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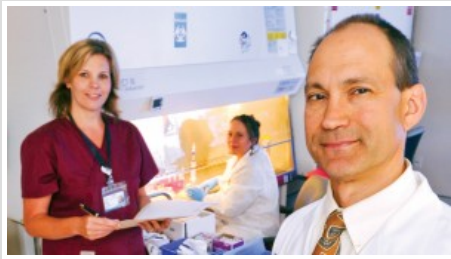
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UMMC Hosts Experimental Stem Cell Clinical Trial

JULY 5, 2012 BY JACK MAZURAK

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Dr. Alexander P. Auchus, professor and McCarty Chair of Neurology; Marcia Bankston, left, clinical research coordinator, and Margaret Lamb, senior medical technologist

JACKSON, Miss. – An emergency helicopter trip in May that brought a stroke patient from Forrest General Hospital in Hattiesburg landed the Clarke County resident the first spot in a clinical trial at the University of Mississippi Medical Center for stem-cell therapy.

The new therapy could prevent further brain injury following an initial stroke, preserve vital motor and cognitive abilities and shorten recovery times.

The stem-cell treatment also could add a full day to a narrow four-and-a-half-hour window

when current drug treatments work best.

The University Comprehensive Stroke Center is one of 10 U.S. sites enrolling a total of 120 patients into the study. The center aims for about 12 from Mississippi.

Dr. Alexander P. Auchus, professor and McCarty Chair of Neurology at UMMC, serves as principal investigator for Medical Center's portion of the clinical trial.

"These are pluripotent stem cells derived from adult bone marrow," Auchus said. "No fetal or embryo-derived cells were used in making this treatment."

"Pluripotent" means the cells can transform into many different types of tissue: bone, muscle, connective tissue and more. That ability makes stem cells promising for a wide range of medical treatments.

"All adults have a small amount of stem cells in their bone marrow," Auchus said. "These were removed from a donor, grown in culture, frozen and distributed to the participating centers."

Study participants get randomized into either a control group, which receives a harmless placebo, or the test group, which gets the experimental therapy. At UMMC, Bone Marrow Transplant Lab personnel prepare the injections.

"This is a collaboration between many players," said Tereza Holman, BMT Lab director. "This is more of a straightforward procedure for us than our normal processing of peripheral blood stem cells and bone marrow for transplants.

"But at the same time, a clinical trial like this could not have been done if there wasn't a lab trained in these preparations."

Brain cells in the stroke-injured area deploy signaling molecules known as cytokines that flag down the stem cells. The stem cells – like ice on a twisted ankle – may keep the injured and nearby brain tissue from excess inflammation, Auchus said.

The therapy could halt a domino effect, called an ischemic cascade, which can cause more severe paralysis, speech and cognitive problems, and leave the patient weaker and more vulnerable to greater injury or death from another stroke.

Mississippi ranked 46th in the nation for stroke deaths between 2005 and 2007, according to the American Heart Association. Stroke killed 128,842 nationally in 2009, making it the fourth-leading cause of death, according to the Centers for Disease Control and Prevention.

Unhealthy lifestyles, including obesity, tobacco use, hypertension and lack of exercise, contribute to stroke's likelihood, along with genetic factors.

The only clot-busting medication is FDA-approved for use up to three hours from symptom onset but is

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Students Learn 'Real Politics' in Washington, D.C., Winter Session

OXFORD, Miss. – Eleven University of Mississippi students spent their winter break learning about the people who work behind the scenes of the American government in Washington, D.C. Lead by Jonathan Klingler, assistant professor of political science, the students of Pol 391: Applied Politics met not with candidates, but with the people who make candidates'

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OXFORD, Miss. – Stephanie Jennings Teague, of Chicago, sees her commitment of \$100,000 to the Patterson School of Accountancy's new building at the University of Mississippi as a means of saying "thank you." "It is a way to show a small token of my appreciation to Ole Miss, the faculty and staff, and the accounting

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Reuters: Keep an Eye on the Money Supply

U.S. inflation roller coaster prompts fresh look at long-ignored money supply By Michael S. Derby NEW YORK – The amount of money sloshing around the U.S. economy shrank last year for the first time on record, a development that some economists believe bolsters the case for U.S. inflation pressures continuing to abate. The Federal Reserve's

commonly used up to four-and-a-half hours, Auchus said. Physicians consider clot removal by catheter viable for up to about six hours following onset.

The new stem-cell therapy could extend the treatment window to 30 hours after symptoms begin.

Ohio-based biotech researcher Athersys developed the experimental therapy and organized the trial. If this phase II trial proves effective, Athersys will start a phase III trial with about 600 patients.

"They wouldn't have picked us if we didn't have the expertise," Auchus said of the University Comprehensive Stroke Center, which admitted more than 500 stroke patients last year.

Not all stroke patients will qualify for the trial, Auchus said. Among other factors, candidates must have no cancer history, have their spleen and must be enrolled within 30 hours of the onset of symptoms. All patients, regardless if they participate in the study, get the stroke center's standard of care.

Mississippi's first participant in the study arrived at Forrest General within two hours of symptom onset, received the clot-buster drug and was transported via AirCare to the Medical Center's Emergency Department, arriving five hours after onset. For those reasons the Clarke County patient made a good candidate, Auchus said.

"We considered putting in a catheter, but imaging showed us the clot was too far away," he said.

"Although the clot was out of reach, the brain's reaction to loss of blood flow was still within the realm of treatment."

The patient, with family support, decided to enroll in the clinical trial. Following standard and trial treatments, the patient left the neuro ICU on day three with some minor weakness as the only residual deficit.

"The family was glad to have a center where the patient had options," Auchus said. "And the patient is home and continues to improve."

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