Amarantus BioScience Holdings, Inc. (OTCQX: AMBS, Target Price: $45.34)

We initiate coverage on Amarantus BioScience Holdings, Inc. ("AMBS") with a price target of $45.34 per share. Based in California, AMBS is a biotechnology company that is discovering and developing treatments and diagnostics for diseases associated with neurodegeneration and apoptosis (programmed cell death). As a biotechnology company, AMBS works to develop treatment for Parkinson's disease Levodopa-Induced Dyskinesia (PD-LID), Adult Attention Deficit Hyperactivity Disorder (ADHD), and Retinitis Pigmentosa, as well as developing better diagnostics to test for Alzheimer's disease and Multiple Sclerosis. AMBS also looks to treat severe burns through their recent acquisition for intellectual property rights to the Engineered Skin Substitute (ESS) product candidate. While their business model is to develop their product candidates through various de-risking milestones, we view AMBS as an attractive high-risk/high-reward investment opportunity in the biotechnology industry.

INVESTMENT HIGHLIGHTS

Strong Portfolio of Lead Products in Therapeutic Division: Engineered Skin Substitute (ESS), Eltoprazine and MANF

AMBS's therapeutic division's lead product candidates are ESS, Eltoprazine and Mesencephalic-astrocyte-derived neurotrophic factor (MANF). ESS is a combination of cultured epithelium with a collagen-fibroblast implant that produces a skin substitute that contains both epidermal and dermal components. ESS has received orphan drug designation from the U.S. Food and Drug Administration for the treatment of hospitalized patients with deep partial and full thickness burns requiring grafting. ESS is also being developed with support from the Armed Forces Institute for Regenerative Medicine (AFIRM). The AFIRM grant is worth $1.3mn and was awarded to support the IND and initial clinical studies. A Phase 2 study is expected in 3Q15.

Eltoprazine is a small molecule 5HT1a/1b partial agonist in clinical development for the treatment of Parkinson's disease levodopa-induced dyskinesia (PD-LID), Adult ADHD, and Alzheimer's Aggression. Eltoprazine has been evaluated in over 600 human subjects to date, and has shown a strong and well established safety profile. AMBS is expecting to have Phase 2b program clinical data in early 2016 for Eltoprazine treating PD-LID.

MANF is believed to have broad potential because it is a naturally occurring protein produced by the body for the purpose of reducing and preventing apoptosis (cell death) in response to injury or disease. AMBS is the front-runner and primary holder of intellectual property around MANF, and is focusing on the development of MANF-based protein therapeutics. MANF has demonstrated efficacy as a disease-modifying treatment in various animal models, including retinitis pigmentosa, Parkinson's disease, cardiac ischemia and stroke. AMBS has also received European Union Orphan Drug Destination for MANF for the treatment of retinitis pigmentosa.

Neuro-diagnostic division seeks to enhance the industry standard

AMBS's diagnostics division's lead developments are the LymPro Test® and MSPrecise®. The Lymphocyte Proliferation Test, LymPro, is a diagnostic blood test for Alzheimer's disease that works by evaluating the cell surface marker CD69 on peripheral blood lymphocytes following a mitogenic stimulation. If the CD69 is not up-regulated when measured, it means there is a dysfunctional cellular machinery division process, and Alzheimer's is more likely to be present. MSPrecise® is a proprietary next-generation DNA sequencing (NGS) assay for the identification of patients with relapsing-remitting multiple sclerosis (RRMS) at first clinical presentation. MSPrecise® utilizes next-generation sequencing to measure DNA mutations found in rearranged immunoglobulin genes in immune cells initially isolated from cerebrospinal fluid. To help fuel the advancement of their Therapeutics pipeline, management has indicated they are evaluating strategic exit opportunities for their diagnostics division including potentially selling off the division, spinning off the division into its own company, or licensing the technologies to a third party.

PhenoGuard™ shows strong potential to further Drug Division

PhenoGuard™ is a proprietary discovery technology that played an essential role to developing MANF. Going forward, management believes that this drug discovery platform can be used to discover other, similar neurotrophic factors. The PhenoGuard™ technology currently consists of 88 cell lines, and management intends to expand the number of such cell lines through additional research.

Initiate coverage with a price target of $45.34

Our analysis indicates a fair value estimate of $45.34 per share, implying an upside of 695.5% from the recent share price of $5.70.

Stock Details (07/16/2015)

OTCQX:	AMBS
Sector / Industry	Healthcare / Biotechnology
Price target	**$45.34**
Recent share price	$5.70
Shares o/s (mn)	7.04
Market cap (in $mn)	$40.1
52-week high/low	$8.00 / 4.57

Source: Bloomberg, SeeThruEquity Research

Key Financials ($mn unless specified)

	FY13	FY14A	FY15E
Revenues	0.0	0.0	0.1
EBITDA	(5.7)	(21.3)	(24.8)
EBIT	(5.7)	(21.4)	(24.8)
Net income	(15.2)	(28.2)	(28.0)
EPS ($)	(0.03)	(0.04)	0.0

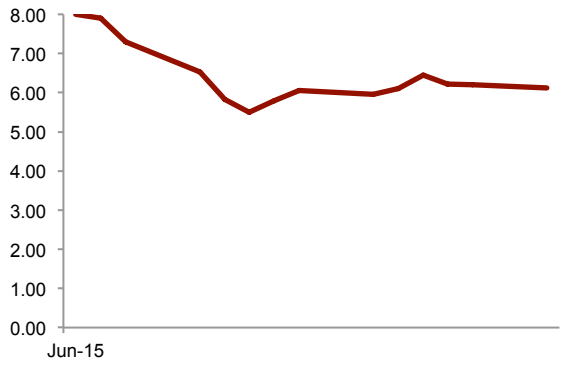
Source: SeeThruEquity Research

Key Ratios

	FY13	FY14A	FY15E
Gross margin (%)	N/A	N/A	75.0
Operating margin (%)	N/A	N/A	(31,007.0)
EBITDA margin (%)	N/A	N/A	(30,958.9)
Net margin (%)	N/A	N/A	(34,992.0)
P/Revenue (x)	N/A	N/A	539.4
EV/EBITDA (x)	(7.9)	(2.1)	(1.8)
EV/Revenue (x)	N/A	N/A	566.6

Source: SeeThruEquity Research

Share Price Performance ($, LTM)



