Zacks Small-Cap Research

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Aethlon Medical (AEMD-OTCQB)

AEMD: Q1 Update, Revived Attention on Ebola

Current Recommendation	**Neutral**
Prior Recommendation	N/A
Date of Last Change	03/12/2012
Current Price (08/19/14)	$0.13
Target Price	**$0.25**

OUTLOOK

AEMD's novel blood filtration device could have utility in the treatment of Hepatitis-C, HIV, sepsis, cancer and bioterror applications. Cancer, which was viewed as more of a backburner application, has recently become an area that AEMD is pursuing more aggressively. Data from key clinical trial for HCV in India was announced throughout 2012. AEMD just got FDA approval to run a human study which is a major milestone and helps to de-risk the company in our opinion. Study to commence in near term. Compassionate use recently commenced in India. In Sept 2011 AEMD was awarded U.S. DARPA gov't contract related to development of a sepsis treatment device. DARPA contracts provide near-term revenue/cash while also providing credibility of the technology and potentially facilitating the quest towards regulatory approval and commercialization.
Material risks remain but AEMD has made meaningful progress in mitigating some of these.

SUMMARY DATA

52-Week High	**$0.27**
52-Week Low	**$0.12**
One-Year Return (%)	**-29.83**
Beta	**1.08**
Average Daily Volume (sh)	**451,977**
Shares Outstanding (mil)	**261**
Market Capitalization ($mil)	**$34**
Short Interest Ratio (days)	**N/A**
Institutional Ownership (%)	**0**
Insider Ownership (%)	**16**
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 2015 Estimate	**N/A**
P/E using 2016 Estimate	**N/A**
Zacks Rank	**N/A**

Risk Level	**Above Avg.,**
Type of Stock	**N/A**
Industry	**Med-Hmo**

ZACKS ESTIMATES

Revenue
(in '000 of $)

	Q1 (Jun)	Q2 (Sep)	Q3 (Dec)	Q4 (Mar)	Year (Mar)
2013	0.2 A	0.4 A	0.2 A	0.4 A	1.2 A
2014	0.2 A	0.6 A	0.1 A	0.7 A	1.6 A
2015	0.1 A	0.3 E	0.2 E	0.4 E	1.0 E
2016					1.3 E

Earnings per Share

	Q1 (Jun)	Q2 (Sep)	Q3 (Dec)	Q4 (Mar)	Year (Mar)
2013	-$0.01 A	-$0.01 A	$0.00 A	-$0.02 A	-$0.03 A
2014	-$0.00 A	-$0.02 A	-$0.01 A	-$0.03 A	-$0.07 A
2015	-$0.02 A	-$0.00 E	-$0.00 E	-$0.00 E	-$0.03 E
2016					-$0.02 E

Zacks Projected EPS Growth Rate - Next 5 Years % **N/A**

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WHAT'S NEW….

Q1 10-Q Filed (ending 6/30/2014)
Aethlon filed their 10-Q for the fiscal first quarter ending 6/30/2014. Highlights in the quarter include further progress in cleaning up the balance sheet via the conversion of non-performing debt to equity and revived attention as to the potential utility of Hemopurifier in the treatment of pandemic threats, namely Ebola.

The entire $51k in revenue came from the Battelle subcontract with no DARPA related revenue recorded in the quarter. Our estimate of $260k included $197k of DARPA and $63k of Battelle revenue. The miss relative to our numbers, which mostly relates to DARPA revenue, is fundamentally largely meaningless as it is timing related. The footnotes in the 10-Q mention that the $197k in DARPA revenue that we anticipated would be billed in Q1 was in fact billed subsequent to Q1 quarter-end (i.e - in Q2) - for which we have since adjusted our model.

As of the filing date of the Q1 10-Q (8/14/2014) AEMD had billed approximately $4.3M under the DARPA awards, which represents $1.97 million under the initial year-1 contract, $1.6 million under the year-2 contract and $659k under the year-3 contract, the latter which was awarded to the company in September 2013 and initially was to pay up to $1.53 million if all eight milestones are met. AEMD began work on the Battelle subcontract in early April 2013 and through August 14th has booked a total of $231k in revenue related to this.

DARPA has the option of entering into the remainder of the proposed contract for years four and five. AEMD recently noted that due to budget restrictions, DARPA plans to reduce the scope of AEMD's contract for years three through five. The three through five year contracts were initially worth ~$3.2M. Due to the budget change, this amount will now be ~$2.4M (the breakdown per contract-year was not disclosed). We had already adjusted our model to account for this change. We currently model just over $700k in DARPA related revenue in the current fiscal year.

We also continue to look for additional, although relatively minimal revenue from the Battelle contract throughout fiscal 2015. As a reminder, AEMD's subcontract is a time and materials contract so the total that AEMD will eventually bill will not be known until their work is completed. We do, however, think it's likely that there will be additional revenue contribution from this contract.

Q1 operating expenses were $1.2M and in-line with our $1.2M estimate. Operating loss was $1.2M compared to our $923k estimate - the difference a result of timing of recognition of the DARPA milestone revenue. Net income and EPS, excluding $2.5M in non-cash expense related to the conversion of certain debt (which had been in default) and related interest to equity, was ($1.2)M and ($0.01), compared to our ($1.0)M and ($0.00) - the difference, again, related to timing of recognition of DARPA revenue.

