



Aura Biosciences Announces Publication of Preclinical Data Supporting AU-011's Potent and Selective Anti-cancer Activity in Ocular Melanoma Tumors

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CAMBRIDGE, Mass.—([BUSINESS WIRE](#))—Aura Biosciences, a biotechnology company developing a new class of therapies to target and selectively destroy cancer cells using viral nanoparticle conjugates, today announced that researchers at Massachusetts Eye and Ear (MEE), Emory University and the National Cancer Institute (NCI) have generated preclinical data that demonstrate the ability of light-activated AU-011 to target and selectively destroy ocular melanoma tumors, both *in vitro* and *in vivo*, in an orthotopic animal model that highly mimics the location and progression of the disease in humans. These results have been [published in the peer-reviewed journal, *Molecular Cancer Therapeutics*](#).

Aura's lead program, light-activated AU-011, is being developed for the treatment of primary ocular melanoma, a rare and life-threatening disease with no approved FDA therapies, and is currently in Phase 1b/2 clinical testing. Researchers believe AU-011's high tumor specificity and targeting capability, due to its ability to selectively bind to heparan sulfate proteoglycans (HSPG) on the surface membrane of tumor cells, may be key to avoiding damage to the main ocular structures and preserving patients' vision.

"These data offer strong support for the basis of our clinical program, which we are currently investigating in patients with primary ocular melanoma," said Elisabet de los Pinos, Ph.D., founder and CEO of Aura. "Our ultimate goal is to offer a first-line treatment option that can achieve local tumor control, while enabling patients to maintain their vision."

Currently available treatment options to control local tumor growth, such as plaque radiotherapy, are highly invasive and not tumor-specific, often resulting in severe and vision-threatening complications. The data published today suggest that AU-011 may be further investigated as a novel first-line treatment option that can enable early intervention and potentially become the standard of care for patients with early-stage ocular melanoma.

About ocular melanoma

Ocular melanoma, also known as uveal or choroidal melanoma, is a rare and aggressive eye cancer. Ocular melanoma is the most common primary ocular tumor and develops in the uveal tract of the eye. No targeted therapies are available at present, and current radiotherapy treatments can be associated with severe visual loss and other long-term sequelae such as dry eye, glaucoma, cataracts and radiation retinopathy. The most common current treatment is plaque radiotherapy, which involves surgical placement of a radiation device against the exterior of the eye over the tumor. This technique can control the melanoma but can also lead to radiation-related cataract, retinopathy, optic nerve damage and loss of vision. The alternative is enucleation, or removal of the eye. Ocular melanoma metastasizes to the liver in about 40 percent of cases in the long term (source: [OME](#)), and only 15 percent of patients whose melanoma has metastasized survive beyond five years after diagnosis (source: [ACS](#)).

About light-activated AU-011

AU-011 is a first-in-class targeted therapy in development for the primary treatment of ocular melanoma. The therapy consists of viral nanoparticle conjugates that bind selectively to unique receptors on cancer cells in the eye and is derived from technology originally pioneered by Dr. John Schiller of the Center for Cancer Research at the National Cancer Institute (NCI), recipient of the 2017 Lasker-DeBakey Award. Upon activation with an ophthalmic laser, the drug rapidly and specifically disrupts the membranes of tumor cells while sparing key eye structures, which may allow for the potential of preserving patients' vision and reducing other long-term complications of treatment. This therapy can be delivered using equipment commonly found in the ophthalmologist's office and does not require a surgical procedure, pointing to a potentially less invasive, more convenient therapy for patients and physicians. AU-011 for ocular melanoma has been granted orphan drug and fast track designations by the U.S. Food and Drug Administration and is currently in clinical development.

About Aura Biosciences

Aura Biosciences is developing a new class of therapies to selectively target and destroy cancer cells. Its lead program, AU-011 in ocular melanoma, is being developed under a CRADA with the National Cancer Institute (NCI), part of the National Institutes of Health. For more information, visit www.aurabiosciences.com.

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