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Amarantus Investigator Presents Positive MANF Animal Data in Central Retinal Vein Occlusion and Glaucoma at the Targeting Ocular Disorders Conference

Data Indicates MANF Promise for Ocular Indications

SAN FRANCISCO and GENEVA, Oct. 7, 2014 (GLOBE NEWSWIRE) --Amarantus Bioscience Holdings, Inc. (OTCQB:AMBS), a biotechnology company focused on developing diagnostics and therapeutics for Alzheimer's disease, Parkinson's disease and ophthalmological disorders, announced that Roman Urfer, PhD, Chief Development Officer at NeuroAssets, presented animal data on mesencephalic-astrocyte-derived neurotrophic factor (MANF) in ocular conditions at the "Targeting Ocular Disorders" Conference in Boston, MA, yesterday (http://www.healthtech.com/Targeting-Ocular-Disorders). In the presentation, titled, "MANF - A Novel Neurotrophic Factor for the Treatment of Retinal Disorders," Dr. Urfer concluded that MANF provided positive protective functional effects in animal models of central retinal vein occlusion (CRVO), as well as central retinal artery occlusion (CRAO) and glaucoma.

Dr. Urfer reported that a single intravitreal administration of MANF in rats with ischemia-related optic nerve damage resulted in a statistically significant protective effect of MANF on retinal function, compared to control animals, as measured by electroretinogram (ERG). Furthermore, this effect was supplemented by a strong retinal ganglion cell protective effect observed in the treatment groups. He concluded that this is a clear signal that MANF provides functional benefit in a model of retinal disorders. CRVO, central retinal artery occlusion, is an orphan indication in humans with limited treatment options. Glaucoma affects approximately 4 million individuals in the United States.

"This is the first observation that a neurotrophic factor is able to rescue retinal function after significant insult," said David A. Lowe, PhD, President & CEO of NeuroAssets and member of the Amarantus Board of Directors. "These data clearly support our focus on the further development of MANF in orphan ophthalmic indications, such as retinitis pigmentosa and CRVO. We plan to pursue complementary IND pathways in these indications, as well as in glaucoma."

"These results, in a highly-relevant animal model of devastating ophthalmological diseases, demonstrate MANF's strong ocular activity and suggest a tiered MANF development approach, focusing initially in orphan indications, and later expanding into larger indications, such as glaucoma," said Gerald E. Commissiong, President &CEO of Amarantus. "We are encouraged by the recent market trend favoring intravitreal treatments for ocular disorders, and look to put MANF on a similar trajectory as we build our ophthalmology franchise. More

importantly, MANF represents a potentially new understanding of the biological mechanism at work in these conditions, and the possibility to develop regenerative medicine treatments for patients who are suffering from a myriad of other diseases that lead to blindness."

About the Study

The study was designed to evaluate the efficacy of MANF intravitreal injection after an optic nerve ischemia/reperfusion injury in albino rats, as well as gain a better understanding of the MANF dose/effect relationship. A single intravitreal administration of MANF was delivered after ischemia and reperfusion of the optic nerve. Efficacy was determined by measuring the b wave amplitudes in electroretinograms (ERGs) seven days after the ischemia and reperfusion. The b-wave is an important functional signal of the retina in response to light and is the ERG-component most susceptible to ischemia. MANF treatment resulted in a statistically significant protective effect of MANF on retinal function, as compared with vehicle treated animals.

The study also showed that MANF effects in the retina mirror the dose-effect relationship observed for MANF in models of Parkinson's disease. Additionally, MANF dose levels were significantly lower than the equivalent dose used in the recent rabbit ocular tolerability study, thereby establishing a preliminary safety margin for MANF in the treatment of optic nerve ischemia.

About CRVO and Glaucoma

Central retinal vein occlusion (CRVO) affects approximately 100,000 patients in the United States, and 140,000 patients in Europe. The market is predicted to grow at approximately 16-18% per year. Companies that are marketing drugs targeting CRVO include Regeneron, Novartis, Roche and Bayer.

Glaucoma affects approximately 4 million people in the United States, with a total drug market size of approximately $3B. With its new mechanism of action, MANF represents a possible new understanding of ocular disease biology, potentially addressing key unmet medical needs in a variety of conditions.

About Mesencephalic-Astrocyte-derived Neurotrophic Factor (MANF)

MANF (mesencephalic-astrocyte-derived neurotrophic factor) is a naturally-occurring protein produced by the body for the purpose of reducing and preventing apoptosis (programmed cell death) in response to injury or disease. Amarantus is developing MANF as a regenerative medicine platform for retinitis pigmentosa (RP) and other ocular indications leading to blindness. Other potential indications include Parkinson's disease, Alzheimer's disease, Wolfram's syndrome, traumatic brain injury (TBI) and myocardial infarction.

Amarantus is the front-runner and primary holder of intellectual property (IP) around MANF.

About Amarantus BioScience Holdings, Inc.

Amarantus BioScience Holdings (AMBS) is a biotechnology company developing treatments and diagnostics for diseases associated with neurodegeneration and protein misfolding-related apoptosis. AMBS has licensed Eltoprazine, a small molecule drug ready for Phase 2b in Parkinson's levodopa induced dyskinesia and adult ADHD. AMBS has an exclusive

worldwide license to the Lymphocyte Proliferation test (LymPro Tes®)) for Alzheimer's disease and owns the intellectual property rights to a therapeutic protein known as mesencephalic-astrocyte-derived nurotrophic factor (MANF) with which it is developing products for brain disorders. AMBS also owns intellectual property for the diagnosis of Parkinson's disease (NuroPro) and the discovery of neurotrophic factors (PhenoGuard). Amarantus operations are located at Janssen Labs @QB3 in San Francisco, CA. For further information please visit www.Amarantus.com, or connect with the company onFacebook, LinkedIn, Twitter and Google+.

Certain statements, other than purely historical information, including estimates, projections, statements relating to our business plans, objectives, and expected operating results, and the assumptions upon which those statements are based, are forward-looking statements." These forward-looking statements generally are identified by the words believes," project," expects," anticipates," estimates," intends," strategy," plan," may," will," would," will be," will continue," will likely result," and similar expressions. Forward-looking statements are based on current expectations and assumptions that are subject to risks and uncertainties which may cause actual results to differ materially from the forward-looking statements. Our ability to predict results or the actual effect of future plans or strategies is inherently uncertain. Factors which could have a material adverse effect on our operations and future prospects on a consolidated basis include, but are not limited to: changes in economic conditions, legislative/regulatory changes, availability of capital, interest rates, competition, and generally accepted accounting principles. These risks and uncertainties should also be considered in evaluating forward-looking statements and undue reliance should not be placed on such statements.

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