November 20, 2014

Amarantus Completes Enrollment of Expanded LP-002 Study of Alzheimer's Blood Diagnostic LymPro Test(R) to Assess Predictive Value in Early-Stage Disease

- *Full dataset on 140 patients in mild, moderate and severe Alzheimer's disease subjects expected to be announced in December 2014*

SAN FRANCISCO and GENEVA, Nov. 20, 2014 (GLOBE NEWSWIRE) -- Amarantus Bioscience Holdings, Inc. (OTCQB:AMBS), a diversified biotechnology company focused on the development of diagnostic and therapeutic products in the areas of neurology, psychiatry, ophthalmology and regenerative medicine, announced that it has completed enrollment in the Company's expanded LP-002 study of the Lymphocyte Proliferation Test (LymPro Test®) blood diagnostic for Alzheimer's disease (AD) assessing LymPro's predictive value in mild, moderate and severe AD vs. healthy controls. Amarantus expects to announce the full results of its in-depth analysis of the full mild-to-severe AD cohort of 140 subjects (initial 72 patients + 68 patient extension) by year-end 2014, and make a final determination on which assay conditions (Version 1 vs. Version 2) it will use to support its product launch.

In October 2014, Amarantus announced positive data from its 72-subject initial clinical performance study for diagnosing Alzheimer's disease demonstrating the LymPro Test achieved highly statistically significant results of both Version 1 and Version 2 in correctly distinguishing patients with moderate-to-severe AD from healthy controls. As a result, the Company extended the LP-002 study to include additional patients diagnosed with early-stage Alzheimer's disease. The expanded 68-subject study includes 34 patients with mild-to-severe AD and 34 patients from a healthy control group.

"The completion of enrollment in the expanded study to include the predictive value of LymPro in early-stage diagnosis represents an important milestone for the Company, and brings us one step closer to our initial goal of providing an accurate and reliable diagnostic blood test for Alzheimer's disease to the pharmaceutical research community, and ultimately commercial use," said Gerald E. Commissiong, President and CEO of Amarantus.

Mr. Commissiong, continued, "We look forward to reporting data from this study before the end of the year and believe the in-depth analysis of LymPro in mild-to-severe Alzheimer's will be invaluable to the medical community, patients and their families in diagnosing the early stages of this debilitating and previously very difficult to diagnose disease. We are excited to be in the final planning stages of bringing the first commercially-viable Alzheimer's

blood diagnostic to the market, and believe LymPro can play a critical role where there is a tremendous need for groundbreaking advancements."

Amarantus anticipates making LymPro available for the Investigational Use Only (IUO) market before the end of 2014. Based on the results from the initial LP-002 cohort data, Amarantus is validating both Version 1 and Version 2 of LymPro for commercialization in IUO with a primary target of pharmaceutical clinical trials. Clinical Laboratory Improvement Amendments (CLIA) certification is not required to launch LymPro in the IUO market. Following the in-depth analysis of the full 140-subject mild-to-severe AD cohort, Amarantus will then make a determination regarding which version of LymPro (Version 1 or Version 2) to launch under the CLIA designation for marketing to the broader medical community in the United States in 2015.

The Company's initial LP-002 study evaluated 36 patients with moderate-to-severe AD versus a control group of 36 healthy subjects. Data showed that 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 stimulation conditions (LymPro Version 1 and LymPro Version 2). In Version 1, LymPro correctly classified AD patients and healthy controls with an overall accuracy of 87% ($p=0.0015$), with a high degree of sensitivity (80%) and specificity (86%). In Version 2, LymPro correctly classified AD patients and healthy controls with an overall accuracy of 83% ($p=0.0059$) while maintaining a high degree of sensitivity (90%) and specificity (71%). CD69 is a protein expressed when lymphocytic blood cells are in the process of proliferating, and is considered an early marker that cell division is imminent. Low levels of CD69 under cell division conditions in AD patients is suggestive 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. Cell cycle dysregulation has been identified as a potential link between amyloid beta plaques and tau tangles in AD.

About Alzheimer's disease

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 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 $1.4 trillion by 2050.

About LymPro Test®

The Lymphocyte Proliferation Test (LymPro Test®) is a diagnostic blood test that measures the ability of peripheral blood lymphocytes to withstand an external mitogenic stimulation that induces them to enter the cell cycle. It is hypothesized 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 ("Eltoprazine"), a phase 2b ready small molecule indicated for Parkinson's Levodopa induced dyskinesia and Adult ADHD. AMBS has an exclusive worldwide license to the Lymphocyte Proliferation test ("LymPro Test®") 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 disorders. AMBS also owns intellectual property for the diagnosis of Parkinson's disease ("NuroPro") and the discovery of neurotrophic factors ("PhenoGuard"). Amarantus' PhenoGuard operations are located at Janssen Labs @QB3 in San Francisco, CA. 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. 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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Source: Amarantus BioScience Holdings, Inc.