Dr. Manning's capable watch. That is a big part of what drives her to make the school the best it can be.

The OSSM has applied proven principles to help its youngsters succeed. The school is a boarding school, which permits the students to concentrate on learning. Distractions such as television, telephones and stereos, are either non-existent or kept to a minimum.

Next, administrators set up a curriculum with a heavy concentration on advanced, college-level coursework. It's an approach that has proven it works.

"If we're honest about it, in America's high schools today, the focus is on activities, rather than academics," Dr. Manning said.

The OSSM raised the bulk of the \$25 million needed to fund construction now underway on a library, gymnasium, expanded dormitory space and science building.

"There's an understanding in the corporate community that these young people are prospective employees," said Dr. Manning.

Any company would be fortunate indeed to have employees who demonstrate this kind of commitment and aptitude. The OSSM is proving that Oklahoma has such capable young minds — and it has found the key to developing them to their fullest potential. ▲

Dr. Manning (center) with two OSSM students.

folio snapshot - BIOTECH NIGHT



Representatives from numerous companies, organizations, and educational institutions gathered recently to discuss the future of biotechnology in Oklahoma. Pictured is Randy Goldsmith, Executive Director of the Oklahoma Technology Commercialization Center.

DURANT LANDS BIG LOTS – MAJOR DISTRIBUTION CENTER



Photo Provided

Ohio-based Big Lots announced it will build a major distribution center in Durant employing up to 500 people.

Major national companies are recognizing the importance of Oklahoma's advantages as a warehouse/distribution location. The state is equidistant from both coasts and offers easy access to major Interstate highways.

In fact, the state's market proximity was a factor recently for Ohio-based Big Lots. The company announced plans to invest \$60 million to \$70 million to open a major distribution center in Durant.

Big Lots' executives took into account the economic advantages as well as proximity to regional stores in making its decision, said Big Lots Chairman

and Chief Executive Officer Michael Potter.

"We were impressed with the can-do spirit shown by Oklahoma," said Potter.

"Everyone has extended a warm welcome and are enthusiastic regarding our becoming a part of the community. This was the most economically beneficial decision for us and we are pleased at every level with the outcome."

The company plans to employ up to 500 people. "It will be the largest single investment in the history of Durant," said Tommy Kramer, Durant Economic Development Director.

Big Lots operates more than 1,300 retail stores in 46 states. Founded in 1967, it is the nation's largest broadline closeout retailer, with annual revenues exceeding \$3 billion.

The economic impact of the new Durant payroll should total about \$11 million annually. What's more, the Big Lots facility could help attract additional industry to the community.

"This will serve as a powerful job creating and community development force in our area," said Kramer. "The fact that a national corporation has recognized the economic benefits of this area will impact us for years to come."

Big Lots is expected to occupy 120 acres in the International Business Park in Durant and will be the anchor tenant at the site. Kramer said the company may break ground as early as December on the 1.2 million square foot facility, which is scheduled to open in 2004.

Governor Frank Keating said Durant was chosen from among 50 other communities in several states. "I congratulate Durant on landing this new distribution center. Durant's enthusiastic response to Big Lots, their labor availability and low business costs made Oklahoma the obvious choice," said Gov. Keating. ▲

TISHOMINGO REAPING BENEFITS OF ECONOMIC PARTNERSHIPS



Murray State College President Dr. Glen Pedersen (left) accepts funds from Brent Kising with the U.S. Department of Agriculture.

If you want proof that synergy works in economic development, you need look no further than Tishomingo and Johnston County. Thanks to synergy among government, academia and the private sector, Johnston County is experiencing steady growth in jobs and industry.

Area leaders have collaborated to attract numerous pet product

companies to the area, many of which have grown since arriving.

"I credit Murray State College, led by Dr. Glen Pedersen, with being the driving force in economic development," said Cecil Carter, Economic Development Coordinator for the Southeastern Oklahoma Economic Development Network. "Once the college became involved in recent years, that's when things really began to take off in a big way."

Dr. Pedersen was quick to praise the efforts of Murray State College, the City of Tishomingo, Johnston County, Commerce's Jim Mills, the Oklahoma Department of Commerce, the Johnston County Chamber of Commerce and the Johnston County Industrial Authority.

Among the major accomplishments was development of a certified industrial park and a 40,000-square-foot industrial building. Early tenants were Pooch Paradise, Hercules Pet Products and more recently, Benty America Pet Supply. Others include Supermarket Services and Frosty Cube.

