

Ranibizumab may prevent retinal detachment side effect

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Proliferative vitreoretinopathy (PVR), or the formation of scar tissue in the eye, is a serious, sight-threatening complication in people recovering from surgical repair of retinal detachment. PVR is difficult to predict, lacks effective treatment options, and substantially reduces an individual's quality of life. Each year 55,000 people are at risk for developing PVR in the United States alone.

A new study carried out by scientists from The Schepens Eye Research Institute/Massachusetts Eye and Ear and the Department of Ophthalmology, Harvard Medical School, and published on *The American Journal of Pathology* website and scheduled for the May 2013 print edition, suggests that Ranibizumab, an anti-VEGF-A monoclonal antibody fragment, is a potential prophylaxis for PVR.

"In this manuscript we present basic studies that have clear implications for [disease pathogenesis](#) and therapy," said senior author Andrius Kazlauskas, Ph.D, Senior Scientist and Simon Scholar in Retinal Research, Mass. Eye and Ear/Schepens Eye Research Institute and Professor of Ophthalmology, Harvard Medical School.

Researchers found that the putative mediators of PVR pathogenesis are growth factors, which contribute to [common diseases](#) such as atherosclerosis and cancer. "Consequently, elucidating functional relationships between growth factors and resolving their contribution to pathogenesis is of wide interest because such information will substantially advance our ability to combat a broad spectrum of

diseases," Dr. Kazlauskas said.

While investigating the functional relationships between growth factors known to promote pervasive human diseases, researchers discovered that Ranibizumab reduced the bioactivity of vitreous from patients and experimental animals with PVR, and protected rabbits from developing this disease.

These pre-clinical findings suggest that one of the clinically approved approaches to neutralize VEGF-A constitutes a novel prophylactic for an incurable, blinding disease.

"Our discoveries also raise the provocative idea that anti-VEGF-based therapies may be effective for managing more than the angiogenesis- and vascular-permeability-driven pathological conditions," Dr. Kazlauskas continues.

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Provided by Massachusetts Eye and Ear Infirmary

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