Source: Bloomberg

SUMMARY TABLE

Figure 1. Summary Table (As of July 16, 2015)

Share data		B/S data (As of 1Q15)		Key personnel:	
Recent price:	$5.70	Total assets:	(9.8mn)	CEO:	Gerald E. Commissiong
Price target:	$45.34	Total debt:	2.85mn	CFO:	Robert Farrell, J.D.
52-week range:	8.00 / 4.57	Equity:	(5.7mn)		
Average volume:*	13,334	W/C:	(4.9mn)		
Market cap:	40.1mn	ROE '14:	691.5%		
Book value/share:	($0.01)	ROA '14:	-1246.8%		
Cash/share	($0.01)	Current ratio:	3.3		
Dividend yield:	N/A	Asset turnover:	0.0		
Risk profile:	High / Speculative	Debt/Cap:	N/A		

** three month average volume (number of shares)*

	Estimates			Valuation		
FY December	Rev ($mn)	EBITDA ($mn)	EPS ($)	P/Rev (x)	EV/Rev (x)	P/E (x)
2013A	0.0	(5.7)	(0.03)	NM	NM	NM
1Q14A	0.0	(1.6)	(0.01)	NM	NM	NM
2Q14A	0.0	(3.7)	(0.01)	NM	NM	NM
3Q14A	0.0	(4.0)	(0.01)	NM	NM	NM
4Q14A	0.0	(12.0)	(0.02)	NM	NM	NM
2014A	0.0	(21.3)	(0.04)	NM	NM	NM
2015E	0.1	(24.8)	0.0	539.4x	566.6x	NM

Source: SeeThruEquity Research

INVESTMENT THESIS

Based in California, Amarantus BioScience Holdings (AMBSD) is a biotechnology company developing treatments and diagnostics for diseases in the areas of neurology, psychiatry, ophthalmology and regenerative medicine. As a biotechnology company, AMBS works to development treatment for Parkinson's disease Levodopa-Induced Dyskinesia (PD-LID), Adult Attention Deficit Hyperactivity Disorder (ADHD), and Retinitis Pigmentosa, as well as developing better diagnostics to test for Alzheimer's disease and Multiple Sclerosis.

AMBS's Therapeutics Division has the development rights to Eltoprazine, a Phase 2b-ready small molecule indicated for Parkinson's disease levodopa-induced dyskinesia (PD-LID), adult ADHD and Alzheimer's aggression. Also in their therapeutics division, AMBS 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's Diagnostics Division consists of two products: MSPrecise and LymPro Test. AMBS 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. AMBS has an exclusive worldwide license to the Lymphocyte Proliferation test (LymPro Test®), the company's flagship blood test for Alzheimer's disease. In our opinion, AMBS's diagnostic division has the potential for a spinoff, initial public offering, or strategic acquisition in the near future and we will be keen to track the division's progress.

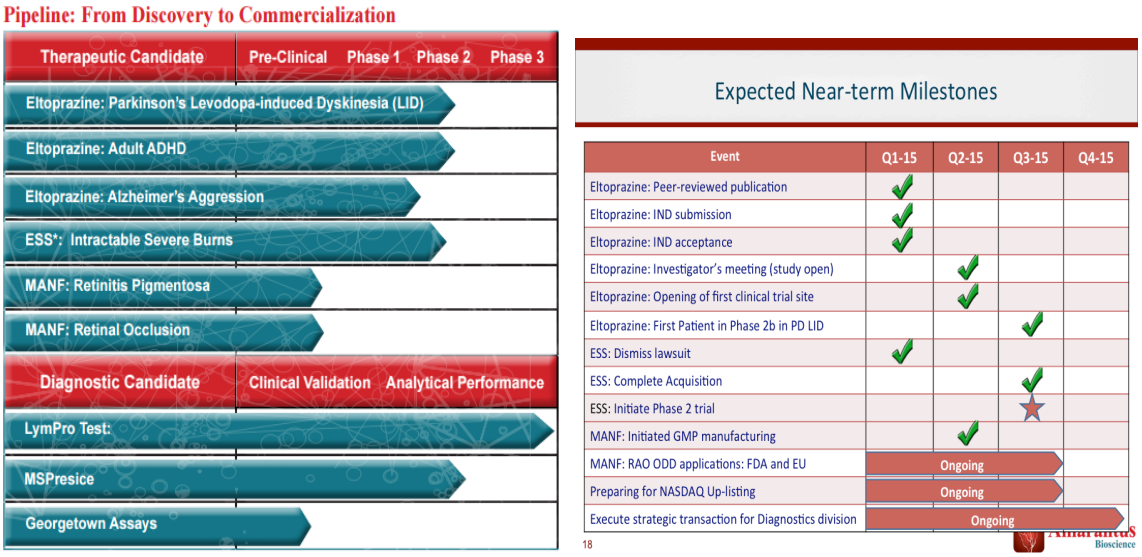
AMBS also owns intellectual property for the NuroPro Blood Test. The NuroPro Blood Test is AMBS's diagnostic platform for the early detection of neurodegenerative diseases. The Parkinson's disease application of the NuroPro Blood Test has completed proof-of-concept and Phase I clinical validation studies. AMBS is now preparing for the Phase II validation study required to gain Clinical Laboratory Improvement Amendments (CLIA) certification.

AMBS just recently announced that it has completed the acquisition of Cutanogen Corporation from Lonza Walkersville, Inc. a subsidiary of Lonza Group Ltd. Cutanogen has an exclusive worldwide license to

intellectual property rights associated with Engineered Skin Substitute ("ESS"), a tissue-engineered skin replacement prepared from a patient's own skin cells. ESS has the potential to become a revolutionary treatment for severe burns and management believes that the path to approval for ESS could be rapid, potentially as quick as four years with market potential of $500 million.

