

MINUTES OF THE HOUSE ECONOMIC DEVELOPMENT COMMITTEE

The meeting was called to order by Chairman Kenny Wilk at 3:30 p.m. on February 10, 2004, in Room 526-S of the Capitol.

All members were present.

Committee staff present:

Kathie Sparks, Legislative Research Department
Susan Kannarr, Legislative Research Department
Renae Jefferies, Office of Revisor of Statutes
Helen Pedigo, Office of Revisor of Statutes
Fulva Seufert, Secretary

Conferees appearing before the committee:

Representative Tom Sloan
Sam Campbell, Manager of New Oread Group, L.C., owner of West Lawrence Laboratories and the Lawrence, Life Sciences Center; Chairman and President of Criti Tech, Inc.
Ms. Janice DeBauge, Chair, Kansas Board of Regents
Dr. Clay Blair, Chair, Research Corporation Board
Barbara Atkinson, M.D., Executive Dean, School of Medicine and Vice Chancellor for Clinical Affairs
Dr. R. W. Trewyn, Kansas State University, Vice Provost for Research, Dean of the Graduate School, President of the KSU Research Foundation
Dr. Kim A. Wilcox, Dean, Liberal Arts and Sciences, University of Kansas
Dr. Zoran Petrovic, Research Director for the Kansas Polymer Research Center at Pittsburg State University
Jim Stoppert, Senior Director of Industrial Bioproducts Development for Cargill, Inc. (Written testimony read by Julie Edge, Ph. D., Inside Edge Solutions LLC)
Jesse Shaver, studying medicine and being a scientist, inventor, grant writer, student at Vanderbilt University School of Medicine, Nashville, Tennessee
Wes Ashton, Director of Government Relations, Overland Park Chamber of Commerce (written only due to time restraint)
Mr. Blake Schreck, President, Lenexa Chamber of Commerce

Others attending:

See Attached List.

Chairman Wilk opened the meeting of the House Economic Development committee Tuesday, February 10, 2004, at 3:30 p.m. in Room 526-S of the capitol. The Chair announced that the committee would have the hearing first on the following:

HB 2539 - Kansas development finance authority; authorizing bonds for research facilities

Chairman Wilk welcomed Representative Tom Sloan to the committee who spoke as a proponent for **HB 2539**. Representative Sloan told the members that attracting research facilities of all types is a priority for most legislators. He said this bill authorizes the Kansas Development Finance Authority (KDFA) to partner with businesses to secure funding for constructing and equipping research facilities. Rep. Sloan said **HB 2539** simply extends the partnership authorization to include private sector organizations which will provide a tool for recruiting corporate investment and job creation in Kansas. (Attachment 1)

Chairman Wilk thanked Rep. Sloan and welcomed Mr. Sam Campbell, Manager of New Oread Group, L.C. and owner of West Lawrence Laboratories and the Lawrence, Life Sciences Center, who spoke as a proponent for **HB 2539**. Mr. Campbell said he felt it was important to develop as many financing alternatives as possible for "research facilities." His testimony included an article entitled, "Next-Generation Lab Design," taken from *Building Design and Construction Magazine*, 9/03. He said that with the inclusion of "research facilities" under the Kansas Development Finance Authority Act, it would enable specialized companies to access bond financing which would provide a realistic and potentially superior alternative to conventional financing.

CONTINUATION SHEET

MINUTES OF THE HOUSE ECONOMIC DEVELOPMENT COMMITTEE at 3:30 p.m. on February 10, 2004, in Room 526-S of the Capitol.

(Attachment 2)

Since there were no additional conferees, Chairman Wilk closed the Public Hearing on **HB 2539**. The Chair then reopened the Public Hearing on the following :

HB 2647 - Bioscience authority and development act

Chairman Wilk welcomed Janice DeBauge, Chair, Kansas Board of Regents, who spoke in support of the Bio-Science Initiative on behalf of the Board of Regents. Ms. DeBauge believes Kansas has a unique and unusually collaborative higher education culture. She specifically mentioned the excellent communication structures and the strong history of constructive problem-solving. However, she said Kansas does not have adequate research resources to ensure continued growth in the future because Kansas does not receive its fair share of research dollars. She praised the legislators for passing legislation last year that made possible issuing bonds for the three new research buildings at the Regents Institutions. She said this infrastructure investment will enable recruitment of additional research leaders. Ms. DeBauge encouraged the committee to thoroughly think through the authority structure to assess how it might function in relation to existing structures. A high priority for them is working with all partners and aligning the interests of the Board and the Bioscience Authority to ensure long-term collaboration, communication, and cooperation between the two entities. She stressed they hoped the bulk of the money generated by this Act would be directed to the Board of Regents institutions and said they were excited about the positive impact this initiative can have on the future of the quality of life in Kansas. (Attachment 3)

Chairman Wilk thanked Ms. DeBauge and welcomed Dr. Clay Blair, Chair, Research Corporation Board, who briefed the committee and then said he had brought some guests who would present testimony. He first introduced Dr. Barbara Atkinson, Executive Dean, School of Medicine and Vice Chancellor for Clinical Affairs, Kansas City Medical Center, who said she applauded the intent of **HB 2647** which will mean so much to business and life science research in Kansas. Her testimony gave some history of the University of Kansas School of Medicine and informed that they have the only wet lab incubator in the Kansas City area. Dr. Atkinson spoke about recruiting eminent scholars and rising stars and the impact it will have on Kansas. She said the economic impact generated by the two medical school teaching hospital campuses in Kansas City and Wichita surpasses one billion and accounts for almost 10,000 jobs. A summary of a report from the American Association of Medical Colleges was included with her testimony. Dr. Atkinson gave several examples of the dollars involved along with the economic impact when these superstars are recruited. She talked about the pending recruitment of Dr. Roy Jensen from Vanderbilt University who will lead the new Kansas Masonic Cancer Research Institute. The \$15 million the Kansas Masons recently pledged will help them become a National Cancer Institute designated center and will make them eligible for millions of dollars from private and federal sources. This NCI designation will enable Kansas to have access to the latest research from all other NCI centers around the country. (Attachment 4)

Dr. Clay Blair next introduced Dr. R. W. Trewyn, Kansas State University, Vice Provost for Research, Dean of the Graduate School and President of the KSU Research Foundation. Dr. Trewyn said that the Kansas Economic Growth Act “offers exceptional prospects for enhancing the economic future of all Kansans.” He said Kansas can succeed at bringing the “cream of the crop” to Kansas. Dr. David Franz has recently been hired to lead the National Agricultural Biosecurity Center at K-State. Dr. Franz is a world-renowned authority on public health and biodefense, and his hiring was done jointly with the Midwest Research Institute. Dr. Franz joins Army colleagues and experts, Drs. Jerry and Nancy Jaax. He reported that scientists at the universities with entrepreneurial interests launched the biotechnology revolution in California in the 1980's, and the eminent scholars and rising stars program can do the same thing in Kansas. (Attachment 5)

Dr. Blair next introduced Dr. Kim A. Wilcox, Dean, Liberal Arts and Sciences, University of Kansas, who said that **HB 2647** was crucial to the state's future. His testimony showed a breakdown of the costs of recruiting the type of scientist that this program fosters. He used an actual example of one of the 30 life scientists that the College of Liberal Arts and Sciences has actually recruited in the past two years. He said this senior scientist example is consistent with the Eminent Scholars identified in the bill and commands a salary of \$55,000 to \$65,000 with start-up costs of \$300K to \$600K. (Attachment 6)

CONTINUATION SHEET

MINUTES OF THE HOUSE ECONOMIC DEVELOPMENT COMMITTEE at 3:30 p.m. on February 10, 2004, in Room 526-S of the Capitol.

The next conferee introduced by Dr. Blair was Dr. Zoran Petrovic, Research Director for the Kansas Polymer Research Center at Pittsburg State University. Dr. Petrovic said that the Kansas Polymer Research Center (KPRC) is part of Pittsburg State University's Business and Technology Institute. At the present, KPRC has 11 researchers, 17 research and 2 applications labs. He said that "access to the proposed Research and Development Voucher Program will give the bioscience industry more incentives to do research with KPRC." This investment in commercialization will encourage companies like their partner Cargill to bring jobs to Kansas. (Attachment 7)

Dr. Blair introduced Julie Edge, Ph.D., Inside Edge Solutions, LLC, who read the written testimony of Mr. Jim Stoppert, Senior Director of Industrial Bio products Development for Cargill, Incorporated. His testimony stated that Cargill, as an international marketer, processor, and distributor of agricultural, food, financial, and industrial products and services, is a global player in the bioscience industry. He said about 100,000 people are employed by Cargill in 60 countries, and about 4,000 jobs are located in Kansas. About 50 of these are at their Wichita-based soybean crushing plant. Cargill is partnering with the Kansas Polymer Research Center largely because of the research of Director, Dr. Zoran Petrovic and his team. He said Cargill is encouraged by the activity in Kansas to support the bioscience industry and the state's academic institutions. (Attachment 8)

The last conferee Mr. Blair introduced was Jesse Shaver, medical and science student at Vanderbilt University School of Medicine in Nashville, Tennessee. Jesse Shaver said that was born near Hays, Kansas, and was educated at Ft. Hays State University. He said he was deeply indebted to Kansas for its tremendous investment in his public education, and he intends to pay it back with a productive career and a needed service. It was apparent that he misses Kansas and earnestly wants to return. Mr. Shaver's testimony gave a history of his accomplishments and aspirations. He has written an R21 grant to the NIH that brings over \$360,000 to Vanderbilt to fund research on his invention. Mr. Shaver also has a patent pending for an invention to prevent blindness from glaucoma through identifying the exact thickness of the cornea. He has found a company and is in the early stages of making his idea a reality. He said Kansas should take the doctor's advice and not be the last state to support the biosciences. Even though spending \$500 million to return Kansas to an economically vibrant and productive state is a big investment, he said he believes Kansas is ready. (Attachment 9)

The Chairman thanked Dr. Blair for the outstanding testimonies and welcomed Mr. Wes Ashton, Director of Government Relations, Overland Park Chamber of Commerce, who yielded his time and submitted only written testimony. (Attachment 10)

The Chair recognized Mr. Blake Schreck, President, Lenexa Chamber of Commerce, who said he strongly supports the concepts in **HB 2647**. Highlights of his testimony stated that the bioscience industry is already an important contributor to the Kansas economy. More than \$140 million in federal bioscience research and development funds have come to Kansas in the year 2000 which makes Kansas 30th among all states. In January, 2004, more than 20,000 Kansans held bioscience-related jobs at the more than 160 bioscience companies currently operating in Kansas. He said 33 of these are located in Lenexa. Mr. Schreck said, "Because it would allow all communities in Kansas the opportunity to pursue significant projects that would positively impact the state and improve the quality of life of its citizens, the Lenexa Chamber of Commerce strongly urges the committee to consider **HB 2647** favorable for passage." (Attachment 11)

Chairman Wilk closed the Public Hearing of **HB 2647**.

Representative Hill made a motion to approve the minutes of the February 5, 2004, meeting, and Representative Boyer seconded. Motion passed.

The meeting adjourned at 5:45 p.m.

