April 7, 2015

Amarantus Reports 2014 Financial Results and Business Overview

Management to Host Conference Call and Webcast on April 9, 2015 at 11:00 a.m. EDT

SAN FRANCISCO and GENEVA, April 7, 2015 (GLOBE NEWSWIRE) --Amarantus BioScience Holdings, Inc. (OTCQB:AMBS), a biotechnology company focused on developing diagnostics in neurology, and therapeutic products in the areas of neurology, psychiatry, ophthalmology and orphan diseases, announced financial results for the year ended December 31, 2014. The Company also highlighted recent corporate and clinical development achievements, as well as upcoming milestones for its Diagnostics division and Therapeutics division.

"The advancements made throughout the course of 2014 and early 2015 in executing our strategy of assembling clinically de-risked and significantly undervalued diagnostic and therapeutic opportunities for the Company's two divisions has yielded a tremendous platform for growth going forward," said Gerald E. Commissiong, President & CEO of Amarantus.

RECENT CORPORATE HIGHLIGHTS

- Appointed renowned drug development expert and co-founder of Amgen, Joseph Rubinfeld, Ph.D., to the Board of Directors;
- Appointed Elise Brownell, Ph.D., to the newly created position of Senior Vice President of Operations and Program Management;
- Completed two non-convertible debenture transactions which raised a total of $2.85 million;
- Completed multiple closings of a Series E preferred stock financing to raise $7.25 million; and
- Modified the terms of the Series E preferred stock to adjust the conversion price to $0.05 (representing a ~2% discount to market as of the date of adjustment), delay any further potential downward adjustment in the conversion price to October 1, 2015, and inserted a provision for a Mandatory Conversion of the Series E preferred stock into common shares upon a Qualified Public Offering of the Company's stock.

DIAGNOSTICS DIVISION OVERVIEW

"We crystalized our corporate development strategy in our Diagnostics division with the synergistic acquisition of multiple sclerosis (MS) diagnostics company, Diogenix, Inc. The lead asset acquired, MSPrecise®, recently completed a clinical validation study with strong results, paving the way for its potential introduction into the commercial marketplace in the fourth quarter of this year. LymPro Test®, our Investigational Use Only (IUO) Alzheimer's diagnostic blood test that was commercialized in late 2014, garnered its first pharmaceutical

customer in the first quarter of 2015, as the interest in trials of experimental Alzheimer's therapies is beginning to increase with high-profile successes renewing hope for the field. We have established a wholly-owned subsidiary, Amarantus Diagnostics, Inc., to house MSPrecise and LymPro and are now evaluating CEO candidates to drive this division forward. We are also currently evaluating strategic options for Amarantus Diagnostics that will allow it to exercise the exclusive option agreement with Georgetown University, and strengthen its position as a leading Alzheimer's diagnostic blood test company, in addition to its emerging leading position in the area of MS diagnostics," stated Robert Farrell, CFO of Amarantus.

Recent Highlights

- Retained an executive search firm to identify a Chief Executive Officer for the Diagnostics division;
- Retained Ravi Kiron, Ph.D., a co-founder in C2N and the former Chief Business Officer at Kinemed, Inc., to serve as Senior Vice President of Business Development;
- Promoted Colin Bier, Ph.D., to Chief Development Officer to oversee the commercialization of the Company's assays under CLIA;
- Retained a consulting firm specialized in the sale of tax credits, to market the $7.5 million of New Jersey tax credits obtained in the Diogenix acquisition; and
- Established an Alzheimer's disease (AD) Diagnostics Scientific Advisory Board with three internationally-renowned AD and neurological disorder specialists, Paula T. Trzepacz, M.D., Jeffrey L. Cummings, M.D., Sc.D., and Robert A. Stern, Ph.D.
- *LymPro Test® for the diagnosis of AD*
    - Presented positive LymPro data at the 12th International Conference on Alzheimer's and Parkinson's Diseases and Related Neurological Disorders;
    - Established the Company's first Investigational Use Only (IUO) Alzheimer's biomarker services collaboration for LymPro Test with Anavex Life Sciences Corp. to evaluate blood samples from AD patients;
    - Entered into a Letter of Intent with Anavex to plan additional scope of further biomarker services for its potential Phase 3 AD clinical trial; and
    - Announced the availability of LymPro Test biomarker services for use by the pharmaceutical industry for IUO.
- *MSPrecise® for the diagnosis of MS*
    - Acquired MS diagnostics company Diogenix, Inc.; and
    - Completed integration of Diogenix into Amarantus Diagnostics corporate infrastructure.
- *Georgetown Assays for the diagnosis of AD*
    - Entered into a one-year, exclusive option agreement with Georgetown University to license patent rights for blood based biomarkers for AD and memory loss.