Balance Sheet / Cash Balance
A significant highlight over the last few quarters has been the accelerated pace that AEMD has cleaned up their balance sheet. This included converting a significant amount of debt to equity, extending the maturity on other debt and a resultant reclassification of a large derivative liability balance to equity.

Since just early February of this year, AEMD has reduced the aggregate amount of debt that is past due from approximately $2.1M (plus ~$1.1M in accrued interest) to just $473k (plus ~$625k in accrued interest) through mid-August. This resulted from the conversion of $860k of notes (plus an additional $480k of interest) to equity and extending the maturity of another ~$580k of debt which had previously been classified as past due. Debt balance (including that owed to related parties), pro forma for the conversion of $200k of debt to equity subsequent to fiscal Q1 2015, stood at $2.7M compared to $3.4M at the end of fiscal Q3 (12/31/2013). In addition, the derivative liability balance (which was $5.6M at the end of Q3 and $10.7M at fiscal 2014 year end) was subsequently reclassified as equity and therefore completely eliminated.

As we have noted in our ongoing coverage of AEMD, their historical significant past due debt balance has kept their risk profile elevated. And while the debt conversions and related amendments will significantly increase the share outstanding count, this recent de-leveraging has provided meaningful de-risking in our opinion.

AEMD exited fiscal Q1 2015 with $807k in cash, compared to $1.3M at the end of fiscal 2014 (3/31/2014). Cash used in operating activities was $764k in Q1. Subsequent to Q1 quarter-end AEMD collected $220k from the

DARPA and Battelle contracts. We continue to expect cash generated from government and other contracts along with additional funds raised through the sale of securities to fund the company over the near-to-mid term.

Operational Update

The Ebola outbreak in West Africa has generated front-page news and revives the notion that Hemopurifier may have utility in treating the deadly virus, for which there currently is no proven cure. As a reminder, Aethlon, in collaboration with the United States Army Medical Research Institute for Infectious Diseases (USAMRIID) and other organizations, have worked in the past to validate Hemopurifier for use against Category A threats, including Ebola. While human studies have yet to move forward due to the difficulty of enrolling patients for a trial with Ebola, in vitro studies were done. The in vitro studies indicated that Hemopurifier captured a significant amount of the Ebola virus in just one hour. AEMD notes that they have reached out to FDA to help determine if there may be an opportunity to consider use of Hemopurifier with patients infected with Ebola from the current outbreak.

Aside from AEMD's continued focus and success with cleaning up their balance sheet and reducing the amount of non-performing debt, the company continues to make other progress on the operational front as well. This includes further investigation of the potential of Hemopurifier for the treatment of cancer. With Hemopurifier being validated in the capture of exosomes for a variety of cancer types including breast, ovarian, colorectal, lymphoma and melanoma and a recent published study naming Hemopurifier as having potential in the treatment cancer, this application appears to be gaining meaningfully more traction. AEMD now hopes to submit an IDE for cancer-related studies by this Fall. And while development of Hemopurifier for a potential cancer-related application remains at an early stage, we view this an especially attractive market given its relatively large size, obvious dearth of effective treatment options and early indications that Hemopurifier may have real utility in addressing it.

The newly launched ESI lab should afford the potential to accelerate R&D efforts for cancer. The lab is also looking at other markers including Alzheimer's Disease, potentially providing AEMD with other shots on goal and applications for Hemopurifier.

Relative to the U.S. safety study in HCV patients, AEMD recently noted that they are now in process of manufacturing a second batch of devices for use in the study and they now hope to initiate the trial in September of this year. If all goes well in the study, the follow-on game plan is expected to include development of feasibility studies in HCV, HIV and cancer.

DaVita Agreement for Pilot Study Finalized

In May AEMD announced that they entered into a definitive agreement with DaVita Clinical Research (DCR), the CRO arm of dialysis services giant DaVita Healthcare, to provide clinical management services for Aethlon's recently approved 10-patient feasibility study. As a reminder, Aethlon first announced in February that they reached a preliminary agreement with DCR to manage the study - which was a change of course as AEMD had previously disclosed the study was expected to be conducted by the Renal Research Institute, a partnership between Fresenius Medical Care (FMS) and Beth Israel Medical Center in NYC. The pivot towards DCR was driven by the potential to leverage DCR's dialysis-related clinical trial experience, their large clinical site network and the expertise of Dr. Stephen Fadem, who will be leading the study.

The feasibility safety study, which will enroll 10 ESRD patients with HCV, will be conducted at the DaVita MedCenter Dialysis clinic in Houston, TX - one of the largest dialysis centers in the U.S. - which could presumably support future, larger HCV studies as well. AEMD hopes to obtain IRB approval and commence enrollment by September. We note that DaVita MedCenter is also in close proximity to MD Anderson Cancer Center - which potentially opens up the possibility to collaborate with DCR and Dr. Fadem on future cancer-related studies as well.

Potential Application in Cancer Gaining More Traction

Aethlon has in the past alluded to the possibility of pursuing further development of Hemopurifier for indications other than just HCV - including potentially for treatment of certain cancers. Cancer, which until recently was considered somewhat of a backburner application, has since evolved into an area that Aethlon expects to pursue more aggressively. The company now hopes to file an IDE this year for treatment of cancer. AEMD has not disclosed what or which cancer types it expects to initially pursue in clinical studies, although as we note below, Hemopurifier could potentially have utility in various cancers.

