



KANSAS BIOSCIENCE
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Bioscience Growth in Kansas

Rural and Urban Development

Federal Reserve Conference

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Partners in Bioscience Growth ●





What Is the Kansas Bioscience Authority?

- The Kansas Bioscience Authority (KBA) was created by the **Kansas Economic Growth Act of 2004** with the sole purpose of advancing Kansas' leadership in bioscience.
- We are **an independent entity** of the state, governed by an 11-member board of directors comprised of prominent local and national leaders in business, agriculture, finance and academia.
- Three major areas of investment
 - Research and Development
 - Commercialization
 - Expansion and Attraction





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Kansas Bioscience Authority Background

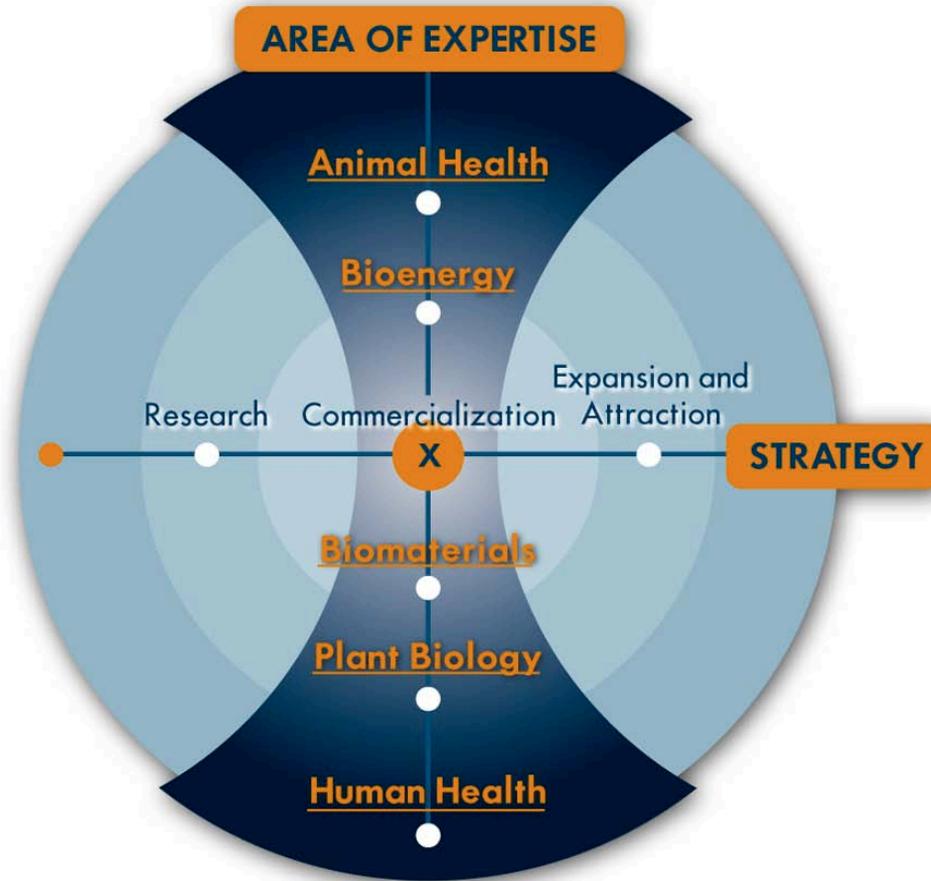
- The KBA is the state's largest-ever commitment to expanding Kansas' research capabilities, promoting innovation, and encouraging company formation that will create high-paying jobs for generations to come.
- The Kansas legislature has charged the authority with developing and managing specific programs to:
 - Expand federal R&D investment
 - Commercialize bioscience discoveries
 - Fund equipment and lab space for research





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Focusing on Kansas' Bioscience Strengths



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A Venture Fund Approach

- **Focus** in key clusters in which Kansas has the opportunity for national dominance.
- Make **game-changing** investments in disruptive technologies.
- Take a **highly evaluative** investment approach.
- Serve as a **strategic partner** to ensure success.
- Concentrate on investment **returns** such as increased federal R&D investment, venture capital investment, and job creation.