Scott Pet Products recently acquired Pooch Paradise. The new company is adding 25 employees and investing capital in the operation.

"The pet products industry has seemed particularly impressed with Johnston County's advantages," said Dr. Pedersen. "We've sort of fallen into this. However, pet products seem to be something people buy even in recessions, so the jobs should be stable."

For example, Benty now needs far more than the original 10,000 square feet it occupied when it moved into the industrial park. The company will

soon lease a new, 132,000-square foot facility. Employment is expected to grow by 120 workers over the next three years.

Other successes include a \$450,000 grant received from the U.S. Department of Agriculture. The monies will be used to construct a new building in the industrial park. It will house NewTec, a company that performs high-tech machining and tooling for the defense industry. Initial employment will be 10.

Dr. Pedersen said the industrial authority's results are all the more remarkable considering that the authority does not have the general taxpayer funding many larger industrial authorities do.

Johnston County has proven that with persistence, partnership and determination, rural economic development can achieve the success usually associated with larger cities. ▲



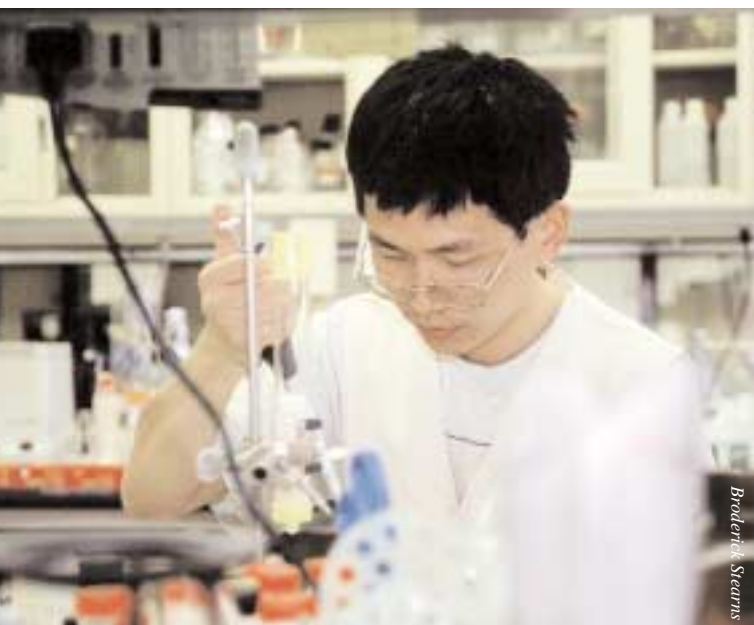
Tishomingo's economy has benefitted from a growing pet products industry.

folio snapshot - State Unveils New Website



YourOklahoma (<http://www.YourOklahoma.com>), the new official website for the State of Oklahoma, has been launched. Citizens and businesses in Oklahoma can now access frequently requested information and will soon be able to take advantage of innovative government services online. Oklahoma's next generation portal was built and is managed by the eGovernment firm NIC (Nasdaq: EGOV).

NOBLE FOUNDATION PERFORMING VITAL RESEARCH



Postdoctoral Fellow Fang Chen performs tests in the Noble Foundation's Plant Biology Division.

The Samuel Roberts Noble Foundation is entering the new millennium attracting international recognition for its world-class research in agricultural biotechnology. The Foundation's efforts have the potential to impact such challenges as the global food supply and the economic viability of the family farm.

The Foundation's scientists, based in Ardmore, Okla. are making significant strides in such fields as plant genomics research, bioinformatics and the development of new strains of plant life to better feed both livestock and people.

Their research could reveal which genetic characteristics cause some crops to resist insect and disease stresses, as well as other traits that give plants superior abilities to absorb nutrients, or to produce natural chemicals beneficial to human health.

But one of the most promising research efforts involves an alfalfa-like plant called *Medicago Truncatula* that Noble researchers consider a "model" legume; in other words, a "white mouse" for studies on leguminous plants.

"In the past year and a half we've obtained DNA sequence information for over 80,000 expressed genes from this plant," explained Dr. Rick Dixon, director of the Foundation's Plant Biology Division. "We're discovering a lot of genes that are going to be important for crop improvement."