A potential application in cancer received arguably additional support in an article titled, "Extracellular Vesicles: Emerging Target for Cancer Therapy" published in the April 2014 issue of the journal, *Trends in Molecular Medicine*. The article, written by researchers at Harvard Medical School, Massachusetts General Hospital and University of Oxford explores evidence that extracellular vesicles (i.e. - exosomes) play a key role in cancer development and progression and suppression of immune response. As such, extracellular vesicles (EVs) have

increasingly become targets for anticancer therapy. This coincides with AEMD's cancer research and how Hemopurifier, via the removal of circulating cancer-secreted exosomes, could have utility in the treatment of cancer.

The authors also believe that EVs may also increase the body's resistance to cancer drugs and hinder their effectiveness. They further note that, while early evidence suggests that inhibition of EV biogenesis may have beneficial effects in the treatment of cancer, that a challenge has been to find therapies that can specifically target cancer related EVs without affecting normal cell function. The researchers specifically reference Hemopurifier as a potential therapy to overcome these challenges, noting that with the use of Hemopurifier "it might be possible to specifically capture tumour cell-derived EVs on an antibody-coated matrix during extracorporeal dialysis. For example, in human epidermal growth factor receptor-2 (HER-2) overexpressing breast cancer, where HER-2-expressing EVs have been shown to interfere with therapy and are associated with tumour aggressiveness, anti-HER-2 antibodies could be used to remove HER-2-expressing EVs from circulation with the aim of improving therapeutic outcome. In principal, this approach could be tailored for other tumour types, as long as the tumour cell-derived EVs are enriched for tumour-specific proteins. However, whether the level and duration of EV depletion after ADAPT (i.e. - Hemopurifier) therapy would be sufficient to achieve a clinically relevant outcome remains to be determined."

The authors note that their current understanding of EVs role in cancer development and progression is still in the relatively early stages and is based on data from in vitro experiments. Their acknowledgement of Hemopurifier as potentially having utility in the treatment of cancer is also largely based on the supposition that removal of circulating EVs may be beneficial in interrupting the development and spread of tumors - which is still just a theory at this point. Nonetheless, we think this research does add meaningful credibility to Hemopurifier's potential role in cancer suppression and adds additional support to AEMD's research which indicates the same.

Cancer-related studies could potentially be on the near-to-mid term calendar. As noted, AEMD expects to file an IDE this year for cancer. And the relationship with DaVita Clinical Research and Dr. Fadem could potentially expand beyond just HCV. The DaVita MedCenter is in close proximity to MD Anderson Cancer Center which could provide convenient logistics for developing cancer-related studies with Hemopurifier.

AEMD has presented data from preclinical studies at industry conferences that have shown Hemopurifier can capture exosomes of various cancers including breast, melanoma, ovarian and colorectal. Specific to melanoma, a study led by Cornell University found that exosomes released by melanoma cancer cells facilitated the spread of the disease throughout the body and to other organs and bones. There was also a predictive relationship between exosome levels and severity of cancer with late-stage (IV) patients presenting with much greater exosomes levels compared to earlier stage patients. This indicates that removal of exosomes from circulation could reduce progression of the deleterious effects of melanoma to other parts of the body and potentially improve patient outcomes.

ESI Investigating Brain-Specific Biomarkers

In September 2013 AEMD announced the launch of Exosome Sciences (ESI), a subsidiary that the company had previously formed to pursue other exosome-related applications for their technology. ESI was revived and charged with investigating exosomes' role in the progression of cancer and infectious and other diseases.

In March AEMD announced that ESI has been investigating certain brain-specific biomarkers and whether they can be identified in circulating exosomes. ESI has isolated the brain-specific biomarkers tau, beta-amyloid, glycoprotein A2B5 and S100B in the circulatory system - previously only identified in cerebrospinal fluid. These biomarkers have been shown to be associated with Alzheimer's Disease (beta-amyloid), Chronic Traumatic Encephalopathy (tau) and traumatic brain injury. There is currently no cure for these disorders and identifying their presence is often not possibly until either well into their progression or, in the case of Chronic Traumatic Encephalopathy (CTE), until an autopsy is done. CTE has received significant mainstream media attention of late as it been associated with head injuries of NFL players and been implicated as a cause for severe depression and some resultant suicides.

AEMD notes that ESI scientists have successfully isolated these brain-derived biomarkers in circulation - while no specifics were provided, we expect to hear more about this in the future. This could provide another potential opportunity for the Hemopurifier in targeting removal of specific circulating exosomes.

As we have noted in the past, while we do not model a contribution from the Exosome Sciences business, we do view this has possessing potential upside to AEMD's core business, particularly over the longer-term. We will update our model to incorporate a contribution from Exosome Sciences depending on its progression and when there's more insight into likelihood and timing of revenue generation. Targeting of brain-specific biomarkers is one more shot on goal for ESI.

Using DCF To Value AEMD

Since initiating coverage of Aethlon Medical back in March 2012 we listed several risks and concerns, some of which we felt precluded us from assigning a reasonable value on the company. Among the greatest concerns, which we felt had the potential to essentially stop the company in its tracks, were AEMD's outstanding and non-performing debt as well as the real uncertainty of whether FDA would ever green-light the company to run U.S. human trials. And while the debt issue remains an overhang, we feel that the company's success in continuing to raise financing (particularly financing that is subordinate to the debt) and ongoing progress with converting a significant amount of debt to equity (and extending maturity of other debt), provides us much more comfort that their still less-than-solid balance sheet can continue to meaningfully improve. AEMD made very substantive progress in managing their debt since the end of calendar 2013 - this includes reducing the amount of non-performing debt from approximately $2.1M to $0.5M, reducing total debt from about $3.4M to $2.7M and completely eliminating its derivative liability.

