Amarantus Subsidiary MANF Therapeutics Announces Retinal Patent Issuances in Europe Covering MANF & CDNF and Positive Data for MANF in Glaucoma

- Patents extend MANF Therapeutics' exclusivity for MANF and CDNF treatment of retinal disorders in Europe into 2031
- Literature Watch "Super-MANF" article published in American Journal of Transplantation outlines microenvironment immunomodulatory role for MANF in the retina
- Positive Data for MANF in Glaucoma and retinal ganglion cell repair published in the peer-reviewed scientific journal Frontiers in Molecular Neuroscience

SAN FRANCISCO, Dec. 26, 2017 (GLOBE NEWSWIRE) -- Amarantus Bioscience Holdings, Inc. (OTCPK:AMBS), a US-based biotechnology holding company with wholly-owned subsidiaries developing first-in-class orphan neurologic, regenerative medicine and ophthalmic therapies, today announced that its wholly-owned subsidiary MANF Therapeutics, Inc. was issued patents in Europe entitled "Method of Treatment for Retinal Disorders" covering the therapeutic use of mesencephalic astrocyte-derived neurotrophic factor (MANF) and cerebral dopamine neurotrophic factor (CDNF) as treatments for retinal disorders, including Glaucoma. The patents extend exclusivity for the use of MANF and CDNF in the treatment of retinal disorders in Europe into 2031, and are in addition to the recent issuance of a patent from the Japan Patent Office based on the same parent patent application. Related patent applications in the US, China and other jurisdictions remain in active prosecution. Additionally, the Company announced the publication of two peer-reviewed articles outlining MANF's role in the treatment of retinal disorders in the peer-reviewed journals American Journal of Transplantation and Frontiers in Molecular Neuroscience.

The article published in the American Journal of Transplantation entitled "Super-MANF to the Rescue: Immunomodulation Improves Retinal Repair and Regenerative Cell Therapy" provides insights on the strong immunomodulatory role of MANF in promoting retinal tissue repair and function, and describes a potential mechanism of action which could also explain MANF's role as a cardiomyokine that protects cardiomyocytes in response to ischemic damage in the heart.

The data published in Frontiers in Molecular Neuroscience entitled "Identification of Mesencephalic Astrocyte-Derived Neurotrophic Factor as a Novel Neuroprotective Factor for Retinal Ganglion Cells" examined the effect of MANF on retinal ganglion cells (RGCs), its
underlying neuroprotective mechanisms and measured the concentrations of MANF in the vitreous of patients with different retinopathies. In summary the results provided important evidence for MANF's potential as a therapeutic protein treatment for a range of retinal pathologies in either the preclinical stage or after diagnosis to promote the survival of RGCs. In addition, the authors concluded that MANF is highly expressed in RGCs and that exogenous MANF can protect RGCs from hypoxia-induced cell injury and apoptosis in both a rat model of chronic glaucoma in vivo and hypoxia-induced RGC apoptosis in vitro.

The Company owns MANF composition of matter patents and patent applications in the United States and Europe. It also owns, or has acquired exclusive rights to, US and international patents and patent applications covering the therapeutic use of MANF in the treatment of retinal disorders, beta cell disorders, Parkinson's disease, and several other diseases.

**About Amarantus Bioscience Holdings, Inc.**

Amarantus Bioscience Holdings (AMBS) is a biotechnology company developing treatments and diagnostics for diseases in the areas of neurology, regenerative medicine and orphan diseases through its subsidiaries. AMBS' wholly-owned subsidiary Elto Pharma, Inc. has development rights to eltoprazine, a Phase 2b-ready small molecule indicated for Parkinson's disease levodopa-induced dyskinesia, Alzheimer's aggression and adult ADHD. AMBS acquired the rights to the Engineered Skin Substitute program (ESS), a regenerative medicine-based approach for treating severe burns with full-thickness autologous skin grown in tissue culture that is being pursued by AMBS' wholly-owned subsidiary Cutanogen Corporation. AMBS' wholly-owned subsidiary MANF Therapeutics, Inc. owns key intellectual property rights and licenses from a number of prominent universities related to the development of the therapeutic protein known as mesencephalic astrocyte-derived neurotrophic factor (MANF). MANF Therapeutics, Inc. is developing MANF-based products as treatments for brain and ophthalmic disorders. MANF was discovered by the Company's Chief Scientific Officer John Commissiong, PhD. Dr. Commissiong discovered MANF from AMBS' proprietary discovery engine PhenoGuard. AMBS also owns approximately 80 million shares of Avant Diagnostics, Inc. via the sale of its wholly-owned subsidiary Amarantus Diagnostics, Inc. that occurred in May 2016.

For further information please visit [www.Amarantus.com](http://www.Amarantus.com), or connect with the Amarantus on [Facebook](https://www.facebook.com), [LinkedIn](https://www.linkedin.com), [Twitter](https://twitter.com) and [Google+](https://plus.google.com).

**About MANF Therapeutics, Inc.**

MANF (mesencephalic-astrocyte-derived neurotrophic factor) is believed to have broad potential because it is a naturally-occurring protein produced by the body to reduce/prevent apoptosis (cell death) in response to injury or disease, via the unfolded protein response. By administering exogenously produced MANF 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 around MANF, and is initially focusing on the development of MANF-based protein therapeutics.

In April 2017, Amarantus incorporated the wholly-owned subsidiary MANF Therapeutics, Inc. to focus on the preclinical and clinical development of MANF. MANF’s lead indication is retinitis pigmentosa, and additional indications including Parkinson's disease, diabetes and
Wolfram's syndrome are envisioned. Further applications for MANF may include Alzheimer's disease, traumatic brain injury, myocardial infarction, antibiotic-induced ototoxicity and certain other orphan diseases.

**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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Source: Amarantus Bioscience Holdings, Inc.

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