Zacks Small-Cap Research

November 19, 2014
Jason Napodano, CFA
312-265-9421
jnapodano@zacks.com

scr.zacks.com
10 S. Riverside Plaza, Suite 1600, Chicago, IL 60606

Amarantus BioScience Holdings, Inc. (AMBS-OTCQB)

AMBS: Amarantus Acquires Rights To Severe Burn ESS Product…

UPDATE

Current Recommendation	**Buy**
Prior Recommendation	N/A
Date of Last Change	10/14/2013
Current Price (11/18/14)	$0.08
Target Price	**$0.20**

On November 17, 2014, Amarantus Bioscience Holdings, Inc. (AMBS) announced that it has entered into an exclusive option agreement with Lonza Walkersville, Inc. to acquire Cutanogen Corporation. Both Lonza Walkersville and Cutanogen Corp. are subsidiaries of Lonza Group Ltd. Acquiring Cutanogen gives Amarantus rights to develop Engineered Skin Substitute ("ESS"), an autologous skin replacement product for the treatment of Stage 3 and Stage 4 intractable severe burns. Below we provide a brief background on the financial terms of the deal, the history and clinical use of ESS, how it fits into the Amarantus portfolio, and conclude with some thoughts on the deal and the Amarantus story.

SUMMARY DATA

52-Week High	**$0.19**
52-Week Low	**$0.04**
One-Year Return (%)	**91.19**
Beta	**-6.05**
Average Daily Volume (sh)	**2,865,572**
Shares Outstanding (mil)	**757**
Market Capitalization ($mil)	**$61**
Short Interest Ratio (days)	**N/A**
Institutional Ownership (%)	**6**
Insider Ownership (%)	**5**
Annual Cash Dividend	**$0.00**
Dividend Yield (%)	**0.00**
5-Yr. Historical Growth Rates	
Sales (%)	**N/A**
Earnings Per Share (%)	**N/A**
Dividend (%)	**N/A**
P/E using TTM EPS	**N/A**
P/E using 2014 Estimate	**N/A**
P/E using 2015 Estimate	**N/A**

Risk Level	**Ultra High / Speculative**
Type of Stock	**Small-Growth**
Industry	**Biotech**

ZACKS ESTIMATES

Revenue
(In millions of $)

	Q1 (Mar)	Q2 (Jun)	Q3 (Sep)	Q4 (Dec)	Year (Dec)
2013	0 A	0 A	0 A	0 A	0 A
2014	0 A	0 A	0 A	0 E	0 E
2015					1.0 E
2016					3.5 E

Earnings per Share
(EPS is operating earnings before non-recurring items)

	Q1 (Mar)	Q2 (Jun)	Q3 (Sep)	Q4 (Dec)	Year (Dec)
2013	-$0.01 A	-$0.00 A	-$0.00 A	-$0.02 A	-$0.03 A
2014	-$0.01 A	-$0.01 A	-$0.01 A	-$0.00 E	-$0.02 E
2015					-$0.01 E
2016					-$0.01 E

WHAT'S NEW

Amarantus Acquires Rights To Engineered Skin Substitute

On November 17, 2014, Amarantus Bioscience Holdings, Inc. (AMBS) announced that it has entered into an exclusive option agreement with Lonza Walkersville, Inc. to acquire Cutanogen Corporation. Both Lonza Walkersville and Cutanogen Corp. are subsidiaries of Lonza Group Ltd. Acquiring Cutanogen gives Amarantus rights to develop Engineered Skin Substitute ("ESS"), an autologous skin replacement product for the treatment of Stage 3 and Stage 4 intractable severe burns. Below we provide a brief background on the financial terms of the deal, the history and clinical use of ESS, how it fits into the Amarantus portfolio, and conclude with some thoughts on the deal and the Amarantus story.

Financial Terms

To acquire the rights to ESS, Amarantus paid Lonza Group, Ltd $250,000 in cash. However, this is just for the exclusive option. To execute the transaction, Amarantus will pay Lonza $4.0 million in cash. The option period expires on December 31, 2014. Amarantus has also agreed to pay milestones to Lonza of $1.0 million for a successful Phase 1 trial and $4.0 million upon the filing of a Biologic License Application (BLA). Lonza is also entitled to 2% royalties on commercial sales.