Rich pipeline with extensive list of expected near-term milestones

Amarantus's pipeline:



Eltoprazine: first-in-class product addressing key unmet need of Parkinson's disease

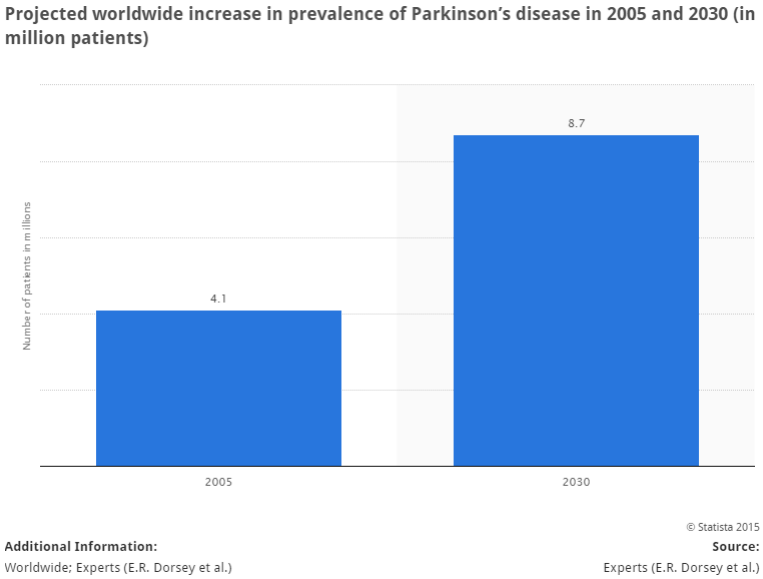
Amarantus's lead therapeutics candidate is Eltoprazine. Eltoprazine is a small molecule 5HT1a/1b partial agonist in clinical development for the treatment of Parkinson's disease levodopa-induced dyskinesia (PD LID) and Adult Attention Deficit Hyperactivity Disorder. As of 1Q 2015, Eltoprazine has been administered to 682 humans and results have shown Eltoprazine to be exceptionally safe.

Parkinson's disease (PD) is a degenerative disorder of the central nervous system, mainly affecting the motor system. The motor symptoms of PD result from the death of dopamine-generating cells in the substantia nigra, a region of the midbrain. According to the Parkinson Foundation, it is estimated that at least 1 million Americans suffer from PD, while roughly 6 million people worldwide suffer from PD. Parkinson's disease is the second most prevalent neurodegenerative disease, following Alzheimer's disease. The average age for a patient to be diagnosed with PD is 60, although signs of PD usually appear much earlier. Roughly 5-10% of patients are diagnosed under the age of 40. Experts project that the worldwide prevalence of Parkinson's disease will increase from 4.1 million people in 2005, to 8.7 million people by 2030.

Currently, Levodopa (also known as L-Dopa) is the most effective treatment used for the debilitating motor symptoms of PD. L-Dopa is converted into dopamine and since motor symptoms are produced by a lack of dopamine in substantia nigra, this administration of L-Dopa temporarily diminishes the motor symptoms. However, a side effect of prolonged treatment with L-Dopa is the occurrence of levodopa-induced dyskinesia (PD-LID). PD-LID causes involuntary movements of the head and neck, arms, legs or other body parts. While L-Dopa continues to be used as the main treatment of PD, and the number of people who suffer from PD continues to grow, PD-LID is a growing concern for patients suffering from PD. Close to one-third of patients develop PD-LID within 4 to 6 years after beginning L-Dopa treatment. This number increases to 90% after 9 or more years of L-Dopa treatment. Currently, there are no treatments for PD-LID, and according to the Michael J. Fox Foundation,

	Q2-15	Q3-15	Q4-15	Q1-16	Q2-16	Q3-16
Launch Phase 2b study	X					
First patient dosing	X					
Study duration		X	X	X	X	
Study data released					X	X

treating PD-LID is one of the greatest unmet medical needs in the industry.



Acquisition of Cutanogen Corp. for rights to Engineered Skin Substitute (ESS)

On July 15, 2015, AMBS announced that it has completed the acquisition of Cutanogen Corporation from Lonza Walkersville, Inc. a subsidiary of Lonza Group Ltd. Cutanogen has an exclusive worldwide license to intellectual property rights associated with Engineered Skin Substitute ("ESS"), a tissue-engineered skin replacement prepared from a patient's own skin cells. ESS has received orphan drug designation from the U.S. Food and Drug Administration for the treatment of hospitalized patients with deep partial and full thickness burns requiring grafting. ESS is also being developed with support from the Armed Forces Institute for Regenerative Medicine (AFIRM). The AFIRM grant is worth $1.3mn and was awarded to support the IND and initial clinical studies.

ESS is a combination of cultured epithelium with a collagen-fibroblast implant that produces a skin substitute that contains both epidermal and dermal components. This model has been shown in preclinical studies to generate a functional skin barrier. Most importantly, self-to-self skin grafts for autologous skin tissue are less likely to be rejected by the immune system of the patient, unlike with porcine or cadaver grafts in which immune system rejection is a possibility. ESS has been used in an investigator initiated clinical setting in over 130 human subjects, primarily pediatric patients, for the treatment of severe burns up to 95% total body surface area.

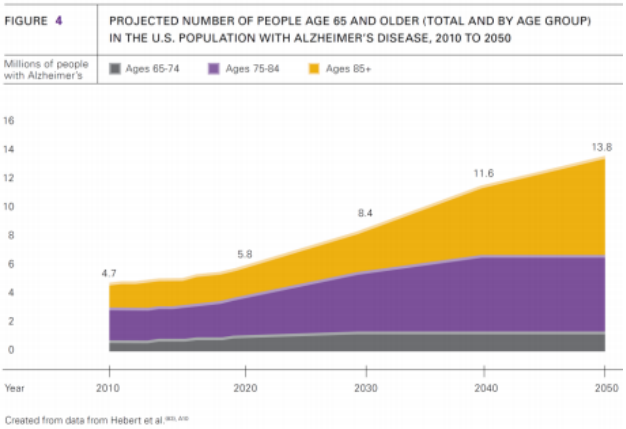
AMBS's CEO Gerald Commissiong stated that the completion of the acquisition from Lonza represents a cornerstone of their therapeutics acquisition strategy as the company prepares for its upcoming listing on a national exchange. Going forward, AMBS plans to take this ESS program through a stringent corporate-sponsored regulatory development program under an already open IND with the FDA, to gain marketing approval, initially intended for the treatment of severe burns in the US.

The overall cost for this acquisition was $14mn paid for with cash and stock. However, management believes that the path to approval for ESS could be rapid, potentially between two to four years, and ESS has the market potential of $500 million. A Phase 2 study is expected in 3Q15.

