

November 18, 2019



Amarantus
BioScience

Amarantus Provides Recapitalization Update to Shareholders

- *Pending license with Emerald provides opportunity to realize therapeutic portfolio value*
- *JV w/Todos announces full enrollment for LymPro Alzheimer's blood test clinical trial*
- *Amarantus management evaluating dividend of Todos shares to Amarantus shareholders after Todos Nasdaq CM uplist*

New York, NY, Nov. 18, 2019 (GLOBE NEWSWIRE) -- via NEWMEDIAWIRE -- [Amarantus Bioscience Holdings, Inc.](#) (OTC Pink: AMBS) ("Amarantus," or AMBS), a US-based JLABS-alumnus biotechnology holding company developing proprietary orphan neurologic, regenerative medicine and ophthalmic therapies and diagnostics through its subsidiaries, today released a letter to its shareholders following the announcement of the binding term sheet to license the Company's therapeutics subsidiaries' technologies to [Emerald Organic Products](#), an emerging CBD-focused health sciences company, and other recent events:

Dear Valued Shareholder,

I am pleased to provide an update regarding progress on several fronts and on the plan to deliver a recapitalization of the Company that would allow for shareholders to benefit from the value of Amarantus' exciting portfolio. Our goal has been to place our development programs into separate subsidiary companies, and then work with partners to attract financial resources to advance these programs through FDA approval and into commercialization via those subsidiaries. This plan would also allow for the settlement of the Company's outstanding liabilities and potentially provide significant upside for Amarantus shareholders.

As previously announced, we entered into joint venture via our [Breakthrough Diagnostics subsidiary with Todos Medical, Ltd.](#) to develop our neurodiagnostics technologies, led by blood screening diagnostic LymPro Test™ for Alzheimer's disease, and we have [agreed to license our therapeutic portfolios to Emerald Organic Products](#). These transactions provide a promising path forward for our programs. Amarantus will own Todos common shares equating to approximately 49% of Todos common shares immediately prior to Todos completing a capital raise to list its common shares on the Nasdaq Capital Markets (Nasdaq CM), and Amarantus will own convertible preferred stock with a face value of \$100M in Emerald upon closing of the pending license agreement of our therapeutics portfolio to Emerald. The Company will also receive royalties from product sales. Amarantus also continues to hold a 31.5% common equity position in [Avant Diagnostics](#), which was taken private in first half of 2019. Avant is preparing to relaunch the Theralink® phosphoprotein tumor analysis platform back into the marketplace in 2020.

I am also confirming our plans remain to complete our capital restructuring by conducting a capital raise via Reg A.

In addition, Amarantus management has begun to evaluate the timing, amount and record date of a potential dividend of a portion of the shares Amarantus receives from Todos to its common shareholders. This dividend assumes the successful completion of the Breakthrough acquisition by Todos and related uplisting of Todos common shares to Nasdaq CM, and would be tangible recognition of ongoing support of Amarantus by its shareholders.

Transactions Summary

Todos Medical JV Status: *The goal of the joint venture agreement with Todos announced in Q4 2018 was to fund the further development by Amarantus' subsidiary Breakthrough Diagnostics, Inc. and its lead product blood diagnostic LymPro Test™ for Alzheimer's disease.*

- Amarantus received approximately 19.99% of Todos Medical common shares in exchange for 19.99% of Breakthrough common shares and a commitment to provide funding for a LymPro PET imaging correlation clinical trial conducted at Leipzig University. In Q2 2019, we announced positive data from an interim analysis of that clinical trial, triggering the exercise of Todos' option to acquire of the remaining unowned 80.01% of Breakthrough Diagnostics.*
- Todos is currently in the process of listing its common shares on the Nasdaq Capital Market (Nasdaq CM), a process expected to be completed in Q4/2019 or Q1/2020. At that time, Amarantus will receive additional common shares of Todos to bring Amarantus' ownership in Todos to 49% prior the expected uplist capital raise.*
- On November 14, 2019, Todos and Amarantus announced that full enrollment of the clinical trial had been achieved with topline results expected before the end of Q1/2020.*

We believe the blood based diagnostic LymPro Test™ for Alzheimer's disease holds great promise for use in assisting pharmaceutical companies in recruiting/conducting clinical trials and, ultimately, providing physicians with a much-needed diagnostic tool by measuring amyloid PET deposits and brain immune cell cycle dysregulation (CCD) using blood. Given the recent Aducanumab data announced by Biogen that is directly related to the amyloid hypothesis, as well as the conditional approval by the National Medical Products Administration in China for the first new Alzheimer's drug in over 20 years, called Oligomannate from Shanghai Green Valley Pharmaceuticals that is based on gut-brain biology of the microbiome and its effects on the immune system, we believe there will be renewed enthusiasm for LymPro because it dynamically measures two fundamental aspects of Alzheimer's biology using blood.