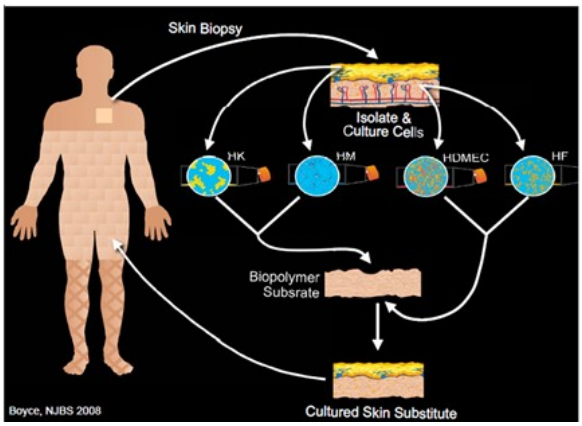
ESS is a product with a somewhat checked past (we discuss below). There is active litigation between Lonza and publicly-traded Regenicin Inc. (RGIN) that encumbers the asset from future development. In short, Regenicin is suing Lonza for breach of contract on a previous transaction / know-how agreement on the ESS product rights. To unencumber the ESS product, Amarantus is acquiring the lawsuit from Regenicin Inc. for the sum of $3.5 million in cash and $3.0 million in Amarantus stock. The schedule of payments between Amarantus and Regenicin can be found in a Form 8K filed by Amarantus on November 14, 2014. As of today, Amarantus has already paid Regenicin (or its lawyers) $500,000 in cash and 37.5 million shares of AMBS stock. The remaining $3.0 million in cash will be paid by January 31, 2015. Amarantus has also paid $450,000 to its lawyers for legal services.

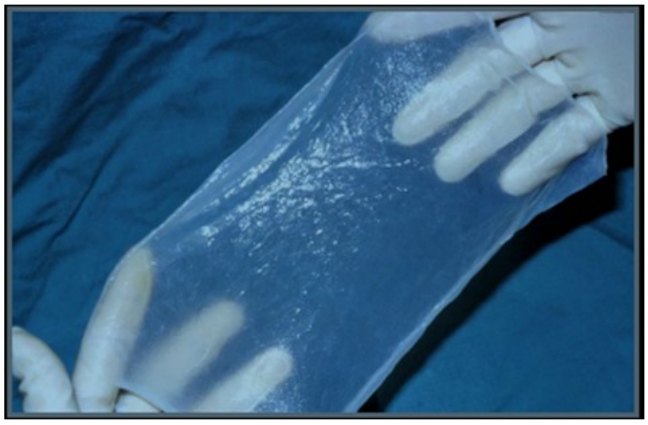
All-in, this asset cost (or will cost) Amarantus $11.2 million in combined cash and stock on or before January 31, 2014. Future milestones to Lonza bring the total to $16.2 million + 2% royalties on commercial sales. In an effort to fund the initial payments to acquire ESS, Amarantus raised $3.0 million in cash on November 7, 2014 through the sale of 3,300 shares of newly designated Series E 12% Convertible Preferred Stock. On November 12, 2014, the company also extinguished $500,000 in a promissory note through an additional Series E Preferred Stock transaction. We remind investors that Amarantus also has significant room under its common stock purchase agreement with Lincoln Park Capital to raise additional capital in the near future. Under the current plan, Amarantus can raise up to $17 million in cash with LPC.

ESS Background Info

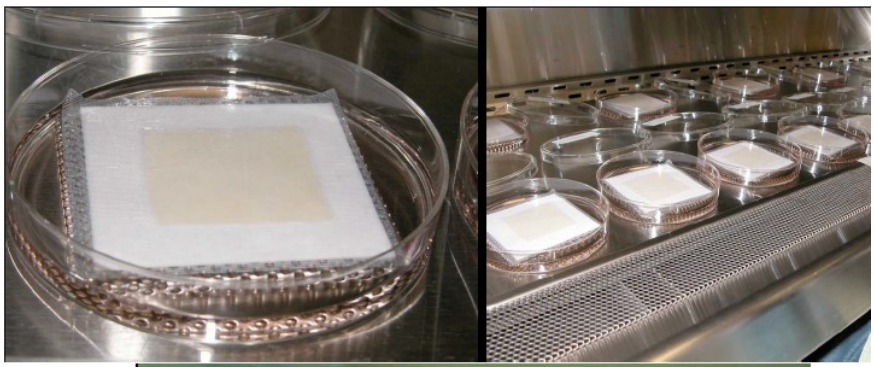
ESS, previously known as PermaDerm®, is a tissue-engineered skin substitute prepared from a patient's own (autologous) skin cells. It is important to note that because ESS is an autologous product, there is virtually no risk of rejection. ESS is also a living-tissue human-derived product; it is not synthetic, harvested from human cadavers, made from allogenic donors, or derived from animals like a porcine or bovine dermal matrix. In a sense, it is the ideal skin substitute because each application is specifically designed for the patient in need. It is also one of the only skin substitute products available that contains both epidermal and dermal layers of skin.