Because *Medicago* is a model plant, these findings have broad applications across many different legume species, including soybean, alfalfa, pea, peanut, beans and lentils. Scientists may even gain a better understanding of unrelated plant species.

Dixon said another promising project by scientist Dr. Maria J. Harrison involves isolating the genes that facilitate phosphate absorption by plants.

The Noble Foundation has been in existence since 1945, but it is the 13-year-old Plant Biology Division that is mainly responsible for enhancing the organization's profile on an international level.

High profile, international journals routinely publish Noble Foundation research findings and discoveries. The Ardmore researchers regularly speak at national and international meetings and serve on grant committees, editorial boards and scientific society committees. The Foundation also collaborates with several respected institutes in other states.

Today the Foundation is home to a corps of world-class plant scientists who have come from all over the globe to perform their research.

The Foundation began 56 years ago with the underlying goal of helping farmers and ranchers make wiser and more productive use of their land.

Little did its founders realize that today, the stakes and the possible implications are much higher — reducing world hunger and malnutrition, enhancing world food supplies and keeping struggling farmers' dreams alive. ▲

NANOSOURCE TECHNOLOGIES DEVELOPS NOVEL PRODUCT



Left to right: Charles Seeney and Michael Moradi.

Nanotechnology? While it's a term you may have heard before, you might be hard pressed to explain to anyone what it means. According to Oklahoma entrepreneur Charles Seeney, nanotechnology is the third recent great megatrend capable of transforming the nation's economy. As CEO of NanoSource Technologies, he's hoping Oklahoma will be the leader in capitalizing on this latest technology, which will

become the basis for the next industrial revolution.

"I've had the idea to start a company utilizing this technology for about 10 years," Seeney said. "In the fall of 1999, the timing seemed right to start my own company, and NanoSource Technologies was born."

So what is nanotechnology? It's the development of materials and material performance at the atomic level — in essence, building critical properties atom by atom. For example, there are unique materials known as nanotubes, which are a form of carbon that can be grown synthetically, having a variety of applications. Such carbon nanotubes are significantly lighter in weight than steel, but can possess up to 1,000 times the strength. In another potential application, nanomaterials have the capacity to allow miniaturization of computer electronic components, i.e., a molecular form vs. the traditional computer chip to transfer information hundreds of times faster. Applications also are under development in the medical field, aerospace and automotive industries.

While NanoSource is exploring various market opportunities, the first one it hopes to capitalize on relates to personal products and individual health. In fact, the company just signed a strategic alliance with Cosmetic Specialty Labs of Lawton.

"In cooperation with Cosmetic Specialty Labs, we have developed a novel nanofabrication or synthesis process and applied it first to the production of nanoparticle titanium dioxide," Seeney said. "TiO₂ nanopowder, as it is called, is an effective broad spectrum UV absorber with numerous commercial applications. It is becoming especially useful as a preventive tool in the fight against skin cancer. The Lawton firm will buy the powder from

NanoSource and will convert it into a paste. The powder can be used as a UV protector in cosmetic products."

Seeney added that, in areas such as Australia, with the depletion of the ozone layer and the rate of skin cancers dramatically on the increase, products absorbing UV rays will be crucial.

"This material could also be put on windows, on clothing, and on any other surface to lessen the effects of UV exposure," Seeney added.

Right now, this Oklahoma City-based company is collaborating with a partner in Canada to produce the nanoparticles. Seeney, however hopes to move that manufacturing facility to Oklahoma.

"Within the next year or so, I'm hoping that we'll have a large production facility here in Oklahoma City. We have exclusive rights to the Canadian technology and NanoSource patents are pending. This technology could literally transform Oklahoma's economy."

NanoSource Technologies, with its flexible process platform, will eventually pursue other applications beyond the personal and healthcare industries, such as nanocomposites for aerospace and automotive, and molecular electronics for the computer world and information technology.

"Nanotechnology will introduce a new way of thinking when it comes to manufacturing," Seeney said. "I'm hoping the facility we build will become the model for changing the ways in which we approach manufacturing processes in this country. More importantly, it has huge potential for Oklahoma's economic future." ▲

folio snapshot - LPGA WILLIAMS CHAMPIONSHIP



The first annual LPGA Championship was held recently at Tulsa Country Club. Sponsored by Williams, the tournament marked the LPGA's first regular tour stop back to Oklahoma since 1983. Pictured at right is LPGA player Kate Golden.

