Approved: March 26, 2004
Date

MINUTES OF THE SENATE COMMERCE COMMITTEE

The meeting was called to order by Chairperson Karin Brownlee at 8:30 a.m. on March 12, 2004 in Room 123-S of the Capitol.

All members were present except:
Senator Jay Emler- excused
Senator Pete Brungardt- excused
Senator Susan Wagle- excused

Committee staff present:
Kathie Sparks, Legislative Research
Susan Kannarr, Legislative Research
Helen Pedigo, Revisor of Statutes
Nikki Kraus, Committee Secretary

Conferees appearing before the committee:
Clay Blair III
Thomas S. Harvath, Associate Principle for Science Technology, Cannon Design Group
Jesse Shaver, Student, Vanderbilt University School of Medicine

Others attending:
See Attached List.

Chairperson Brownlee continued the hearing on:

Sub HB 2647--An act concerning bioscience; creating a Kansas bioscience authority and providing for the powers and duties thereof; providing for bioscience development and funding

Mr. Blair presented testimony in favor of the bill. (Attachment 1) He stated that intellectual property is valuable, but it should be driven by marketing, and take into consideration its acceptance in the marketplace. He said it is not enough to just do research; we need to be able to commercialize it and have it ultimately lead to income and taxes from applied science that will go to our state. He said that this bill seeks to integrate the training from our universities with business professionals. Mr. Blair went on to say that researchers at our university submit grants to large bureaucratic organizations, and funding largely comes from the idea of research for the sake of research rather than that of economic viability. He stated that this bill will help to fund research that will result in economic viability. Mr. Blair stated that the intellectual cream of the Kansas crop is being swept away to the East or West coast as successful students take their skills and Kansas' investment in their education with them. He said that it is one thing to generate an idea in Kansas, but another thing to have an environment that allows these ideas to be commercialized; if skills and ideas are not put to use in Kansas, they will go elsewhere.

Mr. Harvath presented testimony in favor of the bill. (Attachment 2) He stated that in the field of science and technology, successful projects are program driven, meaning that there is first the idea, then facilities to develop that idea. He pointed out recent examples of research facilities that have received millions of dollars in research funding. He emphasized that success stories are based on innovation and entrepreneurs, including a skilled, educated workforce and available facilities in business friendly environment. At the Illinois Institute of Technology, the facility changes involved the renovation of 2 existing warehouse buildings; their target for next year is 50 million dollars of research funding. Mr. Harvath made recommendations to the committee of particularly viable and expanding scientific areas of research and development. He concluded by stating that it would be important to focus on interdisciplinary approaches, as well as public and private industry collaboration; Kansas must build on existing strengths and making itself a location that will attract and retain those high-skill professionals, as well as growing them here.

Mr. Blair stated that there are currently two worlds: entrepreneurship and academics. He said that each world looks at the other with some confusion, academics often looking down at applied research, and entrepreneurs who see developments they would like to market. He stated that our challenge would be how to marry these

two interests. Mr. Blair then introduced Mr. Shaver.

Mr. Shaver presented testimony in favor of the bill. (Attachment 3) Mr. Shaver detailed his unique biography to the committee ranging from a childhood in a small Kansas town to medical school at Vanderbilt University where he is currently, and has developed and patented a unique medical device. He stated that federally funded research is an area in which Kansas needs to become more competitive. He stated that the bioscience authority would be able to reallocate funds to technology transfer; this is a balancing act, but an independent authority would be able to act in a way that could bring strategic planning to the table, and this new approach will help Kansas be ahead of the pack. He stated that small businesses create jobs and wealth, and that it would be crucial to leverage the expertise of our entrepreneurs and use collaborative research as a tie between business and academic facilities. Although grants are great, they are a trickle compared to what is out there from job creation.

Chairperson Brownlee noted that Mr. Shaver had a perfect score on the SAT.

Senator Kerr stated that he noticed that Mr. Shaver was strongly endorsing the bioscience authority versus working through the universities, and he would like more information on that. Mr. Shaver stated that he was once the student body president at Ft. Hays University, and through that position, he interacted with the University system and got a taste of how complex that is. He stated that a university can be a hole in the ground where you throw money, but if the economic potential there is optimized, it would be possible to utilize the success of our own graduates. To make the most of the limited resources available, we can't expect money to just fall out of the education system. He stated that the educational system in Kansas is working so well that students have to leave the state to find work. He concluded by saying that if you charge the university system with the responsibility of the Bioscience Authority, it could get lost in the shuffle.

