

# No space for new magnet

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University of Kansas researchers can't find a room big enough on campus to house a 14-foot, 4-ton magnet.

The researchers at the University of Kansas' Lawrence campus received \$5 million as part of a \$120 million bond issue approved by the Kansas Legislature. The money will go toward advancing the University's protein research, including \$3 million for a high field Nuclear Magnetic Resonance Spectrometer and its housing.

But the size and weight of the structure make finding a place on campus difficult, said David VanderVelde, director of laboratories.

"Maybe the middle of Allen Fieldhouse?" VanderVelde said. "I don't think that's available."

VanderVelde said the spectrometer was a close cousin to an MRI scanner that is used in hospitals. A sample is placed within the magnet and uses magnetic fields and radio waves to produce a spectrum that can give information about a structure.

The magnetic field of the structure requires a room with at least an 18-foot ceiling with no steel reinforcements, he said. No cars or other similar structures can be within a 40-foot radius of the spectrometer.

Jim Roberts, associate vice provost for research, said a committee formed after the bond issue passed was looking at building a site at West Campus near 21st and Iowa streets or building an addition onto Malott Hall.

"But even getting the thing on campus is dicey," Roberts said. "Just the logistics can cause problems."

The University has nine of these instruments, VanderVelde said. The University's biggest Nuclear Magnetic Resonance Spectrometer in Malott Hall is about 9 feet tall, weighs about a ton and cost the University about \$800,000. The new spectrometer will be the biggest in the state and will put KU on the list with only about 25 other universities who have a similar NMR in the country.

The spectrometer will help KU advance its protein research, which VanderVelde

said was on the rise around the world. Kurt Wüthrich of Switzerland won half of the Nobel Prize for chemistry Wednesday for his protein studies that are similar to KU's research.

Current research focuses on proteins instead of genes, VanderVelde said. Because proteins change after they are formed by folding and mutating, diversity within organisms is high. By studying proteins, researchers can learn about how they increase diversity and affect diseases.

VanderVelde said the money will help KU researchers get ahead in the field of studying proteins.

"We're making a big investment to be on the forefront," he said.

The new NMR will help to progress the University's research. Roberts said he hoped all of the new equipment would be in place sometime next fall.

"The pace of research has just gotten more intense and much faster," VanderVelde said. "The people with the better instrument will finish first."

—Edited by Sarah Hill