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MANF Therapeutics Announces Issuance of Patent in Hong Kong Covering Use of MANF for Treatment of Diabetes and Wolfram's

NEW YORK, May 03, 2018 (GLOBE NEWSWIRE) -- **Via OTC PR Wire –** MANF Therapeutics, Inc., a wholly-owned subsidiary of Amarantus Bioscience Holdings, Inc. (OTCPK:AMBS) in pre-clinical development advancing the orphan-drug designated therapeutic protein mesencephalic astrocyte-derived neurotrophic factor (MANF) as a disease-modifying treatment for orphan ophthalmological conditions, Glaucoma and Parkinson's disease, today announced the issuance of Hong Kong patent HK1204364 covering the use of MANF as a treatment for beta cell disorders, including Type-1 diabetes, Type-2 diabetes and Wolfram's Syndrome. This patent extends exclusivity for MANF in the treatment of diabetes and Wolfram's Syndrome in Hong Kong into 2032.

Multiple research groups have published data demonstrating the therapeutic potential of MANF in treating diabetes, including data published in the peer-reviewed scientific journal Cell Reports entitled "MANF Is Indispensable for the Proliferation and Survival of Pancreatic Cells." The study demonstrated the therapeutic benefit of MANF in protecting and restoring pancreatic beta cells *in vitro* and *in vivo* in animal models of diabetes. The study's authors determined "lack of MANF in vivo in mouse leads to chronic unfolded protein response (UPR) activation in pancreatic islets. Importantly, MANF protein enhanced cell proliferation in vitro and overexpression of MANF in the pancreas of diabetic mice enhanced cell regeneration. We demonstrate that MANF specifically promotes cell proliferation and survival, thereby constituting a therapeutic candidate for cell protection and regeneration."

Wolfram's Syndrome is a rare, genetic pediatric condition characterized by Type-1 diabetes, blindness due to optic atrophy, deafness and neurodegeneration that affects an estimated 20,000 patients worldwide, including 1,000 in the United States. Cellular degeneration occurs in Wolfram's Syndrome due to stress of the endoplasmic reticulum (ER), a structure in cells where newly formed proteins are folded into their functional shapes. MANF is an ER-resident chaperone responsible for improving protein folding caused by stress. Wolfram's patients typically develop Type-1 diabetes in early childhood due to beta cell degeneration.

MANF Therapeutics is preparing to restart IND-enabling development of MANF in 2018. MANF has therapeutic potential across multiple orphan ophthalmological conditions such as retinitis pigmentosa and retinal artery occlusion, where MANF has already received orphan drug designation from the FDA, as well as in larger indications such as Glaucoma,

Parkinson's disease, diabetes and cardiovascular disease.

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.

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.

In April 2017, Amarantus incorporated the wholly-owned subsidiary MANF Therapeutics, Inc. to focus on progressing preclinical and clinical development of MANF.

About Amarantus Bioscience Holdings, Inc.

Amarantus Bioscience Holdings (AMBS), a JLABS alumnus company, 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 attention deficit hyperactivity disorder, commonly known as ADHD. AMBS acquired the rights to the Engineered Skin Substitute program, 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. The Company also re-acquired rights to the Alzheimer's blood diagnostic LymPro Test , MSPrecise and NuroPro.

For further information please visit www.Amarantus.com, or connect with the Amarantus on Facebook, LinkedIn, Twitter and Google+.

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