CAMD at risk after cut

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Richard Kurtz, interim director of LSU's Center for Advanced Microstructures and Devices, stands Friday in front of a 'normal incidence monochrometer,' which is used to select wavelengths of light in photo electron spectroscopy research for LSU's new Energy Frontier Research Center. Graduate student Frank Womack, right, works in the background. Kurtz is leading the charge to find more external funding for CAMD, which is fighting for survival after the facility's budget was sliced by more than 50 percent after state budget cuts to colleges in June.

LSU research site seeking $1 million to stay afloat

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Sitting near Baton Rouge's Towne Center development looms LSU's mysterious Center for Advanced Microstructures and Devices and its giant synchrotron device.

Better known as CAMD, the research facility is now fighting for its survival after having its budget sliced by more than 50 percent in the wake of state budget cuts to colleges in June.

LSU officials are racing against time to find at least $1 million in annual external funding for CAMD or the research center risks closure, CAMD interim Director Richard Kurtz said.

“In reality, we face a very serious challenge,” Kurtz said. “This is going to be an uphill battle. It’s not going to be easy, but it’s certainly worth the effort.”

And if LSU officials fail?

“We’ll be at the point where, I think, CAMD will have to close,” Kurtz said. “Difficult decisions have to be made.”

The J. Bennett Johnston Sr. CAMD facility features the only giant synchrotron light source of its kind in the South. There are eight synchrotrons in the country, but LSU has the only one that is not sponsored with federal or private funding.

The synchrotron works by generating electrons as giant magnets swing in a circle to create energy beams, such as X-rays. Those are used in everything from nanofabrication of targeted drug delivery for cancer to the improvement of alternative energy sources.

Although still heavily used, LSU officials have complained that CAMD never reached its potential as a research park or a business recruiting tool.

In the 1980s, CAMD was first seen as the eve of a Silicon Valley on the bayou to create powerful computer chips. That idea never took off, and the facility has instead facilitated research in the energy, biomedical, environmental and nanotechnology fields, Kurtz said.

But many of those uses have gone unnoticed beyond the scientific community for years, said Kevin Carman, dean of LSU’s College of Basic Sciences.

“We’re sort of paying for past sins,” Carman said. “But this is a vitally important resource for LSU and its future as a research institution.”

Asked if he is optimistic about CAMD’s survival, Carman instead said, “I’m determined. I just don’t think we have any other option.”

When LSU was told in the spring to prepare for possible massive budget cuts, Chancellor Michael Martin chose to protect the academic core, which put at risk outside units ranging from CAMD to the LSU Press and the LSU Museum of Art.

“It was never my objective to close CAMD,” Martin said.

Protecting the core meant reducing the “sucking sound coming out of CAMD” on LSU’s budget, Martin said.

Salvaging the academic core is good for students and for faculty keeping their jobs, Kurtz said, but it also means cutting research capabilities and facilities like CAMD.

As a result, CAMD has lost 12 jobs, which represented about half of the LSU main campus' layoffs from the budget cuts. The CAMD staff was reduced from 50 researchers to 30, some of whom were reassigned, Kurtz said.

CAMD's annual operating budget was cut by more than 50 percent from $5.3 million to $2.4 million.

Another $1 million in one-time funds was given to CAMD this year only from LSU's research overhead pool to give CAMD more time to develop self-sustaining funding alternatives, Martin said.

To replace that $1 million next year, Kurtz is heading the development of business plan proposals to the National Science Foundation, the U.S. Department of Energy, the National Institutes of Health and more.

"My personal goal, though, is much higher than that ($1 million)," Kurtz said. "I want us to at least get back to where we were (in funding) or higher."

Kurtz said he is working with former DOE Deputy Director James Decker, who is assisting as an external funds consultant.

Kurtz also only finds himself in this position because of tragedy. In April, the much-delayed CAMD director search finally concluded with the hiring of John Sutherland.

But Sutherland is on leave this semester because of family medical problems. His wife Betsy, a fellow scientist, died earlier this month from cancer.

Kurtz said the irony of the budget cuts is that they came at a time when CAMD is getting unprecedented research funding.

In May, LSU received a new $12.5 million Energy Frontier Research Center, which is funded by the U.S. Department of Energy, and works extensively out of CAMD.

The research center is headed by LSU chemical engineering professor Jerry Spivey, who leads an international team of more than 20 research investigators.

LSU would not have been awarded the research center without CAMD, Spivey said.

"CAMD is absolutely essential to our new energy center," said Spivey, who is looking to improve chemical reactions to develop cleaner fuels, reduce carbon dioxide emissions and more.

CAMD also recently received a $1.26 million grant to upgrade its equipment with a “wiggler” device that produces high-energy X-rays for determining the structure of proteins and for the development of improved cancer treatments.

The grant award is believed to be the largest in LSU history for equipment.

Kurtz said CAMD also has a new research partnership with the Mary Bird Perkins Cancer Center. Research is showing that CAMD X-rays are more effective than conventional hospital therapies at killing cancer cells while protecting healthy cells and tissue, he said.

Kurtz noted that materials science, which delves into fields like nanotechnology, is one of LSU’s fastest-growing areas of study. In fact, LSU is starting a new doctoral program in materials science and engineering to be offered jointly with Southern University and the University of New Orleans.

“Well, CAMD is our best materials science research tool,” Kurtz said.

“CAMD has really has a lot of untold stories of research and success,” Kurtz said, noting that CAMD scientists bring in about $8 million in grants funding per year. “It’s actually a vibrant and exciting place.”