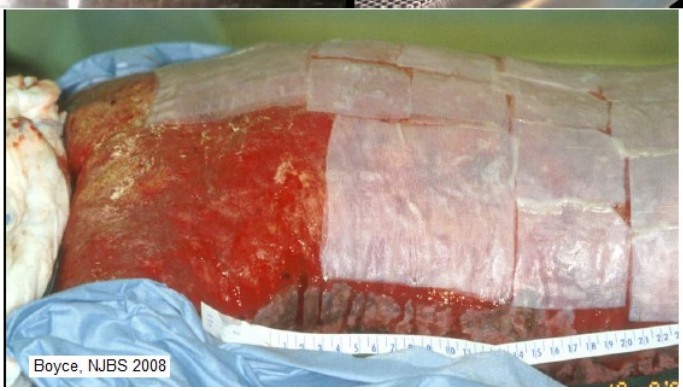
ESS consists of an absorbable collagen and glycosaminoglycan matrix seeded with autologous epidermal keratinocytes and dermal fibroblasts. Skin cells are harvested through a full thickness postage-stamp sized biopsy. Keratinocytes and fibroblasts are then isolated from the harvested section in the cell therapy facility and cultured separately in nutrient media over a 30 day period designed to increase the area of the product up to 100 times the size of the biopsy. This work is done at a cGMP manufacturing facility. The newly formed living skin graft tissue combined with a biopolymer substrate fabricated from collagen recreates the structure of the skin. The final skin product is shipped back to the patient in 6 x 6 cm or 12 x 12 cm sheets housed in sterile culture medium containing gentamycin / amphotericin B. The product is stable at room temperature for up to 48 hours from time of packaging.





Patients with large burns (≥50% of their total body surface area) often do not possess sufficient skin to cover the burn with traditional meshed split-thickness grafting. Meshed grafted creates additional wounds that require attention and frequent harvesting of new skin over an excruciatingly slow and costly process. For example, the average cost for a patient in the Critical Care Unit can reach upwards of $7,000 per day. Because ESS can be expanded and stretched to fit over the patients entire wounds, the product is not only potentially life-saving, but offers dramatically improved cost saves to the healthcare system. In the U.S. alone, burns account for 900,000 hospital days and $3 billion in annual critical care costs. And, because the patient can receive coverage for a larger percent of their body, use of ESS is hypothesized to lower the risk of infection and post-CCU complications.





The product has been previously used in over 150 mostly pediatric patients. It has been in development for over 20 years, initially developed by Steven T. Boyce, PhD while working at the University of Cincinnati – Shriners Hospital for Children (UC-SHC). Dr. Boyce founded Cutanogen in 1997 to move the development of the product forward. The U.S. FDA approved an Investigation Device Exemption (IDE #G980023) in 1998, which lead to the first clinical trial conducted at UC-SHC in 28 patients. At some point, the HHS's Office of Human Research Protection (OHRP) discovered that UCSHC did not have investigational review board (IRB) approval and notified UC of noncompliance with standard clinical trial practices. Issues noted in the OHRP letter to UC include lack of procedural consent forms and standardization of enrollment criteria. UC attempted to address the concerns of the OHRP through various levels of back-and-forth written communication between 2000 and 2003.

Meanwhile, separate from the procedural issues that drew the attention of the FDA and OHRP, Dr. Boyce was busying making multiple presentations at various medical conferences claiming the effectiveness of the product between 2000 and 2006. Presentations included talks at the American Burn Association meeting, the Australia-New Zealand Burn Association meeting, L'Oreal Recherche, the American Academy of Pediatrics, the British Society for Cell Biology, and a NIH Workshop on Engineered Human Skin (source: Sandy Frost). UC-SHC even applied to trademark the name PermaDerm®, and was granted a U.S. Patent No. 6,905,105 – Apparatus for Fabricating A Biocompatible Matrix. In 2006, Cambrex acquired Cutanogen for $1.5 million in cash and $4.8 million in future milestones. Cambrex was acquired by Lonza in February 2007.

Based on the encouraging data being presented by Dr. Boyce, the UC submitted various grants to move development of PermaDerm® forward. Grants and awards included a $1 million gift from Fifth Third Bank in November 2003 and an Army grant of $1.3 million to fund skin research awarded in December 2008. Unfortunately, all the data presentations and applications for grants drew the attention of the U.S. FDA, who conducted a "high priority" inspection of UC-SHC in March 2006. The inspection report in June 2006 noted hundreds of violations, including failure to obtain IRB approval, failure to report unanticipated adverse events, unapproved informed consent, failure to report and maintain adequate records of adverse events, inadequate or missing enrollment criteria, inadequate record keeping, failure to report protocol violations, and failure to adequately document patient background and history.

Over the next several months, the U.S. FDA sent three warning letters to UC-SHC. Additional information can be found in the three letters (here, here, and here). The primary focus of the FDA was the lack of informed consent and the failure to document and adequately report on adverse events. There were also significant procedural issues around manufacturing and reporting; these eventually warranted the FDA placing the clinical development of PermaDerm® on "Integrity Hold" in January 2007. Additional information can be found in an article written by online investigative journalist, Sandy Frost published in December 2007.