Another risk-related issue was an outstanding lawsuit brought by Gemini Master Fund in July 2012 which alleged AEMD was in default of a promissory note issued to Gemini and the company failed to issue Gemini shares upon the presentation of a warrant exercise notice. Gemini was seeking monetary damages and the delivery of AEMD shares. In February AEMD announced that they settled the lawsuit - which included documentation that AEMD had paid the promissory note in full - AEMD agreed to issue Gemini 7.5M common shares, 6.4M which the company had already reserved for issuance in anticipation of this settlement. We view this as a de-risking event as should provide additional confidence to existing and future investors and potentially prompt additional debt-to-equity conversions, thereby further cleaning up the balance sheet.

We also view, as we explain below, the IDE approval as major positive and while this does not necessarily get the company substantially closer to eventual U.S. commercialization, it removes the most near-term hurdle that AEMD had to clear for that to happen and one that had it not happened, in our opinion could have doomed the company.

For those reasons, we have been using a discounted cash flow model to value the company as we now feel the company's future is less uncertain (or near-term risks are at least meaningfully mitigated). We continue to expect somewhat insignificant revenue in the near-to-mid term, largely from the DARPA contract and the subcontract with Battelle. We also think there may be a small revenue contribution from compassionate use of Hemopurifier in India. AEMD also recently noted that they are now investigating Emergency Use Authorization for a bioterror application as well as Humanitarian Use Device for orphan indications - however, given the relatively early stage and uncertainties related to what we view as ancillary potential applications, we also do not figure these into our model.

Following the FDA green-lighting the human study, we built a 10-year DCF model through fiscal 2024. AEMD continues to make meaningful progress with de-risking including cleaning up the balance sheet, raising additional operating capital and diversifying revenue sources (the most recent of which could come from ESI), including the Battelle contract (which we view as positive from both a revenue standpoint and a vote of confidence in AEMD's technology). Ongoing progress with de-risking has prompted a reduction in our discount rate - initially at 15%, which we subsequently trimmed to 14% and which now we have at 10% - the most recent change which reflects the most recent balance sheet and lawsuit risk reduction events.

We note, however, that meaningful risk will likely remain for some time given the potentially lengthy runway until AEMD begins to generate meaningful commercial sales, which we still believe is contingent on launching Hemopurifier in the U.S. Based on our current DCF model AEMD is valued at about $0.25/share. The reduction in the discount rate was offset by a significant increase in the share count from debt-to-equity conversions, which resulted in no change to the price target.

We are maintaining our Neutral recommendation. We feel that continued progress in hitting operational and financial milestones would provide additional de-risking and potentially further upside to the value of the company.

Hemopurifier FDA Approved Human Study - *a refresher*

After a years-long quest, Aethlon Medical (AEMD) cleared what we view as a major milestone, announcing in late June that they received IDE approval to initiate a human feasibility study with Hemopurifier. Whether FDA would approve an IDE was an ongoing question in our mind and, given that such an approval would be required as a first step towards potential U.S. commercialization (where we believe the bulk of potential opportunity lies) of the device, was something that could have been highly detrimental to AEMD had FDA denied the IDE request.

As a reminder, in early January 2013 AEMD announced that they submitted an IDE to the FDA seeking approval to commence a 10-patient safety and effectiveness feasibility study of Hemopurifier. Included in the submission was

data from the recent and ongoing studies at hospitals in India as well as HCV capture data, the latter which that the FDA had requested at a pre-IDE meeting in 2011. Then in late-March, following response from FDA which included comments and study design considerations, AEMD resubmitted the IDE.

FDA subsequently communicated that they were withholding clearance of the IDE until AEMD addressed the agency's safety concern, namely that the company detail their training and monitoring procedures for heparinization - the anticoagulant used during dialysis and with the Hemopurifier. AEMD noted in early May that they were gathering the requested information and expected to have it submitted to FDA in the coming week (i.e. - by mid-May). Given this recent news of the approved IDE, FDA's safety concerns have clearly been satisfied.

The feasibility study will enroll 10 end stage renal disease patients infected with HCV to demonstrate safety of Hemopurifier therapy. The patients, which must not have received any HCV drug therapy for at least the preceding 30 days, will receive three treatments of standard dialysis in the first week (i.e. - control phase), followed by a total of six dialysis treatments using Hemopurifier over the next two weeks. The rate of adverse events during the control and Hemopurifier treatments will be compared. Viral load changes will also be measured in order to provide an indication of efficacy. AEMD also notes that they may also collect HCV capture data (another efficacy metric with positive results in trials in India and which FDA had previously indicated interest in).

AEMD had previously announced that the study was expected to be conducted by the Renal Research Institute, a partnership between Fresenius Medical Care (FMS) and Beth Israel Medical Center in NYC. However, then in late February 2014 the company announced that they have reached an agreement with DaVita Clinical Research (DCR), the CRO arm of dialysis services giant DaVita Healthcare, to provide clinical management services for the study. The agreement was finalized in May. The pivot towards DCR was driven by the potential to leverage DCR's dialysis-related clinical trial experience, their large clinical site network and the expertise of Dr. Stephen Fadem, who will be leading the study.

