

# FSU College of Medicine introduces most advanced MRI in Florida



Byron Dobson , Democrat senior writer 8:20 p.m. EDT October 24, 2016

*State-of-the-art machine will enhance brain research conducted by multiple disciplines*



(Photo: Alvin McBean, Alvin McBean/Democrat)

Florida State University on Monday unveiled the most advanced MRI machine in the state, representing a nearly \$3 million investment administrators say will secure the university's ability to conduct advanced brain research for decades.

By having access to the powerful functional magnetic resonance imaging machine researchers across academic disciplines will be able to conduct research on humans that could lead to breakthroughs in how the brain functions.

It also is a major research tool that will help the university attract top scholars who bring with them a pipeline to millions of dollars in research grants.

The 3T Prisma MRI built by Siemens is housed in a room on the lower level of the College of Medicine, where a celebration and tour was held on Monday. To prepare the room to house the device, it had to be shielded on all sides with six layers of steel and a layer of copper to protect it from radio waves.

The 13-ton machine, which is 60 centimeters in diameter, was installed in June.

"This is not your grandfather or father's MRI," FSU President John Thrasher said. "This is a highly sophisticated machine that can detect and map blood flow changes in the brain in order to track brain activity.

"This machine will open up a whole new world of research possibilities for our faculty, and it's hard to imagine a more important area of study than the brain."

Gary Ostrander, vice president for research, said research capabilities at FSU now will be in the forefront of the country's renewed focus on the brain and how it functions.

"We will be doing research for the next generation of MRIs," he said.

For instance, FSU professors now can conduct research on how a drug is metabolizing on the brain, study brain function, and brain memory.

While the machine is located in a center on the lower floor of the College of Medicine, researchers and students from other departments such as engineering, psychology, biology, the arts and even economics will be attracted to the research the machine is capable of assisting, College of Medicine Dean John Fogarty said.

For instance, Fogarty said, research could determine which part of the brain is activated by the movement of fingers. Economics majors might be interested in how the brain is stimulated by certain commercial products.

"The key message from today is interdisciplinary," Fogarty said.

It will be valuable in studying "how you think, how you feel and how you function; what's going on upstairs while all of that is going on," he explained.



**Florida State University's new MRI machine will be a major asset in recruiting top scholars to campus.** (Photo: Alvin McBean, Alvin McBean/Democrat)

The university stands to gain a substantial boost in research dollars, Ostrander said.

"We will bring in millions more dollars in research," he said, adding the university already has brought some of the country's top scholars and more are being hired.

"We recruited professors who knew we were buying this," Ostrander said. "There is no question we wouldn't have been able to recruit these people (without it). It's a huge deal."

Ostrander pulled out his smartphone to show the clarity of some of the images of the brain already produced.

"The images you can capture with this machine are simply incredible," he said. "It is analogous to upgrading from an old Polaroid instant camera to one of today's high-end digital offerings."

Jens Rosenberg, a researcher at the National High Magnetic Field Laboratory, explained Mag Lab has the world's strongest MRI at 21.1 Tesla. But it's designed for research using mice, or animal models, like rats.



**College of Medicine fMRI facility** (Photo: Bruce W. Palmer)

"Here at the College of Medicine, it's 3T, a state-of-the-art human research magnet," he said. "It has hardware (and software) that makes it stand out from traditional clinical diagnostic imaging. We can acquire higher sensitivity and higher-resolution images.

"One of the main things we will be doing is functional MRI, which measures the activity in a specific region of the brain."

Fogarty said it is important to note the MRI is for research purposes only. He said FSU's Psychology Department has had a contract with a local medical group to conduct its research, but now that can be done on campus.

Some initial tests already have been conducted using human volunteers.

"This is a research magnet right now, not a clinical magnet," Fogarty said. "It will be open just when the investigators are here."

Contact senior writer Byron Dobson at [bdobson@tallahassee.com](mailto:bdobson@tallahassee.com) (<mailto:bdobson@tallahassee.com>) or on Twitter @byrondobson.

Read or Share this story: <http://on.tdo.com/2f9Zxvi>