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A Look at Bioscience Opportunities for Rural and Urban Kansas

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Addressing Failure Factors in Rural Development

- Many rural communities have struggled for decades with the loss of jobs and income from restructuring in the agricultural and manufacturing sectors.
- Most of the technologies being propagated in rural areas are urban-based and biased. They trickle down to rural areas.
- The inputs into an entrepreneurial process (capital, management, technology, and skilled labor) tend to be easier to find in urban areas. Professional advice is also hard to come by. Consequently, entrepreneurial behavior is most lacking in those areas where it is most needed i.e., where the scarcity of other inputs is the highest.
- Existing economic development efforts ignore these unique challenges.





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Addressing Failure Factors

- **Action:** Identify and support agriculture-based entrepreneurs (renewable energy, plant biology, bio and agro-defense) in rural areas of Kansas as a means of strengthening local economies while helping meet critical national challenges.
- **Action:** Match them with best-in-class training, resources and mentors to facilitate their dynamic growth in Kansas.
- **Action:** Develop an entrepreneurial ecosystem over a diverse geography by bringing together entrepreneurs, investors, advisors, experts and mentors from both this region and around the nation.





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Rural Focus: Protecting the Food Supply and Ag Economy

- There's no better place for synergy and existing assets than in the animal health sector.
 - One third of the global animal health industry is in the KC Animal Health Corridor.
 - K-State created the Homeland Defense Food Safety, Security, and Emergency Preparedness Program in 1999.
 - K-State's president testified before the U.S. Senate's Emerging Threats Subcommittee on the Agricultural Biological Weapons Threat.
 - Biosecurity Research Institute, National Agricultural Biosecurity Center
- The NBAF will create an additional magnet effect, pulling talent, resources, and industry growth into the state as NBAF research is commercialized.
 - Kansas was selected for two additional federal research centers in the last six months.





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Rural Focus: Meeting the Nation's Bioenergy Needs

- America must move toward energy independence, and the federal government is investing heavily in R&D. This is an opportunity for Kansas to leverage federal funding.
- Many are taking an “all of the above” approach to include oil, natural gas, and alternative energy sources.
- With our research strength and natural resources, Kansas can drive the next generation of bioenergy: cellulosic ethanol.
 - Dry land crops such as sorghum
 - Switchgrass
 - Wheat
 - Algae
- ***The KBA is investing in this with centers of innovation in bioenergy and plant biology.***





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Spotlight: Centers of Innovation

- **Uniting** key bioscience industry players with world-class research and development capabilities at Kansas universities
- **Industry-led**, transforming existing academic research into integrated, high performance commercial opportunities for Kansas companies
- Focus on **commercial viability**, which requires economic viability, technical feasibility, and marketplace acceptance
- In Kansas' areas of existing bioscience strength, including **bioenergy and plant biology**.
- **Leverage significant private and federal funds** to maximize the state's return, which will include jobs, capital investments, and increased research funding





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Kansas: Remarkable Outcomes

Remarkable Results

- KBA investments have helped generate 1,184 new **jobs**; \$78.6 million in **new wages**; \$151.7 million in **capital expenditures**; \$75.2 million in new **research funding**; and **\$34.4 million in equity investments**.
- *Including estimated wages of jobs, that represents a \$7.47 return to the state's economy for each \$1 invested by the KBA!*

Business Facilities magazine

- Kansas is ranked **#5 in the nation for biotechnology**, along with powerhouses such as California, Massachusetts, and Illinois.
- *From FY04 to FY09, **Kansas ranked #1 in the nation** for its increase in baseline funding from the National Institutes of Health — with a 37 percent jump in dollars attracted to the state.*