Senator Kerr stated that it is a unique individual who is both a top flight researcher and entrepreneur, and asked if it isn't our need to help people who can develop those products connect with those who have the ability/expertise to exploit the work of the researcher. Mr. Shaver agreed, stating that he understood from his own experience that he is not an expert in all areas; in a lot of academic environments, they turn up their noses at practical or applied research, acting as if it is somehow tainted if it is practical, and that idea burns him. He stated that this kind of research should not be something that is looked down upon, and that a cultural change can happen. He stated that it would be great to keep our own graduates, but if the state succeeded in making an environment like that, then creative people from all over the country will come here.

Chairperson Brownlee commented that we have compartmentalized our society so that pieces like these do not work together. Mr. Shaver called this a silo mentality and said that while government may touch upon it, academics have perfected it.

Senator Steineger asked for further elaboration on Mr. Shaver's comment about colossal infrastructures in the state. Mr. Shaver replied with an example of crop tracking and hybrid tracking as a technology that has already been implemented in Kansas while other states have had real trouble with such a system. He stated that in a hypothetical example of crop that might produce insulin for diabetics, this system would be great to assure crop purity for production. He stated that another example is the K-12 education system and the university system in Kansas; at the end of these processes, students are ready and prepared to move on, but they have to go elsewhere to find those high end jobs for which they are qualified. He stated that Kansas needs to light a match at the end to start the fire of economic development.

Senator Steineger questioned the creation of a new authority that is large and very powerful and dealing with a lot of money. He stated that while there may be qualified people with the best intentions at first in this position at first, he wondered if five or ten years form now, when the new has worn off, if perhaps the money may be siphoned off into other areas. He concluded by asking how can we make sure that money gets into classrooms and research rooms.

Mr. Blair stated that originally, he thought that this bill had a brick and mortar orientation, but he had since learned that this should be program driven. He stated that brick and mortar can be something done later, but the initial attitudes will set the tone for the future. He stated that what motivates the people they are trying

to recruit is different than what motivates ordinary people. He stated that Kansas may not need all of that brick and mortar, but, rather, just focus on getting good minds to sit and collaborate.

Senator Steineger stated that he just wanted to be sure we concentrate on gray matter, not concrete.

In reference to discussion of the Stowers Institute, Mr. Blair stated that it was a project specific facility, and, while that is an option, there are others out there.

The committee discussed the outflow of Kansas students to universities and jobs out of state.

Senator Jordan stated that he wanted to keep in mind that the intent of this bill would be to create a new industry in the state. He stated that this is an opportunity for the sate, and the goal would be for the infrastructure to drive the industry's development without micro-managing. Attracting eminent scholars and rising stars is the driving force.

Chairperson Brownlee stated that they did not want to get caught up in what was said before and what had just been said, but Kansas would need every piston firing to succeed, and it would be important not to get stuck on who is getting to do what, or, as Mr. Shaver explained, we may get so mired down that we do not get to move forward.

The meeting adjourned at 9:30 a.m. The next meeting will be at 8:15 a.m. on March 13, 2004 in Room 123-S of the Capitol.

Senate Commerce Committee
Guest List

Date: March 12, 2004

Clay Blair III	
Thomas S. Haivath	Cannon Design
Jesse Shaver	

Testimony to the Senate Commerce Committee

Clay Blair III

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March 12, 2004

I am pleased to speak to you about the Kansas Economic Growth Act. My comments will be brief since I have two guests who will speak directly from their experience and expertise to what the opportunities might be for Kansas in the arena of research and commercialization.

As some of you might know, I worked hard to gain passage of the Regents Research Enhancement law that passed in this Senate two years ago. I now chair the Board that implements that law. We are building a 200,000 square foot research building at KU Medical Center, the Bio-Security Facility at K-State and the aviation research building at Wichita State. These were bold initiatives creating the issuance of $120M in construction bonds. To pay back these bonds, the state is paying the first five years and a percentage of the research grants earned by these 3 institutions is applied to pay the remaining 15 years. I speak from that experience and from my background chairing the Kansas Board of Regents as well as a career as an entrepreneur, investor and as student of start-up companies.

We have all heard that the economic face of America and Kansas is changing. The once smiling face of agriculture and industrialization is no longer center stage. These are commodity driven enterprises that are susceptible to relocation, weather and price competition. We also must compete with world markets where labor costs, environmental regulations, and currency can put us at a disadvantage. Our assets have become, in some measure, liabilities. Today we know the emerging opportunities are found in science, technology and information conveyances. These are knowledge driven and ever changing. Sometimes knowledge-driven enterprise is hard to comprehend yet we know that is where the action is!