HOUSE ECONOMIC DEVELOPMENT COMMITTEE
GUEST LIST

DATE: Tuesday, February 10, 2004

NAME	REPRESENTING
Jesse Shaver	
Terry Bruce	Majority Leader
Wes Ashton	Overland Park Chamber
Steve Johnson	Kansas Gas Service
Steve Robb	Pittsburg St. Univ.
Zorana Petrovic	" " "
George Wilson	Univ. of Kansas
Julie Edge	KTEC (Inside Edge Consulting)
Michael Garner	KTEC
Kerri Holtzman	KTEC
Sam Campbell	West Lawrence Labs/CritiTech Pharmacy
Barbara Anderson	Univ Kansas School of Medicine
JOAN HUNT	KUMC SCHOOL OF MEDICINE
Renée Van Erp	" "
JERRY JAAY	KSU
Pat Trewyn	KSU
Jeanice DeBanga	KBOR
Lew Ferguson	KBOR

HOUSE ECONOMIC DEVELOPMENT COMMITTEE
GUEST LIST

DATE: Tuesday, February 10, 2004

NAME	REPRESENTING
Patty Clark	KDOE
Clay C. Blair	

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HOUSE OF
 REPRESENTATIVES

COMMITTEE ASSIGNMENT:
 CHAIRMAN: HIGHER EDUCATION
 MEMBER: UTILITIES
 ENVIRONMENT
 GENERAL GOVERNMENT &
 HUMAN RESOURCES
 BUDGET

Testimony on HB - 2539 KDFFA Financing for Research Facilities

Mr. Chairman, members of the Committee:

I appreciate the opportunity to discuss the goal of **HB 2539**. As committee members know, attracting research facilities of all types, (e.g. life or biosciences, aircraft or flight etc.), is a primary objective of most legislators, the Administration, and most communities. **HB 2539** authorizes the Kansas Development Finance Authority (KDFFA) to partner with businesses to secure funding for constructing and equipping research facilities.

As you know, KDFFA assistance can result in lower costs for marketing bonds and lower interest rates on those bonds. In a competitive global marketplace, lowering the cost of money to construct and equip research facilities can be an attractive incentive for business investments in Kansas - from large, well-known organizations, (e.g. Stowers, Boeing, and Bayer), and from smaller firms (e.g. Campbell-Becker).

Another conferee will provide specific information on research facility costs and the difficulties associated with obtaining private financing. KDFFA already has authorization to facilitate financing for university research facilities and thus has some expertise in assessing the viability of opportunities. **HB 2539** simply extends that partnership authorization to private sector organizations. Please remember, the State assumes no financial risk or obligations through KDFFA participation - we simply are providing an attractive tool for recruiting corporate investment and job creation in Kansas.

Thank you again for your attention and consideration. I will respond to questions at the appropriate time.

House Economic Development
 2-10-04
 Attachment 1

TESTIMONY ON HB 2539

February 10, 2004

By: Sam Campbell

My thanks to the committee for allowing me to testify in support of HB2539. I believe that it is important to develop as many financing alternatives as possible for "research facilities" in order to provide support for the growing life science activity in our state. The significant cost associated with the construction or remodel of a research facility make them difficult to finance using conventional methods. I draw your attention to the attached article: "Next-Generation Lab Design", *Building Design and Construction Magazine*, 9/ 03. The results of a national survey on research laboratories shows the costs for a variety of laboratory types ranging from \$365.00 to \$810.00 per square foot. The specialized nature of the facility and operating systems, the enormous relative cost per square foot, the need for long term fixed rate financing, and the extensive on-going support and maintenance costs make it very difficult for a conventional lender to meet the needs of a smaller and/or growing life science company that requires this type of facility. With the inclusion of "research facilities" under the Kansas development finance authority act, it will enable these companies access to bond financing providing a realistic and potentially superior alternative to conventional financing.

Mr. Campbell is manager of New Oread Group, L.C., owner of West Lawrence Laboratories and the Lawrence, Life Sciences Center. He is Chairman and President of CritiTech, Inc. a nanoparticle pharmaceutical delivery and drug development company.

House Economic Development
2-10-04

Attachment 2

NEXT-GENERATION LAB DESIGN

Building Teams are rethinking accepted lab design concepts of the past to meet new client demands

By Dave Barista, Associate Editor

Six trends in lab design

1. Workspaces moving out of the lab
2. Keeping costs down
3. Speed of delivery
4. Lab as a recruitment/retention tool
5. Multidisciplinary interaction and collaboration
6. Flexibility and adaptability

The constant scramble for blockbuster ethical drugs by pharmaceutical companies, endeavors like the Human Genome Project, and the growth of such fields as proteomics and bioinformatics have kept demand for new or renovated spaces rather steady. Despite this positive picture, it's not exactly business as usual for the Building Teams designing and constructing these complex facilities.

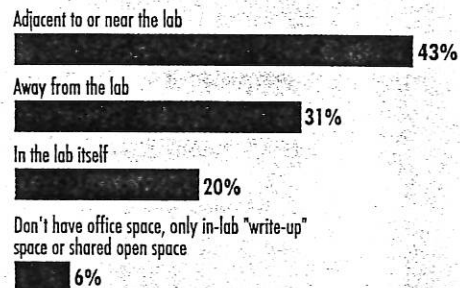
Private-sector and university clients are pushing Building Teams to create lab facilities that accommodate both current and future research needs, that encourage interaction among scientists from many disciplines, that help recruit and retain hard-to-get PhDs — and, did we mention, that do all this at the lowest possible cost, and at the speed of light? Well, that too.

Offices coming out of the lab

Pharma/bio scientists are spending less time in their labs doing traditional bench-style research and more time in their offices analyzing data, preparing reports, or doing e-mail. According to a recent study of 224 scientists conducted by *BD&C* and *RICS*, a nonprofit institute serving the real-estate industry, computer activities take up nearly 40% of a life-scientist's workday.

As a result, designers are moving lab workstations out of the lab. Just 20% of respondents to the *BD&C/RICS* survey said their office space is located in the lab itself. This approach not only saves on lab construction costs, which are significantly greater than office construction costs, but is also safer, says Kling's John LaProcido.

Location of office space relative to lab



Source: *BD&C/RICS Laboratory Users Survey, Sept. 2003*

A survey of 224 research scientists by *BD&C* and *RICS*, a nonprofit institute serving the real estate industry, showed that only one in five (20%) has office space in the lab itself.

"From a safety standpoint, the trend is to get the people out of the lab and control the amount of flammable liquids in a lab," says Kling's director of progress. If a facility exceeds the amount of solvents allowed by NFPA code, then fire-rated solvent storage rooms are required. Just-in-time delivery of chemicals is also an option.

For structures like the seven-story Millennium Pharmaceuticals lab in Cambridge, Mass., NFPA code is even more stringent. "Fire departments don't want high hazards situated in a building where they can't get to [them]," says Steve Copenhagen, AHSC McLellan Copenhagen, Santa Clara, Calif., principal lab planner on the project.

The Millennium plan divides each floor into two fire areas, separated by a four-hour partition



and three-hour doors, thus permitting the maximum amount of chemicals on the upper floors. The lab also has easy-access "safety walls" situated at each lab entry point.

Keeping costs down

"In the '80s and '90s, there were so many blockbuster drugs on the market without competition," says Stephen Steelman, VP and GM with Dallas-based Turner Corp.'s pharmaceutical division. "Many pharmaceutical companies were spending the money to make a design statement. It was sort of an ego thing."

One such ego trip was the big, dramatic atrium, a visual signal of a company's prestige and prominence. In today's economy, such atria are being reconsidered by budget-conscious clients.

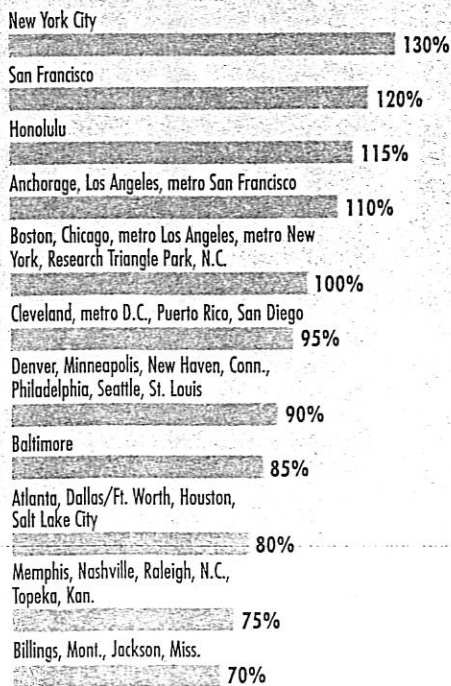
"The basic assertion that good facilities attract good scientists is still there," says Bill Brader, principal and director of projects with Kling, Philadelphia. "But the idea of having the grandiose atrium is gone."

Brader says many clients are asking for scaled-down atrium spaces that are also more functional. He describes a recently designed atrium for a 500,000-sq.-ft. lab facility that incorporates offices, program spaces, widened walkways, and pedestrian bridges that encourage interaction among various disciplines in the facility.

"This building joins lab, office, and develop-

U.S. lab construction costs by location

(Costs are benchmarked to the New York metro area)



Source: HLW International and Accu-Cost

A laboratory in San Francisco would cost 20% more to build than one in the New York metropolitan area (outside New York City itself), according to HLW's Stanley Stark, who compiled the data.

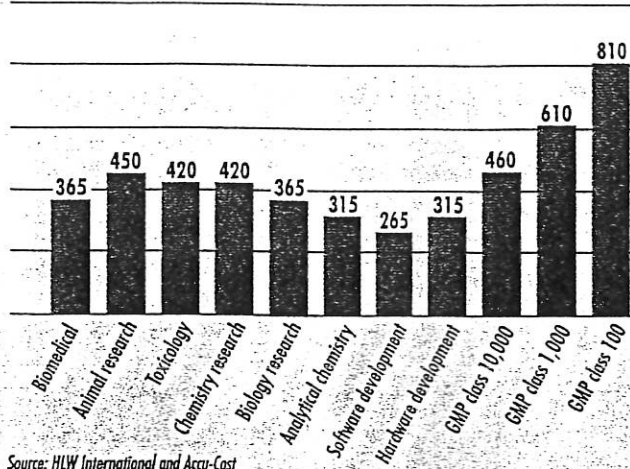
A "safety wall" at Millennium Pharmaceuticals' lab (left) centralizes the location of eyewashes, lab coats, safety glasses, fire extinguishers, safety manuals, service cut-offs, safety showers, and fire-alarm pull stations. The Cambridge, Mass., facility was named 2003 "Lab of the Year" by R&D Magazine.

