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Amarantus Reports Positive Results on MANF Neuroprotective Properties Demonstrated in Preclinical Study in China

SUNNYVALE, Calif.-- Amaranthus BioScience Holdings, Inc. (OTCQB: AMBS), a biotechnology company discovering and developing treatments and diagnostics for diseases associated with neurodegeneration and apoptosis, announces that positive neuroprotective properties for the Company's MANF therapeutic were reported in a preclinical research study conducted by the Department of Orthopaedics at Qilu Hospital of Shandong University, in Jinan, China. Specifically, a published abstract of the study concluded, "These findings demonstrate that MANF shows the potential to alleviate cell damage and inflammation in rat primary astrocytes by suppressing ER (endoplasmic reticulum) stress, indicating that MANF plays an important role in astrocyte inflammation and functioning and may suggest a promising strategy for neuroprotection in the central nervous system."

"The findings from the study at Shandong University are consistent with the results we obtained in our own research with MANF on rat models for Parkinson's disease, which were reported in March 2013," said John W. Commissiong, Ph.D., Chief Scientific Officer of Amaranthus. "We are very pleased that independent research is contributing to the further understanding of MANF. The protective activity demonstrated by this independent work clearly suggests MANF may have utility in the treatment of conditions such as stroke, post-stroke recovery, Traumatic Brain Injury and concussion, as well as having relevance to the use of MANF in Parkinson's disease. We continue to conduct additional experiments with MANF in support of a planned Investigational New Drug (IND) application to the FDA."

An abstract of the research report titled "*Mesencephalic Astrocyte-Derived Neurotrophic Factor Inhibits Oxygen-Glucose Deprivation-Induced Cell Damage and Inflammation by Suppressing Endoplasmic Reticulum Stress in Rat Primary Astrocytes*," was e-published in the *Journal of Molecular Neuroscience*, and is available at

<http://www.ncbi.nlm.nih.gov/pubmed/23760988>. Glucose and oxygen deprivation is a common factor in conditions involving reduced blood flow to the brain. This places energy stress on cells such as astrocytes, which then become damaged, functionally impaired or even die. Release of inflammatory mediators from stressed astrocytes causes further damage to neurons, with resulting neurological impairment. The work from Shandong University suggests MANF may protect against such neurological damage by suppressing these pro-inflammatory changes in astrocytes.

The research abstract stated, "This current study investigates whether mesencephalic astrocyte-derived neurotrophic factor (MANF) inhibits oxygen-glucose deprivation (OGD)-induced cell damage and inflammatory cytokine secretion by suppressing endoplasmic reticulum stress in rat primary astrocytes. We found that MANF alleviated OGD-induced astrocyte damage and rescued the cell viability, and the upregulation of GRP78

(endoplasmic reticulum (ER) stress marker) and NF- κ B p65 (one of the central mediators of proinflammatory pathways) induced by OGD were significantly reduced by preincubation of MANF. In addition, the increases of secretion and mRNA expression levels of the proinflammatory cytokines IL-1 β , IL-6, and TNF- α in astrocytes induced by OGD were significantly suppressed by MANF.”

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, Amarantus is seeking to use a regenerative medicine approach to assist the body with higher quantities of MANF when needed. Amarantus is the front-runner and primary holder of intellectual property (IP) around MANF, and is initially focusing on the development of MANF-based protein therapeutics. MANF's current lead indication is Parkinson's disease with additional focus on Traumatic Brain Injury (TBI). Future indications may include myocardial infarction and certain rare and ultra-rare orphan diseases for which MANF is currently being evaluated.

About Amarantus

Amarantus is a development-stage biotechnology company founded in January 2008. The Company has a focus on developing certain biologics surrounding the intellectual property and proprietary technologies it owns to treat and/or diagnose Parkinson's disease, Traumatic Brain Injury, Ischemic Heart Disease and other human diseases. The Company 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 disorders. The Company also is a Founding Member of the Coalition for Concussion Treatment (#C4CT), a movement initiated in collaboration with Brewer Sports International seeking to raise awareness of new treatments in development for concussions and nervous-system disorders. The Company also owns intellectual property and licenses for the diagnosis of Parkinson's disease and Alzheimer's disease. For further information please visit www.Amarantus.com.

Forward Looking Statements

This press release contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Such statements include, but are not limited to, statements about the possible progress of the MANF technology in testing for Parkinson's disease, as well as statements about expectations, plans and prospects of the development of Amarantus' diagnostic product candidates for Parkinson's and Alzheimer's disease. These forward-looking statements are subject to a number of risks, uncertainties and assumptions, including the risks associated with development of therapeutic drug candidates, as well as the risks, uncertainties and assumptions relating to the development of Amarantus' new product candidates, including those identified under "Risk Factors" in Amarantus' most recently filed Annual Report on Form 10-K and Quarterly Report on Form 10-Q and in other filings Amarantus periodically makes with the SEC. Actual results may differ materially from those contemplated by these forward-looking statements Amarantus does not undertake to update any of these forward-looking statements to reflect a change in its views or events or

circumstances that occur after the date of this presentation.

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