NOVAZYME MERGES WITH GENZYME CREATING BIOTECH POWERHOUSE



Pictured from left to right (foreground): Dr. William Canfield and John Crowley.

Editor's Note: John Crowley came to Oklahoma 18 months ago with a specific mission in mind. Two of his three children are afflicted with a rare genetic illness, Pompe disease, which degenerates muscles leading to death. He wanted to find a cure — and that drive led him to Oklahoma City, where Dr. William Canfield had founded Novazyme Pharmaceuticals. Dr. Canfield had devised a treatment for Pompe, and other rare lysosomal storage diseases. Their collaboration is

yielding remarkable results in Oklahoma City's growing biotech market.

There's a saying that "we never fear anything as long as we're doing the right thing." If anyone ever had reason to fear, it would be John Crowley. Fear however, doesn't appear to be a part of John Crowley's psyche.

"Last year at this time, we had about 27 employees," Crowley said. "Today we have 100 employees, over 30,000 square feet of space and a new clean room where we are manufacturing therapies and drugs to treat these rare diseases."

Novazyme's rapid rise recently caught the attention of Genzyme Corp., the world's third largest biotech company. This past August, Genzyme agreed to buy Novazyme in a stock deal valued at \$225 million. Novazyme will remain a subsidiary of Genzyme, and maintain its presence in Oklahoma City.

"This deal is the largest merger and acquisition in the country for a preclinical drug development company," Crowley said. "It's a great example of the world-class research that is taking place in Oklahoma."

"The merger with Genzyme will have untold benefits for years to come. If you're building an industry cluster, you need an anchor. Genzyme will be that anchor for us," Crowley said.

Crowley says the acquisition was due to several therapies that Novazyme has in the pipeline. Specifically, Novazyme has three drugs that are in active development to treat Fabry disease, Gaucher disease, and Hurler syndrome. All three are fatal, and are caused by missing enzymes, affecting crucial organ and neurological functions. The drug in development that Crowley however is most concerned about is N2-1001 for Pompe disease, which has afflicted his 4-1/2 year old son, Patrick, and 3-1/2 year old daughter, Megan.

"Pompe disease manifests itself in the muscles, degenerating them to the point of death. Most children who have this disease do not live past 10 years of age. I'm hoping that within the next six months, Patrick and Megan will be two of the first children to receive treatment."

Clinical testing of the new drug is taking place just down the hall from Crowley's Oklahoma City office in a new \$3 million clean room facility. "Twenty-five of the people recently hired were for the manufacturing facility," Crowley said. "The facility will support technology development, quality assurance and clinical testing. Eventually, we will need to build a \$50-\$100 million manufacturing facility — I hope we can do that as well in Oklahoma City."

If Crowley's drive and perseverance play into that equation, there's no telling what the future holds for Novazyme's presence in Oklahoma City. The company's success today is a far cry from its beginnings just 18 months ago when \$1.2 million was raised by angel investors — many from Oklahoma. Willing to go to any lengths to find a cure for his children, his dedication will likely impact the lives of countless others. ▲

PROTEOMTECH PRODUCING PROTEINS TO FIGHT DISEASES



Dr. Henry Lin (foreground) in his lab in Oklahoma City.

Editor's Note: Dr. Henry Lin represents a growing trend in Oklahoma. He came to the states in 1982 from China and four years later, completed his graduate education in Biochemistry from Virginia Tech. Dr. Lin then came to the Oklahoma Medical Research Foundation as a research scientist — and he's been here ever since. Today, his research has resulted in the formation of ProteomTech, Inc., a biotech company that commercially manufactures human proteins. The end result will be proteins that can be turned into life-saving vaccines and therapeutic treatments.

"There are 35,000 to 100,000 different kinds of proteins in the human body," Dr. Lin said. "To date, scientists have had no option but to try to purify their own proteins and experiment with them to create ways to fight illnesses. Our process allows different proteins in the body to be duplicated and produced in bulk. This will be much more cost-effective for scientists who are trying to develop breakthrough treatments and vaccines."

ProteomTech's technology involves the collection of genes involved in various diseases. The genes are expressed in bacteria to make proteins in large quantity, which are purified using the unique, key technology the company has developed. These proteins can be used in a variety of applications, such as possibly being used as drug or drug targets in treating cancer.