Todos is also in the process of preparing for the commercial launch of its TM-B1 and TM-B2 screening blood tests for breast cancer with launch expected in the first half of 2020 under an already established CE mark following completion of a clinical trial being funded by Todos' commercial partner Orot+ in Romania. We expect Todos to continue to make progress towards this critical milestone in the months ahead. Breast cancer screening represents an area with significant untapped commercial potential internationally, as well as in the United States.

Emerald Organic Products:*In late October 2019, the Company announced that it entered into a binding term sheet to license the therapeutic technologies from its majority-owned subsidiaries Elto Pharma, Cutanogen and MANF Therapeutics to Emerald Organic Products ('Emerald').*

Amarantus will be receiving at the closing of the transaction (execution of the license):

- *Preferred Stock in Emerald that is convertible in April 2022 into:*
 - *50M shares of Emerald common stock ("Stock"), with an assumed value in April 2022 of at least \$100M*
 - *In the event in April 2022 the Stock is worth less than \$100M, Emerald will make-up the difference between \$100M and the value of the Stock via cash payments to Amarantus of additional royalties*
- *Royalties*
 - *Amarantus will receive a royalty of sales of products licensed by Emerald, and, can buy a higher royalty percentage in increments*

With this structure in place, Amarantus shareholders are positioned for near-term value from the proposed dividend of Todos stock, while mid and long-term investors can maintain participation in the longer-term value creation from the overall Amarantus portfolio and programs that remain, including Todos Medical, Inc. and Avant Diagnostics.

Emerald is a CBD company, with branded consumer products being launched via established national distribution channels, [run by a team of seasoned executives with proven track records of generating results in the nutritional supplement and consumer packaged goods businesses](#). CBD provides an opportunity to leverage the emerging wellness and health market, by combining it with sound clinical and regulatory science to bring products to market that have the potential to meaningfully improve health while reducing healthcare spending. Emerald's business plan involves securing traditional in-store and online distribution channels for its CBD products, and strategically acquiring controlling interests in companies with complementary niche products, capabilities, brands and distribution channels that can be leveraged to generate value for other members of the Emerald family of companies, ultimately allowing for increased overall sales and distribution on a consolidated basis.

*By partnering Amarantus' valuable pipeline of FDA regulated biopharmaceutical product candidates with Emerald Life Sciences, Emerald's emerging biopharmaceutical division, Emerald plans to separate itself from other CBD companies by having proprietary biopharma assets that collectively could generate substantial cash flow in the mid-2020s, once the eltoprazine, ESS and MANF assets have been brought to market for their various therapeutic indications. Unlike traditional biopharma companies, Emerald is projecting to generate significant cash flows from its CBD based businesses with a target of reaching over \$100 million in consolidated revenue in 2021 from product sales of its CBD and related products. With this strategy in place, we believe Emerald can become a premier branded CBD company focused on capturing a significant share of the CBD market, both in the US and internationally, **and** enhance value creation by seeing the promise of the Amarantus pipeline realized for patients suffering from diseases or dysfunction where anecdotal evidence suggests cannabinoids may be beneficial.*

Importantly, going forward Emerald will be assuming the costs of developing the eltoprazine,

Engineered Skin Substitute, MANF and PhenoGuard programs. We believe there is tremendous value in the Amaranthus portfolio:

- *Eltoprazine: Elto Pharma, Inc. – addressable market \$60B+*
 - *Phase 3: Adult ADHD. Next Step: Reformulation*
 - *Phase 2b - Parkinson's levodopa-induced dyskinesia: Next Step: Reformulation*
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 - *Phase 2 Agitation in Alzheimer's. Next Step: Range Finding Studies*
- *ESS: Engineered Skin Substitute (Cutanogen Corporation) – addressable market \$5B+*
 - *Phase 3: Pediatric Severe Burns. Next Step: Chart Review Extension Study from published Phase 2 data to optimize Phase 3 endpoints*
 - *Overall Skin Graft Market*
- *Mesencephalic Astrocyte-derived Neurotrophic Factor (MANF Therapeutics) – addressable market \$100B+*
 - *Retinal Vision Loss – Preclinical*
 - *Wolfram Syndrome (orphan)*
 - *Retinitis Pigmentosa (orphan)*
 - *Glaucoma*
 - *Macular Degeneration*
 - *Neurological Conditions – Preclinical*
 - *Parkinson's disease*
 - *Traumatic Brain Injury*
 - *Alzheimer's disease*
 - *Epilepsy*
 - *Diabetes - Preclinical*
 - *Wolfram Syndrome (orphan)*
 - *Type-1 and Type diabetes*
 - *Biomarker for pre-diabetes / beta-cell health*
 - *Cardiovascular disease - Preclinical*
 - *Myocardial infarction*
 - *Hearing Loss - Preclinical*
 - *Antibiotic-induced hearing loss (orphan)*
 - *Tinnitus*
 - *Immune stimulation - Preclinical*
 - *Certain B-cell cancers*
- *PhenoGuard*
 - *Discovery of other MANF-like proteins*
 - *Evaluation of cannabinoid activity on astrocytes and neurons*