Photo: © Elkus/Manfredi Architects

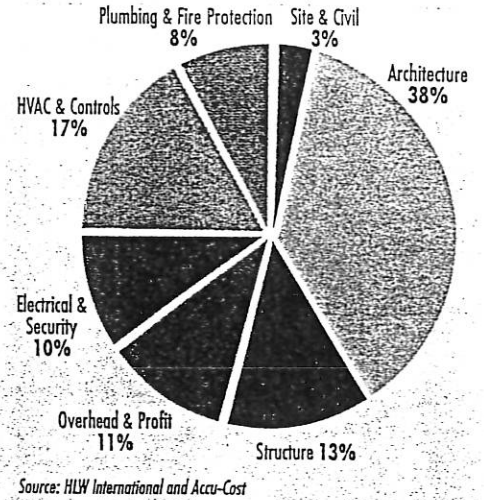
The more traditional multistory atrium for a new life-science research facility in St. Louis for Sigma-Aldrich Corp. (right) incorporates offices, labs, and a communicating stairway. Good facilities still attract good scientists, says one lab planner, but the day of the grandiose atrium may be ending. Design by Hellmuth Obata Kassabaum, with McCarthy Construction Companies as CM (both of St. Louis), and the St. Louis office of Lockwood Greene, Spartanburg, S.C., as engineer of record.

Photo: © Hedrich Blessing

2003 new R&D facility construction costs by type
Cost in dollars/sq. ft.



Distribution of costs by trade for biochemistry lab building



The HLW/Accu-Cost study shows (left) that a facility constructed to GMP (Good Manufacturing Practices) 100 level would run about \$810 a square foot, while a software development facility would cost significantly less to build — \$265 a square foot. In the division of labor by trade (right), “structure” includes foundations and superstructure, while “architecture” takes in roofing, windows, interiors, finishes, fume hoods, special equipment, casework, and elevators for a typical biochemistry lab facility.

ment spaces, so we used a smaller atrium to bring those different functions together in a community space, as well as to bring natural light into the interior,” says Brader.

Dave Hronek, a VP with Detroit-based SmithGroup, says clients are looking to integrate smaller atriums with a communicating stairway or gathering area. “One client called the atrium a place where they could have group meetings, fundraisers, and even small concerts — a space to blend art and science,” says Hronek.

It’s not as if large, dramatic atriums have fallen completely by the wayside. Genentech Hall at the University of California, San Francisco, features an expansive atrium that extends the full height of the five-story building.

“People using this grand stair can be seen from the atrium, open corridors, elevators, and interaction lounges,” says William L. Diefenbach, principal-in-charge with Detroit-based SmithGroup, design architect for the \$223 million project. “It really creates a sense of interac-

tivity at all levels of the structure.”

Where speed to market counts

Getting new facilities online faster is paramount in the pharmaceutical market, where even a few added months of construction time may mean the difference between being first to market with a new drug or being left in the dust by rivals — at a cost of billions in sales.

“We used to see occasional fast-track projects, now it’s routine,” says Walter “Bud” Guest, SVP with McCarthy Building Cos., St. Louis. He says fast-track construction starts with analysis of program and design concept alternatives. During the design phase, Building Teams should consider using phased bid packages, an aggressive design schedule, and design elements that speed the construction process.

During construction, Guests suggests purchasing long-lead equipment early, such as autoclaves, sterilizers, and air handlers. The Building Team may want to offer financial incentives to



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**Testimony on House Bill 2647
House Economic Development Committee**

February 10, 2004

**Janice DeBauge, Chair
Kansas Board of Regents**

Good afternoon, Chairman Wilk and members of the House Economic Development Committee. It is a pleasure to be here this afternoon to support the Bio-Science Initiative on behalf of the Board of Regents.

You have heard the concept of the “21st century knowledge economy” mentioned on numerous occasions. Alan Greenspan speaks frequently of the transition from the traditionally acknowledged visible natural resources of minerals, land, and water to the less visible natural resources of the knowledge and skills of our citizenry. Kansas is particularly poised to capitalize on this development because of its 21st century commitment to providing higher education in a diversity of settings, both geographically and by type of institution. We are also particularly poised to grow exponentially in the biosciences. It is a natural fit for our system for three reasons – the foundation in the various disciplines in numerous institutions is in place, the culture of collaboration across the system is unique and pervasive, and the missions of our universities are distinct. This differentiation among institutions is the fundamental strength of the Kansas system and the focus on separate mission for many decades now makes possible the ability for the state to further develop the bioscience industry.

To elaborate on the foundation that exists, we can point to numerous programs and connections: KU is actively engaged in bioscience research and commercialization in cooperation with the Kansas City Area Life Sciences Institute, the Stowers Institute, as well as other Kansas universities. Bioscience is the primary focus of KU Med as well as much of the research activity on the Lawrence campus. Kansas State University has numerous research activities in food safety, crop resistance, plant engineering, industrial processing, etc. that allow farmers to be competitive through value-added harvest. There is much potential in novel products that can transform industries when plants become biosynthetic factories for a wide range of compounds. The potential is enormous for discoveries in the plant and animal kingdom – and we want those discoveries to happen here in Kansas. The discoveries alone are wonderful, but we need these discoveries to be actualized in the marketplace by utilizing commercialization processes that are efficient and timely.

*House Economic Development
2-10-04*

Attachment 3

Other examples of existing programming include Pittsburg State with its polymer program and partnership with Cargill pursuing renewable resources, and Wichita State University that has faculty engaged in bioscience research in reproductive biology, environmental biology, cancer, bioinformatics, and other pertinent areas. These departments collaborate with colleagues at KU and K-State. The regional universities also have researchers that are connected to colleagues in the three traditional research universities, and the Board is actively engaged in an initiative that was developed by faculty across the system to formalize and encourage research collaboration.

Community Colleges are offering numerous programs for training the technicians that assist bioscience researchers. These include animal technicians and computer technicians as well as persons trained in bioinformatics and biotechnology. The entourage that accompanies a noted researcher is extensive and there are collaborative efforts between community colleges and universities already in place to provide the numerous types of trained individuals required by research teams. This type of program has increased since the opening of the Stowers Institute and we would expect this trend to continue. Additional investment in the infrastructure and recruitment of scholars will have a large and positive impact on the system and the Board of Regents strongly supports this effort and applauds the vision and leadership that brings us here today.

When we look at other states, we are convinced that we have a unique and unusually collaborative higher education culture. We have excellent communication structures and a strong history of constructive problem-solving. What we don't have is adequate research resources to ensure a strong growth engine for the future. Even with the exponential growth in external research funding that the universities have seen in the last few years, Kansas does not receive its fair share of federal research dollars. And, the most recent evaluation of higher education funding in comparison to national statistics shows growing discrepancies in the total funding available for Kansas research universities. For instance, K-State is funded at a level that is 70% of the average of land grant institutions in the United States (these statistics compare the combination of state appropriations and tuition dollars per full-time equivalent student). And, K-State is not alone in this disparity – the other universities face similar realities. At present levels the challenge to compete for researchers and the accompanying dollars and opportunities is large if not overwhelming. Without significant initial investment and a dependable ongoing funding stream, it is not reasonable to expect to attract world-class scholars.

The three research buildings that were made possible by bonds in 2002 are examples of the type of infrastructure investment that enable the recruitment of additional research leaders. The Kansas Economic Growth Act builds upon that investment and extends opportunities exponentially, including providing the resources to actually fund the researchers themselves as well as providing additional infrastructure.

There is much opportunity for synergies between the efforts of the Board of Regents and the Bioscience Authority Board. Many mutual goals are stated in the roadmap and other documents, and the Board is committed to optimizing this opportunity. In thinking about how best to achieve those synergies and to avoid the possible duplication of efforts, inefficiencies of multiple administrations, and even potentially conflicting governance, it is important to carefully

think through this authority structure. Presently, KU is reviewing the authority structure proposed in HB 2647 to assess how it might function in relation to existing structures. The Board of Regents is presently engaged in several activities that are enumerated in the roadmap, such as programming for research collaboration. A high priority for the Board is working with all partners and we believe that aligning the interests of the Board and the Bioscience Authority and ensuring long-term collaboration, communication, and cooperative endeavor between the two entities can best be achieved by voting representation from the Board of Regents itself or through appointments, perhaps in a style similar to that of the present Research Corporation Board.

Also, the Board encourages the bulk of the dollars generated by this Act be directed to the Board of Regents institutions. With additional investments in faculty and space, these entities are very well-poised and best-situated to build on existing resources and ultimately attract the commercial firms needed to actualize discovery.

In conclusion, the Board is very excited about the potential of this initiative because of its positive impact on numerous institutions, because it builds on the solid foundations of existing programs and collaborative culture. And, ultimately, because we believe that investment such as this is vital to the future of the quality of life in Kansas as we capitalize on the knowledge and skills of our citizens.

Thank you for the opportunity to speak to you today and we look forward to further occasions at which to highlight this effort.

Good afternoon. I'm Barbara Atkinson, executive dean of the University of Kansas School of Medicine and vice chancellor for clinical affairs at the University of Kansas Medical Center.

I applaud the intent of this bill to build bioscience research as an economic engine for Kansas and thank you for your consideration of this bill which would mean so much to business and life science research in Kansas.

The University of Kansas School of Medicine has been doing bioscience research since 1905 when our school was founded. Early on, we led the nation in scientific discovery. From his studies of grasshoppers on the Kansas plains, Dr. Walter Sutton discovered that chromosomes carry the units of inheritance. Through his work with monkeys in a KU medical center laboratory, Dr. Herbert Wenner contributed critical research to Jonas Salk's polio vaccine. Today Dr. Bill Narayan works on an AIDS vaccine.

We're scientists and educators. Some of us are also physicians who do research. We study the mysteries of human health and disease, always working toward the day when we can take our discoveries from the laboratory to the bedside in order to improve the lives of our patients.

At the University of Kansas Medical Center, we have the Kansas City area's only wet lab incubator. We know how to take a good idea, give it the support it needs to build, and then launch a new biotechnology business. Dr. Andrew Parkinson, a pharmacology professor from the School of Medicine, created Xeno Tech LLC in our incubator. His business grew from 1 to 70 employees in six years and now thrives in a new 20,000-square-foot facility Lenexa. We have since remodeled our incubator laboratory, and it's ready to continue supporting great new discoveries which are in the process of developing into new small businesses.

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Attachment 4 1

The Kansas legislature has been a partner with us from the beginning, and every day we work hard to make you proud of your investment. For every one dollar that you invest in the medical school faculty, we earn an additional four dollars, bringing in a total of \$160 million dollars to Kansas in research grants, physician practice revenue and endowments this year alone. Recently, your support of a bonding issue, together with \$27 million from the Hall Family Foundation of Kansas City, enabled us to break ground on a biomedical research building, which will increase the amount of research space on our campus by nearly 90 percent.

Recruiting eminent scholars and rising stars to fill that facility, giving them the support team and the tools to help them succeed is expensive. Start up packages to move each eminent scholar will cost up to \$2 million with another \$1 million for supporting staff and equipment. One of our recent recruits, Dr. Darryl Quarles from Duke University, is coming next month to direct our Kidney Institute and lead the patient care effort in kidney disease. He's bringing a team of 17 scientists with him as well as 5 grants from the federal government that will bring in \$1.3 million dollars each year.

We welcome additional financial resources to help us recruit the world's best scientists to Kansas. We know this will be a good investment. We just received a report from the American Association of Medical Colleges on the economic impact generated by your two medical school campuses with their teaching hospitals in Kansas City and Wichita. It shows that we have a total state business volume economic impact in Kansas that surpasses \$1 billion and accounts for almost 10,000 jobs. I have included a summary from that report in my testimony.