"Dr. Charles Gao, who is president of ProteomTech and I had the opportunity to move the company to California," Dr. Lin said. "We stayed in Oklahoma for several reasons — the core technology has been developed here and we have assembled a nucleus of senior personnel that would be hard to match elsewhere. In addition, the availability of space at the Oklahoma Health Center's Research Park is a definite advantage."

In fact, ProteomTech, which currently employs 17 scientists and support staff, expects to triple its staff and laboratory space in the next few months.

The proteins will be grown in bacteria at a plant in China, and then will be shipped to the company's lab in Oklahoma City for purification and bulk production. The proteins will be marketed for up to \$1 million per gram to scientists worldwide who are developing drug therapies to fight illnesses.

"My dream for this company is that one day, we will be able to purify all human proteins," Dr. Lin said. "That's a long-term goal — our short-term goal is to duplicate 3,000 of these proteins in the next 3-5 years. Ultimately, I want ProteomTech to be regarded as the premier facility for the production of proteins which will be provided to all industry and academic labs for improving human health and fighting diseases. The impact would be immeasurable, as there is nothing more powerful than developing life-saving therapies and technologies." ▲

folio snapshot - HYALOSE SIGNS AGREEMENT



In a deal potentially worth more than \$10 million, Oklahoma-City based Hyalose LLC will have its product manufactured by Novozymes A/S of Denmark. Hyalose has developed a technique to produce hyaluronic acid, a lubricant of the eyes, skin, joints and muscles that declines with age. The Danish company will use Hyalose's technology to produce the substance to treat arthritis and other joint diseases. Pictured above is Dr. Paul DeAngelis, one of the founders of Hyalose LLC. The other partner is Dr. Paul Weigel.

WILLIAMS PREDICTS STRONG COMPETITIVE ADVANTAGE FOR WEATHER TECHNOLOGY AND RESEARCH PARTNERSHIPS



Photo Provided

Pictured from left to right: OU President David Boren, Dr. Kelvin Droegemeier and Keith Bailey.

Tulsa-based Williams Cos. has forged a powerful alliance with the University of Oklahoma (OU) weather programs and Norman-based Weather Decision Technologies Inc. to develop proprietary technology to better pinpoint weather conditions as they relate to energy demand.

The keen interest by Williams and other energy companies in accurate weather prediction technology is simple — a one-degree temperature change can mean the decrease or increase of 400 megawatts of use in the Midwest alone. Williams also has an interest in climate prediction models that can anticipate severe winters.

The commercial arrangement between Williams and OU is the largest of its kind in the U.S. between a private corporation and a university meteorology program, and is a mutually beneficial agreement that allows OU to expand its top-tier meteorology programs while Williams receives exclusive weather analysis and forecasting tools.

Highlights of the expansive \$10 million-plus agreement between Williams and OU include:

- Unique, advanced weather and climate prediction capabilities tailored by the University of Oklahoma’s Weather Programs specifically for Williams’ weather-sensitive businesses.
- A grant of \$8.1 million over five years to fund research in advanced weather analysis and prediction at the Center for Analysis and Prediction of Storms (CAPS).
- A grant of \$1.6 million over five years to fund regional climate research at the Cooperative Institute for Mesoscale Meteorological Studies.
- Gifts to create the Williams Endowed Chair, an advanced student computer laboratory, funding for three Williams Fellows in the Master of Science in Professional Meteorology Degree in the School of Meteorology and a gift to the Oklahoma Climatological Survey.

“This history-making agreement between Williams and the University of Oklahoma’s School of Meteorology, a national leader in its field, is a dramatic demonstration of the power of a private sector-university partnership in the creation of economic productivity and growth, and the expansion of knowledge,” said OU President David L. Boren.

In another multi-year agreement between Williams and an Oklahoma weather organization, Weather Decision Technologies, Inc. (WDT), will provide its licensed and proprietary weather forecasting technologies and services to Williams. WDT and OU will also work together to deliver sophisticated weather forecasting technologies to Williams in the near term. ▲

TINKER FORMS EDUCATION ALLIANCE

Within the next five years, almost 8,000 employees or nearly half of the civilian work force at Tinker Air Force Base will be eligible for retirement. Even today, the base faces competition from the private sector for the best employees.

In order to fill the workforce and skills gap that the base faces, an alliance has been created between Tinker and the state’s education community. The Tinker Education Partnership Agreement provides the base with access to programs and services available from state colleges and universities, career technology centers and public schools. The program will also utilize the Online College of Oklahoma and OneNet in delivering services.