THERAPEUTICS DIVISION OVERVIEW

David A. Lowe, Ph.D., member of the Amarantus Board Directors, commented, "The Therapeutics division is now positioned for significant growth. We spent considerable time and resources revitalizing the eltoprazine development program following our in-licensing of this product candidate in early 2014. Today, we are poised to initiate a mid-stage clinical development program of eltoprazine after the United States Food and Drug Administration (FDA) recently allowed the Company's Investigational New Drug (IND) application to

proceed into a Phase 2b program for Parkinson's disease levodopa induced dyskinesia (PD LID). Eltoprazine has a strong safety profile, having been dosed in over 680 human subjects for periods of more than two years, at doses several fold higher than our anticipated dosing regimens going forward. In addition, eltoprazine already has positive Phase 2a data in PD LID, which was recently published, positive Phase 2 data in an adult attention deficit and hyperactivity disorder (adult ADHD) clinical study, as well as significant proof-of-concept clinical data generated by its original owner, Solvay Pharmaceuticals, in the area of aggression associated with AD. We also succeeded in our orphan regulatory strategy for MANF by receiving an orphan drug designation for the treatment of retinitis pigmentosa (RP), which now allows the Company to shepherd MANF's development towards first-in-man studies."

Recent Highlights

- *Eltoprazine: PD-LID, adult ADHD, and Alzheimer's aggression*
  - Published Phase 2a clinical study results in *BRAIN* for the treatment of PD-LID; and
  - Opened an IND application with the neurology division of the FDA to advance eltoprazine into Phase 2b clinical studies.
- *MANF: Mesencephalic-astrocyte-derived neurotrophic factor*
  - Received Orphan Drug Designation (ODD) from the FDA for the treatment of RP;
  - Submitted an application to the FDA for ODD for the treatment of retinal artery occlusion (RAO); and
  - Announced positive preclinical data on the effects of MANF for the protection from vision loss in animal models of RP and RAO.
- *ESS: Engineered Skin Substitute*
  - Entered into exclusive option agreement with Lonza Walkersville to acquire subsidiary Cutanogen Corporation, holder of licensing rights to intellectual property related to ESS for the potential treatment of severe burns;
  - Dismissed with prejudice the litigation that had previously encumbered ESS; and
  - Amended the Lonza exclusive option agreement allowing for the extension of the option period through August 31, 2015.

"In November of 2014, the Company extended its orphan drug strategy beyond MANF by entering into an exclusive option agreement to acquire Cutanogen Corporation from Lonza Walkersville. Cutanogen is the licensee of certain intellectual property rights related to ESS. ESS represents a unique opportunity in the orphan area of severe burns. The potential acquisition of Cutanogen initially presented several risks through which the Company successfully navigated, including the dismissal of the litigation previously encumbering the asset. We have now effectively paved the way for the acquisition to take place and, once acquired, expect to be in a position to initiate a Phase 2 study shortly after the initiation of the eltoprazine PD LID study," added Joseph Rubinfeld, Ph.D., member of the Amarantus Board of Directors.

FULL YEAR 2014 FINANCIAL SUMMARY

Research and development costs for the twelve months ended December 31, 2014 increased $11,673,000 to $13,762,000 from $2,089,000 for the twelve months ended December 31, 2013. During the year ended December 31, 2014, research and development costs consisted primarily of start-up clinical expenses, and $7,200,000 of in-process

research and development associated with intellectual property, litigation and technology relating to the potential Lonza transaction. $3,000,000 of the $7,200,000 was a non-cash expense paid for with shares of the Company's common stock. The increase in research and development expense in 2014, as compared to 2013, was primarily due to in-process research and development cost, and to a lesser extent, LymPro clinical study costs, increases in consulting and stock based compensation.

G&A expenses for the twelve months ended December 31, 2014 increased $3,970,000 to $7,592,000 from $3,622,000 for the twelve months ended December 31, 2013 primarily due to increased key hires the company made to advance its programs, patent related legal costs, development program-related outside services and stock based compensation.