The feasibility safety study will be conducted at the DaVita MedCenter Dialysis clinic in Houston, TX - one of the largest dialysis centers in the U.S. - which could presumably support future, larger HCV studies as well. AEMD hopes to obtain IRB approval, have the Hemopurifiers manufactured for the study and commence enrollment by September of this year.

Assuming positive results, the expectation is this feasibility study will lead to larger U.S. studies to support an eventual FDA approval filing. And while we do not expect U.S. commercialization to be a near-term event, IDE approval to conduct human studies is a huge positive, meaningful hurdle that's now cleared and significantly increases the likelihood of initiation of larger studies to support an eventual FDA filing.

Battelle Subcontract - *a refresher*

In mid-April 2013 AEMD announced that they have been selected as a subcontractor by Battelle Memorial Institute under Battelle's $22.8 million systems integrator contract with DARPA related to the sepsis DLT program. The systems integrator is responsible for integrating the various component technologies developed under the DLT program by the various participating organizations, including AEMD. The contract could last as long as four years. Aethlon and NxStage are the two subcontractors which will work with Battelle to design, develop and test a mobile device to be used to treat sepsis in wounded warfighters. The device could potentially also be used with civilian patients. AEMD's focus under this contract is to develop and distribute the blood separation component technologies for the system. We view AEMD being chosen as one of the key subcontractors as a significant vote of confidence in their technology. The contract pays AEMD on a cost (time and materials) plus margin basis so the total that AEMD will eventually bill will not be known until their work is completed. AEMD began work on this subcontract in early April 2013 and through August 14 has booked a total of $231k in revenue related to Battelle.

AEMD's Bioterror Program Potentially Revitalized - *a refresher*

Another somewhat back-burner application for AEMD's technology has been bioterrorism. Earlier in vivo studies conducted by Aethlon and in conjunction with other organizations, including the Centers for Disease Control and Prevention (CDC), have shown the Hemopurifier was able to rapidly clear viral particles and remove glycoproteins in cell cultures fluids. Pre-clinical studies have shown success with the capture of several Category A (i.e. most serious) pathogens including the Ebola virus, Dengue virus, Lassa virus, West Nile virus, Monkeypox virus, H5N1 Avian flu virus and the H1N1 Swine flu virus.

Aethlon, in collaboration with the United States Army Medical Research Institute for Infectious Diseases (USAMRIID) and other organizations, have worked in the past to validate Hemopurifier for use against Category A threats. Studies have yet to move forward, however - possibly as enrolling for a trial with Ebola infected patients

would present serious challenges. As a result, Aethlon's bioterror program had been in somewhat of a holding pattern.

AEMD's bioterror program could potentially be revitalized, however, and sparked by renewed federal funding for bioterror countermeasures (including medical countermeasures) through the Pandemic and All-Hazards Preparedness Reauthorization Act (PAHPRA) of 2013. The CBO estimates that $11 billion will be spent on PAHPRA from 2014 to 2018. Included in the scope of the program is countermeasures against the new strains of bird flu. Given Hemopurifier's success in pre-clinical studies in capturing the H5N1 Avian flu virus and the H1N1 Swine flu virus, AEMD may be in a solid position to pursue any grant funding targeting the new strains of bird flu.

And with the Ebola outbreak in West Africa generating front-page news, this revives the notion that Hemopurifier may have utility in treating the deadly virus, for which there currently is no proven cure. While human studies have not been done, in vitro studies were done which indicated that Hemopurifier captured a significant amount of the Ebola virus in just one hour. AEMD recently noted that they have reached out to FDA to help determine if there may be an opportunity to consider use of Hemopurifier with patients infected with Ebola from the current outbreak.

APPENDIX

Milestones Related to DARPA Year-1 Contract

Milestone 2.2.1.1 – Write requirements definition for the extracorporeal blood purification system and acquire necessary equipment with a milestone payment of $358,284. Management considers this milestone to be substantive as it was not dependent on the passage of time nor was it based solely on another party's efforts. We worked on this concept for a number of months beginning with a presentation to DARPA in late 2010. We subsequently filed for IP protection on certain of the key concepts in March 2011 and our management visited selected potential vendors to work out many of the details in the summer of 2011 before we were awarded the contract on September 30, 2011. We ordered the breadboard device from one of our vendors before the milestone payment was made. We designed the breadboard prototype and then presented the design to DARPA in order to achieve the milestone.

Milestone 2.2.1.2 -- Fabricate breadboard prototypes for anticoagulation-free anti-sepsis extracorporeal system (ASEPSYS) device. Fabricate prototype blood tubing sets. Acquire anti-thrombogenic surface modified hollow fiber plasma separators with a milestone payment $183,367. Management considers this milestone to be substantive as it was not dependent on the passage of time nor was it based solely on another party's efforts. The consideration for this milestone covers the cost of having the breadboard prototype developed to our specifications, hiring an engineer to supervise the project, acquiring specially coated cartridges and associated overhead. The report was accepted by the contracting officer's representative and the invoice was submitted thereafter.

Milestone 2.2.2.1 – Begin to develop the ADAPT device to efficiently capture sepsis precursors and acquire important equipment and supplies with a milestone payment of $426,424. Management considers this milestone to be substantive as it was not dependent on the passage of time nor was it based solely on another party's efforts. It was critically important to obtain certain pieces of lab equipment as early as possible after winning the contract in order to measure the binding ability of sepsis precursors. We demonstrated that we were able to capture one of the identified possible sepsis precursors as part of our submission for approval. The consideration was also designed to cover the salaries of new and existing scientists, lab space, materials as well as fringe and corporate overhead.

