

New study hopeful on neural stem cells

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Neural stem cells derived from federally approved human embryonic cells are inferior to stem cells derived from donated fetal tissue, a new study found.

Researchers from the Institute for Stem Cell Biology and Medicine at UCLA conditioned cells from the federally approved line to differentiate into neural stem cells, a process that may someday be used to treat diseases such as Parkinson's and Alzheimer's.

However, the neural stem cells showed a lower level of a metabolic gene called CPT 1A, which can cause hypoglycemia in humans, researchers said.

The new study may bring scientists closer to growing neural and other stem cells in the lab so they replicate normal cells which function normally, said Guoping Fan, an assistant professor of human genetics and a researcher in UCLA's stem cell institute.

"This study is a very important first step in looking at the differentiation process in neural stem cells," said Fan, senior author of the study. "Now we have a direct measurement of the types of cells that eventually, we hope, will be used for transplantation."

The study appears this week in an early online edition of the journal *Human Molecular Genetics*.

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