

Advancing Biosecurity, Biodefense and Biomanufacturing Technologies

Advancing Biosecurity, Biodefense, and Biomanufacturing Technologies is an NSF Engines Development Award project that will build upon existing activity in the broad domain of biosecurity, biodefense and biomanufacturing in the Northeast Kansas and Northwest Missouri region to promote economic development by making the region a hub of research, education and manufacturing.



What is biosecurity, biodefense and biomanufacturing?

Biosecurity and biodefense combat infectious animal and plant diseases as well as zoonotic and foreign animal diseases to protect agriculture, the food supply and human health. Biomanufacturing employs living systems to produce commercially important biomaterials and biomolecules for the pharmaceutical industry, food and beverage processing and industrial applications.

What will the project do?

Through partnerships and collaborations with academic and government research, the private sector and strong regional organizations and affiliations who promote economic development, project activities will include:

- Attract, create and grow new economic activity to achieve a net growth of jobs as more companies locate and expand in the region and benefit many communities and the region's economic base.
- Sponsor targeted events to showcase use-inspired research and make connections with private sector partners.
- Partner with local, state, and national organizations to increase entrepreneurial ventures in the region.
- Help form startups and small businesses in the target industry and connect them with mentors, customers, corporate partners, and investors.
- Develop and provide anchor investments for an investment continuum that will enhance the deployment of innovations and advance the facilitation of technology-based startups within the region.
- Provide technical assistance services including product design and development, design verification, prototyping, custom equipment design/build, and technology scale-up and commercialization.
- Develop a Biomanufacturing Training and Education Center ,BTEC, to meet the workforce needs of current and anticipated new biotech industries locating in Kansas.
- Train the research, development and manufacturing workforce with a particular focus on outreach to underrepresented populations in the current workforce.

Who are the project leads?

- **Kansas State University**
- **Manhattan Area Technical College**
- **BioKansas**
- **K-State Innovation Partners**
- **Manhattan Area Chamber of Commerce**

How can you participate?

This short-term project lays the foundation for potential long-term funding and development of an innovation ecosystem. Over the next two years, we are looking for partners who can help by:

- Attending events and convenings.
- Providing information on regional ecosystem capabilities.
- Identifying opportunities or gaps.
- Developing future strategies to address research, translation and workforce needs.
- Supporting and building an inclusive culture in the region.
- Helping us create programs to support biosecurity, biodefense and biomanufacturing.
- Collaborating and helping us cultivate new partnerships.

Current partners:

BIOKANSAS

BioMADE™

BioNexus | KC

BCSI
BIOSCIENCE
CORE SKILLS
INSTITUTE

City of
Manhattan
Kansas

EcoDevo
Your Resource for Growth

FLINT HILLS
REGION



gener8tor

GINKGO
BIOWORKS

Kansas
Department of Commerce

KANSAS STATE
UNIVERSITY

KC ANIMAL HEALTH
CORRIDOR

KU
THE UNIVERSITY OF
KANSAS

Latham
BIOPHARM GROUP
PART OF SIA PARTNERS

Manhattan
Area Chamber of Commerce

MANHATTAN
KNOWLEDGE BASED ECONOMIC DEVELOPMENT

MANHATTAN
TECH
MANHATTAN AREA TECHNICAL COLLEGE

NBAF
NATIONAL BIO AND
AGRO-DEFENSE FACILITY

North Central Regional
Planning Commission
Serving Kansans since 1972

Pfizer

PLUGANDPLAY



SCORPIUS
BIOMANUFACTURING

STEM
connector

TriRx
PHARMACEUTICAL
SERVICES

VENTRIA
BIOSCIENCE



Connect with us:

Learn more about this project, on our website k-state.edu/bio-engine. If you are interested in becoming a partner, please email bio-dev-engine@k-state.edu or fill out the NSF interest form on our website.