Milestone 2.2.2.2 - Perform initial screening of the different proposed capture agents by measuring binding affinity and kinetics using surface plasmon resonance (SPR) or biolayer surface interferometry (BLI) with a milestone payment amount of $216,747. Management considers this milestone to be substantive as it was not dependent on the passage of time nor was it based solely on another party's efforts. We demonstrated that we were able to capture several of the identified possible sepsis precursors as part of our submission for approval. The consideration was also designed to cover the salaries of new and existing scientists, lab space, materials as well as fringe and corporate overhead. The report was accepted by the contracting officer's representative and the invoice was submitted thereafter. DARPA made the milestone payment in full.

Milestone 2.2.1.3 - Assemble and test breadboard ASEPSYS devices. Evaluate the use of different techniques and approaches to eliminating anticoagulants. The milestone payment amount was $183,367. Management considers this milestone to be substantive as it was not dependent on the passage of time nor was it based solely on another party's efforts. The consideration for this milestone covers the cost of assembling and testing the breadboard prototype that we had developed to our specifications, hiring an engineer to supervise the project, testing specially coated cartridges and associated overhead. The report was accepted by the contracting officer's representative and the invoice was submitted thereafter. The report was accepted by the contracting officer's representative and the invoice was submitted thereafter. DARPA made the milestone payment in full.

Milestone 2.2.2.3 - Perform preliminary quantitative real time PCR to measure viral load, and specific DNA or RNA targets. The milestone payment was $216,747. Management considers this milestone to be substantive as it was not dependent on the passage of time nor was it based solely on another party's efforts. We demonstrated that we were able to measure viral load of one or more targets as part of our submission for approval. The report was accepted by the contracting officer's representative and the invoice was submitted thereafter.

Milestone 2.2.1.4 - Obtain all necessary IRB documentation and obtain both institutional and Government approval in accordance with IRB documentation submission guidance prior to conducting human or animal testing. The milestone payment was $183,367. Management considers this milestone to be substantive as it was not dependent on the passage of time nor was it based solely on another party's efforts. We obtained all of the required documentation from both institutional and Government authorities. The report was accepted by the contracting officer's representative and the invoice was submitted thereafter.

Milestone M2 – Target capture > 50% in 24 hours for at least one target in blood or blood components. The milestone payment was $216,747. Management considers this milestone to be substantive as it was not dependent on the passage of time nor was it based solely on another party's efforts. We demonstrated that we were able to capture > 50% in 24 hours of one of the agreed targets in blood or blood components. The report was accepted by the contracting officer's representative and the invoice was submitted thereafter.

Milestones Related to DARPA Year-2 Contract

Milestone 2.3.3.1 – Build the ADAPT capture cartridges with the identified affinity agents. Measure the rate of capture of the specific targets from in ex vivo recirculation experiments from cell culture and blood. The milestone payment was $208,781. Management considers this milestone to be substantive as it was not dependent on the passage of time nor was it based solely on another party's efforts. We demonstrated that we were able build the ADAPT capture cartridges with the identified affinity agents and to measure the rate of capture of the specific targets from in ex vivo recirculation experiments from cell culture and blood. The report was accepted by the contracting officer's representative and the invoice was submitted thereafter.

Milestone 2.3.2.1 – Demonstrate the effectiveness of the prototype device in vivo in animals preventing platelet activation or clotting in at least a 2 hour blood pumping experiment at 75 mL/min blood flow. The milestone payment amount was $195,581. Management considers this milestone to be substantive as it was not dependent on the passage of time nor was it based solely on another party's efforts. The prototype device was successfully used in vivo in animals preventing platelet activation or clotting in at least a 2 hour blood pumping experiment at 75 mL/min blood flow. The report was accepted by the contracting officer's representative and the invoice was submitted thereafter.

Milestone M4 – Target capture > 50% in 24 hours for at least 5 targets in blood or blood components. The milestone payment was $208,781. Management considers this milestone to be substantive as it was not dependent on the passage of time nor was it based solely on another party's efforts. We demonstrated that we were able to capture > 50% in 24 hours for at least 5 of the agreed targets in blood or blood components. The report was accepted by the contracting officer's representative and the invoice was submitted thereafter.

Milestone 2.3.2.2 – Formulate initial design based on work from previous phase. Begin to build and test selected instrument design and tubing sets. The milestone payment amount was $195,581. Management considers this milestone to be substantive as it was not dependent on the passage of time nor was it based solely on another party's efforts. We demonstrated that we had begun to build and test selected instrument design and tubing sets. The report was accepted by the contracting officer's representative and the invoice was submitted thereafter.

Milestone 2.3.2.2 – Write and test software and conduct ergonomic research. Begin discussions with the systems integrator. The milestone payment was $195,581. Management considers this milestone to be substantive as it was not dependent on the passage of time nor was it based solely on another party's efforts. We obtained wrote and tested software and conducted ergonomic research and began discussions with the systems integrator. The report was accepted by the contracting officer's representative and the invoice was submitted thereafter.

Milestone 2.3.3.2 – Cartridge construction with optimized affinity matrix design for each potential target. Complete the capture agent screening. The milestone payment was $208,781. Management considers this milestone to be substantive as it was not dependent on the passage of time nor was it based solely on another party's efforts. We completed the cartridge construction with optimized affinity matrix design for each potential target and completed the capture agent screening. The report was accepted by the contracting officer's representative and the invoice was submitted thereafter.