MANF a naturally-occurring protein produced by the body

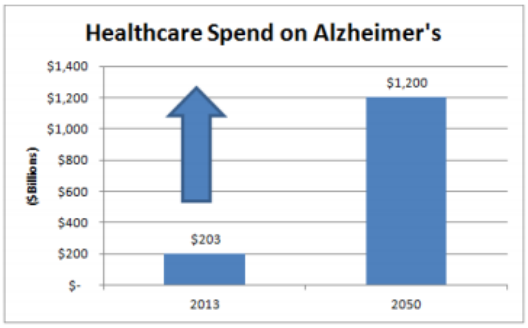
Mesencephalic-astrocyte-derived neurotrophic factor (MANF) is a naturally-occurring protein produced by the body for the purpose of reducing and preventing apoptosis (cell death) in response to injury or disease. AMBS believes that MANF has broad potential after already demonstrating efficacy as a disease-modifying treatment in various animal models, including retinitis pigmentosa, cardiac ischemia and stroke. MANF was discovered by the company's Chief Scientific Officer, Dr. John Commissiong.

Amarantus is the front-runner and primary holder of intellectual property around MANF, and is focusing on the continued development of MANF-based protein therapeutics. AMBS made the strategic decision to focus the development of MANF in orphan drugs. In December 2014, the FDA granted MANF orphan drug designation for the treatment of retinitis pigmentosa (RP). RP refers to a group of inherited diseases causing retinal degeneration that often leads to blindness. With the increasing number of individuals suffering from retinal degeneration, MANF has a promising market to serve.



Pre-clinical data showed that MANF provided protective functional effects in an animal model of retinitis pigmentosa. Also, toxicology studies have showed that MANF was well tolerated after being administered a therapeutically relevant dose. AMBS is striving to build their MANF program by seeking out other orphan drug designations for MANF, and by continuing to advance this promising product candidate toward clinical testing in multiple therapeutic areas, including retinitis pigmentosa, Parkinson's disease, and Wolfram Syndrome.

Recently it was announce that the delivery and distribution of MANF in a preclinical model to brain areas involved in PD was successful. Further solidifying the rationale for its preclinical development as a potential disease-modifying treatment for PD. AMBS also recently received a Notice of Allowance for the MANF U.S. patent application covering compositions of matter and methods of use related to proprietary manufacturing processes for synthetic MANF and its administration for protein and cell therapy. MANF has also shown potential in treating other illnesses such as diabetes, myocardial infarction, hearing loss, otology, and other apoptosis-related disorders.



LymPro® expected to become market's lead diagnostic test for Alzheimer's disease

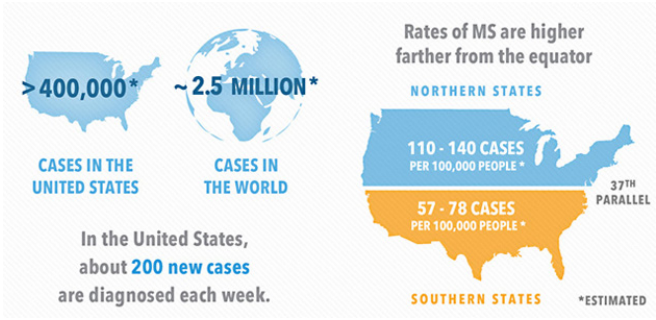
The Lymphocyte Proliferation Test (LymPro) is a diagnostic blood test for Alzheimer's disease originally developed by the University of Leipzig in Germany. This diagnostic blood test works by evaluating the cell surface marker CD69 on peripheral blood lymphocytes following a mitogenic stimulation. Patients of Alzheimer's have a dysfunctional cellular machinery division process that inappropriately allows mature neurons in the brain to enter the cell division/cycle process. When this happens the neurons start the cell division process, but cannot complete the process, resulting in a number of cytokines and other genes are up-regulated, ultimately leading to cell death by apoptosis. This inappropriate cell division activation process is also present in the lymphocytes of Alzheimer's patients, as lymphocytes share similar cellular division machinery with brain neurons. This patient-specific identification has the potential to become an invaluable tool for Alzheimer's disease clinical trials, as there has been a well-documented history of patient recruitment errors related to inaccurate diagnosis of Alzheimer's.

Alzheimer's disease is a chronic neurodegenerative disorder that slowly destroys memory and thinking skills, and eventually the ability to carry out the most routine tasks. Experts estimate that over 5 million Americans suffer from Alzheimer's, and AD is currently ranked as the 6th leading cause of death in the United States and its prevalence is expected to quadruple by 2050, according to the National Institute of Aging. Alzheimer's is the most common cause of dementia among older adults. It is estimated that the cost of caring for people with AD and dementia will increase from an estimated $203bn in 2013, to a projected $1.2 trillion per year by 2050. Unfortunately, compared to cardiovascular disease, stroke, prostate and breast cancers, AD is the only cause of death increasing, with an estimated 68% growth in death rate from 2000 to 2010. According to the Alzheimer's Foundation, it is widely accepted that with the increasing trend towards a longer life expectancy, along with the baby-boomer generation approaching retirement, the occurrence of Alzheimer's disease is likely to double within the next 20 years.

Clinical research is currently focusing on being able to diagnose patients in the early phases of the disease. Clinical trials for AD tend to be lengthy and expensive due to the slow neurodegenerative process and the

difficulty in accurate diagnosis and monitoring of treatment response. There are no accurate or convenient tools that are available today for predementia diagnosis of AD. The diagnosis procedure for AD is a clinical entity using a process that combines cognition assessments with imaging and spinal fluid (CSF) tests. However, this diagnostic procedure can last for several months to a year and is usually initiated late in the disease development. AMBS seeks to provide a robust, minimally invasive and affordable means of improving the diagnosis of mild AD. In addition, the LymPro test may be able to address the need of identifying and enriching clinical trial populations beyond the already at-risk populations currently being studied within drug development trials.

