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# Amarantus Re-acquires Rights to Alzheimer's Blood Diagnostic LymPro Test

## Company also re-acquires remaining rights to MS diagnostic MSPrecise

NEW YORK, April 06, 2018 (GLOBE NEWSWIRE) -- Via OTC PR Wire -- **Amarantus Bioscience Holdings, Inc.** (OTC Pink:AMBS) (the "Company" or AMBS), a US-based JLABS-alumnus biotechnology holding company developing first-in-class orphan neurologic, regenerative medicine and ophthalmic therapies through its subsidiaries, today announced that it has re-acquired all rights held by Avant Diagnostics, Inc. (OTC Pink:AVDX) to neurology-focused diagnostic tests LymPro Test, MSPrecise and NuroPro. Under the terms of the agreement, Amaranthus agreed to cancel all liabilities (approximately \$722,500) Avant owed to Amaranthus and issue Avant 1,000,000 shares of Amaranthus common stock. Avant agreed to issue to Amaranthus an additional 30,092,073 Avant common shares in satisfaction of certain amounts owed under the original acquisition agreement. Amaranthus intends to assign these diagnostic assets to a new subsidiary that aligns with Amaranthus' holding company business model.

"The science underpinning the LymPro Test for Alzheimer's disease has continued to mature during the intervening period of our ownership by virtue of the improved understanding of the immune system's involvement in the underlying mechanisms of cell death in Alzheimer's disease," said Gerald Commissiong, President & CEO of Amaranthus. "Going forward, we believe there is an opportunity to move the neurology assets via a focused subsidiary and key additions to management with experience to take it forward. We continue to be excited by Avant's Theralink platform and its potential to dramatically improve cancer prescription accuracy, both in terms of positive and negative predictive value, using its industry leading proprietary Reverse-Phase Protein Array (RPPA) platform that evaluates phospho-protein activation in tumor tissue."

### About Alzheimer's Disease

According to the Alzheimer's Association, it is estimated that over 5.4 million people in the United States suffer from Alzheimer's disease. Over 500,000 patients are diagnosed annually, with nearly one-in-eight older Americans affected by the disease. Alzheimer's disease is the third leading cause of death in the United States. The cost of unpaid care in the United States is estimated at over \$210 billion annually. Total payments for care are estimated at over \$200 billion annually, including \$140 billion in cost to Medicare and Medicaid. Alzheimer's expenditures in the United States are expected to exceed \$1.2

trillion by 2050. There is no cure or effective treatment for Alzheimer's disease. Worldwide, about 35.6 million individuals have the disease and, according to the World Health Organization, the number will double every 20 years to 115.4 million people with Alzheimer's by 2050.

### **About LymPro Test**

The Lymphocyte Proliferation Test (LymPro Test) is a diagnostic blood test that determines the ability of peripheral blood lymphocytes (PBLs) and monocytes to withstand an exogenous mitogenic stimulation that induces them to enter the cell cycle. It is believed that certain diseases, most notably Alzheimer's disease, are the result of compromised cellular machinery that leads to aberrant cell cycle re-entry by neurons which then leads to apoptosis. LymPro is unique in the use of peripheral blood lymphocytes as a surrogate for neuronal cell function, suggesting a common relationship between PBLs and neurons in the brain.

### **About MSPrecise**

MSPrecise is a proprietary next-generation DNA sequencing (NGS) assay for the identification of patients with relapsing-remitting multiple sclerosis (RRMS) at first clinical presentation. MSPrecise utilizes next-generation sequencing to measure DNA mutations found in rearranged immunoglobulin genes in immune cells initially isolated from cerebrospinal fluid. MSPrecise would augment the current standard of care for the diagnosis of multiple sclerosis by providing a more accurate assessment of a patient's immune response to a challenge within the central nervous system. This novel method of measuring changes in adaptive human immunity may also be able to discern individuals whose disease is more progressive and requires more aggressive treatment.

### **About Amaranthus 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.

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

## **About Elto Pharma, Inc.**

Elto Pharma, Inc. is developing Eltoprazine, an oral small molecule 5HT1A/1B partial agonist in clinical development for the treatment of Parkinson's disease levodopa-induced dyskinesia (PD-LID), Alzheimer's aggression and adult attention deficit hyperactivity disorder (adult ADHD). Eltoprazine has been evaluated in over 680 human subjects to date, and has a well-established safety profile, with statistically significant efficacy results across multiple central nervous system indications. Eltoprazine has received orphan drug designation (ODD) from the US FDA for the treatment of PD-LID.

Eltoprazine was originally developed by Solvay (now Abbvie) in aggression-related indications. The eltoprazine program was out-licensed to PsychoGenics, Inc. (PGI). PGI licensed eltoprazine to Amaranthus in 2014 after a successful proof-of-concept trial in PD-LID.

In April 2017, Amaranthus incorporated the wholly-owned subsidiary Elto Pharma, Inc. for the purpose of raising capital to finance the further clinical development of Eltoprazine.

## **About Cutanogen Corporation**

Engineered Skin Substitute (ESS) is a tissue-engineered skin prepared from autologous (patient's own) skin cells. It is a combination of cultured epithelium and a collagen-dermal fibroblast implant that produces a skin substitute which contains both epidermal and dermal components. This model has been shown in preclinical studies to generate a functional skin barrier. Most importantly, because ESS is composed of a patient's own cells, it is less likely to be rejected by the immune system of the patient, unlike with porcine or cadaver grafts in which immune system rejection is a possibility. A non-GMP version ESS has been used in investigator-initiated and compassionate-use clinical settings in over 150 human subjects, primarily pediatric patients, for the treatment of severe burns up to 95% of total body surface area. The non-GMP version has also been used in the treatment of two patients with Giant Congenital Melanocytic Nevi (GCMN).

In July 2015, Amaranthus' acquired Lonza Walkersville's wholly-owned subsidiary Cutanogen Corporation, the sole licensor of intellectual property rights to ESS from Cincinnati's Shriners' Hospital for Children and the University of Cincinnati. Cutanogen Corporation is a wholly-owned subsidiary of Amaranthus.

## **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, Amaranthus is seeking to use a regenerative medicine approach to assist the body with higher quantities of MANF when needed. Amaranthus is the frontrunner and primary holder of intellectual property around MANF, and is initially focusing on the development of MANF-based protein therapeutics.

In April 2017, Amaranthus 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 includes 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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