The FDA Morley Audit from March 2010 noted, "Hundreds of violations," the majority of which were around inadequate reporting of adverse events. Despite the FDA clinical hold and warning letters, interest in PermaDerm® remained high from physicians and patients. Of course, between 2000 and 2007 one can argue only the "good data" on PermaDerm® was presented by Dr. Boyce and promoted by UC-SHC. Nevertheless, UC-SHC had petitions for compassionate use of the product. One specific instance was from a ten year old burn patient in June 2010. The FDA rejected the application a week after it was filed, noting, "Failure in data collections and oversight…" as the reasons for not allowing the products use. Quite simply, the FDA was not convinced that PermaDerm® worked as well as the data presented publicly made it seem, and was deeply concerned with the lack of reported safety data and nature and frequency of adverse events with the products use.

In August 2010, Regenicin completed an acquisition of the technology know-how on PermaDerm® from Lonza Walkersville. We note that new Amarantus BOD member and previous advisory, Dr. Joseph Rubinfeld, was appointed to Regenicin's BOD at the time of the deal. In late 2010, Lonza reported have received access to more than $18 million in grant funding from the U.S. Department of Defense for the development and commercialization of PermaDerm®. Lonza and Regenicin planned to conduct a clinical trial in adult burn patients in 2011, but the trial never started due to the FDA clinical hold. Despite the lack of clinical progress over the past several years, in June 2012, the U.S. FDA granted Orphan Drug designation to the product.

Today, ESS, which is the new GMP manufactured version of PermaDerm®, has a new Investigational New Drug (IND) application with the U.S. FDA, essentially wiping the slate clean of existing clinical data, both good and bad. Amarantus goal is to initiate a Phase 2a clinical study with ESS in the second quarter 2015. This trial has already been listed on ClinicalTrials.gov (NCT01655407). The trial is designed to enroll 10 adult patients (age 18-40) with deep partial or full-thickness burns ≥ 50% of their total body surface area (TBSA). The trial is set up to compare treatment with ESS vs. treatment with meshed, split-thickness autograft (MSTAG) on a per-patient level. The primary assessment measures will be: 1) incidence and severity of infections (0-6 months), 2) incidence of re-grafting (0-6 months), 3) incidence of adverse events (treatment-related and all, 0-36 months), 4) percentage of engraftment assessed by investigator and by independent observer (0-6 months), 5) wound closure (0-3 months), 6) re-grafting area (0-6 months). Secondary assessments also include scaring, incidence and severity of pruritis, paresthesias, pain, sensation, contracture release, and body temperature stability.

Amarantus estimates the target patient population in the U.S. that would qualify for the study (i.e. TBSA ≥ 50%) is between 500 and 2000 individuals. However, management believes that approximately 100,000 patients have burns with TBSA ≥ 30%, meaning that a large market opportunity exits to expand the ESS development path should the initial Phase 2a study prove successful. On a global basis, burns with TBSA ≥ 30% affect over 1 million.

Amarantus plans to conduct a detailed pricing and reimbursement study for ESS in 2015. Based on reimbursement for wound care products like Epicel, Dermagraft, and Apligraf, we see a sizable market opportunity for ESS if developed to commercialization. The cost to care for a severely burned patient can range from $200,000 to over $1 million in hospital and physician's fees alone. Complications, such as infections, fragile skin breakdown, disfigurement, scaring, depression, etc… can double or triple the all-in costs. The fact that ESS has been designated as an Orphan Drug product will only further help strengthen Amarantus' commercial pricing efforts if approved. We believe there would be significant payor interest in a more effective product like ESS should the new clinical data match the previous excitement of a decade ago.

Our Thoughts On The Deal

Amarantus acquisition of ESS is difficult to assess at this stage. The FDA has cited "Hundreds of violations" and "Failures in both data collections and oversight" in its audit of the historic clinical data on PermaDerm®. It is clear to us that Dr. Boyce, for whatever reason, was only telling one side of the story to the public between 2000 and 2008. It is important to note, Dr. Boyce is a PhD, not an MD with clinical experience. Much of the lack of reporting and adequate record keeping seems the result from using the PermaDerm® product like a commercially approved product rather than an investigational product. Perhaps this is why there was also a lack of informed consent over use of an investigational drug. His intent does not at all seem nefarious.

Based on available data, it looked like PermaDerm® worked. However, we have almost no data to analyze on things like safety or adverse events, and how use of the product compares to standard-of-care. Beyond simply anecdotal evidence of the product working, a true assessment of the clinical data would include the risk / benefits of use and a full safety analysis vs. standard of care. This was not done, so almost the entire clinical history of the product, including use in roughly 150 individuals, needs to be thrown out.

