Zacks Small-Cap Research

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Aethlon Medical (AEMD-NASDAQ)

AEMD: Feasibility Study Nearing Completion, Pivotal U.S. Study Could Be Next

AEMD continues to make substantive positive progress on several fronts. Using sum-of-the-parts valuation and based on current development progress in each respective category we place value of $90M for Hemopurifier in virus, pathogen, bioterror and cancer applications and combined value of ESI and ELLSA technology of $30M. Total company value equates to ~$120M or $15/share

Current Price (11/18/16)	$4.66
Valuation	**$15.00**

OUTLOOK

AEMD's novel blood filtration device could have utility in the treatment of Hepatitis-C, HIV, sepsis, cancer, pandemic diseases and bioterror applications.
AEMD recently got FDA and IRB approvals to run a human study in viral pathogens which is a major milestone. Enrollment is now ~80% complete and expected to complete later in 2016.
DARPA contract now completed but AEMD has submitted for other gov't contracts. Emergency / Humanitarian Use could offer other near-term revenue opportunities.
Mgmt has been very resilient and successful in pursuing high potential opportunities in areas such as Ebola, cancer, Alzheimer's and CTE. Pandemic viruses such as Zika, Dengue and Chikungunya could offer attractive commercializable opportunities for Hemopurifier. AEMD making more dedicated effort towards virus and Category A threat applications.
Following results of feasibility study, AEMD expects to pursue chronic viral pathogen-related clinical study. Cancer study is also a possibility.

SUMMARY DATA

52-Week High	**$9.09**
52-Week Low	**$4.02**
One-Year Return (%)	**-37.71**
Beta	**2.83**
Average Daily Volume (sh)	**10,732**
Shares Outstanding (mil)	**8**
Market Capitalization ($mil)	**$36**
Short Interest Ratio (days)	**N/A**
Institutional Ownership (%)	**22**
Insider Ownership (%)	**10**
Annual Cash Dividend	**$0.00**
Dividend Yield (%)	**0.00**
5-Yr. Historical Growth Rates	
Sales (%)	**-17.6**
Earnings Per Share (%)	**N/A**
Dividend (%)	**N/A**
P/E using TTM EPS	**N/A**
P/E using 2017 Estimate	**N/A**
P/E using 2018 Estimate	**N/A**
Zacks Rank	**N/A**

Risk Level	**Above Avg.,**
Type of Stock	**Small-Growth**
Industry	**Med-Hmo**

ZACKS ESTIMATES

Revenue
(in '000 of $)

	Q1 (Jun)	Q2 (Sep)	Q3 (Dec)	Q4 (Mar)	Year (Mar)
2015	0.1 A	0.5 A	0.0 A	0.2 A	0.8 A
2016	0.2 A	0.2 A	0.3 A	0.2 A	0.9 A
2017	0.0 A	0.4 A	0.0 E	0.0 E	0.4 E
2018					0.0 E

Earnings per Share

	Q1 (Jun)	Q2 (Sep)	Q3 (Dec)	Q4 (Mar)	Year (Mar)
2015	-$0.80 A	-$0.16 A	-$0.26 A	-$0.13 A	-$1.22 A
2016	-$0.18 A	-$0.16 A	-$0.16 A	-$0.16 A	-$0.66 A
2017	-$0.28 A	-$0.29 A	-$0.16 E	-$0.17 E	-$0.90 E
2018					-$0.81 E

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

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Fiscal Q2 2017 Financials, Operational Update: *Feasibility Study Nearing Completion, Pivotal U.S. Study Could Be Next. Meantime, Will Seek Emergency, Humanitarian Use …*

Aethlon reported financial results for their second quarter 2017 (ending September 30) and provided an operational update. There were no major surprises in the financial results relative to our expectations although AEMD did recognize the final DARPA milestone one quarter ahead of what we modeled. And while OpEx was higher than our estimate – all of the difference relates to non-cash stock compensation. Importantly, the company remains diligent on expenses and is efficiently allocating cash towards growth opportunities including their R&D pipeline. This includes the U.S. feasibility study which management noted is nearing completion with only the final two patients left enroll.