Intellectual property is now seen as having great value. It's value, however, is driven by the capacity of its owners to optimize a business plan driven by marketing and financial expertise and acceptance in the market place, not just "pure research" for its own sake. This legislation is unique in that it builds on pure research and seeks to optimize partnerships derived from relationships of skilled entrepreneurs and business people with scholars of science and technology. This bill seeks

to differentiate between "pure science" which is common in our universities and "applied science". I.E. Research that can ultimately lead to a commercialization that creates jobs and taxes. It potentially, if managed, integrates the scholarship of our universities and the training from our community colleges with sound business approaches that demand accountability and bottom-line results. I like this bill because it also creates opportunities for entrepreneurship in rural areas of the state and seeks to promote tourism opportunities. It would benefit the uniqueness of some of our treasured communities that are experiencing declining demographics.

In the normal course, researchers write scientific proposals and submit them to a large funding bureaucracy. Their scientific peers evaluate the proposal and accept or deny it based upon scientific merit, but with no consideration of its economic viability. In contrast, this system accepts and indeed actively identifies proposals based upon both the scientific merit and the commercialization potential. This is the difference between waiting for economic growth to happen and doing something to make it happen.

We are not leveraging one of our states core competencies. We are already spending tremendous sums of money on a quality K-12 and higher education system. Kansas has a good education system. Ironically, the cream of our crop are swept away to either the East coast or the West coast because their environments offer the most opportunity to utilize skills and knowledge that our young people learned in Kansas.

In summary, our successful students leave Kansas and take with them our substantial investment. By any measure, our Kansas education system represents a farm team for more innovative states in our nation that can provide more economic opportunities in the knowledge-based economy.

It is one thing to generate ideas in Kansas, but it is another thing to have an environment that allows ideas to become commercialized economic reality. We need the process to happen here, from start to finish. If our people can't put their skills and ideas to work in Kansas, they will put their skills and ideas to work somewhere else. If this is the case, what have we accomplished?

With all the uproar about education in Kansas, I speak to you as an ordinary parent and ask the question: Where would you choose to place your child or grandchild to be educated, in Kansas, or in the Boston public school system, or perhaps Los Angeles? I think we know the answer. The statistics bear out that Kansas can compete and our K-12 system is just as good as any system on the

east or west coast. The tragedy is after a great investment in our children's education, they leave the state, and thus we export one of our great assets.

I could go on and on, but when you mix business, academic knowledge and empower the entrepreneurship in us all - good things happen. Ordinary people with good ideas suddenly see the light and do extraordinary things. I'd now like to have you hear from one such individual.

Introduce Tom Harvath and Jesse Shaver.

...ments Regarding Proposed
Kansas Economic Growth Act
Substitute House Bill No. 2647

By:

Thomas S. Harvath, AIA
Associate Principal for Science & Technology
Cannon Design
St. Louis, Missouri

March 12, 2004

As a planner specializing in science and technology facilities design, a few recent headlines have caught my eye:

"University receives $10 million NIH Grant for Cancer Imaging Research"..."University researchers have (already) developed three new cancer drugs approved by the FDA for human use."

MU Life Sciences *Update* periodical, October 2003

"Alien Technologies (Company) recently landed $38 million in funding for its RFID (micro-electronic mechanical device) products."

Small Times magazine, August 2003

There are a multitude of articles like these in the newspapers and scientific publications every week. The profitable output of creative, well-educated and ambitious American minds combined with robust American technology can be staggering - it will continue to lead the world.

The 21st century's economic success story will be based on INNOVATION & ENTREPRENEURSHIP - facilitated by a strong academic and research base - good technology transfer mechanisms - a skilled, educated workforce, and available, affordable facilities - all within a business-friendly environment.

This is the future - that Kansas can and must participate in - and with good stewardship and wise decisions it doesn't cost that much - and it's money well spent.

- We're doing a really great project now for Illinois Institute of Technology where we are gutting and renovating two old buildings (one of them a warehouse structure) on campus for laboratories. The intriguing thing about this project is that they are adjacent to a third building that is University-owned that houses an entirely separate corporation doing $25-50 million a year in contract research. The two renovated buildings will be used for pure University research in Building One, and technology incubator labs for start-up commercial companies in Building Two. So these start-up companies will benefit from the example and assistance of University researchers on one side AND successful commercial researchers on the other side - all in one complex.

As an architect and planner, I cannot begin to address all the issues that spell success in building technology companies, but I did want to share my perspective on how a state such as Kansas might best target its resources to get a robust share of the 21st century economy.

We have seen that new, commercially viable technologies should build on existing strengths within the state and to succeed, there need to be certain core competencies represented.

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ı the state there should be identified Centers of expertise for the following core competencies, and the best Information Technology should be in place to link them to all major research centers in the rest of the state to create a collaborative, networked community of scholars and entrepreneurs, benefiting from these Centers of expertise. This listing is not meant to be all-inclusive nor exhaustively researched, but rather a reminder of some of the relevant competencies crucial to support contemporary science and technology initiatives.

Primary Centers

Secondary (& "Optional") Centers

The Centers are multi-disciplinary and collaborative. Each Center has primary importance to scientific disciplines that are key to technological advance in the state.

