



August 2017



Team receives nearly \$11 million COBRE grant to establish neuroscience research center

The National Institutes of Health is awarding a Kansas State University-led team of [psychological sciences](#) researchers with a prestigious five-year, \$10.6 million [Centers of Biomedical Research Excellence \(COBRE\)](#) grant. It is the largest grant in the history of the psychological sciences department.

The team - which also includes collaborators from Wichita State University and the University of Kansas Medical Center - will use the grant to establish the [Cognitive and Neurobiological Approaches to Plasticity](#) (C-NAP) center. Plasticity refers to the brain's ability to grow and change its connections, and encompasses both natural aspects of human brain development throughout the lifespan as well as those due to experiences.

The center will support cognitive, behavioral and neurobiological research as well as laboratory renovation and upgrades; faculty, postdoctoral fellow and graduate student recruitment; and professional development.

The funding initially will support four faculty members who are serving as project leaders as well as postdoctoral fellows and doctoral students who will help conduct the research. The center also will recruit two new faculty members during the five-year grant.

The four project leaders and their research topics include:

- Mary Cain, professor of psychological sciences, who will study how environmental enrichment can change brain structure and create resistance to alcohol abuse.
- Heather Bailey, assistant professor psychological sciences, who will study how an older adult's rich body of knowledge can help overcome the degradation of working memory for everyday activities that people experience as they age. She will collaborate with the University of Kansas Medical center's Hoglund Brain Imaging Center.
- Charles Pickens, assistant professor of psychological sciences, who will study the neural circuits involved in cognitive flexibility and decision-making.
- Rui Ni, associate professor of psychology at Wichita State University, who will work to develop interventions to mitigate cognitive and visual impairments that affect driving abilities in aging individuals.

In addition to supporting faculty projects, the COBRE grant will fund three core research facilities, including:

- Renovating the Behavioral Neuroscience Laboratory Research Core at Kansas State University so researchers can use state-of-the-art neuroscience techniques.
- Building a new Neuroinformatics Research Core at Kansas State University to improve data modeling and visualization capabilities.
- Creating a 3-D driving simulator at Wichita State University that uses advanced technology, such as eye tracking, to study driving behavior.

The COBRE grant also supports a pilot grant program to recruit new faculty members to the center, a training program for postdoctoral researchers and a scientific exchange network to build collaborations with other universities. During the five years of grant funding, the university will organize two miniconferences for scientists to share their latest research.

Advanced wheat flour purity test developed at K-State gaining recognition globally

A technical advance in the flour milling industry by Kansas State University researchers and industrial partners in Brazil is garnering international attention.

An article by Mark Boatwright, doctoral candidate in biochemistry, and David Wetzel, professor of grain science and industry, both research analytical chemists, was translated and published July 7 in the German journal [Mühle + Mischfutter](#). The article was co-written with E.S. Posner of ESP International in Israel, and Ricardo Lopes, Bunge Ltd. in Brazil. The German translation is of their article "[Profiling Endosperm Purity of Commercial Mill Streams by Debrannin Using Quantitative Chemical Imaging](#)" that first appeared in the journal Cereal Foods World in fall 2015.

The article's German translation is significant, Wetzel said, because Swiss-made milling equipment is used worldwide, and the engineers who install and maintain this equipment read the German journal.

Boatwright and Wetzel developed a chemical imaging method that can help mills assure the purity of the wheat flour produced will meet baking industry standards and consumers' expectations. The method measures the chemical and molecular structural differences between the endosperm, which makes up more than 80 percent of the inside of a wheat kernel, and the nonendosperm, which is the hard, outer layer of the kernel.

Wetzel anticipates the article will be translated into Turkish soon; Turkey also manufactures milling equipment.



Seaton Hall/Regnier Hall dedication date set for October 13, 2017

The Seaton Complex, home to K-State's College of Architecture, Planning & Design, is on schedule and will be ready for students and faculty when classes begin August 21, 2017. The 194,000 square feet of



K-State named Innovation and Economic Prosperity University

Kansas State University has been named an [Innovation and Economic Prosperity University](#) by the Association of Public and Land-grant Universities (APLU) for the institution's strong commitment to

improvements include interdisciplinary design labs, an outdoor teaching amphitheater, a green roof, secure exhibit and gallery space, 20,000 square feet of fabrication and product design labs, collaborative spaces and an atrium commons. A [webcam](#) is available to watch the renovation's progress.

On Friday, October 13, the College of Architecture, Planning & Design will host a dedication of the newly constructed section, Regnier Hall, named in honor of the family who gave the lead gift. The dedication includes the following events:

2:00 pm Regnier Hall Dedication

3:00 pm Tours of the Seaton / Regnier Complex

3:00 - 4:00 pm Refreshments in Regnier Hall

NRC grants boost young faculty, graduate students in mechanical and nuclear engineering department

The Nuclear Regulatory Commission has awarded Kansas State University's [mechanical and nuclear engineering department](#) two grants totaling more than \$843,000.

The commission is awarding a \$450,000 grant to help develop young faculty members' careers and a \$393,820 grant to continue the department's nuclear research fellowship program for graduate students.

Both grants are consistent with the university's goal to become a Top 50 public research university by 2025, said William Dunn, professor, department head and principal investigator for the faculty development grant.

The faculty development grant helps the university attract and retain young tenure-track faculty members in nuclear engineering by leveraging funds from other sources to support them and their students, Dunn said. In the past four years, the department has hired four tenure-track assistant professors, and the faculty development grant funds enable these faculty to recruit top-level graduate students.

The fellowship grant will cover tuition and fees for students pursuing graduate studies in nuclear

economic engagement.

With this national designation, the university joins 60 other public institutions across the country that are improving lives well beyond the confines of their campuses.

The university conducted a self-assessment and obtained feedback from internal and external stakeholders to identify accomplishments and strengths as well as possible growth areas. The process also included cataloging more than 300 centers, institutes and programs that affect economic engagement.

Surveys and open forums revealed local engagement, partnerships and commitment to the land-grant mission as central economic engagement strengths of K-State. These strengths are illustrated by:

- Four Feed the Future Labs, an investment of more than \$100 million from the U.S. Agency for International Development;
- An economic impact of \$882 million generated by the university in Riley, Geary and Pottawatomie counties alone; and
- Research expenditures of \$189 million in fiscal year 2015.

Engagement also involves connecting the research enterprise at the university with the needs of industry. In the past few years, Kansas State University has grown its research agreements with industry nearly sixfold and attracted seven companies to the region.

"As a land-grant institution, K-State relies on strong partnerships and innovation to enhance quality of life," said Richard Myers, university president. "This process affirms how vital K-State is to not only our local community, but also to the state, region, nation and world. Receiving this designation allows us to learn best practices from other universities while sharing some of our best practices to ensure higher education continues to be an economic driver."

Manhattan, KS ranked 8th best college town in America

engineering. Fellows will conduct numerical and experimental investigations in reactor physics, thermal hydraulics, radiological engineering or other areas relevant to the safe, efficient and effective use of nuclear energy and radiation.

DID YOU KNOW?

The 2018 Princeton Review named K-State No. 2 for best athletic facilities and No. 3 in the 'students pack the stadium the most' category.

Manhattan, KS home to Kansas State University's main campus, was named the 8th [best college town in America](#) by American Institute for Economic Research (AIER).

AIER compiled its list using nine economic, demographic, and quality-of-life factors. For this study, college towns are defined as being home to a college or university and must have less than 250,000 residents. Manhattan's metro population is 98,643.

AIER also scored each city on nine metrics that include rent, earnings, bars and restaurants.



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