Q2 revenue was $387k, representing the final two DARPA milestones (see milestones 2.6.1.3 and 2.6.1.4 in Appendix) and roughly twice what we had modeled as we anticipated the final milestone would be recognized in Q3. As a reminder, one of these final milestones was to "quantify the degree to which the Middle East Respiratory Syndrome Coronavirus (MERS) can be extracted from circulation in vitro using miniature Hemopurifiers". MERS recently evolved as another target for a potential commercial application of Hemopurifier.

Q2 OpEx was $2.6M, while significantly higher than the $1.1M in Q1 as well as our $1.3M estimate, all (and more) of the difference relates to non-cash stock compensation, which totaled $1.5M in Q2 and just $51k in Q1.

Pro forma for the collection of a $194k milestone payment and $61k in net proceeds from additional stock sales via the HC Wainwright ATM program, cash balance at quarter end was approximately $811k. Cash used in operating activities was $936k ($711k ex-changes in working capital) and $1.8M ($1.8M ex-changes in working capital) in the three and six months ending September 30. AEMD expects to continue to opportunistically tap the ATM program to help fund operations. They raised ~$328k through this since the beginning of Q2 and there remains over $12M still available.

On the operational front…
…AEMD continues to make progress with the U.S. feasibility study. While this has dragged out longer than initially anticipated, management noted on the Q2 call (that we missed due to a time conflict) that they are down to identifying the final two (of a total of 10) subjects to enroll in the study. If all goes well, it could finish by current year-end. This study, assuming positive, is expected to set the stage for an FDA IDE submission seeking approval to conduct a larger, controlled clinical study with individuals infected with a chronic viral pathogen - as well as potentially open up initial use (potentially via Humanitarian Use Device) for latent pathogens and pandemic threats such as Zika, Ebola, MERS and others. AEMD may also then seek approval to initiate a cancer study. As such, results of this study will be an important pathway towards further development and validation of Hemopurifier.

And while the DARPA grant is now completed, AEMD is looking to pick up additional government-related contracts and recently submitted for two new U.S. Department of Infectious Disease contracts as well as a National Cancer Institute program related to tumor-derived exosomes.

Management mentioned on the call their primary focus is to be able to fulfill the Public Health Emergency Medical Countermeasures Enterprise (PHEMCE) goal of developing broad-spectrum medical countermeasures (MCM). PHEMCE is an interagency governmental organization comprised of HHS, CDC, NIH, FDA, VA, DoD, DHS and USDA with a goal of "coordinat(ing) the development, acquisition, stockpiling, and use of medical products that are needed to effectively respond to a variety of high-consequence public health emergencies, whether naturally occurring or intentional."

AEMD laid out several milestones as they enter 2017…

- **IDE for Viral Indication**: assuming successful results from the U.S. feasibility study, they will submit an IDE to FDA requesting approval to commence a pivotal, controlled study for a "feasible" viral indication. "Feasible" which we think indicates that it will be a viral indication which affords enrollment of a sufficient number of subjects without undue difficulty. We think possibilities could be HCV or HIV (but perhaps not Zika, Ebola or others where enrollment could be very challenging). Management noted that the specific indication that they will seek will be determined though interaction with FDA and infectious disease experts.
- **Emergency Use Authorization**: AEMD will submit for EUA for emerging pandemic threats. Hemopurifier already has EUA in the U.S. and Canada for Ebola. As a reminder Hemopurifier was successfully used on an

Ebola patient during the outbreak in 2014 and in early 2015 FDA approved a clinical trial protocol for the treatment of Ebola using the device.