Centers: **Affect:**

Nanotechnology Center

Bioinformatics Center

Proteomics & Genomics Center

Advanced Imaging Centers

Plant and Animal Genetics Research & Transformation Center

questions to ask when considering potential recipients of funding support under the proposed Act:

1. What is the proposed investment recipient's relationship to emerging themes in science?
2. Is the core competency duplicated elsewhere in the state?
3. What are the opportunities for externally funded research or venture capital investment?
4. What is the plan for interdisciplinary, inter-institutional and public/private industry collaboration?
5. Does the proposed investment build on existing strengths?
6. Will its proposed location attract/retain high-quality researchers in the proposed scientific discipline?

Finally, I think about that last question - how do you attract the high-energy, high-creativity entrepreneurs to Kansas to drive the innovative and profitable technologies, products and services of the future?

Arguably, the most credible answer is this: "You grow them here." That is, you continue to also invest in the facilities and educational resources at primary, secondary and university levels to ensure that Kansas students have the opportunity to be "turned on to science" - like Jesse Shaver here. Invite these home-grown geniuses and entrepreneurs to stay here in Kansas and thrive-in a progressive, business-friendly and high quality of life environment.

Jesse Shaver
Testimony to the Senate Commerce Committee
March 12, 2004

Madam 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. The programs outlined in this initiative are, in my opinion, a great step forward for our state.

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 for 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.

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

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ıth Education program has placed the US government's costs due to open-angle glauc… at over $1.5 billion annually, representing Social Security benefits, lost income tax revenues, and health care expenditures. That is the cost of just one particular affliction of the eye. 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 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 help clinicians make a diagnosis, and also, that it would be a lot of hard work to make the idea 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 identified a company that deals with this area of medical technology. How do you find a company like that? I had some luck in the process, but I managed to find a company in the Raleigh-Durham area of North Carolina, the famous Research Triangle. I know that area 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 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. This is not a large grant for the NIH, but even still, a little idea has already made a difference to the research 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 the research enterprise itself 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-off's, 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

sas. We often think about the hard natural resources that have been so important to Ka s. Bioscience also makes real products - things you can hold in your hand - things that people need.

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 my sister and brother-in-law, leave the state of Kansas too often for technologically and economically greener pastures. This outflow must be addressed through strong leadership and thoughtful policymaking. The quality of our job market should match the caliber of our young, educated labor force, or they will continue to leave home.

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, and Kansans have been pioneers in science and industry throughout our state's history.

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. In my opinion, the Bioscience

ıority could re-write the book on technology transfer. One key feature of this plan is t. 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. I've also seen cases where, in the host of missions that a university carries, things just get lost in the shuffle.

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.

Both the Entrepreneurship portion and the Bioscience portion of this act offer a multi-pronged approach to invigorating our economy statewide.

The Center for Entrepreneurship, along with the Community Entrepreneurship Fund, will provide a jump-start for new businesses struggling with their first steps, and help to nurture them through the critical period.

The Downtown Redevelopment Act and Angel Investment Tax Credit Program will make it easier for successful Kansans to reinvest capital into the Kansas economy. These are people who have good business instincts, and it makes good sense for the state to try and make it easier for them to do what they do so well. We all know that small businesses create jobs, and create wealth. So much of the real trick to successful statewide economic development policy is getting action at the ground floor. These types of innovative programs allow the state of Kansas to leverage the expertise of our business community across the state, while allowing our entrepreneurs to flourish.

The Bioscience portion of the act is equally impressive. The Collaborative Research Incentive Programs will help to form strong and productive ties between businesses and our academic institutions. This is a critical area, because so much potential goes unrealized when ideas never make it out of the lab, or when critical problems from the real world go unaddressed. These programs will help to break down some of the barriers that have impeded efficient technology transfer, which is necessary for economic growth outside the research enterprise. The Technology Transfer Program will help make sure that we have enough intellectual property experts to smooth out the bumpy places in the road to commercialization of research findings. The Patent Donation Attraction Program also makes good sense. An idea is nothing if you don't put it to good use.

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

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. You don't need to re-invent the wheel, but with this initiative, you have a chance to.

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 Entrepreneurship portion and the Bioscience portion can work hand in hand to help expand the Bioscience sector in the Kansas economy, and also to help other sectors of the economy experience a renewal as well. So often, economic development policy is an afterthought tagged on to some other initiative. With this act, there is a dedicated authority, charged with a mission to foster economic growth as job one.

The time has come for bold leadership in this area. In my opinion, this package of initiatives was put together in a very unique way, because each portion is strong by itself, but taken together, they will have an even greater effect. There are leverage effects to help us make the most of our direct expenditures, our past investments, and our human expertise in business, science, and technology.

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.