Amarantus BioScience Announces Publication of Independent Peer-Reviewed Data for Receptor and Secretion Pathways related to MANF

SUNNYVALE, Calif., Jan. 16, 2013 /PRNewswire/ -- Amarantus BioScience, Inc. (OTCQB: AMBS), a biotechnology company discovering and developing treatments and diagnostics for diseases associated with protein misfolding and apoptosis centered around its patented therapeutic protein Mesencephalic Astrocyte-derived Neurotrophic Factor (MANF), today announced that an independent peer-reviewed research paper entitled Mesencephalic astrocyte-derived neurotrophic factor (MANF) secretion and cell surface binding are modulated by KDEL receptors was published in the Journal of Biological Chemistry. The research paper concludes "These findings provide insight into the mechanisms of MANF neuroprotection, and may be applicable to understanding its functions in other secretory tissues."

The endoplasmic reticulum (ER) is the part of the cell where unfolded proteins are properly folded and then exported into different parts of the cell, or secreted out of the cell, so that they can perform their normal biological functions. When the ER becomes stressed, protein folding is compromised, and cells can become dysfunctional. Apoptosis, also known as Programmed Cell Death, is one of the main side effects of protein misfolding due to ER stress, and several independent peer-reviewed research papers have demonstrated that MANF plays a critical role in reducing protein misfolding and apoptosis. MANF has been shown to be upregulated inside the cell, and subsequently secreted out of the cell, with data demonstrating that MANF ultimately reduces apoptosis in the cells in which it originates, the cells it interacts with once secreted out of the cell, as well as when manufactured MANF is administered to various parts of the body undergoing ER stress. Amarantus is seeking to administer manufactured MANF to areas in the body where ER-stress occurs due to injury or disease, giving the body additional quantities of MANF during times of stress in order to reduce apoptosis and improve cellular function. The Company believes that if cellular function can be improved, overall system recovery is likely in many therapeutic indications. ER-stress and protein misfolding appear to be a key component of Parkinson's disease biology. Amarantus' Chief Scientist originally discovered MANF, and the Company was awarded composition of matter patents on MANF in Europe in 2010 and in the United States in 2011. The Company also recently won a court challenge to its composition of matter patents in Europe. The Company also owns worldwide patent applications covering various methods of using MANF as it relates to neurological conditions.
In this research paper, the authors describe the process by which MANF's intracellular activity (autocrine) may be regulated through MANF binding to the canonical ER-specific retention receptors with the amino acid sequence 'KDEL', known as 'KDELRs' (KDEL Receptors). Researchers expressed, or blocked, a key amino acid sequence on the MANF molecule known as 'RTDL,' which is a highly-conserved amino acid sequence that was shown in this research paper to be required for retention of MANF in the ER, or for secretion of MANF out of the ER, with signal activation through the KDELRs. Further, the research paper goes on to suggest that certain KDELRs are resident on the cell surface membrane, and that MANF's extracellular activity (paracrine) is regulated, at least in part, via cell-surface KDELRs. Interestingly, the paper suggests that following ER stress, there is an increase in expression of KDELRs on the cell surface membrane, opening the possibility that MANF's paracrine activity may be more potent or broad in times of ER stress.

"This publication provides further insight into the biological profile of MANF and the proteins it interacts with in both an autocrine and paracrine fashion," said Gerald E. Commissiong, President & CEO of Amarantus. "As we learn more about its biological functions, we believe the Company is likely to find additional avenues to commercially exploit MANF's breakthrough biology, and bring new meaningful treatments to patients in a variety of indications, including orphan indications."

About Mesencephalic-Astrocyte-derived Neurotrophic Factor (MANF)

MANF (Mesencephalic-Astrocyte-derived Neurotrophic Factor) is a protein that corrects protein misfolding, one of the major causes of apoptosis (Programmed Cell Death). Mesencephalic-Astrocyte-derived Neurotrophic Factor (MANF) 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 (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 where MANF is currently being evaluated.

The Company also owns an inventory of 88 cell lines referred to as "PhenoGuard Cell Lines." MANF was the first therapeutic protein discovered from a PhenoGuard Cell Line, and it is anticipated that additional therapeutic proteins useful for various therapeutic approaches to the Central Nervous System will be identified from the Company's inventory of PhenoGuard Cell Lines.

About Amarantus BioScience, Inc.

Amarantus BioScience, Inc. 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 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. 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 benefits of MANF therapeutic applications and/or advantages presented by Amarantus' PhenoGuard technology, as well as statements about expectations, plans and prospects of the development of Amarantus' new product candidates. These forward-looking statements are subject to a number of risks, uncertainties and assumptions, including the risks that the anticipated benefits of the therapeutic drug candidates or discovery platforms, 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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