Leading the Way

TEXAS TECH UNIVERSITY SYSTEM

A Year in Review

2010-2011

Well on its way to Tier One status, Texas Tech's total research expenditures surpassed more than $125.8 million in 2010.

Redefining Research

When Deepwater Horizon burned and sank into the Gulf of Mexico, researchers at Texas Tech didn't wait for an invitation to discover the impact that the more than 210 million gallons of oil would have on the environment. That's because at Texas Tech, research stretches beyond white coats and sterile laboratories.

The Texas Tech team, which comprises some of the country's most preeminent researchers, offers expertise to solve problems, improves lives and finds new solutions to the world's critical needs through a top-notch, multi-disciplinary approach. As the university continues toward Tier One status, Texas Tech has more than doubled its total research expenditures with approximately $125.8 million in 2010, up from about $50 million in 2008.

The Carnegie Foundation for the Advancement of Teaching designated Texas Tech as a community-engaged university. The organization bestows this on universities that have exemplary engaged outreach.

Whether it's continuing to monitor the radiation effects at Chernobyl in Ukraine, developing cutting-edge MicroZAP food sterilization technology or using science to build more sustainable habitations for people, Texas Tech's practical solutions have a global impact today and into the future. University researchers are discovering ancient dinosaurs that help history's understanding of how sauropods evolved. Texas Tech's experts are studying the moon's earthquakes by restoring and reanalyzing data from NASA's Apollo missions. And, the university's scientists continue to search for the smallest particles at the world's largest particle collider deep beneath the earth in Switzerland.

Texas Tech is included in a $5.2 million grant from the U.S. Department of Energy to advance two areas of wind power research. One project will improve short-term wind forecasting, which will accelerate the use of wind power in electricity transmission networks by allowing utilities and grid operators to forecast more accurately when and where electricity will be generated from wind power. Another project aims to boost the speed and scale of mid-size wind turbine technology development and deployment.

One assistant professor of chemistry received a grant from the National Institutes of Health to find better methods of studying cell death that could lead to more useful medications for ailments such as heart disease and cancer.

In a collaborative effort that included a Texas Tech biologist, researchers have made a breakthrough in explaining the sudden death of bee colonies since late 2006 across North America. This information can help the agriculture industry, which depends heavily on insect pollination to make the food the world's population eats.

Scientists at Texas Tech's Center for Pulsed Power and Power Electronics have been instrumental in the U.S. Department of Defense's efforts to combat improvised explosive devices (IEDs). The center's research was recently referenced in a Popular Mechanics story on the Navy's research in defeating IEDs.

And, the National Science Foundation has approved six STEM proposals from Texas Tech faculty for approximately $12.87 million in total funding. ■