Major General Charles Johnson II, Tinker commander, said the partnership will address both training needs of the 16,000-civilian-employee workforce at the Oklahoma City Air Logistics Center and the more than 8,000 other workers that include Air Force and other personnel.

“Together, we can provide outstanding training and employment opportunities for Oklahoma’s young people and ensure that Tinker remains a vital contributor to the nation’s security. Tinker is a national asset and I aim to keep it that way,” said Johnson.

Tinker officials estimate they will need 1,100 new employees over the next two fiscal years alone. Of these, 645 or more than 73 percent will be in the trades and crafts area: aircraft electricians, machinists, sheet metal mechanics, pneumatic system mechanics, aircraft engine mechanics and aircraft mechanics, among others — skills that are already taught at state technology centers.

Some of the programs discussed between base officials and the State Regents include developing apprentice programs that would involve both classroom and on-the-job training. At the end of their coursework, fully trained students would be placed in jobs specific to their training, certification or degree.

Johnson said high-tech workers such as engineers and scientists will benefit from special programs intended to enhance critical computer software skills. Other ideas for attracting more high-tech workers include internships providing part-time employment for individuals interested in obtaining degrees in those fields and employing students at the end of their junior year.

Tinker officials intend for the agreement to provide employees with the technical training and educational opportunities they must have in today’s global marketplace. ▲



Robert Heard

VENTURE CAPITAL – OCIB’S ROBERT HEARD

Raising venture capital to invest in emerging technologies is critical in any high-tech economy. Many times, the availability or lack thereof is the difference between success and failure. That’s just one of many factors that led to the formation of the Oklahoma Capital Investment Board (OCIB) back in 1987. OCIB’s President Robert Heard is at the forefront of these efforts.

“OCIB encourages the growth of a broadly diversified and sophisticated financial system that can support entrepreneurial companies,” Heard said. “The board has invested in eight venture capital funds with the specific purpose of growing and supporting entrepreneurial companies in the state.”

During the year 2000, the state legislature helped that cause, when it increased OCIB’s authorization level to \$100 million. With its expanded authority, this has allowed OCIB to allocate \$60 million in a new round of investment in venture capital funds.

“There are several criteria we use when determining whether to invest in a new fund,” Heard said. “We look for a strong track record of success, a good strategic fit with the sectors emerging within the state, and a willingness on the part of the fund managers to be visible and accessible to local entrepreneurs.”

OCIB has two specific programs under which it supports venture capital pools. The Venture Investment Program supports funds that have a history of building and growing companies. To date, more than \$83 million has been invested in promising Oklahoma businesses.

OCIB’s Oklahoma Capital Access Program (OCAP) provides another tool similar to credit insurance. The lender can build its customer base by granting loans that have merit but could benefit from a higher loan loss reserve. OCAP loans must be for an Oklahoma enterprise, and can’t be used to refinance debt or for speculative purposes. To date, the program has been utilized by 74 financial institutions, supporting over 1,000 loans in excess of \$27 million.

“Raising venture capital will become easier as Oklahomans gain experience with the New Economy and the techniques for building great companies in emerging sectors,” Heard said. “Instead of investing in oil and gas, the economic growth of our state will be measured by our willingness to invest in high-tech ventures — it’s imperative for the state’s future.” ▲

OKLAHOMA INVITATIONAL HUGE SUCCESS



Senior PGA Tour player Dr. Gil Morgan puts on a golf clinic for participants in the Invitational.

In an effort to increase business investment in Oklahoma, Governor Frank Keating and members of the Oklahoma Business Roundtable hosted the second annual “Oklahoma Invitational” Golf Tournament in Oklahoma City and Tulsa.

The Oklahoma Business Roundtable is a private non-profit

group of Oklahoma companies and organizations that works directly with state government through the Governor’s Office and the Oklahoma Department of Commerce to encourage investment and job creation in the state.

The tournament paired 13 out-of-state guests with 13 Oklahoma business executives. It was co-chaired by Ed Martin, President, Ackerman and

McQueen Advertising, and Joe Cappy, Chairman, CEO and President of Dollar Thrifty Automotive Group in Tulsa.

“The Business Roundtable plays a vital part in the state’s overall economic development efforts particularly when Roundtable members participate personally in the recruitment process,” said Governor Keating.

