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# Amarantus Subsidiary MANF Therapeutics Announces Patent Issuances in Europe and China Covering MANF as a Treatment and Biomarker in Diabetes and Publication of MANF Human Pre-Diabetes and Diabetes Biomarker Data

- *Patents extend MANF Therapeutics' exclusivity for use of MANF as a treatment and a biomarker for beta cell disorders in Europe and China into 2032*
- *List of diseases covered by patents include Type-1 diabetes, Type-2 diabetes and Wolfram's Syndrome*
- *Publication opens potential to diagnose and monitor pre-diabetes and diabetes patients*

SAN FRANCISCO, Jan. 03, 2018 (GLOBE NEWSWIRE) -- via **OTC PR Wire** -- [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 and China entitled "*Beta Cell Disorders*" covering the therapeutic and biomarker use of mesencephalic astrocyte-derived neurotrophic factor (MANF) in beta cell disorders, including pre-diabetes, Type-1 diabetes, Type-2 diabetes and Wolfram's Syndrome. The patents extend exclusivity for the therapeutic and biomarker use of MANF in Europe and China into 2032.

Additionally, the Company announced the publication of a peer-reviewed article in [Endocrine Journal](#) entitled "[Circulating mesencephalic astrocyte-derived neurotrophic factor is increased in newly diagnosed prediabetic and diabetic patients, and is associated with insulin resistance](#)" describing how a MANF-based ELISA was used to identify levels of circulating MANF protein in pre-diabetes and diabetes patients. Results from these tests demonstrated that blood levels of MANF were correlated with insulin sensitivity indices in pre-diabetes patients in the 257 participant study. The authors of the publication concluded that MANF serum levels were higher in patients with newly diagnosed pre-diabetes and type-2 diabetes than in non-glucose tolerant controls, and that MANF appears to be associated with the Matsuda Index, QUICKI and HOMA-IR in pre-diabetes patients.

## **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](#), [LinkedIn](#), [Twitter](#) and [Google+](#).

### **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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