Today, most neuroscience diagnosis is done clinically by trained professionals using their best judgment on patients. For Alzheimer's disease, there is no objective diagnostic tool available to aid in the diagnosis of the disease. The diagnostics used in the industry today that the LymPro test looks replace are Cerebrospinal Fluid (CSF), Positon Emission Tomography (PET), Magneto encephalography (MEG), Magnetic Resonance Imaging (MRI), Electro encephalography (EEG), Cognition, and Blood. Cerebrospinal fluid is currently the best tool today to diagnosis AD, however, many patients do not prefer this invasive process as CSF requires the insertion of a needle into the lower spinal column in order to collect 5-10 ml of blood free CSF. Positron Emission Tomography is an expensive approach that requires the use of large multi-million dollar cameras. Magneto encephalography includes the use of scarcely available and costly instruments that measure minute currents of the brain. Magnetic Resonance Imaging is common and measures the gross anatomy of the brain within the skull with resolution approaching 100 microns. MRIs are the standard of care to ensure that there is no brain tumor, not frequently used to detect AD. Electro encephalography attempts to make videos of brain activity instead of snapshots, which is difficult to do because the brain would have to be at complete rest for several minutes. Many companies are creating cognitive assessments of human subjects from a neuropsychological perspective, although this approach has many limitations on the ability to accurately and objectively measure brain function. Blood is the favorable biological specimen for minimally invasive diagnostic procedures. The entire AD community would appreciate discovery of blood-based biomarkers and thus diagnostics of the brain, however the Blood Brain Barrier provides a protective barrier from the internal insult within a host. It is clear that the diagnostic tests used today have flaws to some degree, which provides the opportunity for a new diagnostic to emerge and set the industry standard.



Globally, there has been an astounding increase in the projected number of Alzheimer's disease patients. AD not only represents a major area of unmet medical need, but also represents a significant market opportunity for diagnostics for the disease. AD biomarker sales are currently at $1.5bn, and is expected to double within the next 5 years. AMBS looks to target this market and have LymPro become the industry lead diagnostic test for Alzheimer's disease.

MSPrecise® Represents compelling commercialization opportunity for diagnosing MS

In January 2015, AMBS acquired MSPrecise®, a proprietary next-generation DNA sequencing assay for the identification of patients with relapsing-remitting multiple sclerosis (RRMS) at first clinical presentation. MSPrecise® works by utilizing next-generation sequencing to measure DNA mutations found in rearranged immunoglobulin genes in immune cells initially isolated from cerebrospinal fluid.

Multiple Sclerosis (MS) is a chronic, unpredictable disease that damages the central nervous system (CNS), which is made up of the brain, spinal cord and optic nerves. MS is thought to be an immune-mediated disorder, where the immune system incorrectly attacks healthy tissues in the Central Nervous System. An individual can develop MS at any age, however, most are diagnosed between the ages of 20 and 40. According to the National MS Society, more than 2.3 million people worldwide suffer from MS, and currently there is no known cure for MS. There is no single laboratory test available to prove or rule out MS; instead patients must go through several test and procedures including magnetic resonance imaging (MRI) before being diagnosed.

AMBS believes that MSPrecise® will set a new standard of diagnosing MS by providing a more accurate assessment of a patient's immune response to a challenge within the central nervous system. Results from a previous clinical validation study has shown that MSPrecise® provided a clear improvement in classifying early-stage MS patients when compared with the already published performance for the current diagnostic

standard of care by cerebrospinal fluid analysis. Throughout this study, MSPrecise® not only performed well as a standalone test, but also when combined with the current standard of diagnosis, oligoclonal banding (OCB). MSPrecise® demonstrated that it can significantly reduce the number of both false positives and false negatives as compared to use of OCB alone. With MSPrecise® being a highly differentiated diagnostic test compared to current diagnostics used, AMBS looks to penetrate this unmet need in the MS diagnosis and treatment industry.

AMBS's management has indicated that they intend to commercialize MSPrecise® as a laboratory developed test ("LDT") under the Clinical Laboratory Improvement Amendments ("CLIA") in the second half of 2015. Throughout the commercialization process, management will look to evaluate all of their options in regards to the possibilities of expanding or divesting this segment of their business.

Source: healthline.com

NuroPro Blood Test

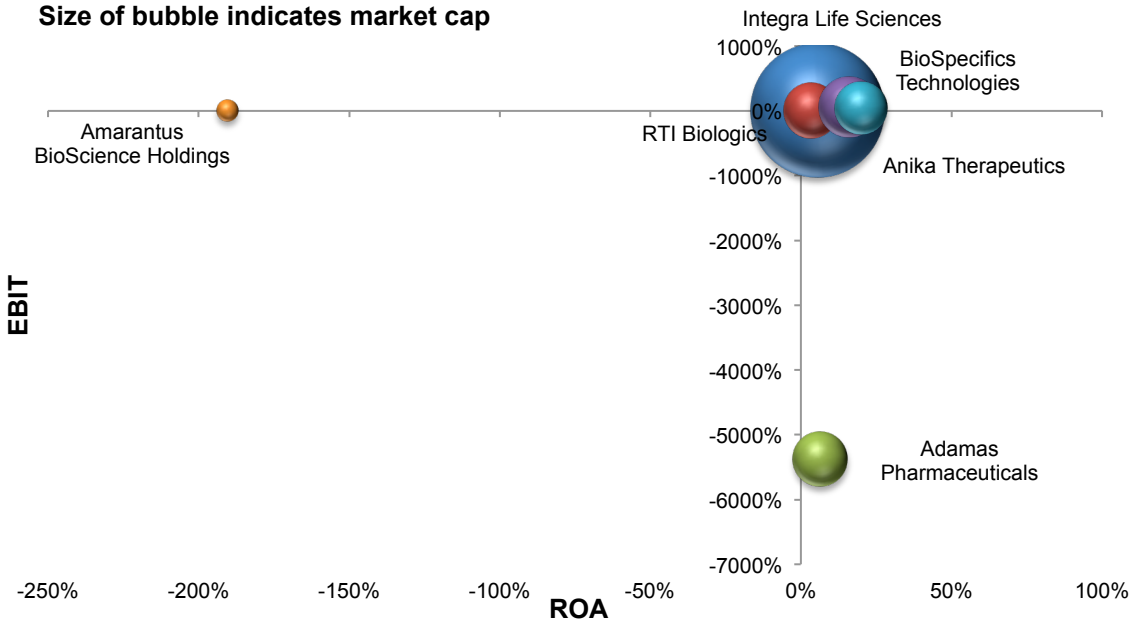
AMBS also owns intellectual property for the NuroPro Blood Test. The NuroPro Blood Test is AMBS's diagnostic platform for the early detection of neurodegenerative diseases. This platform consists of monitoring the concentration of 57 protein markers in blood serum identified to be linked to neurodegeneration, in order to accurately detect and distinguish between Alzheimer's disease, ALS, and Parkinson's disease. AMBS's license is focused on the further development of a subset of 21 of these protein markers specifically targeting early diagnosis and ongoing monitoring of Parkinson's disease. The current diagnostic tests results in a lengthy amount of time to accurately diagnose Parkinson's disease and also a relatively high early-misdiagnosis rate. The market needs a better diagnostic test and AMBS is developing NuroPro to satisfy this need. The Parkinson's disease application of the NuroPro Blood Test has completed proof-of-concept and Phase I clinical validation studies. AMBS is now preparing for the Phase II validation study required to gain Clinical Laboratory Improvement Amendments (CLIA) certification.

