October 2018

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Kansas State University

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RESEARCH MAGAZINE FOR KANSAS STATE UNIVERSITY

FALL • 2018

Life of the wild

What we can learn from wildlife

The making of a meal

Research that improves America's favorite food

An urban prairie

How university green roofs enrich city life

A drop of water

Beads of water form on a plant after an early morning shower in The Gardens at Kansas State University.

Kansas State University researchers are protecting rural communities from water shortages by taking a fresh approach to training graduate students.

Melanie Derby, assistant professor of mechanical and nuclear engineering and Hal and Mary Siegele professor of engineering, is leading an interdisciplinary team that has been awarded a five-year, $2.9 million National Science Foundation Research Traineeship Program, or NSF NRT, grant. The funding will help the team train graduate students to address complex water-related challenges by working across disciplines. It is the first NRT project awarded in the state of Kansas.

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Features

✈ Seek more

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About Seek

Seek is Kansas State University's flagship research magazine and invites readers to "See" "K"-State's research, scholarly and creative activities, and discoveries. Seek is produced by the Office of the Vice President for Research and the Division of Communications and Marketing.

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KANSAS STATE
UNIVERSITY

You've heard the proverb: It takes a village to raise a child. The same is true of economic development: It requires dedicated leaders, planners, citizens, workers and businesses. Some might call it a village.

We have an outstanding village here in Manhattan, as indicated by consistently high quality of life ratings. Our town-gown relations rankings from The Princeton Review are also high: We ranked No. 1 in 2018 and No. 3 in 2019. Collaborations that build on research strengths, such as expertise that delivers food to your table, on page 20, and fights infectious diseases that affect both animals and people, on page 28, are a start. Although I love to sing the praises of Kansas State University research, I know it takes more than robust research to build long-term economic success.

Our North Campus Corridor project, which is a finalist for a University Economic Development Association 2018 Award of Excellence in the Place category, is an excellent example of how K-State and the surrounding community work together. When the National Bio and Agro-defense Facility came to town, both K-State and Manhattan recognized the opportunity it presented. The village came together to develop a long-term vision and the infrastructure necessary to support future growth. Plans are coming to fruition now, and industry partners are taking notice and bringing more jobs to our region. Read more about the North Campus Corridor on page 8.

Other research centered in our neighborhood explores Kansas wildlife, on page 14, as well as child development. See page 32 to read how a child's play changes over time, how infants recognize familiar caregivers and more. Another project highlighted on page 10 investigates how native plants grow in the harsh environment of a green roof. Finally, don't miss reading about our First Scholars program on page 39 to learn how the university is contributing to national research that helps first-generation college students complete their degrees.

University Distinguished Professor James Sherow's work on the Chisholm Trail is featured on page 37, and Professor Harold Trick's eight patents, with another pending, on biotechnologies that help us produce better crops are on page 36. The people who traveled the Chisholm Trail forged a path to success by driving cattle from Texas to Abilene, Kansas, to avoid an economic disaster that could be caused by an infectious disease carried by ticks. Our area's roots to infectious diseases run deep! Those same people couldn't have imagined the innovations ahead in breeding disease-resistant wheat, or the research that would someday keep their animals healthier. And they certainly couldn't have foreseen a national lab that would be dedicated to protecting their livelihoods.

They would be amazed at our village.

Peter K. Dorhout, Vice President for Research