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COLUMBIA MISSOURIAN

MU wins \$1.1 million grant for nuclear research

By [Garrett Evans](#)

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COLUMBIA — MU received a grant Tuesday of more than \$1.1 million to promote nuclear energy research and development projects.

The U.S. Department of Energy announced that MU was one of the just 31 college and universities across the country to receive a grant as part of its Nuclear Energy University Programs. The grants total \$39 million.

The university also was the only school in Missouri to receive an award.

The grant will be used for research by the MU Nuclear Science and Engineering Institute, Research Reactor and Chemistry Department, David Robertson, associate director of the Research Reactor, said.

In order to be considered for a research and development project, nuclear energy experts from the Department of Energy, national laboratories, industries and universities, reviewed 766 project applications from university professors, U.S. Department of Energy spokeswoman Niketa Kumar said.

After selecting 249 of those applications, the professors submitted a final proposal, from which 51 were chosen, she said.

MU will put its grant money toward a project in the Reactor Concepts Research, Development and Demonstration field, one of the four awarded fields.

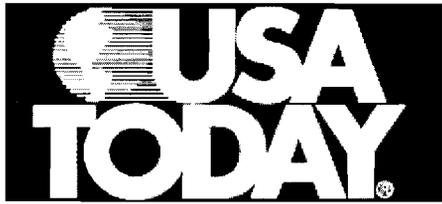
Kumar said this project will aim to "develop new and advanced reactor designs and technologies that broaden the applicability of nuclear reactors while addressing the technical, cost, safety and security issues associated with different reactor concepts."

Under the project, MU is working to increase the safety of the next generation of power plants, Kumar said.

A team of MU researchers, lead by nuclear engineering professor Sudarshan Loyalka, is looking at ways to eliminate the release of small amounts of radioactive material at power plants in the event of "extreme accident conditions" — a melting or evaporation of nuclear material, Kumar said.

Robertson said the general purpose of the project is to look at the behavior of materials under high temperatures, through the use of a high temperature reactor.

He said a high temperature reactor can be used to generate electricity, and run chemical processes such as hydrogen production.



Power breakfasts loaded with protein and fiber start school year right

New research shows that you'll feel full longer and may get less hungry throughout the day if your first meal has protein-rich foods, such as eggs, Greek yogurt, low-fat dairy products or lean meat, and fiber-filled fare, such whole-wheat bread, whole-grain cereal, fruit and vegetables.

These foods appear to have more staying power than highly processed foods such as bagels, muffins, doughnuts and sugary cereals.

The findings are especially important for school-aged children who may be ravenous by lunch time if they don't eat a good breakfast.

"The evidence is pretty convincing that consuming more protein at breakfast will provide more appetite control for the rest of the day," says Heather Leidy, an assistant professor of nutrition at the University of Missouri.

Her research shows that when teens eat a higher-protein breakfast, they have reduced feelings of hunger and increased fullness right away and that feeling of satiety continues throughout the day.

Leidy and her research staff performed functional MRIs on the teens' brains and found that a higher protein breakfast reduced the teens' motivation and drive to eat and made food look less rewarding and appealing.

Other studies show that students who eat breakfast do better on standardized tests and have improved cognitive function, attention spans and memory skills. Plus, kids who start the day with healthful fare are also likely to have consumed important nutrients such as calcium and vitamins, nutritionists say.

However, surveys show that between 30% to 60% of kids skip breakfast. Teens are more likely to miss it than younger children, Leidy says. And many of those who eat breakfast are consuming high-fat, high-sugar processed foods that have relatively no impact on satiety, she says.

In order to get the full benefits of the satiety from this kind of breakfast, the meal needs to be approximately 300-350 calories, Leidy says. Just grabbing a piece of fruit or granola bar is probably not enough to keep hunger at bay, she says.

If you have 100 calories of eggs at breakfast or the same calories in the form of a plain white bagel, chances are that several hours later you'll be less hungry if you had the eggs than if you had the bagel

The Institute of Medicine recommends a diet containing a range of 10% to 35% of calories from protein. The institute concluded that there is no clear evidence that high-protein intake increases the risk of kidney stones, osteoporosis, cancer, coronary artery disease and obesity.

Yogurt can be served with diced fruit or toast for a power packed breakfast.

In addition to students, dieters also get a boost from a protein-packed breakfast. Studies show that protein helps dieters feel full longer, which may help them adhere to a program better, says Karen Miller-Kovach, chief scientific officer for Weight Watchers, who reviewed the research on this topic when developing the company's PointsPlus System.

She says one of her favorite breakfasts is a poached egg on whole-wheat toast and fresh fruit. "It leads to a productive hunger-free morning and helps me feel in control of my appetite for the rest of the day."

Whole-wheat tortilla, toast or sandwich thin bread and cup egg beaters or egg whites make a healthy breakfast burrito.

From a practical point of view, that means if you have 100 calories of eggs at breakfast or the same calories in the form of a plain white bagel, chances are that several hours later you'll be less hungry if you had the eggs than if you had the bagel, she says.

