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# Amarantus BioSciences Presents Data on MANF at the 14th Annual Meeting of the American Society of Experimental Neurotherapeutics Conference

SUNNYVALE, CA--(Marketwire -02/22/12)- Amarantus BioSciences, Inc. (OTC.BB: AMBS.OB - News), a biotechnology company developing MANF, a first-in-class disease-modifying therapeutic protein being developed for the treatment of Parkinson's Disease, will present preclinical data on MANF at the 14th Annual Meeting of the American Society of Experimental Neurotherapeutics (ASENT) Conference at the Ritz Carlton Hotel in Washington, D.C. during the Pipeline session on Friday, February 24th, 2012 at 2:15pm ET.

A presentation titled, "MANF: A Bi-functional Protein with Multiple Therapeutic Indications is Neuroprotective and is Upregulated in the Unfolded Protein Response," will be given by John W. Commissiong, PhD, Chief Scientific Officer of Amarantus. MANF is the company's lead drug candidate, and is one of the first potential drug candidates to be rationally discovered from an increased understanding of astrocyte-neuron biology. MANF is a novel 18 kDa, astrocyte-derived, secreted protein, with well-defined N- and C-terminal domains separated by a linker region. Prior published studies have synthesized the C-terminal domain of MANF and demonstrated that it is anti-apoptotic. Parkinson's disease is caused, in part, by apoptosis of dopaminergic neurons of the substantia nigra in the brain.

"The data that will be presented demonstrate that MANF may be important in the treatment of multiple disease indications associated with apoptosis, and our research has achieved pre-clinical proof-of-concept with MANF in the area of Parkinson's disease," said John W. Commissioning, PhD, Chief Scientific Officer of Amarantus. "Current Parkinson's drugs treat disease symptoms, even as the underlying neuropathology progresses. While early, MANF appears to correct the neuropathology of Parkinson's disease and could ultimately offer long-term relief of symptoms."

MANF was purified from a ventral midbrain astrocyte cell line using an assay that was designed to identify molecules that specifically protect dopaminergic neurons. Data that will be presented demonstrate:

- MANF improved behavioral deficits and neuronal cell death in neuroprotective and neurorestorative 6-OHDA rat models of Parkinson's disease;
- In response to serum starvation insult of dopaminergic neurons in vitro, MANF upregulates the TH+ biomarker (the marker for dopaminergic neurons) and MAP2 (general neuron marker);
- In response to serum starvation insult of GABAergic and serotonergic neurons in vitro, MANF does not upregulate the GAD (marker for GABAergic neurons) or 5-HT (marker

serotonergic neurons) biomarkers. However these neurons remained viable as evidenced by the upregulation of MAP2 (general neuron marker);
- MANF increased the release of GABA from pre-synaptic GABAergic terminals in the substantia nigra (SNc) via a bicuculline-sensitive, GABA-A receptor mechanism, an action that could reduce excitotoxic intracellular Ca2+ in dopaminergic neurons;
- MANF is a molecular chaperone, improving protein folding in the adaptive pathway of the unfolded protein response (UPR) triggered by stress of the endoplasmic reticulum (ER). Mis-folding of alpha-synuclein protein is a hallmark of Parkinson's disease;
- MANF significantly reduced the activity of the pro-apoptotic enzyme caspase-3, and reduced the death of cardiomyocytes when tested in an in vitro model of cardiac ischemia in the Glembotski lab.

The next steps in the development of MANF towards Investigational New Drug status for Parkinson's disease are: finding efficacious dosing regimens for MANF in a primate model, manufacturing GMP grade material, and establishing MANF's safety and tolerability profile.

"The profile of MANF suggests that it could be a first in class disease modifying drug for Parkinson's disease. Results from other laboratories suggest that MANF may also be indicated for cerebral ischemia/traumatic brain injury, cardiac ischemia/myocardial infarction, diabetes, organ transplantation and many other conditions related to protein mis-folding in the ER. While our focus is on the development of MANF for Parkinson's disease, we hope to ultimately explore MANF in these other diseases in the future," added Gerald Commissioning, President and CEO.

**About Amarantus BioSciences, Inc.**

Amarantus BioSciences, Inc. is a development-stage biotechnology company founded in January 2008. The Company has a focus on developing certain biologics and biomarkers surrounding the intellectual property and proprietary technologies it owns and has rights to for the treatment and diagnosis of Parkinson's disease and other human diseases. The Company owns the intellectual property rights to an anti-apoptotic therapeutic protein known as Mesencephalic-Astrocyte-derived Neurotrophic Factor ("MANF"), and owns an inventory of 88 cell lines referred to as "PhenoGuard Cell Lines" from which MANF was discovered. The Company also has a license to the NuroPro™ diagnostic test for Parkinson's disease from Power3 Medical Products. 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, advantages presented by Amarantus' PhenoGuard technology, and/or possible benefits of the NuroPro™ diagnostic platform, 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.