It's like the police just pulled over someone for speeding and found ten pounds of heroin in the trunk, but the guy gets off Scott-free because they didn't have a warrant. We know damn-well the guy is guilty, but in this country we have rules that need to be followed. The rules were clearly not followed at UC-SHC with PermaDerm®.

As part of Amarantus due diligence on ESS, they spoke to several key opinion leaders in the burn space. Management shared with us a quote from Dr. David Ahernholz on PermaDerm®. Dr. Ahernholz noting that the failure to get this products on the market has been the, "Great disappointment… because it is a life-saving drug that works." Dr. Ahernholz also noted that PermaDerm® would be his, "First choice of therapy of a severe-burn patient." Dr. Ahernholz is board-certified in general surgery and is a member of numerous professional organizations including the American Burn Association, the Surgical Infection Society, the American Association for the Surgery of Trauma, the Central Surgical Society and the Minnesota Surgical Society. He is currently the Associate Director of the Burn Center at Regions Hospital and the President of the American Burn Association.

On Amarantus conference call to discuss the acquisition of the product rights, management had Dr. Nicole S. Gibran, M.D., F.A.C.S. on briefly to talk about her experience with the product. She stated, "ESS offers hope to care providers, who treat severely wounded individuals, that a reliable skin substitute will be available for the horrible situation when wound coverage is not possible. I have long wanted to see ESS developed so that we can offer this life-saving technology to our patients and I am delighted that Amarantus is committed to move this forward." Dr. Gibran is a Professor of Surgery and Director of the University of Washington Medicine Regional Burn Center at Harborview Medical Center in Seattle, Washington, and a principle investigator for the upcoming Phase 2a ESS clinical study.

Despite the checkered past, those are some strong endorsements by key opinion leaders in the burn space. Below we summarize some of the positive attributes that Amarantus has going for it with respect to moving ESS forward:

- ✓ Strong KOL support (note the comments from Drs. Ahernholz and Gibron)
- ✓ Potential for strong pricing power (note the cost to care for severe-burn patient and ODD status)
- ✓ New active IND (releasing the previous clinical hold from 2007)
- ✓ Approved protocol for a Phase 2a study (already listed on ClinicalTrials.gov)
- ✓ Active AFIRM grant for $1.3 million, with potential to expand based on previous $18 million award (pulled when the FDA placed the product on clinical hold)
- ✓ Relatively quick path to market (thanks to ODD) and potential for priority review / expedited approval
- ✓ Meaningful potential for label expansion beyond initial Orphan population (if ESS works, we believe treating physicians will clearly want to use the product in patients with TBSA < 50% as well)
- ✓ Large market opportunity, estimated at $500M per year (based on pricing x number of patients)

That being said, Amarantus spent $11.2 million in cash and stock to acquire this product. Based on the market capitalization as of November 7, 2014 of $64 million (~800 million shares x $0.08 per share), that's nearly 20% of the market value now assigned to a brand new asset. In order to fund the future clinical development of ESS, along with existing products like LymPro, eltoprazine, and MANF, shareholders will see significant dilution. For example, we estimate the cost of the Phase 2a ESS study will be in the area of $4 to $6 million. The current AFIRM grant only provides $1.3 million in funding. On top of that, we have some meaningful concerns or questions that still need to be addressed. These include:

- ✓ What needs to be done to secure additional funds from AFIRM or the U.S. DOD?
- ✓ How long will this take?
- ✓ Can this be done in time to fully-fund the Phase 2a trial in the timelines management has given (i.e. start the trial in the second quarter of 2015)?
- ✓ Is 30 days too long of a timeframe between when the biopsy if taken to when the product is returned to the patient for grafting?
- ✓ Are study investigators going to have a problem convincing severe-burn patient to use an investigation product in lieu of standard of care (note this has been a significant problem for Avita Medical enrolling its Phase 3 burn trial with Recell®)?
- ✓ At some point Lonza decided to stop cooperating with Regenicin on PermaDerm®. Will Amarantus have a smooth transition and working relationship with Lonza?
- ✓ Previous clinical data no doubt played a part in helping Amarantus make a decision to acquire ESS. The FDA has stated this data is unreliable. What to believe?

…Let's Break Out An Envelope So We Can Scribble On The Back…

Amarantus believes that ESS has market potential of $500 million. Based on available patient population and pricing data, we believe this is a fair estimation (assumes 2,000 patients at $250,000 per treatment). Management believes that the path to approval for ESS could be rapid, potentially as quick as four years. If we assume peak sales six years after commercialization, then we are looking at $500 million in ESS sales in 2025. Historic success rate of a Phase 2a asset is around 10%. Average Price-to-Sales ratio for the biopharma industry is 5.5x. Amarantus discount rate based on the Series E convertible preferred issued on November 14, 2014 is 22% (12% coupon + 10% OID). Amarantus will owe 2% royalty on sales to Lonza. Plugging those numbers into a calculator gives us a fair-value today of $37 million; only Amarantus will require an estimated $7 million to complete the Phase 2a program and tech-transfer. The potential is there for non-dilutive capital through a new DOD grant, but until the money has been secured, we can only suspect that Amarantus will need to raise these funds themselves. So net-net, ESS looks to be worth around $30 million.