We are in the process of recruiting another superstar, Dr. Roy Jensen from Vanderbilt University, to lead our Kansas Masonic Cancer Research Institute. The Kansas Masons recently pledged \$15 million to help us become a National

Cancer Institute designated center. NCI designation will make us eligible for millions of additional dollars from private and federal sources, but we need to demonstrate a commitment from the state. NCI designation also will mean that Kansas has access to the latest research from all the other NCI centers around the country. That means people in this region won't have to go to the Mayo Clinic or to MD Anderson for the most up to date cancer treatment, but can receive the best cancer care right here in Kansas.

Part of the Kansas Masons' \$15 million gift will be used for an endowed professorship that our new director will hold. If we are successful in recruiting Dr. Jensen (and it looks promising, except that we still need to find additional resources), we need to give him the people and resources that are necessary to make our cancer program the best it can be. He has learned from Vanderbilt how to build a quality program, and we are fortunate he's interested in bringing that expertise to Kansas.

Dr. Jensen's recruitment package includes the addition of 21 physicians and 9 basic scientists over the next four years. The money to recruit these faculty members will need to come from a combination of private, federal and state dollars. We know that the investment in our cancer program will eventually bring in more dollars than the ultimate cost, and we hope it will bring the promise of better treatments for those with cancer.

An example of this promise is Dr. Kathy Roby in our Department of Anatomy who is working with a team to develop a breakthrough drug to treat ovarian cancer. She worked with scientists at KU Lawrence and Critech (a company founded by two KU professors) to develop a better delivery system for Taxol, a drug used to treat breast and ovarian cancers. It's a good drug but unfortunately has many terrible side effects. Dr. Roby has shown that a similar but newly packaged drug called NanoTax, is effective in treating ovarian cancer in the mouse without those side effects. Mice receiving NanoTax survived more than twice as long as mice

receiving no drug. NanoTax is now ready for human trials, and Dr. Roby has applied for NIH funding so that the first patients to receive this new drug will be at the University of Kansas Hospital, receiving a drug which was developed at KU with the help of a small business that started at KU. Dr. Roby's research illustrates how industry and university scientists can become partners in developing treatments and drugs that improve human health and lead to a positive economic impact on the state.

As another example, I'd like to discuss the impact of the work being done at the University of Kansas School of Medicine in Wichita. The faculty practice in Wichita has just set up a new Clinical Research Institute to enable testing of drugs and devices. They have been particularly successful up to now in testing drugs to treat psychiatric illnesses like depression. The ability to recruit additional eminent scholars and rising stars to Wichita will allow major expansion of this work. The Orthopedics Research Institute that is a joint venture of the School of Medicine with Via Christi Hospital has led to new types of orthopedic devices and glues used in joint replacements. Not only does this type of discovery help the lives of patients, it leads to patents and business opportunities in the state.

At both the Kansas City and Wichita campuses we make a special effort to disseminate our information and critical treatment options throughout the state of Kansas. I have included a map of the state showing the areas we provide outreach clinics where our specialist doctors see patients referred by local family physicians, as well as our telemedicine network sites which span the state and allow consultation on a regular basis between local physicians and our scarce specialists.

One final example, the Kansas Biomedical Research Infrastructure Network (K-BRIN) fosters inter-campus biomedical research collaboration and infrastructure support among 9 campuses throughout Kansas. The K-BRIN has already

brought \$8.6 million to Kansas in the past three years, and we have demonstrated such success, the National Center for Research Resources is offering us the opportunity to compete for renewal of this grant which will bring \$18.5 million to Kansas during the next five years. A map which demonstrates the 9 campus partnership throughout Kansas is included.

We have other examples, but I share these to show you that your School of Medicine has experience in this business of bioscience research. Again, I applaud the intent of this bill to build on our success by recruiting more eminent scholars and rising stars to Kansas who will be able to expand and increase our efforts.

However, at this time, I would like to raise a few questions. How will this bill influence the direction of bioscience research in Kansas? Will there be an effort to build a critical mass of research in cancer, for instance, so that Kansas will be known as a center of excellence? That will enable us to both recruit and retain eminent scholars.

What is the role of the Kansas Bioscience Authority in the commercialization of intellectual property created by the scholars employed by state universities? In my experience, scientists relinquish their intellectual property with great reluctance. I would encourage you to appoint eminent scholars already in Kansas to the Kansas Bioscience Authority Board. They would be able to offer valuable guidance in recruitment efforts.

I would also ask if the intent of this legislation is to create new free-standing research institutes whose scholars are employed by the authority or, as I hope, to support those academic institutions that already are successful in education and bioscience research.

If we want to foster a climate that recruits the best scientists to Kansas, we need to be thoughtful in how we answer these questions.

The Life Sciences effort in Kansas is not in its infancy; rather, it's rapidly entering quite a growth spurt. The investment by the state will not be in a speculative start-up venture, but in a movement that already has passed critical milestones in quality of research and financial stewardship. The University of Kansas School of Medicine has been at this business of biomedical research for nearly 100 years. Our federal funding, combined with the Stowers investment and that of our other life science partners proves opportunities are here and now, not wishful thinking.

I welcome the opportunity to help you evaluate and lead this ambitious endeavor and answer your questions for the benefit of the citizens of Kansas.

February 10, 2003
Testimony before the Economic Development Committee
Topeka, Kansas

**Association of American Medical Colleges
The Economic Impact of AAMC Member Institutions 2002**

State Summary Report

State:

Kansas

Summary of AAMC Member-Related State Impacts

Total State Business Volume Impact	\$1,054,411,454
Direct State Business Volume Impact	\$458,439,763
Indirect State Business Volume Impact	\$595,971,691
Total State Employment Impact	9,999
Total State Government Revenue	\$35,017,240
Total Out-of-State Medical Visitor Impact	\$54,289,986

State Business Volume Impacts

Total State Business Volume Impact	\$1,054,411,454
Spending for capital improvements, goods, supplies, services	\$252,811,443
In-state staff spending	\$103,254,730
In-state total physician (employed and contract) spending	\$32,648,158
In-state resident and student spending	\$15,435,445
Out-of-state patient in-state spending	\$3,930,307
In-state spending by out-of-state patient visitors	\$3,287,005
In-state spending by other out-of-state visitors	\$47,072,674
AAMC member-related business real property investments	\$156,052,895
AAMC member-related business inventories	\$130,747,020

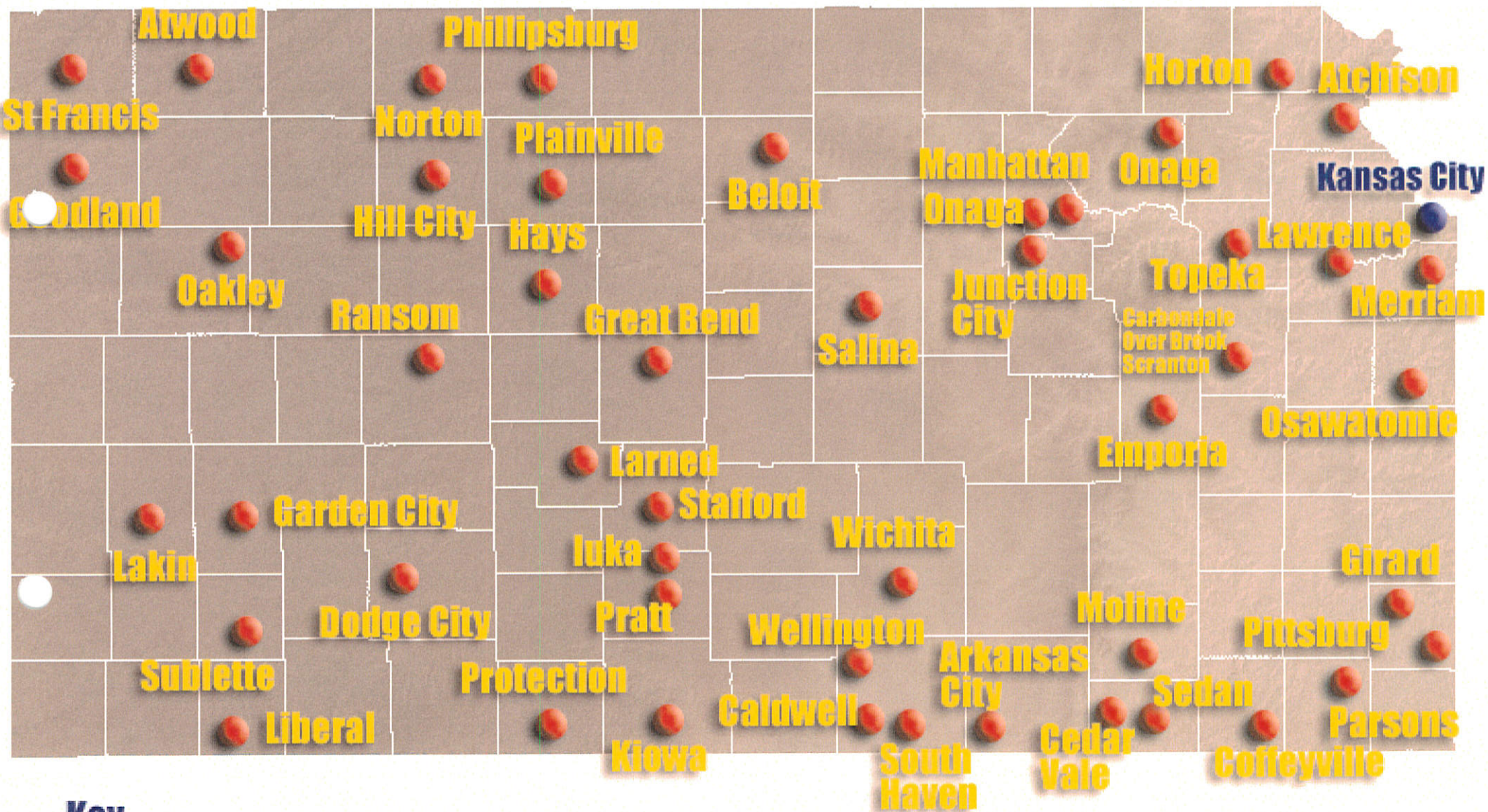
Government Revenue Impacts

Total Government Revenue Impact	\$35,017,240
Individual income tax revenues	\$11,121,643
Sales and gross receipts tax revenues	\$17,541,983
Corporate net income tax revenues	\$2,342,442
Other tax revenues	\$4,011,172

Total AAMC Member-Related Employment Impact **9,999**

Tripp Umbach Healthcare Consulting, Inc., 2003

KUMC TELEMEDICINE NETWORK



Key

 **Telemedicine Sites for Patient Consults and Telekidcare**

University of Kansas Medical Center

TeleKidcare

Greater Kansas City Area TeleKidcare

Schools	County
USD 500 - Kansas City, Kansas	
Banneker Elementary	Wyandotte
Caruthers Elementary	Wyandotte
Emerson Elementary	Wyandotte
Grant Elementary	Wyandotte
ME Pearson Elementary	Wyandotte
New Chelsea Elementary	Wyandotte
Northwest Middle	Wyandotte
Quindaro Elementary	Wyandotte
Welborn Elementary	Wyandotte
Whittier Elementary	Wyandotte
Wyandotte High School	Wyandotte
USD 512 - Shawnee Mission	
South Park Elementary (Merriam)	Johnson
YWCA of Kansas City, Kansas	Wyandotte
Providers	
KUMC - Pediatric Clinic - Dr. Pam Shaw	Wyandotte
KUMC - Child Psychiatry Clinic - Dr. Poonam Khanna	Wyandotte
KUMC - DDC - Dr. Matt Reese	Wyandotte
Kansas City Psychiatric Group - Dr. Kenneth Sonnenschein (Leawood)	Johnson