Other income (expense) for the twelve months ended December 31, 2014 decreased $3,498,000, to $5,923,000 from $9,421,000 for the twelve months ended December 31, 2013. Primary reasons for this decrease include: (1) interest expense for the twelve months ended December 31, 2014 decreased $1,818,000, to $813,000 from $2,631,000 for the twelve months ended December 31, 2013 due to conversion of debt to common stock, primarily during the first half of 2014, (2) loss on the issuance of common stock improved $92,000 from $260,000 in 2014 compared to $352,000 in 2013; (3) in 2014 the Company incurred no loss on issuance of debt, as compared with a loss of $6,709,000 in 2013; (4) in 2014 the Company incurred $1,250,000 loss on the extinguishment of convertible debt compared to none in 2013; (5) in 2014 the Company incurred $3,867,000 loss on the issuance of warrants and none in 2013; and (6) income from the change in fair value of warrants and derivatives liabilities increased $46,000 from $317,000 for 2014, as compared with $271,000 in 2013. Net loss for the twelve months ended December 31, 2014 was $28,152,000 compared to a net loss of $15,170,000 for the twelve months ended December 31, 2013.

As of December 31, 2014, the Company had total current assets of $412,000 consisting of $214,000 in cash and cash equivalents and $198,000 in prepaid expenses and other current assets. Also, from the second closing of the Series E Convertible Preferred Stock (Series E) offering the Company had $1,450,000 of outstanding Series E stock subscriptions as of December 31, 2014. Additionally, the Company continues to have access to over $14 million in additional funding available from an equity financing facility with Lincoln Park Capital.

The Company is preparing to list its common shares on a national stock exchange in 2015.

2015 EXPECTED NEAR-TERM MILESTONES

"In a few short months from today, pending the acquisition of Cutanogen, the Company's Therapeutics division expects to have two ongoing mid-stage clinical studies in the areas of PD LID and severe burns, as well as a preclinical orphan ophthalmology program maturing towards the clinic. Management and the Board of Directors believes this scenario has the potential to be truly transformative for the Company and its shareholders. Moreover, during that same timeframe, we expect to make progress in executing on one of the strategic alternatives for the Diagnostics Division in order to generate further value for our shareholders," said Gerald. E. Commissiong, President and CEO of Amarantus. "While we have focused primarily on executing on our strategic initiatives to assemble and incubate undervalued, clinical assets towards feasibility milestones in each of these distinct divisions, going forward, we will be focused on executing on clinical, regulatory, commercial and

corporate milestones to maximize their value."

- Initiate a Phase 2b clinical study of eltoprazine in PD-LID in 2Q 2015;
- Complete the acquisition of Cutanogen and then initiate a Phase 2 study mid-year 2015; and
- Receive responses on our ODD applications for MANF in RAO from the FDA, and from the European Commissiong for MANF for the treatment of RP and RAO;
- Continue to explore strategic options for our Diagnostics division, including a potential spin-off, to derive the full value of the Company's premier neuro-diagnostics business; and
- Pursue an up-listing to a national stock exchange listing to position the Company for an appreciation in value.

"We have laid the groundwork for numerous opportunities to propel the Company forward with the goals of addressing unmet medical needs for patients that are so deserving of viable treatment options, and ultimately unlocking significant value for our loyal shareholders," concluded Mr. Commissiong. "Moving forward, our management team and board are committed to delivering on meaningful milestones on the clinical, regulatory and operational fronts by successfully executing on our business plan. Given this, we believe we have positioned Amarantus for an exciting 2015."

CONFERENCE CALL AND WEBCAST DETAILS

Amarantus Management will host a quarterly business update call on April 9, 2015. The business update may be accessed by telephone by dialing Toll-Free (US & Canada): 877-705-2969 or International: 201-689-8868; or by webcast on the News and Events page of the Investor Relations section of the Amarantus corporate web site under the IR Calendar at www.amarantus.com. Webcast participants are encouraged to go to the web site 15 minutes prior to the start of the call to register, download and install any necessary software.

Amarantus Bioscience Holdings, Inc.

