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Amarantus Announces the Presentation of Data Showing MANF's Positive Effect on Retinal Function at Association for Research in Vision and Ophthalmology (ARVO) Annual Meeting

- Study conducted by leading researchers at University of Miami -

- Data demonstrate MANF preserves photoreceptor cells and light-sensing function -

SAN FRANCISCO and GENEVA, May 7, 2015 (GLOBE NEWSWIRE) -- [Amarantus BioScience Holdings, Inc.](#) (OTCQB:AMBS), a biotechnology company focused on developing therapeutic and diagnostic products for neurological disorders and orphan indications, announced the presentation of positive preclinical data for MANF (mesencephalic-astrocyte-derived neurotrophic factor) in retinitis pigmentosa (RP) at the Association for Research in Vision and Ophthalmology Annual Meeting, being held in Denver, CO. The results from preclinical studies demonstrate that MANF preserves the light-sensing function of photoreceptor cells in a genetic model of RP.

"We are very pleased with the data generated in RP from Dr. Wen's lab at University of Miami's Bascom Palmer Eye Institute, one of the world's most prestigious ophthalmology research and treatment centers," said Gerald E. Commissiong, President & CEO of Amaranthus BioScience Holdings, Inc. "Given the recent granting of orphan drug designations in both the US and EU, the presentation of this data is very timely as we build momentum for MANF in this devastating orphan indication, as well as continue to further establish the MANF orphan ophthalmology franchise."

[MANF](#) is a naturally-occurring protein that reduces and prevents apoptosis (programmed cell death) in response to injury or disease. Previous studies conducted by Rong Wen, M.D., Ph.D., Professor of Ophthalmology, at the Bascom Palmer Eye Institute at the University of Miami Miller School of Medicine, and the inventor of the technology encompassing MANF treatment for RP and other retinal disorders, have shown that recombinant human MANF protects photoreceptors in a retinal degeneration rat model of RP carrying the S334ter rhodopsin mutation.

Dr. Wen's poster on MANF entitled, "*ERG preservation by intravitreal injected recombinant mesencephalic astrocyte-derived neurotrophic factor (MANF) in rd10 mice*," disclosed the results of the effect of MANF on the electrophysiological activities of retinal cells in the *rd10* mice, a retinal degeneration model of RP carrying the *Pde6b^{rd10}* mutation. The data demonstrated that intravitreal injection of recombinant human MANF preserves the light-

sensing function of photoreceptor cells, as measured by the b-wave amplitude using electroretinography. The data was presented today at the ARVO 2015 Annual Meeting, abstract 5405-A0254, Yiwen Li and Rong Wen, Bascom Palmer Eye Institute, University of Miami, Miami, Florida, U.S.A..

Dr. Wen commented, "We continue to see very encouraging preclinical data with MANF. I am looking forward to continue further development of MANF in collaboration with Amaranthus, as I believe it has the potential to address RP, as well as other ophthalmologic disorders with serious unmet need and improve the quality of life of patients where no viable treatments exist today."

About Bascom Palmer Eye Institute at the University of Miami

The Bascom Palmer Eye Institute at the University of Miami Miller School of Medicine has been ranked No. 1 nationally in ophthalmology in U.S. News & World Report's annual "Best Hospitals" rankings for 11 consecutive years. Founded in 1962, Bascom Palmer is the largest ophthalmic care, research and educational facility in the southeastern United States. Its staff treats more than 250,000 patients and performs more than 13,000 surgeries annually. At the forefront of innovation in ophthalmology for more than five decades, the institute's physicians and scientists are internationally recognized for their expertise in every eye disorder, including glaucoma, macular degeneration, diabetic retinopathy, cataracts, dry eye, eye cancers and eye diseases in children.

About Mesencephalic-Astrocyte-derived Neurotrophic Factor (MANF)

MANF (mesencephalic-astrocyte-derived neurotrophic factor) is believed to have broad potential because it is a naturally-occurring protein produced by the body for the purpose of reducing and preventing apoptosis (cell death) in response to injury or disease, via the unfolded protein response. By manufacturing MANF and administering it to the body, Amaranthus is seeking to use a regenerative medicine approach to assist the body with higher quantities of MANF when needed. Amaranthus is the front-runner and primary holder of intellectual property around MANF, and is initially focusing on the development of MANF-based protein therapeutics.

MANF's lead indication is retinitis pigmentosa, and additional indications including Parkinson's disease, diabetes and Wolfram's syndrome are currently pursued. Further applications for MANF may include Alzheimer's disease, traumatic brain injury, myocardial infarction, antibiotic-induced ototoxicity and certain other rare orphan diseases currently under evaluation.

About Amaranthus BioScience Holdings, Inc.

Amaranthus BioScience Holdings (AMBS) is a biotechnology company developing treatments and diagnostics for diseases in the areas of neurology, psychiatry, ophthalmology and regenerative medicine. AMBS' Therapeutics division has development rights to eltoprazine, a Phase 2b ready small molecule indicated for Parkinson's disease levodopa-induced dyskinesia, adult ADHD and Alzheimer's aggression, and owns the intellectual property rights to a therapeutic protein known as mesencephalic-astrocyte-derived neurotrophic factor (MANF) and is developing MANF-based products as treatments for brain and ophthalmic disorders. AMBS' Diagnostics division owns the rights to MSPrecise[®], a proprietary next-

generation DNA sequencing (NGS) assay for the identification of patients with relapsing-remitting multiple sclerosis (RRMS) at first clinical presentation, has an exclusive worldwide license to the Lymphocyte Proliferation test (LymPro Test[®]) for Alzheimer's disease, which was developed by Prof. Thomas Arendt, Ph.D., from the University of Leipzig, and owns intellectual property for the diagnosis of Parkinson's disease (NuroPro). AMBS also owns the discovery of neurotrophic factors (PhenoGuard[™]) that led to MANF's discovery.

For further information please visit www.Amarantus.com, or connect with the Company on [Facebook](#), [LinkedIn](#), [Twitter](#) and [Google+](#).

Forward-Looking Statements

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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