Method for Reducing Intraocular Pressure Using Integrin-Linked Kinase Inhibitor

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Technology description

Integrin-linked kinase (ILK) is an intracellular protein that plays an important role in connecting integrins to the actin cytoskeleton. UW-Madison researchers have shown that ILK works with phosphatidylinositol 3-kinase (PI3K) to regulate the organization of the actin cytoskeleton in trabecular meshwork cells in the eye, which control the outflow of fluid from the aqueous humor to modulate intraocular pressure. When fluid cannot flow normally from the aqueous humor, intraocular pressure increases and elevates the risk of developing glaucoma. UW-Madison researchers now have developed a method of treating increased intraocular pressure by administering agents that interfere with activities of integrin-linked kinase. Interfering with the ability of ILK to couple integrin signaling to the actin cytoskeleton increases aqueous humor outflow through the trabecular meshwork and decreases intraocular pressure. A PI3K inhibitor can be administered with the ILK inhibitor to further reduce intraocular pressure.

The Wisconsin Alumni Research Foundation (WARF) is seeking commercial partners interested in developing a method of treating increased intraocular pressure by administering agents that interfere with activities of integrin-linked kinase.

Application area

Preventing or treating glaucoma

Advantages

Reduces elevated intraocular pressure

Treatment is non-invasive

Institution

Wisconsin Alumni Research Foundation

Inventors

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