Milestone M5 – Target capture > 90% in 24 hours for at least three targets in blood or blood components. The milestone payment was $208,781. Management considers this milestone to be substantive as it was not dependent on the passage of time nor was it based solely on another party's efforts. We demonstrated that we were able to capture > 90% in 24 hours for at least three of the agreed targets in blood or blood components. The report was accepted by the contracting officer's representative and the invoice was submitted thereafter.

Milestone M3 – Conduct a series of experiments aimed at characterizing the contribution of several alternate fluidic designs and methods of perfusing plasma filters and affinity columns in the performance of affinity plasmapheresis. The milestone payment was $195,576. Management considers this milestone to be substantive as it was not dependent on the passage of time nor was it based solely on another party's efforts. We demonstrated that we had conducted the relevant series of experiments. The report was accepted by the contracting officer's representative and the invoice was submitted thereafter.

Milestones Related to DARPA Year-3 Contract

Milestone 2.4.2.1 – Evaluate contribution of manufacturing process variables to binding capacity of affinity resin. The milestone payment was $197,362. Management considers this milestone to be substantive as it was not dependent on the passage of time nor was it based solely on another party's efforts. We demonstrated that we had evaluated the contribution of manufacturing process variables to binding capacity of affinity resin. The report was accepted by the contracting officer's representative and the invoice was submitted thereafter.

Milestone 2.4.1.1 – Design and fabricate optimized configuration(s) of hemopurification device(s) that contain(s) a combination of hemofilters, plasma filters and affinity columns. The milestone payment was $186,164. Management considers this milestone to be substantive as it was not dependent on the passage of time nor was it based solely on another party's efforts. We demonstrated that we had designed and fabricated optimized configuration of hemopurification devices. The report was accepted by the contracting officer's representative and the invoice was submitted thereafter.

Milestone 2.4.2.3 – Perform biocompatibility tests for the combination ADAPT device to confirm the combination cartridge does not present additional risk. The milestone payment was $78,641. Management considers this milestone to be substantive as it was not dependent on the passage of time nor was it based solely on another party's efforts. We demonstrated that we had performed biocompatibility tests for the combination ADAPT device to confirm the combination cartridge does not present additional risk. The report was accepted by the contracting officer's representative and the invoice was submitted thereafter.

PROJECTED INCOME STATMENT

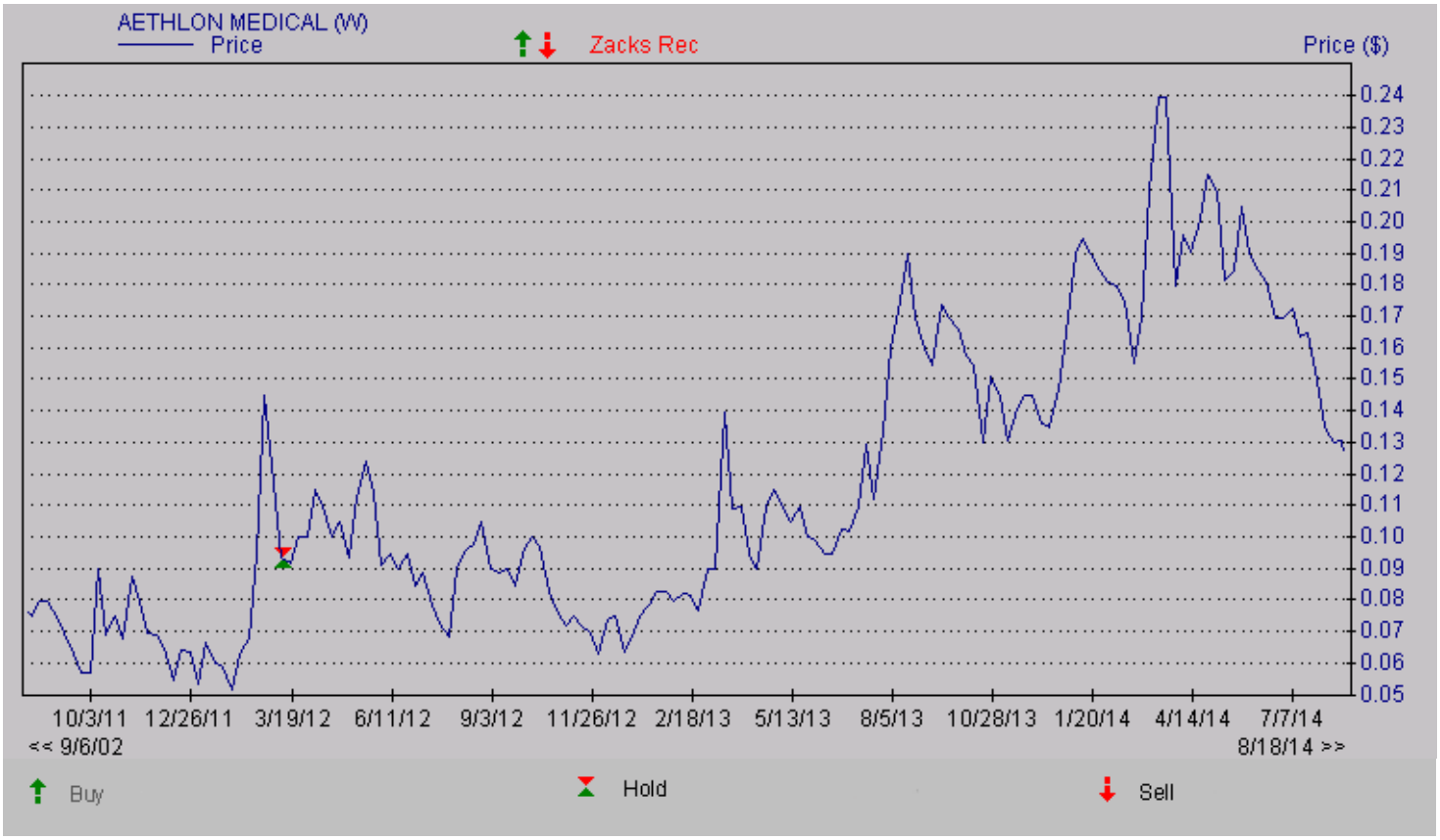
Aethlon Medical, Inc.

