UB gets federal grant for stem cell study

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A stem cell biologist at the University at Buffalo has received a $1.98 million federal research grant.

Te-Chung Lee, associate professor of biochemistry, will investigate the potential of bone marrow-derived adult stem cells to treat the serious heart malfunction known as hibernating myocardium.

Hibernating myocardium is a condition in which heart cells that have experienced reduced blood flow over an extended period of time due to narrowed coronary arteries adapt by down-regulating metabolism while remaining functionally viable.

Previous work at the university has shown restoring normal blood flow to such "hibernating" regions improves function. However, scientists also found cells in the left ventricle, the heart's main pumping chamber, often do not return to normal, leaving the heart compromised.

Lee and colleagues will investigate whether transplanting a swine model's own bone marrow stem cells into the down-regulated tissue can change the myocardial adaptive responses and improve the function of the hibernating myocardium.

The grant is being provided by the National Institutes of Health.