“Golf is the language of business and this special event allowed a perfect environment to show world-class hospitality,” said Roundtable President Donald Paulsen. “It can be very persuasive when the head of an Oklahoma company talks directly with a prospect who is being urged to invest in our state. When we’re hosting prospects who are considering a new or expanded Oklahoma operation, we can reference the state’s commitment to providing an educated and well-trained workforce and advantages such as lower business costs. Those are definitely selling points,” Paulsen said.

Paulsen said the organization helps to fund business recruitment efforts when state-appropriated funds can not be used. “The Roundtable is proud to assist the Department of Commerce with its comprehensive marketing program to develop a distinct and attractive business image of our state.”

Senior tour professional and Edmond resident, Dr. Gil Morgan, was also on hand to provide a special golf clinic for the group. ▲

HELPING OKLAHOMA COMMUNITIES GROW



Ron Voth

In rural Oklahoma, per capita income is lagging behind the metropolitan areas of the state by roughly 30 to 35 percent. Ron Voth’s job is to figure out why.

Voth is a Senior Research Analyst with the Oklahoma Department of Commerce. Over the last six months, he’s been to about 107 rural communities, mostly in western Oklahoma. Over the next six months or so, he’ll visit 119 more across the state.

Rural Oklahoma isn’t foreign to him. He’s lived, farmed and ranched for 30 years in Fairview, Okla. and has a degree from Oklahoma State University in Agricultural Economics.

In each community, meetings are set up by Commerce’s regional directors who also explain their role in each region and how they work with each community. Voth then conducts a rural economic survey to find out what makes rural economies tick and the needs of each one. He’ll take the results to the Office of State Finance who will look at the issues, and determine policy or legislation to help create funding mechanisms for potential programs to solve these problems.

“Issues between metropolitan and rural are different. Some of the communities are too large to be eligible for some federal or state programs and many are too small to fix themselves,” said Voth.

“Consistently, I’ve found the biggest issues are infrastructure-related — roads, sewer, water, as well as the lack of affordable housing and rental property. There are many other issues the survey has identified that every community has to deal with. For example, how can they attract new industry and continue to grow existing industry.” Voth says in rural communities, 75% of the growth comes from businesses already there.

“For example, Marlow has successfully added companies who manufacture in metal fabrication and oil and gas related industries. As a result of their diversification efforts, they’ve grown and added jobs. In Elk City, which used to be primarily an agriculture, oil and gas economy, they’ve developed a regional health center for their area. Now the health care industry and other manufacturers are having a positive influence on their economy,” added Voth.

“I don’t come to town with advice. I’m there to listen,” explained Voth. “I personally feel that we are the hired hands of these communities, so to speak, we work for them.” ▲

SNEED JOINS COMMERCE

When George Sneed joined the Oklahoma Department of Commerce as the agency’s new General Counsel, he brought significant experience in the private sector with him along with a strong work ethic.

After serving as the director of operations for a major trucking company, Sneed attended law school at Oklahoma City University. After graduating with a distinguished record, Sneed practiced law for 11 years with the Oklahoma City firm of Behrens, Taylor, Gee, Wheeler and Rainey.

Ron Bussert, Executive Director for the Commerce department, said that Sneed will direct legal activities and handle legislative liaison responsibilities for the agency.

“I’m looking forward to working with communities to encourage them to take advantage of economic development opportunities in Oklahoma. Our agency can suggest state incentives to assist those communities that help themselves,” said Sneed.

“Many Oklahoma communities have assets they may not have considered that are quite attractive to companies looking to expand or relocate. Communities with successful efforts and initiatives should be used as models.” ▲



George Sneed

folio snapshot - Consul General Of France Visits Oklahoma



The Consul General of France, Denis Simonneau visited Oklahoma recently as part of an effort to strengthen Oklahoma’s ties to France. During a ceremony at the Oklahoma City National Memorial, Simonneau also placed flowers at the site of the bombing of the Murrah building.

WHERE DO WE GO FROM HERE? SECURING BIOTECH'S FUTURE IN OKLAHOMA



Cheryl Choumbakos

It's no secret now to many people in Oklahoma City's biotech community, that there is a plethora of emerging technologies that could literally transform the quality of human health. That comes as welcome news to Cheryl Choumbakos as well. Choumbakos is President of the Oklahoma City branch of Emergent Technologies, a venture capital fund based in Austin. Her mission is to identify emerging technologies with the greatest potential for commercial success.