	2012 A	2013 A	Q1 A	Q2 A	Q3 A	Q4 A	2014 A	Q1 A	Q2 E	Q3 E	Q4 E	2015 E	2016 E
Revenue	$1,359.6	$1,230.0	$195.6	$644.9	$76.3	$707.0	$1,623.8	$51.3	$254.4	$226.0	$419.0	$950.7	$1,304.0
YOY Growth	-	*-9.5%*	*-9.8%*	*61.2%*	*-63.4%*	*74.8%*	*32.0%*	*-73.8%*	*-60.6%*	*196.1%*	*-40.7%*	*-41.5%*	*37.2%*
Cost of Goods Sold	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0					$0.0	$0.0
Gross Income	$1,359.6	$1,230.0	$195.6	$644.9	$76.3	$707.0	$1,623.8	$51.3	$254.4	$226.0	$419.0	$950.7	$1,304.0
Gross Margin	*100.0%*	*100.0%*	*100.0%*	*100.0%*	*100.0%*	*100.0%*	*100.0%*	*100.0%*	*100.0%*	*100.0%*	*100.0%*	*100.0%*	*100.0%*
SG&A	$3,385.0	$3,365.4	$641.5	$581.1	$766.3	$1,181.6	$3,170.4	$876.3	$808.0	$806.0	$709.0	$3,199.3	$3,600.0
% SG&A	*249.0%*	*273.6%*	*328.0%*	*90.1%*	*1004.1%*	*167.1%*	*195.2%*	*1708.3%*	*317.6%*	*356.6%*	*169.2%*	*336.5%*	*276.1%*
R&D	$1,089.0	$1,440.0	$337.9	$293.6	$542.4	$335.1	$1,509.0	$347.0	$388.0	$547.0	$524.0	$1,806.0	$2,500.0
% R&D	*80.1%*	*117.1%*	*172.8%*	*45.5%*	*710.7%*	*47.4%*	*92.9%*	*676.5%*	*152.5%*	*242.0%*	*125.1%*	*190.0%*	*191.7%*
Impairment	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Operating Income	($3,114.3)	($3,575.4)	($783.8)	($229.8)	($1,232.3)	($809.7)	($3,055.6)	($1,172.0)	($941.6)	($1,127.0)	($814.0)	($4,054.6)	($4,796.0)
Operating Margin	-	-	-	-	-	-	-	-	-	-	-	-	*-367.8%*
Loss on extinguishment of debt	$77.3	$139.8	$22.8	$17.5	$0.0	$0.0	$40.3	$2,453.6	$0.0	$0.0	$0.0	$2,453.6	$0.0
(Gain)/ loss on derivative liability	$766.9	$44.7	($609.1)	$2,992.0	($78.2)	$6,242.3	$8,547.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Interest (income), net	$3,792.7	$1,107.1	$106.0	$110.4	$113.4	$957.3	$1,287.2	$78.7	$90.0	$88.0	$85.0	$341.7	$255.0
Other expense	$360.2	$25.0	$0.0	$0.0	$1,000.0	($491.4)	$508.6	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Pre-Tax Income	($8,111.4)	($4,892.0)	($303.5)	($3,349.7)	($2,267.6)	($7,517.9)	($13,438.6)	($3,704.3)	($1,031.6)	($1,215.0)	($899.0)	($6,849.9)	($5,051.0)
Taxes (benefit)	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Tax Rate	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*
Net Income	($8,111.4)	($4,892.0)	($303.5)	($3,349.7)	($2,230.6)	($7,473.2)	($13,356.9)	($3,655.9)	($1,031.6)	($1,215.0)	($899.0)	($6,801.5)	($5,051.0)
Net Margin	-	-	-	-	-	-	-	-	-	-	-	*-715.4%*	*-387.3%*
EPS	($0.08)	($0.03)	($0.00)	($0.02)	($0.01)	($0.03)	($0.07)	($0.02)	($0.00)	($0.00)	($0.00)	($0.03)	($0.02)
YOY Growth	-	*-58.9%*	*-78.6%*	*81.7%*	*-669.2%*	*110.6%*	*110.0%*	*834.7%*	*-77.9%*	*-61.3%*	*-91.0%*	*-62.5%*	*-35.3%*
Diluted Shares O/ S	101,766	149,224	176,222	187,644	198,153	214,217	194,059	227,113	262,000	279,000	285,000	263,278	302,000

Brian Marckx, CFA

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