

Compound may provide drug therapy approach for Huntington's disease

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UT Southwestern Medical Center researchers have identified compounds that appear to inhibit a signaling pathway in Huntington's disease, a finding that may eventually lead to a potential drug therapy to help slow the progression of degenerative nerve disorders.

"Our studies have uncovered a new [therapeutic target](#) for Huntington's disease treatment and possibly for other [neurodegenerative diseases](#)," said Dr. Ilya Bezprozvanny, professor of physiology and senior author of the study, published in today's issue of [Chemistry and Biology](#). "In addition, we now have this new series of compounds that gives us a tool to study the pathogenesis of Huntington's disease."

Huntington's disease is a fatal genetic disorder in which certain [brain cells](#) waste away. More than 250,000 people in the U.S. have the disorder or are at risk for it. The most common form is adult-onset, with symptoms usually developing in patients in their mid-30s and 40s.

The disease results in uncontrolled movements, psychiatric disturbance, gradual dementia and eventually death. There is no therapy available currently to slow the progression of the disease.

Scientists at UT Southwestern found that quinazoline-derived compounds effectively block what is known as the store-operated calcium entry signaling pathway, which was never before implicated in Huntington [nerve cells](#) but that might be a therapeutic target in the disease.

Dr. Bezprozvanny's laboratory research has contributed to growing scientific evidence that suggests abnormalities in neuronal calcium signaling play an important role in the development of Huntington's disease. UT Southwestern researchers demonstrated in the current study that the quinoline compounds – supplied by EnVivo – protected brain cells.

"If this holds, this compound can be considered to have potential therapeutic application for Huntington's," he said. "As we ultimately seek a cure, we are encouraged to have found something that may slow the progress or delay the onset of the disease."

Provided by UT Southwestern Medical Center

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