Wichita TeleKidcare

Schools	County
USD 259 - Wichita Public Schools	
Caldwell Elementary	Sedgwick
Colvin Elementary	Sedgwick
Park Elementary	Sedgwick
Providers	
KUMC-Wichita - Faculty Pediatric Clinic - Dr. Rebecca Reddy	Sedgwick

Four Rivers TeleKidcare

School	County
USD 360 - Caldwell	
Caldwell Schools (Caldwell)	Sumner
USD 509 - South Haven	
South Haven School (South Haven)	Sumner
USD 353 - Wellington	
Kennedy Elementary (Wellington)	Sumner
Providers	
Caldwell Family Practice - Dr. James Blunk (Caldwell)	Sumner
The Family Care Center & Wellington Family Practice Clinic (Wellington)	Sumner

Pittsburg TeleKidcare

Schools	County
USD 250 - Pittsburg School District	
Meadowlark Elementary	Crawford
Lakeside Elementary	Crawford
Provider	
Community Health Center of Southeast Kansas (Frontenac)	Crawford
Dr. Carolina Sanchez-Galo	

University of Kansas Medical Center TeleKidcare

South Central Kansas Special Education Cooperative (SCKSEC) TeleKidcare

Schools

USD 300 - Comanche County School District	
South Central Elementary/Middle School (Protection)	Comanche
USD 255 - South Barber School District	
South Barber Elementary/Middle School (Kiowa)	Barber
USD 349 - Stafford School District	
Stafford School (Stafford)	Stafford
SCKSEC	
Iuka Learning Center (Iuka)	Pratt

Providers

Pratt Rural Health Care Center, Chris Gardiner and Brad Hill, PA (Pratt)	Pratt
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Santa Fe Trail School TeleKidcare

Schools

USD 434 - Santa Fe Trail School District	
Carbondale Attendance Center (Carbondale)	Osage
Overbrook Attendance Center (Overbrook)	Osage
Santa Fe Trail High School (Carbondale)	Osage
Scranton Attendance Center (Scranton)	Osage

Provider

Cotton-O'Neil Clinic, Diana Kimball, ARNP (Carbondale)	Osage
Kansas City Psychiatric Group - Dr. Kenneth Sonnenschein (Leawood)	Johnson

Flint Hills TeleKidcare

Schools

USD 383 - Manhattan-Ogden School District	
Northview Elementary (Manhattan)	Riley
Ogden Elementary (Ogden)	Riley

Providers

Pediatric Associates - Dr. Graham Rose (Manhattan)	Riley
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Chautauqua County TeleKidcare

Schools

USD 285 - Cedar Vale School District	
Cedar Vale School (Cedar Vale)	Chautauqua
USD 286 - Chautauqua County Community School District	
Sedan School (Sedan)	Chautauqua

Providers

Chautauqua County Health Department (Sedan)	Chautauqua
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Kansas State-Wi[®] Telemedicine Sites

Atchison, Atchison Hospital Association/Riverbed Regional Healthcare System, 1301 North 2nd, Atchison, KS, 66002, John Nunn, 913-367-6600 ext 1349

Arkansas City, South Central Kansas Regional Medical Center, 216 W Birch, Arkansas City, KS 67005, Kenny Salsbury, (316) 442-2500, FAX (316) 441-5952

Atwood, Rawlins County Hospital, 707 Grant Street, Atwood, KS 67730, Danise Sperry (785) 626-3211, FAX (785) 626-9093

Beloit, Mitchell County Hospital, PO Box 399, Beloit, KS 67420-0399, Deb Beam, (785) 738-9580, FAX (785) 738-9586

Caldwell, Sumner County Hospital District No.1, 601 S Osage, Caldwell, KS 67022, Virgil Watson, Jr., (620) 845-6492, FAX (620) 845-6475

Cedar Vale, Cedar Vale Community Hospital, 501 Cedar, Cedar Vale, KS 67024, Mitzi McKinley, (620) 758-2287, FAX (620) 758-2976.

Coffeyville, Coffeyville Regional Medical Center, 1400 W 4th Street, Coffeyville, KS 67337, Ann Murrow, (620) 252-1600, FAX (620) 252-1557

Dodge City, Columbia Western Plains, 3001 Avenue A, PO Box 1478, Dodge City, KS 67801, Julie Isaac, (620) 225-8436, FAX (620) 225-8742

Emporia, Emporia State University 1200 Commercial Box 4061, Emporia, KS, 66801, (620)-341-5748

Garden City, St. Catherine's Hospital, 410 East Walnut, Garden City, KS 67846-5672, Nicki Twiss, (620) 272-2322, FAX (620) 272-2387

Garden City, Southwest Kansas AHEC, 1501 Fulton Terr, Ste 1, Garden City, KS 67846, Robert Smoot, (620) 275-0259, FAX (620) 275-2831

Girard, Hospital District #1, 302 N Hospital Drive, Girard, KS 66743, Donna Shireman, (620) 724-8291, FAX (620) 724-6332

Goodland, Goodland Regional Medical Center, 220 West 2nd Street, Goodland, KS 67735, Sondra Krayca, (785) 899-6025, FAX (785) 899-7209

Great Bend, Central Kansas Medical Center/St. Rose, 3515 Broadway Ave, Great Bend, KS 67530, Brenda Reichuber, IS Training Coord. (620) 786-6693, FAX (620) 792-1605 ; Pete Billinger, (620) 786-6142, FAX (620) 792-1605

Hays, Hays Medical Center, St. Anthony's Campus, 2220 Canterbury, Hays, KS 67601, Dennis Schukman, (785) 623-2385, FAX (785) 623-5011

Hays, Northwest Kansas AHEC, 217 East 32nd, Hays, KS 67601, Bev Brungardt, (785) 628-6128, FAX (785) 628-6034

Hill City, Graham County Hospital, 304 W. Prout, Hill City, KS 67642, Donella Belleau, (785) 421-2121, FAX (785) 421-2034

Horton, Northeast Kansas Center for Health & Wellness, 240 W. 18th Street, Horton, KS 66439, Sonjia Clay, RN, (785) 486-2642, FAX (785) 486-3620

Junction City, Geary County Community Hospital, PO Box 490, Junction City, KS 66441, Derrin Pelfrey, (785) 238-5140 x4221, FAX (785) 238-5278

Kansas City, University of Kansas Medical Center, 39th & Rainbow Boulevard, KansasCity, KS 66160-7171, Lori Wade, (913) 588-2225, FAX (913) 588-2227

Lakin, Kearny County Hospital, 500 Thorpe, Lakin, KS 67860, Steve Reiner, (620) 355-7111, FAX (620) 355-6091

Larned, Larned State Hospital (2 miles west of Larned on Hwy 56, Building ATC North), Route 3, Box 89, Larned, KS 67550, Doug Simmons, (316) 285-4126, FAX (316) 285-4399

Larned, St. Joseph Hospital, 923 Carroll, Larned, KS 67550, Pete Billinger, (620) 792-2511, FAX (620) 792-1605

Lawrence, Lawrence Memorial Hospital, 325 Maine St., Lawrence, KS 66044, Jim Cobb, (785) 840-3605, FAX (785) 840-3021

Liberal, Southwest Medical Center, 15th at Pershing, PO Box 1340, Liberal, KS 67905, Kim Brennan, (620) 629-6327, FAX (620) 629-2440

Manhattan, KU Northeast Regional Network Site, 3260 Kimball Ave., Manhattan, KS 66503, Susan Harmz, (785) 537-3376, FAX (785) 537-3393

Moline, Moline Community rural Health clinic, P.O. Box 155, Moline, KS 67353, Lynnetta Hanoshy, (620) 647-8109, FAX (620) 647-3638

Norton, Norton County Hospital, 102 East Holme Street, Norton, KS 67654, Georgia Briery, (785) 877-3351 x251, FAX (785) 877-4075

Oakley, Logan County Hospital, 211 Cherry Street, Oakley, KS 67748, Eric Kohn, (785) 672-8155, FAX (785) 672-8184

Oakley, NW Kansas Education Service Center, 703 W 2nd, Oakley, KS 67748, Jan Schartz, (785) 672-3125 x181, FAX (785) 672-3496

Onaga, Onaga Community Hospital, 120 West 8th St., Onaga, KS 66521, Cathy VanDonge, (785) 899-4657 x1108, FAX (785) 899-7163

Osawatomie, Osawatomie State Hospital, 500 State Hospital Drive, Osawatomie, KS 66064, Chuck Hampton, (913) 755-7355, FAX (913) 755-2637

Parsons, Parsons State Hospital & Training Center, KUAP-Media Services, PO Box 738, Parsons, KS

67357, Cynthia Huebner, (620) 421-6550, Ext. 1734, FAX (620) 421-6550, Ext. 1791

Parsons, Labette County Hospital, 1902 S US Hwy 59, Parsons, KS 67357, Cindy Spriggs, (620) 421-4881, FAX (620) 421-0993

Phillipsburg, Phillips County Hospital, 1150 State Street, PO Box 607, Phillipsburg, KS 67661, Ruth Hackerott, (785) 543-5226 x249, FAX, (785) 543-6272

Pittsburg, Pittsburg State University, 1701 S Broadway, Pittsburg, KS 66762, Treva Sherman, (620) 235-4840, FAX (620) 235-4849

Pittsburg, Mt. Carmel Medical Center, 1102 E Centennial, Pittsburg, KS 66762, Robert Poole, (620) 232-0153, FAX (620) 232-0493

Plainville, Plainville Hospital, Box 389, Plainville, KS 67663, Richard Bergling, (785) 434-4553, FAX (785) 434-2434

Pratt, Pratt Regional Medical Center, 200 Commodore Street, Pratt, KS 67124-3099, DeWayne Bryan, (316) 672-5936, FAX (316) 672-2113

Ransom, Grisell Memorial Hospital, PO Box 268, Ransom, KS 67572, Joy Jansonius, (785) 731-2231, FAX (785) 731-2895

St. Francis, Cheyenne County Hospital, 210 W. 1st St., PO Box 547, St. Francis, KS 67756, Noreen Iliff, (785) 332-2104, FAX (785) 332-2106

Salina, Salina Regional Health Center, Santa Fe Campus, 400 S. Santa Fe, Salina, KS 67402 Valyne Pochop, (785) 452-7603, FAX (785) 452-7700

Sedan, Sedan City Hospital, 300 North Street, Sedan, KS. 67361 Tanya Depew (620)-725-3115, FAX (620)-725-4433

Sublette, High Southwest Plains Network, PO Box 1010, Sublette, KS 67877, Doug Gonzales, (620) 675-2241, FAX (620) 675-8396