Not bad considering Amarantus paid $11.2 million (+ $5 million in potential milestones). To raise $11.2 million at $0.08 per share, Amarantus would have to issue 140 million shares. If we divide $30 million in value by 140 million shares, we get ESS worth approximately $0.21 per share. Amarantus stock is at $0.08 per share. As such, the previous rudimentary analysis tells us this is a potential accretive transaction. The key value-creating events for investors will be: 1) securing additional DOD funding, and 2) data from the Phase 2a study.

How Does This Fit In?

Amarantus stated strategy is to be an early-stage incubator for troubled, yet promising assets. That's why the name of the company is Amarantus Bioscience Holdings, Inc. They are a "holding company" looking to secure assets, create value through advancement in clinical development, and then monetize through sales, spin-off, or out-licensing. The primary focus on the company is on rare / orphan diseases (MANF and ESS) or on large diseases where there remains a significant unmet medical need (LymPro and eltoprazine).

ESS is the company's first move into regenerative medicine, and although ESS and the treatment of severe burns has absolutely no overlap with a rapid diagnostic for Alzheimer's disease or a small molecule for the treatment of Parkinson disease – Levodopa Induced Dyskinesia, ESS actually has quite a lot in common with LymPro and eltoprazine in terms of the Amarantus strategy. All three products were troubled and picked up for very little upfront cash. LymPro was purchased out of bankruptcy because the previous developer did not have the necessary expertise in flow cytometry to work through clinical trial issue. Amarantus doesn't have this expertise either, but Becton Dickinson and ICON Labs clearly do. Management has created significant value with LymPro over the past two years simply by picking up the pieces of a stalled asset and slowly putting them back together.

For products like eltoprazine and ESS were picked up thanks to key management relationships with personnel around the respective asset. For example, the deal to acquire eltoprazine was no doubt brokered by former PsychoGenics Chief Scientific Officer and current Amarantus BOD member, David A. Lowe, PhD. For PsychoGenics, a change in strategy from internal development to a CRO meant that eltoprazine was up for sale. For ESS, take note of the fact that Dr. Joseph Rubinfeld, former co-founder of Amgen, was appointed to the Regenicin BOD back in 2010 when Regenicin acquired the rights to the product from Lonza. At the time of the appointment, Regenicin said the appointing for Dr. Rubinfeld would be instrumental to assisting the company's commercialization efforts of PermaDerm®. Dr. Rubinfeld has been on Amarantus Board of Advisors since November 2012. Amarantus announced on November 17, 2014 that Dr. Rubinfeld was appointed to the BOD in conjunction with the acquisition to the rights to ESS.

Add in MANF for rare eye diseases and the Amarantus pipeline is looking rather impressive. The company has built a group of assets specifically designed to provide shareholders with at least one major value-creating event every year over the next four years. Each of these potential events could provide significant positive return for shareholders. For this reason we continue to believe that Amarantus stock is a good buy at today's price. The current market capitalization is roughly $75 million. We think it could be worth $150 to $200 million as some of these value-creating events below are realized.

Asset	Pre-Clinical	Phase 1	Phase 2	Phase 3	Commercial
LymPro Test®: Alzheimer's (CLIA)	→	→	→	→	Potential spinoff in 2015
Eltoprazine: Parkinson's / Adult ADHD		→	→	→	Potential partnership in 2016
ESS-W*: Intractable Severe Burns		→	→		Potential spinoff / partner 2017
MANF: Retinitis Pigmentosa Pre-Clinical	→				Potential PoC in orphan ocular in 2018