"Oklahoma has a wonderful pool of research and technology," Choumbakos said. "However, it's critical for certain things to transpire so that we stay ahead in the biotech race. For one, Oklahoma needs more funding for very early stage technology enterprises. Entrepreneurs need help learning how to think about creating a business and what business models best fit their particular situation. These firms also need access to start-up capital when they are in the incubating phase," Choumbakos said.

"In addition, while I firmly believe that good technologies supported by viable business plans will find funding for development and growth — even in a state like ours where investment capital is fairly hard to find — it takes money to get started. Patent applications have to be written, reviewed and filed, technologies validated, markets identified and analyzed, and business plans developed — these are all expensive undertakings that need accessible capital."

Presently, the Oklahoma Technology Commercialization Center's Tech Financing Program has \$1 million dollars which it loans in small "awards" for this very purpose. "There are many worthy fledgling companies competing for

OTCC funding, but there's just not enough money to go around," Choumbakos said. "As venture capital focuses on later and later stage funding, a larger appropriation for this program would help fill the earliest stage capital void."

Choumbakos says the availability of additional research dollars is just as important. Traditionally, Oklahoma has ranked poorly in the dollar amount of grants received by the National Institutes of Health, the National Science Foundation and NASA.

"It's critical for Oklahoma to fund new and existing research programs," Choumbakos said. "For example, the Oklahoma Center for the Advancement of Science and Technology (OCAST) has seen a dramatic increase in requests for funding through its grant programs in health research, applied research and technology commercialization. Supporting this research yields technology that leads to new companies. In fact, Small Business Innovation and Research grants helped companies such as Nomadics, UroCor, ForHealth Technologies and ZymeTx get off the ground."

Choumbakos added that it is just as important to foster the development of public/private partnerships in facilitating the commercialization of new technologies. "Collaborations such as these create a pipeline of emerging technologies that have the potential to yield a much greater return for every dollar invested."

Speaking of investment, that may be the most important challenge of all.

"All of us who are involved in new business development need to educate our state leaders, legislators, and citizens as to the importance of the biotech industry," Choumbakos said. "There is no reason why Oklahoma's image in the 1980s as the oil capital can not be transformed into an identity based on biotechnology. It's the industry that will provide a solid economic base, high paying jobs and help create an image of progress and national leadership. But to get there, Oklahoma must make a visible and unyielding commitment to ensuring biotech's future in the years to come." ▲

OKLAHOMA TECHNOLOGY ADVANCEMENT CONSORTIUM



Hank Haines, co-founder of the Consortium, is working with Oklahoma's youth to develop high-tech skills.

Today's leaders' opinions vary on many issues, but there is one thing upon which they can all agree — tomorrow's economy will depend heavily on the availability of a skilled, technologically-oriented workforce.

In recent years, demand for such workers has outweighed supply. Educators have been scrambling to catch up with the need for workers.

Thus, some business executives and educators have created the Oklahoma Technology Advancement Consortium (OTAC). The idea originated with Samuel Henry "Hank" Haines, Executive Vice President of Sequoyah Technologies, L.L.C. in Tulsa.

Haines co-founded Sequoyah in 1999. As a startup, Sequoyah found what many other firms did — tight supplies of high-tech workers. Haines soon realized a broader solution was needed, and began formulating plans for the Consortium. His idea was to build partnerships among business, government and academia.

"We wanted to build bridges that would result in long-term, mutually beneficial relationships," said Haines. "Once that was in place, we hoped for a snowball effect."

The Consortium will execute its plan using a two-fold approach — first, generate excitement among students, from kindergarten through 12th grade.

"Since children are the workforce of tomorrow, one of the ways OTAC plans to combat the quantity of skilled workers is to get involved in training children to become comfortable with technology," said Haines.

To accomplish that goal, the Consortium has already donated computer equipment to Wilson Elementary in Tulsa.

The next step targets adults. The consortium is seeking avenues to facilitate applied research. Businesses that might benefit can help fund the effort.

Founding members of the consortium include representatives from Oklahoma State University's Computer Science department, as well as executives

from Williams Communications, Phillips 66, Jane Phillips Hospital, Oklahoma Investment Forum and Aaro Broadband Wireless Communications.

"The need is out there, as is the desire to address it," said Haines. "We hope to create an excitement within the business community to harness the talent and capabilities that already exist, for the benefit of everyone." ▲

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