Ocugen Expands Global Patent Portfolio for OCU200

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Company Receives Patents in US and Japan and Notice of Intent to Grant Patent in EU

MALVERN, Pa., May 8, 2017 /PRNewswire/ -- Ocugen, Inc., a biopharmaceutical company developing treatments for sight-threatening diseases, today announced the Company continues to expand its global patent protection for OCU200, its product candidate to treat wet age-related macular degeneration and other neovascular diseases of the eye. Together with patents already issued by the United States Patent and Trademark Office (USPTO) and the Japan Patent Office (JPO), Ocugen recently received Notification of Intent to Grant Patent from the European Patent Office (EPO) thereby strengthening the Company's patent position within major markets. These patents and Notification of Intent to Grant cover compositions of matter and methods of use for OCU200 - a fusion protein that combines the anti-angiogenic properties of tumstatin with the targeting properties of transferrin.

"We are very pleased with the patent allowances we have received to date, as it further supports our efforts to advance novel therapies into the ophthalmology market, as well as reinforces our broad exclusivity strategy aimed at supporting a growing list of protections for our pipeline of products," said Dr. Shankar Musunuri, Founder, Chairman and Chief Executive Officer at Ocugen. "These additional patent allowances for OCU200 support our long-term efforts to develop new therapies for wet age-related macular degeneration and unmet medical needs in other neovascular diseases which represent a multi-billion dollar market opportunity."

Details related to U.S. Patent No. 9,290,562, JPO Patent Publication No. 6,073,888 and the EPO Notification of Intent to Grant Patent are titled - Transferrin-tumstatin fusion protein and methods for producing and using the same.

Ocugen has a broad pipeline that includes both clinical stage and pre-clinical programs addressing large areas of unmet medical need. The Company's programs are focused on activating novel biologic pathways to treat inflammatory, degenerative, and neovascular diseases of the eye and are designed to deliver value over the near, mid and long term.

About OCU200 (Tumstatin-Transferrin) as a Treatment for Neovascular Disorders

OCU200 is a fusion protein that down regulates angiogenesis in active endothelial cells involved in choroidal neovascularization by binding to αVβ3 integrins. The targeting element allows for efficient delivery of the molecule to the diseased tissue. OCU200 has shown a strong dose-response effect in animal models of wet age-related macular degeneration and represents the initial target clinical indication for OCU200.

Tumstatin is an endogenous fragment of collagen IV and has been shown to be a powerful anti-angiogenic agent. Tumstatin plays a pivotal role in inhibiting blood vessel formation by binding to αVβ3 integrins. αVβ3 integrins are found on actively proliferating endothelial cells within the retina and are known to be directly involved in angiogenesis (Friedlander et al., Proc. Natl. Acad. Sci. USA Vol. 93, pp. 9764-9769, September 1996). Tumstatin binds to αVβ3 integrins on active endothelial cells and selectively stimulates an anti-angiogenic response (Maeshima Y, et al. J Biol Chem 275(28):21340-21348). This unique mechanism of action drives regression of endothelial cells and results in a VEGF independent treatment approach with the potential for true disease modification which currently does not exist.

Transferrin is an iron uptake protein and both transferrin and its receptor are highly expressed within the retina. Transferrin has been shown to facilitate macromolecule migration across a number of cell types including retinal pigment epithelial cells. The use of transferrin as a drug delivery agent has been established as a means for effective drug targeting within the retina.

About Ocugen, Inc.

Ocugen is advancing two novel biologicals and a marketed drug product as a re-purposed drug under the U.S. Food and Drug Administration's 505(b)(2) regulatory pathway to treat sight threatening ocular disorders. OCU100 is a recombinant form of lens epithelium derived growth factor. It received orphan-drug status from the U.S. Food and Drug Administration for treatment of retinitis pigmentosa (RP), a rare eye disease. Its second asset, OCU200, is an anti-angiogenic tumstatin fusion protein being developed for treatment of wet age-related macular degeneration (AMD). OCU300 is being developed through the FDA's 505(b)(2) pathway for the treatment of ocular graft versus host disease (oGVHD). All three products have respective patent issued from the USPTO.

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SOURCE Ocugen, Inc.