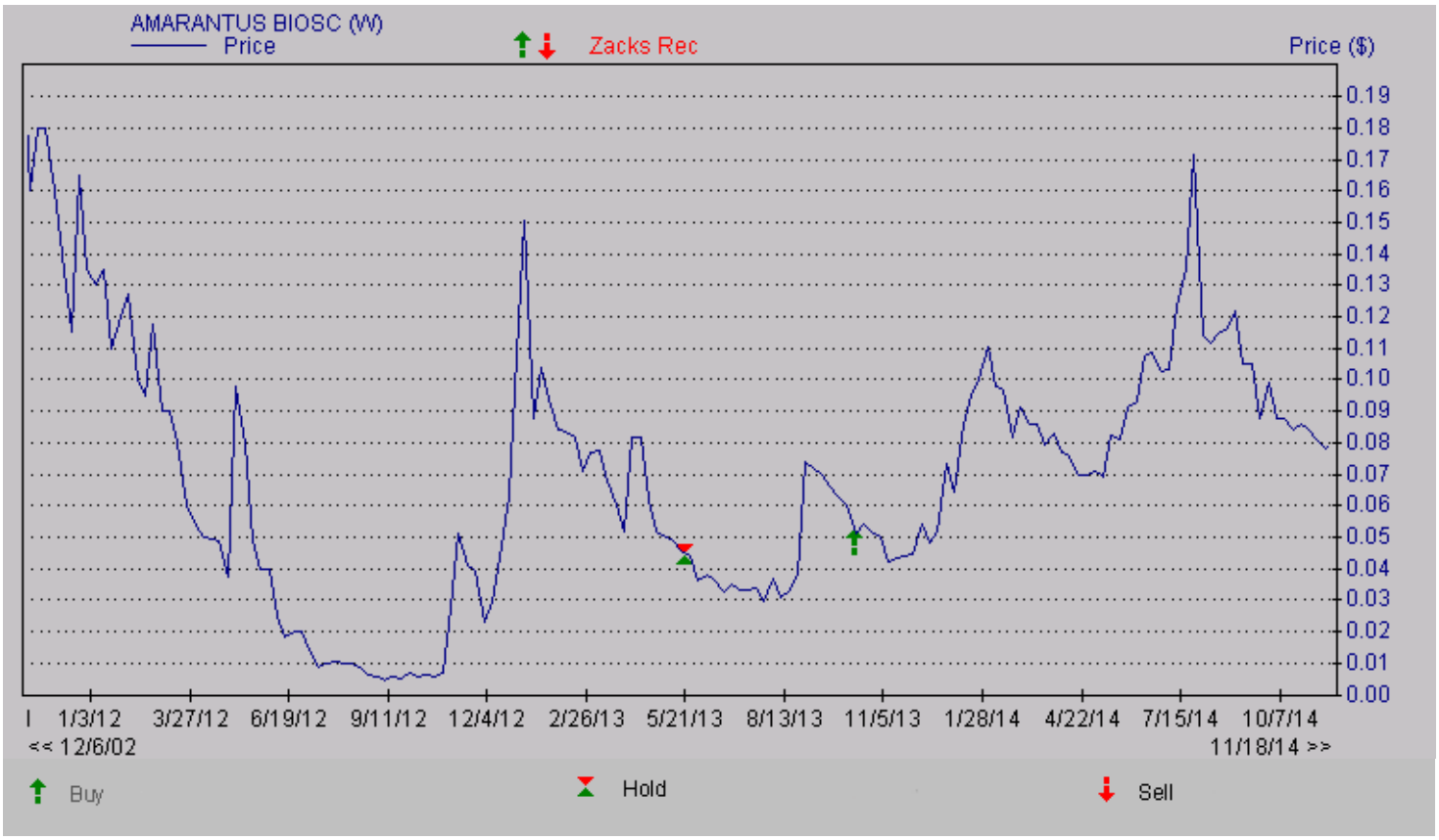
PROJECTED FINANCIALS

Amarantus Bioscience, Inc.
Income Statement

Amarantus Bioscience, Inc.	2012 A	2013 A	Q1 A	Q2 A	Q3 A	Q4 E	2014 E	2015 E	2016 E
MANF	$0	$0	$0	$0	$0	$0	$0	$0	$0
YOY Growth	-	-	-	-	-	-	-	-	-
Eltoprazine	$0	$0	$0	$0	$0	$0	$0	$0	$0
YOY Growth	-	-	-	-	-	-	-	-	-
Engineered Skin	$0	$0	$0	$0	$0	$0	$0	$0	$0
YOY Growth	-	-	-	-	-	-	-	-	-
LymPro (CLIA + ROU)	$0	$0	$0	$0	$0	$0	$0	$1.0	$3.5
YOY Growth	-	-	-	-	-	-	-	-	*250.0%*
Total Revenues	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$1.0**	**$3.5**
YOY Growth	-	-					-	-	*250.0%*
CoGS	$0	$0	$0	$0	$0	$0	$0	$0.2	$0.7
Product Gross Margin	-	-	-	-	-	-	-	*80%*	*80%*
R&D	$0.584	$2.089	$0.517	$1.640	$1.899	$1.900	$5.956	$5.000	$6.000
SG&A	$3.506	$3.622	$1.119	$2.101	$2.070	$1.800	$7.090	$4.500	$5.000
Operating Income	($4.090)	($5.711)	($1.636)	($3.741)	($3.969)	($3.700)	($13.046)	($8.700)	($8.200)
Operating Margin	-	-	-	-	-	-	-	-	-
Interest & Other Income	($1.045)	($9.421)	($3.906)	($0.284)	($0.430)	($0.050)	($0.200)	($0.300)	($0.300)
Pre-Tax Income	($5.136)	($15.132)	($5.542)	($4.025)	($4.399)	($3.750)	($13.246)	($9.000)	($8.500)
Taxes & Other	$0	$0	$0	$0	$0	$0	$0	$0	$0
Tax Rate	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*
Net Income	($5.136)	($15.132)	($5.542)	($4.025)	($4.399)	($3.750)	($13.246)	($9.000)	($8.500)
Net Margin	-	-					-	-	-
Reported EPS	**($0.04)**	**($0.03)**	**($0.01)**	**($0.01)**	**($0.01)**	**($0.00)**	**($0.02)**	**($0.01)**	**($0.01)**
YOY Growth	-	-	-	-	-	-	-	-	-
Basic Shares Outstanding	140.7	450.9	630.7	734.0	767.7	825.0	739.4	1000.0	1250.0