COMPETITIVE LANDSCAPE

The US Biotechnology industry generated revenue close to $100bn for the year 2014. The industry landscape continues to be populated by hundreds of small companies along with a handful of very large companies. For 2014, the top four companies in the industry generated half of the total industry revenue. However, the majority of biotechnology firms still employ fewer than 50 employees.

There has been a co-development/acquisition trend within the biopharmaceutical industry in recent years, and small cap companies such as AMBS may be targets for mid/large pharma companies. Co-development deals provide these small cap companies the necessary resources to navigate and survive the lengthy R+D processes. In the acquisition market, these small companies are often highly valued.

Figure 2. ROA vs. EBIT– TICKER Peers



Source: Company filings, SeeThruEquity Research

FINANCIALS AND FUTURE OUTLOOK

Revenue/Drivers

ABMS has yet to record any revenue and we do not expect them to begin generating revenue until the FY2015E timeframe.

AMBS does not expect to receive any revenues from the commercialization of their product candidates for at least the next several years in the case of Eltoprazine and MANF and until the second half of 2015 in the case of LymPro. To obtain revenues from sales of our product candidates, they must first succeed, either alone or with third parties, in developing, obtaining regulatory approval for, manufacturing and marketing drugs with commercial potential. However, with a strong pipeline of products targeted at unsatisfied markets, AMBS is poised to gain a market share and develop a steady stream of revenue.

Margins/Expenses

Recently, AMBS has been spending more on research and development as well as general and administrative. For 1Q 2015, R&D expense was $2.5mn, up from $517k in 4Q 2014. General and administrative expense was $4mn for 1Q 2015 compare to $1.1mn in 4Q 2014.

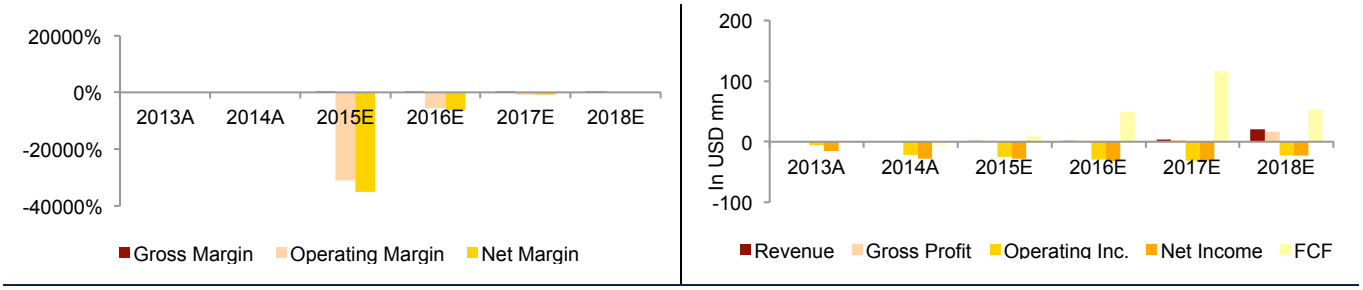
Balance Sheet & Financial Liquidity

As a development stage company with financial statements prepared on a going concern basis, AMBS's balance sheet and financial solvency represent key risks for the company. We believe there is risk to shareholders of dilution, or that the company is unable to raise new capital on terms favorable to current equity shareholders. We expect that the company will need to raise additional capital to fund its growth plans.

For 1Q 2015, AMBS had $109k in cash on its balance sheet, with total assets of $11.3mn as compared to $2.3mn 4Q 2014. This significant growth in total assets over the span of three months is due to the DioGenix acquisition. This acquisition raised intangible assets in 4Q 2014 from $1.5mn to $10.3mn in 1Q 2015. For 1Q 2015, AMBS had accounts payable and accrued expenses totaling $4.5mn with total liabilities of $7.6mn, and notes payable of $2.9mn in Q1 when the company had a zero balance for notes payable for 4Q 2014.

The company expects to continue to incur substantial losses over the next several years during its development phase. To fully execute its business plan, the company will need to complete certain research and development activities and clinical studies. Further, the company's product candidates will require regulatory approval prior to commercialization. These activities may span many years and require substantial expenditures to complete and may ultimately be unsuccessful. Any delays in completing these activities could adversely impact the company. The company plans to meet its capital requirements primarily through issuances of debt and equity securities and, in the longer term, revenue from product sales.

Figure 3. Key Performance Indicators of TICKER, FY13–18E



Source: Company filings, SeeThruEquity Research

VALUATION

We have valued Amarantus using two different valuation methods; discounted cash flow ("DCF") and Peer Group Valuation. Our blended valuation, combining the two methodologies mentioned above, yields a fair value of $45.34 per share, representing an upside of 695.5% from the recent price of $5.70 as of July 16, 2015.

DCF

We expect revenues to accelerate in the 2015/2016E timeframe as Amarantus is planning on commercialize its product in 2015. We discounted cash flows at a weighted average cost of capital of 20.3% and assumed a terminal growth rate of 7.5% at the end of 2019E to arrive at an enterprise vale $315.68mn. Adjusting for the cash balance of $0.68mn and debt of $2.85mn as of June 29, 2015. We arrived at a fair value of $45.34 per share.

