

Do-it-yourself brain repair following stroke

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Stroke is a leading cause of long-term disability and death in the United States. A team of researchers — led by Gregory Bix, at Texas A&M College of Medicine, College Station — has identified a way to exploit one of the brain's self-repair mechanisms to protect nerve cells and enhance brain repair in rodent models of stroke. The authors suggest that this approach could provide a nontoxic treatment for stroke.

The most common form of stroke (ischemic stroke) occurs when a blood vessel that brings oxygen and nutrients to the brain becomes clogged, for example with a blood clot, causing nerve cells in the affected area to die rapidly. In their study, Bix and colleagues detected in rodent models of stroke elevated levels of domain V, a naturally occurring fragment of the molecule perlecan, suggesting it might have a natural role in repairing the brain after a stroke.

When administered in these models 24 hours after stroke, perlecan domain V protected nerve cells from death and promoted blood vessel growth, a key component of brain repair. The authors therefore suggest that perlecan domain V could provide a therapy that improves [stroke](#) outcome by protecting [nerve cells](#) and enhancing [brain repair](#).

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