If you want to last from breakfast to lunch without having your stomach rumbling and feeling like "you're so hungry that you're going to eat the kitchen sink," make sure your first meal of the day includes both protein and fiber, she says.

Elizabeth Ward, a registered dietitian in Boston, mother of three and blogger at food.usatoday.com, says kids who skip the morning meal often miss out on important vitamins and other nutrients that they don't make up for during the rest of the day.

"Breakfast is a prime opportunity for good nutrition, which is why it is a top priority for my family and me," she says. "I make sure the kids leave time for breakfast every day by minimizing the morning chaos, and by reducing distractions," she says.

MU, Columbia partner with 'Gig.U'

By CBT Staff

Aug 5, 2011

Officials from the University of Missouri and the city of Columbia have announced a new partnership that will utilize national resources to eventually build an ultra high-speed Internet network available to homes and businesses throughout the city. The partnership, known as "Gig.U: The University Community Next Generation Innovation Project," pairs research institutions with city leaders with the goal of building a successful network that would support ingenuity, ideas and economic growth.

"We are excited about this opportunity to build the future capacity and infrastructure for a knowledge-based economy in Missouri," MU Chancellor Brady Deaton said at a July 27 press conference. "While we are only in the initial phases of this partnership, this new agreement could result in research grants and more companies wishing to relocate to our region, stimulating our local and state economies."

Currently, the cost of deploying ultra high-speed networks is too high for many communities and service providers to support. Through the partnership, university researchers and city leaders will work with Internet service providers to identify needs specific to building an ultra high-speed network in the community. Once the needs are identified, the partners will work to build the necessary Internet infrastructure.

MU and Columbia join more than 30 research institutions and their local communities in this project. Innovations that are necessary to develop these high-speed networks could utilize the research institutions as testing grounds for the networks. The funding for the first phase, which includes developing a Request for Information that will be sent to Internet service providers, is approximately \$15,000 and will be split among the city, \$6,000; MU, \$7,500; and MORENet, \$1,500. Project leaders hope the initial investment will lead to grants for research and community infrastructure.

"The University of Missouri is our main economic engine and has a long partnership with local government," said Columbia Mayor Bob McDavid, who also attended the press conference. "Our citizens say that job creation is one of their top priorities, which, in this day and age, means jobs in the tech economy. The Gig.U partnership is perfectly matched with where we want to go."

Once in place, the network would benefit researchers who collaborate with colleagues throughout the world, students who need access to the latest knowledge on many subjects, businesses that would use the network to enhance their success and bring new discoveries to

the marketplace and individuals who use the network for business and personal needs. Work on the project will be directed by four operating committees composed of representatives of the universities and communities that have joined the Gig.U consortium. Blair Levin, former executive director of the National Broadband Plan, is leading the project.

Institutions that are charter members of Gig.U along with MU include: Duke University, University of Michigan, Penn State University, Case Western Reserve University, University of Chicago, University of Virginia, University of Kentucky, University of Louisville, University of Virginia, Arizona State University, Indiana University, Michigan State University, North Carolina State University, University of Alaska, University of Maryland, University of Florida, University of Hawaii and West Virginia University.

MU Health Care 'Most Wired'

By CBT Staff

Aug 5, 2011

University of Missouri Health Care has been recognized as one of the nation's "Most Wired" hospitals according to the 2011 Most Wired Survey released in the July issue of Hospitals Health Networks magazine.

The survey recognizes the top 100 hospitals in the country that are making progress in the adoption of health information technology.

University of Missouri Health Care is the only health care organization in mid-Missouri and one of only five hospitals in the state to receive the Most Wired distinction.

"The Most Wired award validates our commitment to patient safety and the delivery of high-quality care to our patients," said Jim Ross, CEO of MU Health Care. "This award recognizes our belief that information technology is vital to improving the health care needs of our patients."

The Most Wired award follows MU Health Care's recognition for achieving Stage 6 of the Electronic Medical Record Adoption Model. In May, Healthcare Information and Management Systems Society Analytics, a national company that evaluates hospitals' progress in implementing electronic medical records, announced that MU Health Care had reached the Stage 6 milestone on a scale of 0 to 7 in its transition from all paper to all electronic patient records.

"Our recent recognitions as a Most Wired health care organization and as reaching Stage 6 of the HIMSS EMR Adoption Model lets our patients know that they are receiving care at one of the most technologically advanced hospitals in the country," said Joanne Burns, chief information officer at MU Health Care.

Through the Tiger Institute for Health Innovation, a partnership with Cerner Corporation, MU Health Care is advancing technology to provide patients with the highest standards in safety and quality of care. The implementation of new information technology services such as a computerized provider order entry system and electronic medication administration record are positioning MU Health Care as a regional and national leader in providing an electronic health record for patients.

In its 13th year, the *Hospitals & Health Networks'* Most Wired Survey annually asks hospitals and health systems nationwide to answer questions regarding their IT initiatives. Every hospital in the U.S. is invited to participate in the survey.