Source: Zacks Investment Research, Inc. *Jason Napodano, CFA*

HISTORICAL ZACKS RECOMMENDATIONS



DISCLOSURES

The following disclosures relate to relationships between Zacks Small-Cap Research ("Zacks SCR"), a division of Zacks Investment Research ("ZIR"), and the issuers covered by the Zacks SCR Analysts in the Small-Cap Universe.

ANALYST DISCLOSURES

I, Jason Napodano, CFA, CFA, hereby certify that the view expressed in this research report accurately reflect my personal views about the subject securities and issuers. I also certify that no part of my compensation was, is, or will be, directly or indirectly, related to the recommendations or views expressed in this research report. I believe the information used for the creation of this report has been obtained from sources I considered to be reliable, but I can neither guarantee nor represent the completeness or accuracy of the information herewith. Such information and the opinions expressed are subject to change without notice.

INVESMENT BANKING, REFERRALS, AND FEES FOR SERVICE

Zacks SCR does not provide nor has received compensation for investment banking services on the securities covered in this report. Zacks SCR does not expect to receive compensation for investment banking services on the Small-Cap Universe. Zacks SCR may seek to provide referrals for a fee to investment banks. Zacks & Co., a separate legal entity from ZIR, is, among others, one of these investment banks. Referrals may include securities and issuers noted in this report. Zacks & Co. may have paid referral fees to Zacks SCR related to some of the securities and issuers noted in this report. From time to time, Zacks SCR pays investment banks, including Zacks & Co., a referral fee for research coverage.

Zacks SCR has received compensation for non-investment banking services on the Small-Cap Universe, and expects to receive additional compensation for non-investment banking services on the Small-Cap Universe, paid by issuers of securities covered by Zacks SCR Analysts. Non-investment banking services include investor relations services and software, financial database analysis, advertising services, brokerage services, advisory services, equity research, investment management, non-deal road shows, and attendance fees for conferences sponsored or co-sponsored by Zacks SCR. The fees for these services vary on a per client basis and are subject to the number of services contracted. Fees typically range between ten thousand and fifty thousand USD per annum.

POLICY DISCLOSURES

Zacks SCR Analysts are restricted from holding or trading securities placed on the ZIR, SCR, or Zacks & Co. restricted list, which may include issuers in the Small-Cap Universe. ZIR and Zacks SCR do not make a market in any security nor do they act as dealers in securities. Each Zacks SCR Analyst has full discretion on the rating and price target based on his or her own due diligence. Analysts are paid in part based on the overall profitability of Zacks SCR. Such profitability is derived from a variety of sources and includes payments received from issuers of securities covered by Zacks SCR for services described above. No part of analyst compensation was, is or will be, directly or indirectly, related to the specific recommendations or views expressed in any report or article.

ADDITIONAL INFORMATION

Additional information is available upon request. Zacks SCR reports are based on data obtained from sources we believe to be reliable, but are not guaranteed as to be accurate nor do we purport to be complete. Because of individual objectives, this report should not be construed as advice designed to meet the particular investment needs of any investor. Any opinions expressed by Zacks SCR Analysts are subject to change without notice. Reports are not to be construed as an offer or solicitation of an offer to buy or sell the securities herein mentioned.

ZACKS RATING & RECOMMENDATION

ZIR uses the following rating system for the 1074 companies whose securities it covers, including securities covered by Zacks SCR:
Buy/Outperform: The analyst expects that the subject company will outperform the broader U.S. equity market over the next one to two quarters.
Hold/Neutral: The analyst expects that the company will perform in line with the broader U.S. equity market over the next one to two quarters.
Sell/Underperform: The analyst expects the company will underperform the broader U.S. Equity market over the next one to two quarters.

The current distribution is as follows: Buy/Outperform- 16.8%, Hold/Neutral- 76.5%, Sell/Underperform – 6.1%. Data is as of midnight on the business day immediately prior to this publication.