Topeka, Kansas State Board of Education, 120 SE 10th Ave, Topeka, KS 66612, Linda Grindol, (785) 296-4961, FAX (785) 296-7933

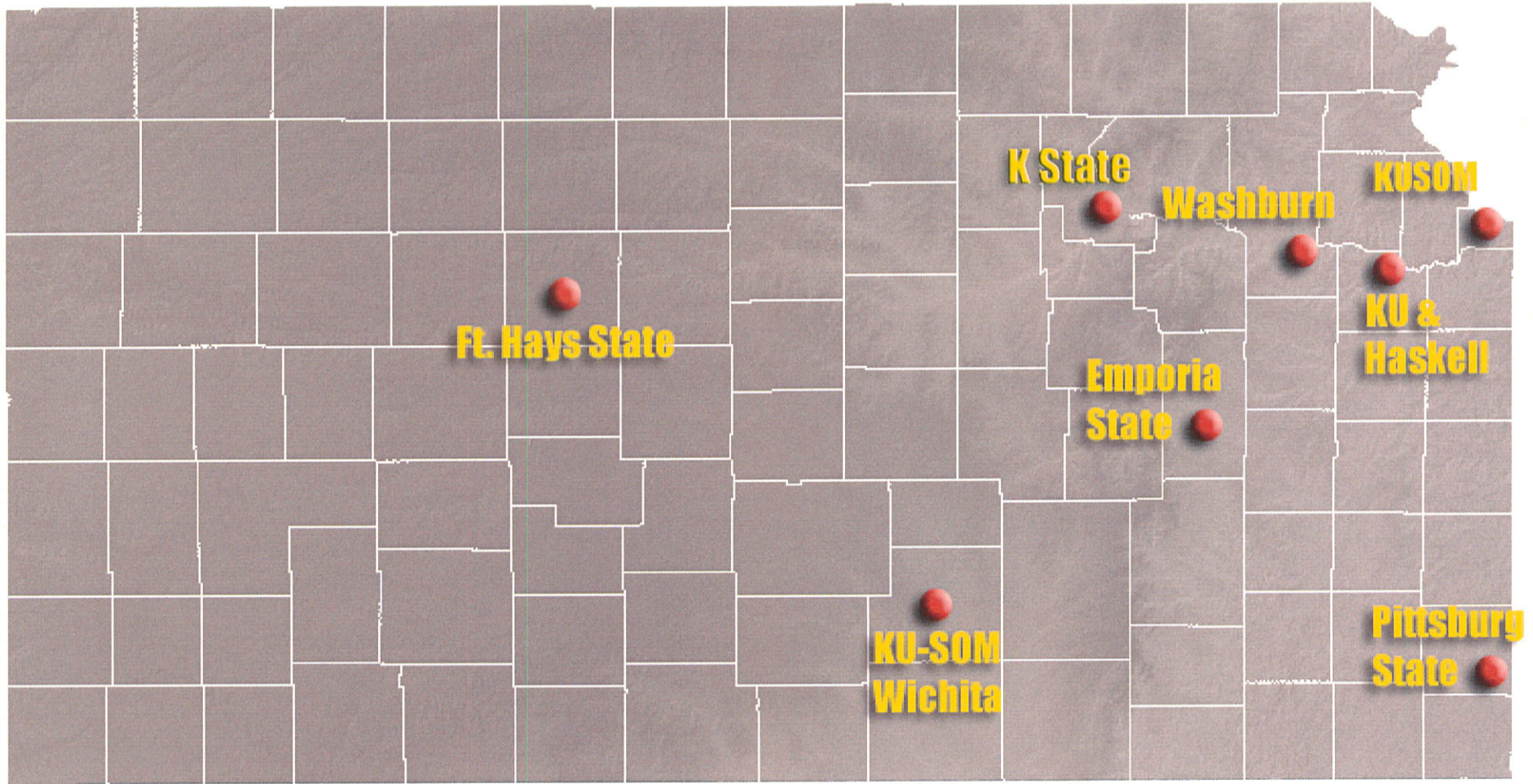
Topeka, Stormont-Vail Hospital, address1, Topeka, KS, Zip, Theresa Clark, (785) 354-5381, FAX (785) 354-5381

Wichita, Center for Health and Wellness, 2707 E. 21st Street, Wichita, KS 67214, Larry Bush, (316) 691-0249, FAX (316) 691-0569

Wichita, University of Kansas School of Medicine, 1010 North Kansas, Wichita KS 67214, Cheryl Freeman, (316) 293-2653, FAX (316) 293-1888

Wichita, Via Christi Hospital, St. Francis Campus, 929 N. St. Francis, Wichita, KS 67235, Phil Omenski, (316) 268-5187, FAX (316) 268-8694

Kansas Biomedical Research Infrastructure Network (KBRIN)



KBRIN promotes and mentors life sciences research across the state. The NIH-funded program, which links KU to other Kansas universities, fosters biomedical research, connects Kansas researchers and creates a bioinformatics network for all campuses.

HOUSE ECONOMIC DEVELOPMENT COMMITTEE
REPRESENTATIVE KENNY WILK, CHAIRMAN

10 FEBRUARY 2004

STATEMENT BY R.W. TREWYN
KANSAS STATE UNIVERSITY
VICE PROVOST FOR RESEARCH
DEAN OF THE GRADUATE SCHOOL
PRESIDENT OF THE KSU RESEARCH FOUNDATION

Mr. Chairman and members of the committee, thank you for the opportunity to provide a few brief comments regarding the *Kansas Economic Growth Act*. First and foremost, let me say it offers exceptional prospects for enhancing the economic future of all Kansans.

Kansas was not a significant participant in the first wave of the biotechnology revolution that focused predominantly on human health innovations in the 1980s. That entrepreneurial transformation was spawned on the west coast and spread to the east coast, but the states in between were bypassed for the most part.

The *Kansas Economic Growth Act* provides the opportunity for Kansans statewide to benefit and prosper in the new millennium's bioscience/biotechnology evolution. It builds on the state's agricultural bioscience roots as well as the Kansas City area life sciences initiative. It provides an opportunity for the research universities in Kansas to be more competitive nationally and internationally. All of these things bode well for the economy in Kansas ... diversifying, solidifying, and magnifying the financial base.

Kansas State University can help facilitate the economic growth in Kansas. During the past decade and a half, K-State has made huge strides in research, moving from less than \$20 million in annual research awards to \$100 million. Bringing federal research dollars back to Kansas, in and of itself, has positive economic outcomes: a significant portion of the research funding goes into personnel — it creates jobs. As a land-grant university, most of the research at K-State is also applied in nature — the products of research are designed to solve real-world problems. For example, new wheat varieties are developed that provide increased crop yields for Kansas' farmers, thereby enhancing family income and the Kansas economy. The list of such benefits is long and diverse.

But, how will the *Kansas Economic Growth Act* impact research, graduate education, and technology transfer at K-State, areas for which I have some level of responsibility? Tremendously! And that's true across the board.

With regard to research, the eminent scholars and rising stars will enhance the stature and breadth of bioscience research at K-State significantly. Our greatest limitation in taking research to the next level (doubling/tripling the competitive awards) is the need for more faculty scientists. Infusing a critical mass of current and soon-to-be bioscience superstars will provide a step-function increase in research output. The bottom line: the payback to Kansas will be measured in the near-term for once — in years, not decades.

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Attachment 5

Can we succeed in bringing the cream of the crop to Kansas? Absolutely! We recently hired Dr. David Franz to lead the National Agricultural Biosecurity Center at K-State. The hiring was done jointly with the Midwest Research Institute. Dr. Franz is a world-renowned authority on public health and biodefense who serves on multiple committees of the National Academy of Sciences. Dr. Franz joins his illustrious Army colleagues at K-State, Drs. Jerry and Nancy Jaax. What these three experts bring to our biosecurity efforts, the eminent scholars and rising stars will bring to our bioscience research efforts.

The second greatest challenge in taking research to the next level at K-State is the shortage of research support personnel — postdoctoral researchers, graduate students, and laboratory technicians. Technically proficient human resources are in high demand nationally and internationally; they're expensive as well. A critical mass of eminent scholars and rising stars will serve as a magnet to attract the numbers needed, starting with graduate students who want a broad-based, high-quality pool of faculty scientists from which to select a research mentor. The importance this plays in attracting the very best graduate students and postdoctoral researchers cannot be overstated. Additionally, it helps attract the best and brightest undergraduates.

And how will these research and human resource outcomes at Kansas State University impact the Kansas economy? Positively and extensively!

The generation of intellectual property (patentable inventions and the like) correlates directly to the extramural funding base at a research university — the greater the research funding, the more inventions that result. Therefore, a step-function increase in extramural awards should automatically increase the number of patent disclosures that ensue. Moreover, the eminent scholars and rising stars should be selected, at least in part, for their track record in creating intellectual property of commercial value.

Patentable inventions can lead to the generation of revenues from traditional licensing agreements with major corporations or less traditional licensing to local start-up companies. My responsibilities for technology transfer for the past decade have convinced me that the latter (licensing to local start-ups) provides the greatest opportunity for K-State to generate substantial revenues. In addition, local start-up ventures provide the greatest opportunity for Kansas to benefit economically. Notably, the infrastructure necessary to facilitate these entrepreneurial activities is already in place.

By hiring eminent scholars and rising stars with an interest in seeing the products of their research commercialized, the *Kansas Economic Growth Act* can move the Kansas economy forward expeditiously. An integrated research and economic development program will help diversify and grow the Kansas economy in a synergistic fashion.

University scientists with entrepreneurial interests launched the biotechnology revolution in California in the 1980s. The eminent scholars and rising stars can do the same thing in Kansas in the new millennium, leading the bioscience evolution with an expanded focus on plants, animals, and people. The state's economy will be the better for it ... east to west, north to south. Kansans will be able to take that to the bank.

House Economic Development Committee

Testimony on H.B.2647

Kansas Economic Growth Act

February 10, 2004

Kim A. Wilcox

Dean, Liberal Arts and Sciences

University of Kansas

It is indeed a pleasure to be here today and speak on behalf of a bill that is crucial to the state's future. I know that time is short, so I will use mine to share one example of the type of scientist that we are recruiting to Kansas and the challenges that we face in that recruitment process. Since the negotiations with this candidate are still underway, I will not use this scientist's name or that of his present university.

Senior Scientist at another research university and KU graduate

Bio-Analytical Chemist – assesses newly synthesized compounds to confirm their chemical composition, three-dimensional shape, and effectiveness

Collaborators – has initiated discussions with 13 potential faculty collaborators at KU beyond the Chemistry

(Molecular Biosciences–2, Engineering–5, Pharmacy-1, KUMC-5)

NOTE: A cadre of potential collaborators is a primary recruiting factor!

