

MODULATION OF WNT5A TO TREAT GLAUCOMA

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PATENT STATUS

Country	Type	Number	Dated	Case
Japan	Issued Patent	7299889	06/20/2023	2017-162
United States Of America	Published Application	20240124538	04/18/2024	2017-162
China	Published Application	CN 117379543 A	01/12/2024	2017-162
China	Published Application	CN 117159463 A	12/05/2023	2017-162
China	Published Application	CN 117159718 A	12/05/2023	2017-162

Additional Patents Pending

BRIEF DESCRIPTION

A major risk factor for glaucoma which affects over 3 million Americans and 60 million people worldwide is increased intraocular pressure (IOP), which can damage the optic nerve and cause permanent blindness without treatment. Currently, there is no cure for glaucoma. Existing eye drops or oral medications are of limited efficacy with many side effects, and surgeries often fail with scar formation and fibrosis. Schlemm's canal (SC) is a circumferential channel located at the iridocorneal angle in the ocular anterior chamber. It is part of the conventional aqueous humor outflow system, which accounts for 70–90% of the total aqueous humor that drains out of the eye in human. The endothelial cell lining of Schlemm's canal is one of the primary sites of resistance to aqueous humor drainage and is a major determinant of IOP. When canal resistance increases with age or under pathological situation, IOP is elevated leading to glaucoma with irreversible optic nerve damage and vision loss. It is therefore an important target for glaucoma therapy.

UC researchers have discovered that Wnt5a is expressed on Schlemm's canal, where its expression is regulated in response to shear stress change, and devised a method for treating Glaucoma or pathogenic intraocular pressure by locally administering to an eye in need thereof formulations of a Wnt5a inhibitor.

SUGGESTED USES

Treatment of Glaucoma or intraocular pressure.

ADVANTAGES

A dramatic improvement over current therapies.

RELATED MATERIALS

ADDITIONAL TECHNOLOGIES BY THESE INVENTORS

- ▶ [Modulation of Sc Function To Treat Glaucoma](#)
- ▶ [Live Imaging of Corneal Lymphatic Vessels](#)

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OTHER INFORMATION

CATEGORIZED AS

- » [Biotechnology](#)
- » [Health](#)
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- » [Disease: Ophthalmology and Optometry](#)

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