Consolidated Balance Sheets

(in thousands, except share and per share data)

	December 31, 2014	December 31, 2013
Assets		
Current assets:		
Cash and cash equivalents	$214	$1,033
Deferred Funding fees, net	—	109
Prepaid expenses and other current assets	198	106
Total current assets	412	1,248
Restricted cash	204	—
Property and equipment, net	145	—
Intangible assets, net	1,497	611
Total assets	$2,258	$1,859

Liabilities and Stockholders' Equity (Deficit)

Current liabilities:		
Accounts payable	$ 3,353	$ 972
Accounts payable - Regenicin	2,550	—
Related party liabilities and accrued interest	252	248
Accrued expenses	149	292
Accrued interest	25	112
8% senior convertible debentures, net of discount	—	932
Convertible promissory notes	—	124
Derivative liability	—	5,859
Total current liabilities	6,329	8,539
Total liabilities	6,329	8,539
Commitments and contingencies		
Series D convertible preferred stock ($1,000 stated value; 1,300 shares designated; 1,299.327 and -0- shares issued and outstanding as of December 31, 2013	—	839
Stockholders' equity (deficit):		
Convertible preferred stock, $0.001 par value, 10,000,000 shares authorized:		
Series A, $0.001 par value, 250,000 shares designated, -0- shares issued and outstanding as of December 31, 2014 and December 31, 2013	—	—
Series B, $0.001 par value, 3,000,000 shares designated, -0- shares issued and outstanding as of December 31, 2014 and December 31, 2013	—	—
Series C, $0.001 par value, 750,000 shares designated, 750,000 shares issued and outstanding as of December 31, 2014 and December 31, 2013	1	1
Series D, $1,000 stated value; 1,300 shares designated; 1,299.327 issued and outstanding as of December 31, 2014; aggregate liquidation preference of $1,299 as of December 31, 2014	1,169	—
Series E, $1,000 stated value; 6,000 shares designated, 4,500 issued and outstanding as of December 31 2014; aggregate liquidation preference of $4,500 as of December 31, 2014	4,050	—
Common stock, $0.001 par value — 2,000,000,000 and 1,000,000,000 shares authorized as of December 31, 2014 and December 31, 2013, respectively; 842,190,750 and 574,171,945 shares issued and outstanding at December 31, 2014 and December 31, 2013, respectively	842	574
Additional paid-in capital	45,050	18,938
Accumulated deficit	(55,183)	(27,032)
Total stockholders' equity (deficit)	(4,071)	(7,519)
Total liabilities and stockholders' equity (deficit)	$2,258	$1,859

Amarantus Bioscience Holdings, Inc.

Consolidated Statements of Operations

(in thousands, except share and per share data)

	Year Ended December 31, 2014	**Year Ended December 31, 2013**
Net Sales	—	—

Operating Expense:		
Research and development	13,762	2,089
General and administrative	7,592	3,622
Total operating expenses	21,354	5,711
Loss from operations	(21,354)	(5,711)
Other income (expense):		
Interest expense	(813)	(2,631)
Loss on issuance of common stock	(260)	(352)
Loss on issuance of debt	—	(6,709)
Loss on extinguishment of convertible debt	(1,250)	—
Loss on issuance of warrants	(3,867)	—
Other expense	(50)	—
Change in fair value of warrants and derivative liabilities	317	271
Total other expense	(5,923)	(9,421)
Net loss	$(27,277)	$(15,132)
Preferred stock dividend	875	38
Net loss attributable to common stockholders	$(28,152)	$(15,170)
Basic and diluted net loss per common share	$(0.04)	$(0.03)
Basic and diluted weighted average common shares outstanding	788,933,978	450,931,510

About Amarantus BioScience Holdings, Inc.

Amarantus 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®), which was developed by Prof. Thomas Arendt, Ph.D., from the University of Leipzig, for Alzheimer's disease 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.

In November 2014, AMBS entered into an exclusive option agreement that now runs through August 2015 with Lonza Walkersville, Inc., a subsidiary of Lonza Group Ltd., to acquire Cutanogen Corporation, a subsidiary of Lonza Walkersville, to develop Engineered Skin Substitute, an autologous skin replacement product for the treatment of Stage 3 and Stage 4 intractable severe burns. In January 2015, AMBS executed a one-year exclusive option agreement with Georgetown University to enter into a license for the patent rights related to certain blood based biomarkers for memory loss and Alzheimer's disease jointly owned by Georgetown University and University of Rochester.

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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