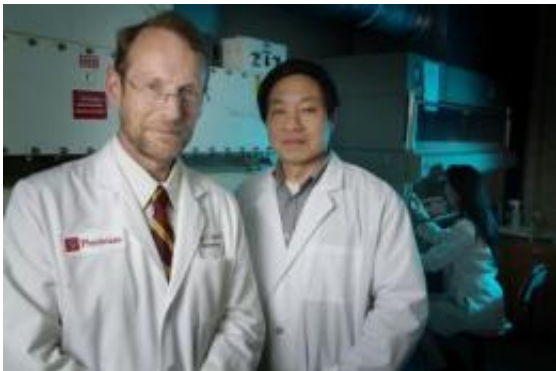


Natural compound stops retinopathy

July 2 2009



Dr. Timothy Lyons, left, director of the Harold Hamm Oklahoma Diabetes Center, stands with Dr. Jay Ma, principal investigator on the project and director of research for the diabetes center. Credit: OU Medicine

Researchers at the University of Oklahoma Health Sciences Center have found a way to use a natural compound to stop one of the leading causes of blindness in the United States. The research appears online this month in the journal *Diabetes*, a publication of the American Diabetes Association.

The discovery of the compound's function in inflammation and blood vessel formation related to eye disease means scientists can now develop new therapies -including eye drops - to stop diabetic retinopathy, a disease which affects as many as five million Americans with Type 1 and Type 2 diabetes.

"There is no good treatment for retinopathy, which is why we are so excited about this work. This opens an entirely new area for pharmaceutical companies to target," said Jay Ma, the principal investigator on the project and a research partner at the OU Health Sciences Center, Dean A. McGee Eye Institute and the Harold Hamm Oklahoma Diabetes Center.

Diabetic retinopathy is the most common diabetic eye disease and a leading cause of blindness in American adults. It is caused by changes in blood vessels of the retina, the light-sensitive tissue at the back of the eye. In some people with diabetic retinopathy, blood vessels may swell and leak fluid. In other people, abnormal new blood vessels grow on the surface of the retina. Over time, diabetic retinopathy can get worse and cause some vision loss or blindness.

Oklahoma researchers found that this inflammation and leakage is caused by an imbalance of two systems in the [eye](#). To restore balance, they delivered the new compound to cells using nanoparticle technology. The treatment in research models stopped the leakage, blocked inflammation and kept unwanted [blood vessels](#) from growing. Researchers are now testing the compound's uses for cancer and age-related macular degeneration.

Source: University of Oklahoma

Citation: Natural compound stops retinopathy (2009, July 2) retrieved 24 April 2024 from <https://medicalxpress.com/news/2009-07-natural-compound-retinopathy.html>

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