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Amarantus Announces Positive Data From 140 Subject LP-002 Clinical Study of LymPro Test(R) Confirming Statistically Significant Markers for Alzheimer's

SAN FRANCISCO and GENEVA, Jan. 15, 2015 (GLOBE NEWSWIRE) --Amarantus BioScience Holdings, Inc. (OTCQB: AMBS), a biotechnology company focused on the development of diagnostics for neurology and therapeutic products in the areas of neurology, psychiatry, ophthalmology and regenerative medicine, reported positive top-line results of its LP-002 study of the Lymphocyte Proliferation Test (LymPro Test®) blood diagnostic for Alzheimer's disease (AD). Results from the 140-subject study demonstrated that multiple individual biomarkers achieved statistically significant results to correctly identify patients with AD from healthy controls. The company recently completed 'Fit-for-Purpose' assay validation for LymPro at Icon Central Laboratories in Farmingdale, NY, enabling the assay to be offered to the pharmaceutical industry for evaluation in therapeutic Alzheimer's clinical trials. Biomarker services using LymPro Test biomarker data are now available to the pharmaceutical industry for Investigational Use Only (IUO) in pharmaceutical therapeutic clinical development programs.

In addition, the company identified a new, undisclosed biomarker that correlates with AD diagnosis in the LP-002 study ($p<0.0001$). This new marker could become a central component of a multivariate algorithm (LymPro Score) that is currently being analyzed by company scientists to deliver a simplified assessment of an individual's likelihood of having Alzheimer's disease.

"LymPro represents an innovative approach to improving the diagnosis of Alzheimer's disease by measuring a fundamental aspect of disease biology," said Gerald E. Commissiong, President & CEO of Amarantus. "The fact that LymPro has the ability to distinguish patients with early stage AD from control subjects will be important to the pharmaceutical industry engaged in Alzheimer's research. We believe LymPro will have an important impact on future therapeutic drug development programs enabling pharmaceutical companies the opportunity to both enrich clinical trial populations, as well as monitor relevant biology in AD subjects."

In the 140-subject study assessing 71 patients with mild-to-severe AD versus a control group of 69 healthy subjects, the expression of the marker CD69 on specific subpopulations of lymphocytic cells was statistically significantly lower in the AD groups versus the control group, as measured under two different mitogenic stimulation conditions (LymPro Version 1 and LymPro Version 2). The LymPro Version 1 assay replicated previous published work, most notably with the CD19+ positive lymphocytes ($p=0.0005$), confirming published literature. Each of the three stages of Alzheimer's disease showed significant differences in

marker expression as compared to healthy controls.

In addition, after further analysis of a 44 subject 7-year longitudinal retrospective study including a patient record clinical data assessment over time, LymPro was able to distinguish Alzheimer's disease from Parkinson's and vascular dementias with a sensitivity of 94% and specificity of 65% (p=0.0002). This is of importance because it may assist pharmaceutical companies in distinguishing dementia of the Alzheimer's type from dementia of a different etiology.

A copy of a corporate presentation reviewing the data is available online on the company's website at http://ir.amarantus.com/presentations.

As described in the published literature, CD69 is a protein expressed when lymphocytic blood cells are undergoing proliferation, and is considered an early marker of cell division. Low levels of CD69 under cell division conditions in AD patients is indicative of lymphocytic cell cycle dysregulation and a surrogate marker for the neuronal cell cycle dysregulation that has been observed in the brains of AD patients at autopsy.

"Not only is LymPro a consistent and reliable tool in diagnosing Alzheimer's disease, having completed 'Fit-for-Purpose' assay validation at Icon, it may now be used to enrich inclusion criteria in pharmaceutical clinical studies," said Colin Bier, Chief Development Officer of Amarantus Diagnostics, the company's newly created wholly-owned subsidiary. "Use of the LymPro Test will likely mitigate principal investigators' risk of selecting the wrong patients for inclusion in clinical studies of Alzheimer's therapeutics."

Amarantus intends to publish data from these studies in peer-reviewed journals as well as present them at various scientific congresses throughout the course of 2015.

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 to withstand an external 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. LymPro is unique in the use of peripheral blood lymphocytes (PBLs) as a surrogate for neuronal cell function, suggesting a common immune-based relationship between PBLs and neurons in the brain.

About Amarantus BioScience Holdings, Inc.

Amarantus BioScience Holdings (AMBS) is a biotechnology company developing treatments and diagnostics for diseases associated with neurodegeneration and protein misfolding-related apoptosis. AMBS has licensed Eltoprazine, a Phase 2b ready small molecule indicated for Parkinson's disease Levodopa-induced dyskinesia and adult ADHD. AMBS has an exclusive worldwide license to the Lymphocyte Proliferation test, (LymPro Test®), which was developed by Prof. Thomas Arendt, Ph.D., from the University of Leipzig, for Alzheimer's disease and owns the intellectual property rights to a therapeutic protein known as mesencephalic-astrocyte-derived neurotrophic factor ("MANF") and is developing MANF-based products as treatments for brain and ophthalmic disorders. AMBS also owns intellectual property for the diagnosis of Parkinson's disease (NuroPro) and the discovery of neurotrophic factors (PhenoGuard™).

In November 2014, AMBS entered into an exclusive option agreement with Lonza Walkersville, Inc., a subsidiary of Lonza Group Ltd., to acquire Cutanogen Corporation, a subsidiary of Lonza Walkersville, to develop Engineered Skin Substitute (ESS-W), an autologous skin replacement product for the treatment of Stage 3 and Stage 4 intractable severe burns.

On January 12, 2015, AMBS announced the acquisition of DioGenix, Inc., a specialized neuro-diagnostics company, and owns the rights to MSPrecise®, a proprietary next-generation DNA sequencing (NGS) assay for the identification of patients with relapsing-remitting multiple sclerosis (RRMS) at first clinical presentation. For further information please visit www.Amarantus.com, or connect with the company onFacebook, LinkedIn, Twitter and Google+.

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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