Avant Diagnostics: *In the first half of 2016, Amaranthus provided funding for Avant Diagnostics to acquire Theranostics Health, Inc., a cancer biomarker company focused on phosphoprotein tumor analysis that provides actionable information to physicians to make recommendations about which FDA approved drug combinations are likely to be most successful in treating cancer on an individual basis, and, equally importantly, which common FDA approved drugs are likely to be ineffective or potentially dangerous for treating certain cancers on an individual basis. This powerful technology is rooted in intellectual property from George Mason University centered around the cell cycle biomarkers involved in the mTOR pathway, as well as other pathway markers such as HER2. Amaranthus continues to hold a 31.5% common equity position in Avant, and we believe Avant has tremendous*

opportunity to alter the way cancer is treated worldwide.

Conclusion

We are encouraged by the progress in recent months and the strength of the opportunities to move our programs forward. We see significant synergy in our product and IP portfolios, and see areas for potential collaborations that could accelerate growth.

I would personally like to thank each shareholder for their continued support of our mission of bringing life-saving treatments to patients, and we are excited to see this mission fulfilled through Emerald Organic Products while Amarantus and its shareholders reap the rewards from the significant investments we have made over the 12 years.

Warmest Regards,

*Gerald Commissiong
President & CEO*

About Amarantus Bioscience Holdings, Inc.

Amarantus Bioscience Holdings (AMBS) is a JLABS alumnus biotechnology company developing treatments and diagnostics for diseases in the areas of neurology, regenerative medicine and orphan diseases through its subsidiaries. The Company's 80.01%-owned subsidiary **Breakthrough Diagnostics, Inc.**, currently a joint venture with Todos Medical, Ltd. has licensed intellectual property rights to the Alzheimer's blood diagnostic LymPro Test ® from Leipzig University that was originally developed by Dr. Thomas Arendt, as well as certain rights to multiple sclerosis diagnostic MSPrecise™ and Parkinson's diagnostic NuroPro. Amarantus entered into a joint venture agreement with **Todos Medical, Ltd.** to advance diagnostic screening assets, and Todos has exercised its exclusive option to acquire Amarantus' remaining ownership in Breakthrough in exchange for approximately 50% ownership of Todos. The transaction is expected close before the end of the first quarter of 2020. Amarantus also owns approximately 30% of the common shares of **Avant Diagnostics, Inc.**, a healthcare data-generating technology company that specializes in biomarker assay services that target multiple areas of oncology. Avant provides precision oncology data through its TheraLink® assays to assist the biopharmaceutical industry and clinical oncologists in identifying likely responders, initially for breast cancer, to over 70 FDA-approved drug treatments.

AMBS 50%-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. The AMBS acquired **Cutanogen Corporation** from Lonza Group in 2015. Cutanogen is preparing for pivotal studies with Engineered Skin Substitute (ESS) for the treatment of pediatric life-threatening severe burns. ESS is a regenerative medicine-based, autologous full-thickness skin graft technology originally developed by the Shriners' Hospital that can be used to treat severe burns, as well as several other catastrophic and cosmetic dermatological indications. 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 is developing MANF-based products as treatments for ophthalmological

disorders such as Wolfram Syndrome, Retinitis Pigmentosa and Glaucoma, as well as neurodegenerative diseases such as Parkinson's disease. MANF was discovered by the Company's Chief Scientific Officer John Commissiong, PhD. Dr. Commissiong discovered MANF from AMBS' proprietary discovery engine PhenoGuard, and believes several other neurotrophic factors remain to be discovered. Amaranthus has entered into a binding letter of intent to license the therapeutic assets from Elto Pharma, Cutanogen and MANF Therapeutics to Emerald Organic Products.

For further information please visit www.Amarantus.com, or connect with the Amaranthus on Facebook, LinkedIn, and Twitter.

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Notice Regarding Forward-Looking Statements

This letter contains forward-looking statements, about the Company's expectations, beliefs or intentions regarding, among other things, its product development efforts, business, financial condition, results of operations, strategies or prospects. Forward-looking statements can be identified by the use of forward-looking words such as "believe," "expect," "intend," "plan," "may," "should" or "anticipate" or their negatives or other variations of these words or other comparable words or by the fact that these statements do not relate strictly to historical or current matters. Forward-looking statements relate to anticipated or expected events, activities, trends or results as of the date they are made. Because forward-looking statements relate to matters that have not yet occurred, these statements are inherently subject to risks and uncertainties that could cause actual results to differ materially from any future results expressed or implied by the forward-looking statements. Many factors could cause actual activities or results to differ materially from the activities and results anticipated in such forward-looking statements, including, but not limited to, the factors summarized in the filings with the SEC. Amaranthus does not undertake any obligation to publicly update these forward-looking statements, whether as a result of new information, future events or otherwise.

Source: Amaranthus Bioscience Holdings, Inc.



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