

# LA JOLLA LIGHT

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## Research Report: Brain-cell death cause revealed

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Alzheimer's disease, Parkinson's disease and Huntington's disease are all characterized by the untimely death of brain cells. But what triggers this cell death? According to a new study published by researchers at Sanford-Burnham Medical Research Institute the answer in some cases is the untimely transfer of the gaseous molecule nitric oxide (NO) from one protein to another.

While it was previously known that NO and related molecules can contribute to nerve cell death or survival, these new findings reveal that NO can actually jump from one protein to another in molecular pathways that lead to cellular suicide. The findings appear in the journal *Molecular Cell*. More information at <http://bit.ly/c6K4I8>.

### **Treating sickle cell disease**

Sickle cell disease is a severe inherited disorder affecting more than 70,000 Americans and several million people worldwide. Those afflicted experience anemia, pain, organ damage and breathing problems. In severe cases, patients typically do not live beyond their mid-40s or 50s.

Now, researchers from the La Jolla Institute for Allergy & Immunology, Dana-Farber Cancer Institute in Boston and Washington University in St. Louis have joined forces to investigate a potential new therapy for sickle cell disease.

A multi-center clinical trial will test the ability of a drug the ability of the drug Lexiscan to reduce inflammation that contributes to the poor blood flow and serious complications characteristic of sickle cell disease. Lexiscan is currently approved by the FDA as a pharmacologic stress agent used to diagnose heart disease.

The trial, conducted in Boston and St. Louis, is being funded primarily by a \$1.2 million, two-year American Recovery and Reinvestment Act stimulus grant. News release at <http://bit.ly/dlcXnl>.

### **Footloose glaciers crack up**

Glaciers that lose their footing on the seafloor and begin floating behave erratically, according to a new study led by the Scripps Institution of Oceanography, UCSD. The study presents the first detailed observation of the transition from grounded (resting on the ocean floor) to floating glaciers. Floating glaciers produce larger icebergs than their grounded cousins and do so at unpredictable intervals.

Such a transition is currently taking place at Columbia Glacier, one of Alaska's many tidewater glaciers. Tidewater glaciers flow directly into the ocean. Prior to this study, Alaskan tidewater glaciers were believed to be exclusively grounded and unable to float without disintegrating.

However, Columbia Glacier unexpectedly developed a floating extension in 2007 that has endured far longer

than researchers expected. The research team believes that this floating section may have been caused by the speed at which the glacier is receding. Columbia is one of the fastest receding glaciers in the world, having retreated 2.49 miles since 2004, and nearly 12.43 miles since 1980.

The finding appears in the journal Geophysical Research Letters. News release at <http://bit.ly/dCsizH>.