Anticipated Research Team – 5 post-doctoral researchers, 13 graduate research assistants

Federal Research Support – approx. \$5M

Costs

Salary and Fringe Benefits: \$120K + \$34K

(current salary: approx. 100K)

Laboratory Renovation: \$100K

Equipment: \$931K

Microfabrication Facility: \$692K

Continuing Costs: \$154K

One-Time Costs: \$1.7M

Impact

Central to Kansas' Life Science Initiative

University-wide impact on research and technology transfer

Exacerbation of space crisis on campus

Exacerbation of budget crisis on campus

Prognosis – Optimistic

This individual is one of 30 life scientists that we have recruited in the College of Liberal Arts and Sciences in the past two years. This senior scientist is consistent with the Eminent Scholars identified in the bill and provides an example of the resources needed to recruit such scholars to Kansas. Typically, junior faculty, or Rising Star Scholars, in molecular biosciences and chemistry command salaries of \$55,000 to \$65,000 and start-up costs of \$300K to \$600K.

House Economic Development
2-10-04
Attachment 6

Testimony

Kansas House Committee on Economic Development

February 10, 2004

Thank you Mr. Chairman and members of the House Committee on Economic Development. My name is Dr. Zoran Petrovic, and I am the Research Director for the Kansas Polymer Research Center at Pittsburg State University. The Kansas Polymer Research Center (KPRC) is part of Pittsburg State University's Business and Technology Institute, which is a Kansas Technology Enterprise Corporation Center of Excellence. Today, KPRC has 11 researchers, 17 research and 2 applications labs, and the best research equipment for polymer research in several surrounding states.

I appreciate the opportunity to testify today in support of House Bill 2647 — the Kansas Economic Growth Act's Bioscience Initiative. As a bioscience researcher focused on developing new environmentally-sound polymers from plant materials, I can see the importance of the investment Kansas will make in the research to commercialization process if the Kansas Economic Growth Act passes.

For the past decade, the KPRC has become a leader in bioscience research through its partnership with industry and the U.S. Department of Energy to develop bio-based polymers. Our research is transforming soybeans into polymers like polyurethane, which can replace the use of petroleum products in their production. Polyurethane is a versatile material used to make foam, plastic, fiber, film, coatings, inks, adhesives, sealants and many other

House Economic Development
2-10-04

Attachment '7

products. The principal industries in which it is used are furnishings, construction, and transportation.

Three years ago, our leadership position helped us to develop a very promising partnership with Cargill, the world's leader in merchandising, processing, and distributing agricultural and other essential products and services. Cargill now provides significant funding for the KPRC and together we have developed a number of soy-based polymer products that are ready for manufacturing. Our work with Cargill is an excellent example of how academia and industry can work together to create innovative bioscience products that will benefit the consumer and the environment.

The KPRC is making a significant contribution to the biosciences with our research discoveries and their commercial potential, but we continue to face many challenges that limit our progress and the contribution we could make to the state. The proposed Kansas Economic Growth Act's Bioscience Initiative would bring down many of the barriers we face and help to ensure the success of research institutions like ours.

In particular, the proposed BioAuthority program for attracting eminent and rising star scholars to the state would allow KPRC to reach new heights. We are interested in attracting world-class researchers to complement and extend our research capabilities. We are currently trying to recruit an eminent scholar by the name of Dr. Mihail Ionescu from Romania, a world-class chemist and the Scientific Director of Center of Chemical Research—Bucharest (ICECHIM). The BioAuthority's proposed eminent scholar program would be an ideal way to build the necessary funding to attract such

a world-class scholar and help stabilize the research staff at KPRC. We are currently experiencing significant turnover in our research staff and more stable funding sources would help us to keep the most promising researchers and continue to conduct superior research.

While we have achieved strong success through our endeavors and partnerships to date, we have done so in less than ideal facilities. We currently occupy an old dormitory on the campus of Pittsburg State University that is ill suited for conversion to laboratory space. Our research requires us to work with dangerous gases at extremely high pressures and with heavy equipment that are not compatible with our surroundings and the requirements for safety. KPRC would benefit greatly from the Bioscience Initiative's proposed programs that would fund new state-of-the-art research facilities in the state.

The research being conducted at KPRC is a strong candidate for significant federal funding opportunities with federal agencies like the U.S. Department of Agriculture and Department of Energy. With added access to matching funds for federal grants, the work we are doing to turn soybeans into industrial polymers could be further enhanced.

Our bio-materials research is an applied area in the biosciences, which means our work is more easily and quickly commercialized than research conducted in the more traditional human pharmaceutical and crop sciences. We currently have several new applications of our research that have opportunities to enter into several markets from auto products to flexible and rigid forms, to coatings and adhesives. Even if our soy-based polymers only

capture a small fraction of the market, it will still mean hundreds of millions of dollars in economic benefit to the companies and communities involved.

The Bioscience Initiative's proposed incentives to the bioscience industry will be very important to our industry partners. Access to the proposed Research and Development Voucher Program will give the bioscience industry more incentives to do research with KPRC. The proposed Bioscience Development District program will ensure that our industry partners have the proper incentives to manufacture our jointly developed projects in Kansas. With these commercialization investments, we ensure that companies, like our partner Cargill, have more incentives to work with the bioscience researchers at our state universities and that the fruits of our joint labor bring jobs to Kansas.

The Kansas Economic Growth Act's Bioscience Initiative is an important investment by the state of Kansas. We have all the elements of an outstanding bioscience research base in our state. Now it is time to accelerate the state's investment to ensure that the state's research institutions like KPRC can reach their potential for driving important advances in the biosciences, commercialize our discoveries with industry leaders, and ensure that the resulting jobs go to Kansans.

Testimony
Kansas House Committee on Economic Development
February 10, 2004

Thank you Mr. Chairman and members of the House Committee on Economic Development for the opportunity to submit testimony in support of House Bill 2647 — The Kansas Economic Growth Act's Bioscience Initiative. My name is Jim Stoppert, and I serve as the senior director of industrial bioproducts development for Cargill Incorporated.

Cargill is an international marketer, processor, and distributor of agricultural, food, financial, and industrial products and services. Our company is a global player in the agricultural side of the bioscience industry. Of the 100,000 people Cargill employs in 60 countries, about 4,000 jobs are located in Kansas, including about 50 at our Wichita-based soybean crushing plant.

In addition to Cargill's operations in 21 communities across the state, scientists from Cargill are also conducting joint research with the Kansas Polymer Research Center at Pittsburg State University on the development of soy-based polyols for the urethane industry. Our research is an excellent example of the potential industrial and environmental applications of the biosciences, as well as a successful research partnership between academia and industry. In our joint research, we are developing soybean-based polyurethane, which is a versatile bio-based material used to replace the use of petroleum products in the manufacturing of foam, plastic, fiber, film, coatings, inks, adhesives, sealants, and many other products.

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There is a growing need for more sustainable, renewable, and low-cost raw material options in the industrial marketplace. We believe derivatives of agricultural commodities can fill many needs of the industrial market and contribute to the success of the bioscience industry. As a leading processor of agricultural products, we have access to a sizeable renewable materials feedstock, some of which is produced by Kansas growers.

The research alliance with the Kansas Polymer Research Center is part of a larger Cargill industrial bio-products initiative to accelerate development of industrial products from annually renewable resources, such as soybeans. The potential for the industrial bio-products market is substantial, but will take many years to develop. By some estimates, as much as two-thirds of the \$1.5 trillion global industrial chemicals and plastics business could potentially be served by bio-based renewable feedstocks.

The Kansas Economic Growth Act's Bioscience Initiative is an important commitment by the State of Kansas to grow and support its bioscience research base and industry. Such a commitment sends a signal to bioscience companies like Cargill that Kansas is a great place to consider for expanding existing and locating new operations. Cargill's industrial bio-products program is a long-term initiative that requires a long-term commitment. Cargill is looking for this same commitment from our research and commercial partners as well as the states in which we locate our operations.

Cargill's decision to partner with the Kansas Polymer Research Center was largely based on the research of the Director, Dr. Zoran Petrovic, and his team. The proposed investments in the eminent and rising star scholars at the state's universities will provide access to more world-class researchers like Dr. Petrovic. In addition, the proposed bioscience development district program will help companies like Cargill offset the costs of building new manufacturing facilities to commercialize the joint research conducted with academic partners. Kansas' investment in the biosciences will also help ensure that bioscience companies like Cargill have access to high-quality, highly-educated workers. All of these aspects of the Kansas Economic Growth Act will help bioscience companies like Cargill conduct the business of bioscience in a more cost-effective and supportive business climate.

For almost 140 years, Cargill has been finding markets for the products farmers grow. The company has always looked to future developments in areas like the biosciences to sustain our growth. We are encouraged by the developments in Kansas to support the bioscience industry and the state's academic institutions.

Mr. Chairman and members of the committee,

My name is Jesse Shaver. I am here today to speak in strong support of the Kansas Economic Growth Act, and specifically, the Kansas Bioscience Initiative.

I would like to tell you a little of my story. In an anecdotal way, I hope I can demonstrate the potential of this initiative.

I was born in western Kansas and lived on a small family farm in Sherman County until the age of five, when my family moved to Ellis County in the mid-1980's. I grew up in a tiny town called Schoenchen, south of Hays, where I attended grade school. I attended high school in Hays, and also college, at Fort Hays State University.

I would like to point out that the State of Kansas and her taxpayers have already made a tremendous investment in my public education, and I intend to pay it back with a productive career and a needed service, as best I can.

If you get the sense that I miss Kansas, you are right. I have been away for some time. After college, my studies brought me to Vanderbilt University School of Medicine in Nashville, Tennessee.

There, I am studying medicine, and I am also studying to be a scientist at the same time. Over the past two and a half years, I have learned a lot about what it means to be a medical scientist, and also, some of what it can mean to our future economy.

As I am sure you have all read, bioscience is an explosive sector of the economy. With all the talk about "exponential growth rates" and numbers in the billions, it is as if even the economists have adopted the language of the microbiologists, describing a teeming colony of growth, productivity, and efficiency. Most of all, the language that resonates between the two fields is the language of life itself.

During the summer between my first and second year of medical school, I invented something, a tool that a doctor can use to measure the thickness of a person's cornea. Why in the world would someone need to do that? Well, new studies indicate that knowing the corneal thickness can help a doctor to diagnose glaucoma, a disease that has caused blindness in 120,000 of the three million Americans who have it. In other words, this is a biomedical instrument, a product, that 17,000 ophthalmologists and 40,000 optometrists may eventually use every day in the care of their patients.

Glaucoma is something that costs our society a great deal. In addition to the human costs of glaucoma - the suffering and the disability - there are financial costs as well. The National Eye Health Education program has placed the US government's costs due to open-angle glaucoma at over \$1.5 billion annually, representing Social Security benefits, lost income tax revenues, and health care expenditures. That is the cost of one particular affliction of the eye. I imagine that, as legislators, hearing about an annual cost of \$1.5 billion makes your ears hurt too.

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It turns out that blindness from glaucoma can be prevented with the right medication, but the doctor has to know which people are at risk to in order to prescribe that medication properly. The new clinical evidence shows that to do this right, the thickness of the cornea must be known accurately.

I knew that my invention could potentially do a lot of good, and also, that it would be a lot of hard work to make it a reality, so I did what inventors do when they reach that point. I filed a patent application. A patent is a key part of this whole story, because it is what makes the real work of taking a concept and making something useful worth all the effort. And it is a lot of effort, but things are set up so that the effort is rewarded.

The next part of the process was getting organized, so I found a company that deals with this area of medical technology. How do you find a company like that? I will admit, I got lucky, but one way to do it is to dial random telephone numbers in the 919 area code.