Figure 4. Discounted Cash Flow Analysis

$' 000	FY15E	FY16E	FY17E	FY18E	FY19E
EBIT	(24,805.6)	(28,613.6)	(30,973.7)	(22,937.5)	40,660.2
Less: Tax	0.0	0.0	0.0	0.0	10,165.0
NOPLAT	(24,805.6)	(28,613.6)	(30,973.7)	(22,937.5)	30,495.1
Changes in working capital	20,571	38,511	80,548	140,512	23,494
Depreciation & Amortization	1,150	1,380	1,655	1,987	2,384
Capex	(1,537)	(1,845)	(2,214)	(2,656)	(3,188)
FCFF	**(4,622.0)**	**9,432.4**	**49,015.8**	**116,904.9**	**53,185.4**
Discount factor	0.91	0.76	0.63	0.52	0.44
PV of FCFE	(4,211.4)	7,142.7	30,863.0	61,206.0	23,153.4
Sum of PV of FCFE					119,113.6
Terminal cash flow					447,895.6
PV of terminal cash flow					196,567.9
Enterprise value					315,681.4
Less: Debt					2,850
Add: Cash					680
Equity value					**319,211**
Outstanding shares (mn)					7.0
Fair value per share ($)					**45.34**

Summary conclusions		Key assumptions	
DCF FV ($ per share)	45.34	Beta	1.1
Recent price ($ per share)	5.70	Cost of equity	20.3%
Upside (downside)	695.5%	Cost of debt (post tax)	4.8%
WACC	20.3%	Terminal Growth Rate	7.5%

Source: SeeThruEquity Research

Figure 5. Sensitivity of Valuation – WACC vs. Terminal Growth Rate

		WACC (%)				
		19.3%	19.8%	20.3%	20.8%	21.3%
Terminal growth rate (%)	6.50%	46.62	44.78	43.07	41.48	40.00
	7.00%	47.93	45.97	44.17	42.49	40.92
	7.50%	49.35	47.27	**45.34**	43.56	41.91
	8.00%	50.90	48.67	46.62	44.72	42.97
	8.50%	52.59	50.19	48.00	45.98	44.11
	9.00%	54.45	51.86	49.50	47.34	45.35

Source: SeeThruEquity Research

Peer Group Valuation

We compared Amarantus with similar small cap biotechnology companies, Integra Life Sciences, Adamas Phamaceuticals, RTI Biologics, Anika Therapeutics and BioSpecifics Technologies, using a market multiple approach.

Figure 6. Comparable Valuation (Data as of 07/16/15)

Company	Mkt cap ($ mn)	EV/Revenue(x)		Price/Revenue(x)	
		FY15E	FY16E	FY15E	FY16E
Integra Life Sciences	2,091	2.8x	2.7x	2.3x	2.2x
Adamas Pharmaceuticals	551	800.6x	174.6x	1271.0x	277.1x
RTI Biologics	372	1.5x	1.4x	1.3x	1.2x
Anika Therapeutics	480	4.8x	4.2x	5.4x	4.7x
BioSpecifics Technologies	350	11.3x	10.3x	12.0x	10.9x
Average		**164.2x**	**38.6x**	**384.6x**	**86.8x**
Amarantus BioScience Holdings	40	38.3x	5.9x	501600.0x	77169.2x
Premium (discount)		(76.7%)	(84.8%)	130319.4%	88796.6%

Source: Bloomberg, SeeThruEquity Research

RISK CONSIDERATIONS

Reliance on market acceptance of LymPro, Eltoprazine and MANF

If AMBS does obtain U.S. regulatory approval, they still need to obtain market acceptance from physicians, patients, third-party payers and others in the medical field. The degree of market acceptance will be contingent on a number of factors. For example, these products will still need to establish a reputation of efficacy and safety, which will lead to physicians endorsing these products.

Greatly dependent on the successful commercialization of LymPro, EltoPrazine, and MANF

To date, AMBS has incurred significant costs and will continue to spend more for the development of their lead product candidates: LymPro, Eltoprazine and MANF. AMBS has yet receive approval to commercialize any of these three and may never be able to obtain approval. If AMBS fails to successfully commercialize their products, this may lead to them being unable to generate sufficient revenue to sustain and grow the business.

Risks associated with obtaining U.S. regulatory approval

Obtaining FDA approvals in the U.S. for drugs is a time consuming and costly process, and does not guarantee success. The company has three product candidates under development in various phases of development and failure to receive FDA approval could stunt company growth and result in loss of significant financial resources. We note that AMBS has not received full approval for any product candidate yet, although they have shown positive results throughout the early stages of testing.

Going concern

AMBS is a development stage company engaged in biotechnology research and development. ABMSD have recorded recurring losses from operations since inception; AMBS has a negative working capital and have generated negative cash flow from operations. There is substantial doubt about our ability to continue as a going concern.

Adequate protection of intellectual property and product candidates

AMBS commercial success will depend in part on obtaining and maintaining intellectual property protection for their technologies and product candidates. While AMBS has issued enforceable patents covering their product candidates, the patent positions of life sciences companies, like AMBS, can be highly uncertain and involve highly complex legal procedures. We would also like to note that the general patent environment outside of the U.S. also involves significant uncertainty. Changes to either patent laws or the interpretations of patent laws in the U.S. could possibly lead to an unfavorable environment for AMBS and lead to negative results for the company.

Limited operating history

AMBS is at an early stage of development and currently has no source of revenue and may never become profitable. Currently, AMBS does not have any products approved for commercial sale and, to date, they have not generated any revenue and their ability to generate revenue depends heavily on obtaining U.S regulatory approval, receiving market acceptance, successfully commercializing their products and protecting their intellectual properties. With all of AMBS's existing products in various stages of development, it is unclear if any of these products will gain approval and generate future revenue for AMBS.

Management Team

Gerald E. Commissiong, Chief Executive Officer, President, Director

Mr. Commissiong has served as the Chief Operating Officer and a Director of Amarantus since April of 2011. In October of 2011, Mr.Commissiong was appointed to serve as the Company's Chief Executive Officer and President. Mr. Commissiong was the co-founder and President and Chief Executive Officer of Amarantus, which was formerly known as CNS Protein Therapeutics, Inc. He played a significant role in sourcing the initial funding for the company in 2008, as well as structuring, staffing, and developing the overall path for the company. Prior to co-founding Amarantus, Mr. Commissiong played professional football for the Calgary Stampeders of the Canadian Football League. Mr. Commissiong holds a B.S. degree in Management Science and Engineering with a focus on Financial Decisions from Stanford University.

