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Amarantus Receives Notice of Allowance for U.S. Patent Application Covering Proprietary Methods of Administration and Compositions in the Treatment of Parkinson's Disease

Patent Issuance Will Provide IP Protection for Lead Product Candidate Eltoprazine for Treatment of Parkinson's Disease Levodopa-Induced Dyskinesia (PD-LID)

SAN FRANCISCO and GENEVA, Switzerland, May 13, 2015 (GLOBE NEWSWIRE) -- [Amarantus BioScience Holdings, Inc.](#) (OTCQB:AMBS), a biotechnology company focused on developing therapeutic and diagnostic products for neurological disorders and orphan indications, announced that a Notice of Allowance was received from the U.S. Patent and Trademark Office (USPTO) for U.S. Patent Application Serial No. 11/713,156 entitled, "*Pharmacological Treatment of Parkinson's Disease*." Upon issuance, the patent will provide additional intellectual property protection for the Company's lead product candidate, eltoprazine. The allowed patent claims cover methods and compositions for the administration of eltoprazine for the alleviation of akinesia, rigidity and/or tremor associated with Parkinson's disease.

Eltoprazine, a small molecule 5HT_{1A/1B} partial agonist, is currently preparing to commence Phase 2b clinical development for the treatment of Parkinson's disease levodopa-induced dyskinesia (PD-LID). PD-LID is an abnormal involuntary, movement disorder resulting from prolonged levodopa-based therapy, the most commonly prescribed treatment for Parkinson's disease (PD). PD-LID occurs in approximately 60-80% of PD patients and is one of the most difficult problems facing people with the disease. This dyskinesia can be severely disabling and impact quality of life by prohibiting the ability to perform routine daily functions.

"This Notice of Allowance for eltoprazine in Parkinson's is a meaningful addition to the intellectual property estate we have established related to eltoprazine and comes at an important time as we are gearing up to commence enrollment and patient dosing in our Phase 2b program in PD-LID," said Gerald E. Commissiong, President & CEO of Amaranthus. "We believe eltoprazine has tremendous potential as an important therapy to address a significant unmet need and improve the quality of life for individuals with Parkinson's disease and their families."

Amarantus expects to initiate patient enrollment and dosing in a 60-subject Phase 2b clinical study with eltoprazine in individuals with PD in the second quarter of 2015. The PD-LID

study will be conducted at Parkinson's disease centers of excellence in the United States and Europe. This trial is a double-blind, placebo-controlled, four-way crossover, dose range finding, clinical study designed to evaluate dose response effect of repeated eltoprazine dosing on safety, tolerability and dyskinesia severity using state-of-the-art rating scales, diaries and motion sensors. Pharmacokinetics and pharmacodynamics will also be evaluated.

The USPTO issues a Notice of Allowance after it makes a determination that a patent should be granted from a patent application.

About Etoprazine

[Etoprazine](#) is a small molecule 5HT_{1A/1B} partial agonist in clinical development for the treatment of Parkinson's disease levodopa-induced dyskinesia (PD-LID), adult attention deficit hyperactivity disorder (ADHD), and Alzheimer's aggression. Etoprazine has been evaluated in over 680 human subjects to date, and has a well-established safety profile. Etoprazine was originally developed by Solvay Pharmaceuticals, now AbbVie, for the treatment of aggression. Solvay out-licensed the eltoprazine program to PsychoGenics. PsychoGenics licensed eltoprazine to Amaranthus following successful proof-of-concept trials in PD-LID and adult ADHD.

About Parkinson's Disease and Levodopa-Induced Dyskinesia (PD-LID)

Parkinson's disease is a chronic, progressive neurodegenerative disorder that causes motor symptoms such as tremors, rigidity and slowed movements as well as non-motor symptoms including cognitive impairment, mood disorders and autonomic dysfunction. The Parkinson's Disease Foundation estimates that there are approximately one million people living with Parkinson's disease in the United States and seven to 10 million PD patients worldwide. The most commonly prescribed treatments for Parkinson's disease are levodopa-based therapies. In the body, levodopa is converted to dopamine to replace the dopamine loss caused by the disease. As dopamine neurons in the brain are lost the therapeutic efficacy of levodopa attenuates, and increased use is associated with a side effect of dyskinesias. These are involuntary, uncontrollable and often exaggerated and jerky movements. They are distinct from the static, rhythmic tremor as a symptom of Parkinson's disease. Levodopa-induced dyskinesia can be severely disabling, rendering patients unable to perform routine daily tasks.

About Amaranthus BioScience Holdings, Inc.

Amaranthus BioScience Holdings (AMBS) is a biotechnology company developing treatments and diagnostics for diseases in the areas of neurology, psychiatry, ophthalmology and regenerative medicine. AMBS' Therapeutics division has development rights to eltoprazine, a Phase 2b ready small molecule indicated for Parkinson's disease levodopa-induced dyskinesia, adult ADHD and Alzheimer's aggression, 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' Diagnostics division 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, has an exclusive worldwide

license to the Lymphocyte Proliferation test (LymPro Test[®]) for Alzheimer's disease, which was developed by Prof. Thomas Arendt, Ph.D., from the University of Leipzig, and owns intellectual property for the diagnosis of Parkinson's disease (NuroPro). AMBS also owns the discovery of neurotrophic factors (PhenoGuard[™]) that led to MANF's discovery.

For further information please visit www.Amarantus.com, or connect with the Company on [Facebook](#), [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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