That is a bit of an exaggeration, but not by much. The area code is in the Raleigh-Durham area of North Carolina, the famous Research Triangle. I know that area code because that's where my older sister and my brother-in-law live. Both Kansas natives and graduates of K-State, she is a pharmaceutical chemist and he is an electrical engineer. When I go to visit them in the technology corridor, I am always amazed by the growth, the new construction, and the dynamic, resilient economy. It is a sight to see.

I did indeed find a small company that I was comfortable doing business with, and we began planning the early stages of making the idea a reality. With the skills of the company team, including physicians, scientists, and entrepreneurial businessmen, we charted a course.

I approached the director of ophthalmic research at Vanderbilt, and proposed a research plan to be conducted at the university. I wrote an R21 grant to the NIH, the federal entity that funds such human health-related research to the tune of several billion dollars every year.

For the moment, consider the direct economic impact of the research process itself.

I just turned 25 years old in January. I am still a full-time student. And yet, with my side project, this invention, I wrote a grant that brings over \$360,000 to my university to fund research on this device. Through this effective competition for federal research dollars, I am paying a significant portion of the salaries of a few of my professors – but I swear, they grade my papers even tougher now than before! Even still, a little idea has already made a difference to the operating budget of the university. Prominent researchers typically bring much more than that to their institutions every year, on the order of several million each. The bottom line is, federally-funded research is one area where Kansas needs to become more competitive, and I believe it can.

But research is really just the first part of the economic impact of biological science. A product needs a company. If this invention proves to meet a medical need that exists, then a whole new story begins. A story with production facilities, and salespeople, and further research and development. A story with profits that are reinvested, perhaps in a similar endeavor, or perhaps in a totally new business. This is the real story of spin-offs, and this is the real meaning of ripple effects. This is technology transfer – moving ideas from the world of research into our economy. There is no reason that this company couldn't be based anywhere in Kansas.

Bioscience is truly amazing. Human ingenuity combines technical skill with the gifts of nature to improve the quality of life. And quality of life is always in demand.

What does it take for the seeds of ideas to grow? It takes a rich soil of research infrastructure. It takes well-written policies to smooth the path between a discovery in a lab and a product on the market. It takes a well-educated work force, something that Kansas already pays a lot of money for. Graduates of our state universities, like myself and my sister and brother-in-law, leave the state of Kansas far too often for technologically and economically greener pastures. This outflow must be addressed through strong leadership and thoughtful policymaking.

The case for action is clear enough, but what about the plan of action? Will it do the trick?

In a lot of ways, Kansas finds itself in a very favorable position. Enormous investments have already been made, and colossal infrastructures have already been built. Our strengths across the spectrum of biosciences are indeed remarkable, and something that our people can be proud of. Our children emerge from the system of education with strong foundations, ready to become a well-trained workforce. This is true, indeed, sometimes so much so that our local industry cannot fully utilize them. And the pioneer spirit is still present in the citizens of Kansas. That isn't just something they told us in Kansas history class. The pioneer spirit is real.

Vanderbilt University, a prominent research institution, boasts exactly two Nobel Prize winners – both in the area of medicine – and one of them was a proud Kansan, Earl Wilbur Sutherland Jr., a native of Burlingame, and graduate of Washburn University.

Another, perhaps less obvious advantage that Kansas has in the task set before us is the fact that our university research infrastructure is not yet a behemoth on the national stage.

Because of this, the legislative policies that you enact, especially with regard to those that facilitate the transfer of technology from research institution to the private sector, can be designed without the difficulties of powerful entrenched interests and with the benefit of hindsight. We can build our system of technology transfer right, from the ground up.

By this, I mean that Kansas can take advantage of all the experience gained from other efforts in other places, and implement the best parts. We also have the freedom and flexibility to design something truly new, something that has never been possible before. We can be innovative where innovation counts most.

The plan that has been presented is innovative, to be sure. One key feature of this plan is the creation of an independent authority for resource allocation. This is a fundamental improvement to the technology transfer process. In the modern research enterprise, technology transfer is often impeded by competing interests that are found in a typical research university setting. There is a balancing act, and technology transfer often loses out.

An independent authority will have the freedom to act in the larger economic interests of the state, and to direct research in a manner that is at once compatible with science, technology, and commerce. An independent authority will bring strategic planning and good business sense to the table, which will revolutionize the concept of public investment in bioscience as an engine of economic growth. To me, this new approach is what will set the Kansas effort ahead of the pack.

Our own Senator Dole helped to play an instrumental role in our national policy on technology transfer, with the Bayh-Dole Act of 1980. This visionary piece of legislation got the ball rolling for our national technology transfer policy. Your efforts hold the potential to redefine successful technology transfer and support of scientific innovation once again. The better these policies are crafted, the more results you will see.

In the year 2000, the Association of University Technology Managers conducted a national study of the impacts of technology transfer from academia to industry. In that study year, more than 450 new companies were started to commercialize academic research, and 80% of these new companies were located in the same state as the university. Support of research in Kansas will benefit the Kansas economy.

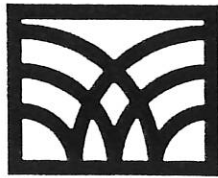
The time has come for bold leadership in this area. I am a young man, and I've just shared a little of my first-hand experience.

My pharmacology professor, Dr. Joe Awad, gave this pearl of wisdom to our medical school class: "It is seldom advisable to be the very first person to take a new drug, just as it is seldom advisable to be the last person to take it."

I think that we should take the doctor's advice, and not be the last state to embrace this area of the economy. I know that \$500 million is not an easy pill to swallow in any budget, but it really is for our own good as a state.

Hopefully, when I finish my training in a few years, I will return to a Kansas that is as economically vibrant and productive as I know it can be. Kansas is ready.

Thank you very much.



OVERLAND PARK

CHAMBER OF COMMERCE

TO: Representative Kenny Wilk, Chairman
Members, House Economic Development Committee

FROM: Wes Ashton, Director of Government Relations
Overland Park Chamber of Commerce

DATE: February 10, 2004

RE: **HB 2647- Bioscience authority and development act.**

The Overland Park Chamber of Commerce would like to express its support for the concepts embodied in HB 2647, which is a component of the Kansas Economic Growth Act. We believe this is critical legislation that can help set the economy on the right track for the future of Kansas.

The Overland Park Chamber has recognized the potential growth in the bioscience field, as well as the need to develop and grow new sectors of the Kansas economy. Kansas is in a unique situation to be among the national leaders in a growing field that will soon be a significant portion of the GDP. The Overland Park Chamber of Commerce has listed the expansion of biosciences in Kansas as a Top Priority for the 2004 Legislative session, and encourages this committee to pass this legislation for the benefit of all Kansans.

Although the bioscience sector is unclear to many Kansans today, the Overland Park Chamber believes that it has already begun to be a factor in the Kansas economy and will continue to grow. Currently, there are over 160 bioscience companies in Kansas employing over 10,000 people. Almost half of these companies and over half of the employees are located in Johnson County. There are twenty bioscience companies in Overland Park.

Establishing the Kansas Bioscience Authority is the first step to place Kansas as a leader in this growing sector of the economy. Setting a goal to attract and recruit eminent scholars to relocate to Kansas will not be without challenges, but is a goal that the Overland Park Chamber believes in and will help to succeed. We believe that the Overland Park area will be able to help attract eminent scholars to Kansas due to the high quality of life.

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The Overland Park Chamber believes that the plan set forth in HB 2647 will have a significant impact on the Kansas economy in the coming years. This will send an important message to our citizen's as well as the national sector that Kansas is poised and ready to play a role in this industry and grow our economy. While assistance from private institutions will be needed to ensure its success, this committee and this Legislature can begin the process by laying out the tools that business will need.

For all the foregoing reasons, the Overland Park Chamber of Commerce encourages the committee to consider HB 2647 favorably for passage. Thank you for your time and attention to this issue.

If you would like additional information, please call 913-491-3600 or at *washon@opks.org*.



The Historic Lackman-Thompson Estate

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TO: Representative Kenny Wilk, Chairman
Members, House Economic Development Committee

FROM: Blake Schreck, President
Lenexa Chamber of Commerce

DATE: February 10, 2004

RE: **HB 2647—Kansas Bioscience Authority and
Development Act**

The Lenexa Chamber of Commerce would like to express its strong support for the concepts embodied in House Bill (HB) 2647, which would create a new statewide bioscience authority, fund new programs that support bioscience research and development, enhance bioscience commercialization infrastructure, and provide incentives to encourage bioscience companies to locate and expand operations in Kansas.

The emerging bioscience industry is already an important contributor to the Kansas economy. Kansas received more than \$140 million in federal bioscience research and development funds in FY 2000 – 30th among all states. By January 2004, more than 20,000 Kansans held bioscience-related jobs, employed either as researchers and support staff at the state's universities or as researchers, management, technicians, and support staff at one of more than 160 bioscience companies currently operating in Kansas (33 of which are located in the City of Lenexa – 1 in every 5 bioscience companies in the state.) In addition to these jobs, which often pay substantially higher salaries than positions with similar educational backgrounds in other academic fields, bioscience companies also add to the state's tax base and provide significant capital investment.

The movement to further develop bioscience technology is rapidly accelerating nationwide. In June 2002, the Brookings Institute found that biotechnology companies have grown an average of 12.3% annually, and many forecasters are predicting that bioscience will become a major focus of the U.S. economy in coming years. **Recognizing its economic value and significant growth potential, a number of states are already taking steps to ensure their ability to effectively compete for future bioscience-related opportunities.**

To cultivate the strengths that make our state a natural fit for bioscience work and to remain a forerunner in the race to attract this important economic sector, the State of Kansas must demonstrate its serious commitment to creating a supportive

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environment for the biosciences industry. By improving the technical and human infrastructure necessary to promote development and commercialization of bioscience products and services, we believe HB 2647 would send a strong pro-business message and substantially raise Kansas's competitive position in attracting unique bioscience-related opportunities across the state.

If implemented, the 10-year plan envisioned by HB 2647 would provide the strategic funds necessary to assist key stakeholders in sharing resources and information, attract additional federal research funding, provide needed lab facilities and equipment, encourage project collaboration, facilitate the transfer of technology from research to commercial products and services, provide business assistance to start-up companies, and create incentives to recruit more bioscience-related businesses to Kansas -- **investments that will encourage new economic growth, new businesses, new jobs, and new opportunities statewide.**

These opportunities include a real chance for the Kansas City metropolitan area to expand its existing bioscience facilities and continue to build its reputation as a leader in bioscience research. In fact, just today the Stowers Institute for Medical Research announced plans to build a second campus, a 600,000 sq. ft. addition employing 225 people with an estimated economic impact of \$1.5 billion. Richard Brown, co-chairman of the Institute, said the decision to expand came as a direct result of efforts by civic leaders and lawmakers to push proposals to strengthen bioscience research. The proposals in HB 2647 are already paying dividends.

Because it would allow all communities in Kansas the opportunity to pursue significant projects that would positively impact the state and improve the quality of life of its citizens, the Lenexa Chamber of Commerce strongly urges the committee to consider HB 2647 favorable for passage. Thank you for your time and attention to this issue.