Dr. John W. Commissiong, Chief Scientific Officer, Director

Dr. Commissiong has served as the Chief Scientific Officer and a Director of Amarantus since co-founding the company in 2008. From 2000 through 2008, Dr. Commissiong served as the CSO of Neurotrophics Inc & Prescient Neuropharma Inc. Dr. Commissiong has been focused on the discovery of novel neurotrophic factors for the treatment of neurodegenerative diseases, as well as understanding the fundamental underlying biology of protoplasmic type-1 astrocytes that secrete neurotrophic factors. He was Chief of the Neural Transplantation Unit, NINDS-NIH, from 1989-94 where his research focused on identifying therapeutic approaches to spinal cord injury. Dr. Commissiong was Head of the Neurotrophic Factors Group, NINDS-NIH, from 1994-97 where he focused on developing technologies to systematically identify novel neurotrophic factors with applications for specific Central Nervous System disorders. He co-founded Prescient Neuropharma in 1999, and discovered MANF in 2003. MANF is currently in preclinical development for the treatment of Parkinson's disease. The work pioneered by Dr. Commissiong has led to significant advancements in the field of astrocyte-neuron biology. Dr. Commissiong believes that a fundamental understanding of astrocyte-neuron interactions in the Central Nervous System will lead to a new generation of therapies to treat brain-related disorders. Dr. Commissiong did his Postdoctoral work in the Lab Preclin Pharmac, NIMH-NIH, concentrating on the application of quadruple mass spectrometry in the analysis of neurotransmitters. He holds a Ph.D. in Neurophysiology from the University of Southampton, a M.Sc. in Biochemical Pharmacology from the University of Southampton and a B.S. in Biology and Chemistry from the University of the West Indies

Robert Farrell, Chief Financial Officer

Mr. Farrell was appointed as the company's Chief Financial Officer, effective April 1, 2014, Mr. Farrell served as Chief Financial Officer of Titan Pharmaceuticals from 1996 to 2008, and as President and CEO from 2008 to 2010. During his tenure at Titan, Mr. Farrell was responsible for all SEC filings, fund raising, financial and tax planning strategies, mergers & acquisitions, corporate partnerships, licensing transactions and financial operations. Mr. Farrell most recently served as CFO at Sanovas, Inc. Mr. Farrell previously served as CFO, Corporate Group Vice President and General Counsel at Fresenius USA and Fresenius Medical Care. Mr. Farrell also previously served as the CFO for the Institute for One World Health in San Francisco and currently serves on the Board of Directors of Prime Genomics, Inc. Mr. Farrell holds a J.D. from the University of California's Hastings School of Law.

FINANCIAL SUMMARY

Figure 7. Income Statement

Figures in $mn unless specified	FY13A	FY14A	FY15E	FY16E	FY17E
Revenue	**0.0**	**0.0**	**0.1**	**0.5**	**3.6**
YoY growth	N/A	N/A	N/A	550.0%	600.0%
Cost of sales	0.0	0.0	0.0	0.1	0.7
Gross Profit	**0.0**	**0.0**	**0.1**	**0.4**	**2.9**
Margin	N/A	N/A	75.0%	75.0%	80.0%
Operating expenses	5.7	21.4	24.9	29.0	33.9
EBIT	(5.7)	(21.4)	(24.8)	(28.6)	(31.0)
Margin	N/A	N/A	(31007.0%)	(5502.6%)	(850.9%)
EBITDA	**(5.7)**	**(21.3)**	**(24.8)**	**(28.6)**	**(30.9)**
Margin	N/A	N/A	(30958.9%)	(5494.5%)	(849.6%)
Other income/ (expense)	(9.4)	(5.9)	0.0	0.0	0.0
Profit before tax	(15.1)	(27.3)	(24.8)	(28.6)	(31.0)
Tax	0.0	0.0	0.0	0.0	0.0
Net income	**(15.2)**	**(28.2)**	**(28.0)**	**(31.9)**	**(31.0)**
Margin	N/A	N/A	(34992.0%)	(6139.5%)	(850.9%)
EPS (per share)	**(0.03)**	**(0.04)**	**0.0**	**0.0**	**0.0**

Source: SeeThruEquity Research

Figure 8. Balance Sheet

Figures in $mn, unless specified	FY13A	FY14A	FY15E	FY16E	FY17E
Current assets	1.2	0.4	0.5	2.9	20.6
Intangibles	0.6	1.5	1.5	1.5	1.5
Other assets	0.0	0.3	0.1	0.1	0.0
Total assets	**1.9**	**2.3**	**2.1**	**4.5**	**22.1**
Current liabilities	8.5	6.3	7.0	20.9	62.7
Other liabilities	0.0	0.0	0.0	0.0	0.0
Shareholders' equity	(6.7)	(4.1)	(4.9)	(16.4)	(40.5)
Total liab and shareholder equity	**1.9**	**2.3**	**2.1**	**4.5**	**22.1**

Source: SeeThruEquity Research

Figure 9. Cash Flow Statement

Figures in $mn, unless specified	FY13A	FY14A	FY15E	FY16E	FY17E
Cash from operating activities	(3.5)	(11.3)	(10.5)	(12.6)	(9.8)
Cash from investing activities	(0.1)	(1.5)	(1.7)	(1.9)	(2.0)
Cash from financing activities	4.4	12.5	13.8	11.0	8.8
Net inc/(dec) in cash	**0.9**	**(0.3)**	**1.7**	**(3.5)**	**(3.0)**
Cash at beginning of the year	0.2	1.0	0.7	2.4	(1.1)
Cash at the end of the year	**1.0**	**0.7**	**2.4**	**(1.1)**	**(4.0)**

Source: SeeThruEquity Research

About Amarantus BioScience Holdings, Inc.
Amarantus BioScience Holdings (AMBS) is a biotechnology company developing treatments and diagnostics for diseases in the areas of neurology and orphan diseases. AMBS' Therapeutics division has development rights to eltoprazine, a small molecule currently in a Phase 2b clinical program for Parkinson's disease levodopa-induced dyskinesia and with the potential to expand into adult ADHD and Alzheimer's aggression. The Company has an exclusive worldwide license to intellectual property rights associated to Engineered Skin Substitute (ESS), an orphan drug designated autologous full thickness skin replacement product in development for the treatment of severe burns currently preparing to enter Phase 2 clinical studies. AMBS owns the intellectual property rights to a therapeutic protein known as mesencephalic-astrocyte-derived neurotrophic factor (MANF) and is developing MANF as a treatment for orphan ophthalmic disorders, initially in retinitis pigmentosa (RP). AMBS also owns the discovery of neurotrophic factors (PhenoGuard(TM)) that led to MANF's discovery.

AMBS' Diagnostics division owns the rights to MSPrecise(R), 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(R)) 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).

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

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