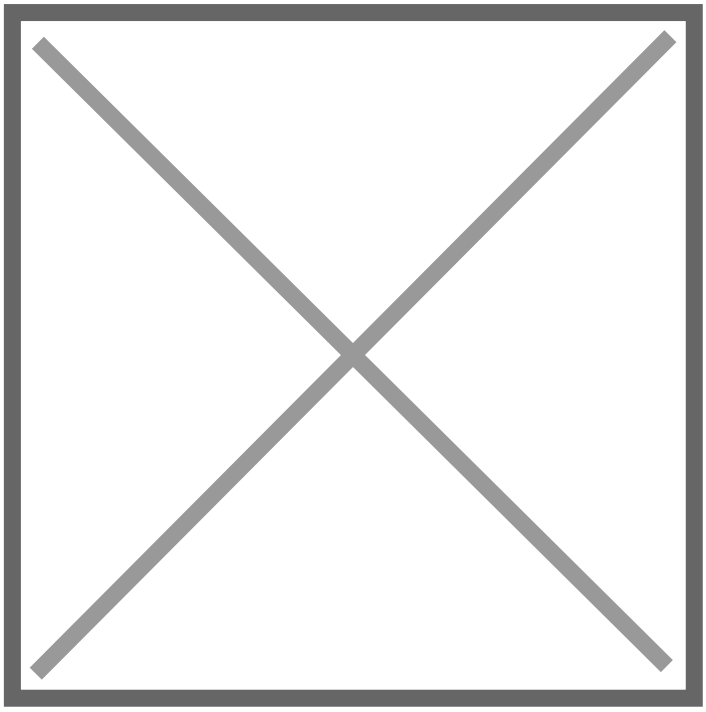
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# Scientists coax brain cells to grow in a dish

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After coaxing heart and liver cells to grow in vitro, scientists have been able to successfully grow brain cells in a dish. Regenerative medicine scientists at the University of Florida's McKnight Brain Institute have created a system in rodent models that for the first time duplicates neurogenesis - the process of generating new brain cells in a dish. This cell culture method holds the potential promise of producing a limitless supply of a person's own brain cells to heal disorders such as Parkinson's disease or epilepsy.

"It is like an assembly line to manufacture and increase the number of brain cells," said Dr Bjorn Scheffler, a neuroscientist at Florida University who made the breakthrough. "We can basically take these cells and freeze them until we need them. Then we thaw them, begin a cell-generating process, and produce a ton of new neurons."

If the discovery can translate to human applications, it will enhance efforts aimed at finding ways to use large numbers of a person's own cells to restore damaged brain function, partially because the technique produces cells in far greater amounts than the body can on its own. In addition, the discovery pinpoints the cell that is truly what people refer to when they say "stem cell." Although the term is used frequently to describe immature cells that are the building blocks of bones, skin, flesh and organs, the actual stem cell as it exists in the brain has been enigmatic, according to Dennis Steindler, executive director of the McKnight Brain Institute. Its general location was known, but it was an obscure species in a sea of cell types.

"We've isolated for the first time what appears to be the true candidate stem cell," said Steindler. "We used a special microscope to watch living cells over long periods of time through a method called live-cell microscopy." he added.