- **Humanitarian Use Device**: will submit for one or more HUD exemption applications for which Hemopurifier has already been validated through in vitro studies. As a reminder Hemopurifier has already shown utility in capturing a variety of viruses and pathogens including Ebola, Zika, Chikungunya, Dengue virus, H1N1 swine flu, H5N1 bird flu virus, the reconstructed Spanish flu of 1918 virus, West Nile virus and MERS. AEMD expects additional data in Zika as well.
- **Cancer Study?** Depending on the results of the feasibility study as well as just general feasibility of pursuing a potential cancer indication, AEMD may approach FDA regarding the possibility of a specific cancer-related development program focused on capture of tumor-derived exosomes. Hemopurifier has already shown some promise in this area and, potentially, if AEMD scores a grant related to this, it could provide some more insight into the possibilities of a cancer program. We continue to view cancer as more of a back-burner application and expect resources will be mostly focused on the viral and infectious disease areas, at least over the near term.

REFRESHER OF ONGOING PROGRAMS and RECENT EVENTS

Refresher on other recent operational milestones…
Successes on the operational front over the recent past have included publishing of the of the manuscript of the DETECT (Diagnosing and Evaluating Traumatic Encephalopathy Using Clinical Tests) study, enrollment progress of the U.S. feasibility study, additional clinical experience with the TauSome CTE assay including use in a new NIH-funded study and validation of Hemopurifier in the in vitro capture of Chikungunya virus.

U.S. Feasibility Study Progressing
In 2015 Dr. Ronal Ralph was brought on as the new principal investigator. AEMD since brought on two sub-principal investigators. The first patient completed a six-treatment protocol of Hemopurifier therapy in March. While progression of the study has been drawn out longer than initially anticipated, management noted on the Q2 call that they are down to identifying the final two (of a total of 10) subjects to enroll in the study. Management continues to guide for completion of the study by current year-end. AEMD also recently noted that they have a cGMP manufacturing system operational which is manufacturing Hemopurifier devices for this study.

As a reminder, this is a safety study being conducted at DaVita Medical Center Dialysis in Houston with target enrollment of 10 dialysis patients infected with a viral pathogen (such as HCV). Patients receive Hemopurifier treatment three times per week for two weeks. This is primarily a safety study but secondary outcomes including quantity of captured viral copies and change in viral load will also be measured. Results are expected to set the stage for an FDA IDE submission seeking approval to conduct a larger, controlled clinical study with individuals infected with a chronic viral pathogen. We think possibilities could be HCV or HIV (but perhaps not Zika, Ebola or others where enrollment could be very challenging). Management noted that the specific indication that they will seek will be determined though interaction with FDA and infectious disease experts.

Cancer Study? Depending on the results of the feasibility study as well as just general feasibility of pursuing a potential cancer indication, AEMD may approach FDA regarding the possibility of a specific cancer-related development program focused on capture of tumor-derived exosomes. Hemopurifier has already shown some promise in this area and, potentially, if AEMD scores a grant related to this, it could provide some more insight into the possibilities of a cancer program. We continue to view cancer as more of a back-burner application and expect resources will be mostly focused on the viral and infectious disease areas, at least over the near term.

Emergency Use and Humanitarian Use Device Exemption
AEMD also expects to seek EUA for emerging pandemic threats. Hemopurifier already has EUA in the U.S. and Canada for Ebola. As a reminder Hemopurifier was successfully used on an Ebola patient during the outbreak in 2014 and in early 2015 FDA approved a clinical trial protocol for the treatment of Ebola using the device. In addition they expect to submit for one or more HUD exemption applications for which Hemopurifier has already been validated through in vitro studies. As a reminder Hemopurifier has already shown utility in capturing a variety of viruses and pathogens including Ebola, Zika, Chikungunya, Dengue virus, H1N1 swine flu, H5N1 bird flu virus, the reconstructed Spanish flu of 1918 virus, West Nile virus and MERS. AEMD expects additional data in Zika as well.

Physician With Hemopurifier Following Human Ebola Treatment



SOURCE: Aethlon Medical

ESI Broadens Access to ELLSA Platform
Following compelling initial results of the CTE study (detailed below) as well as in identifying HIV via isolation of urinary exosomes and subsequent analysis, AEMD announced that they will begin production of their ELLSA diagnostic platform and look to collaborate with other institutions interested in pursuing diagnostics related to disease-specific exosomes.

ELLSA Used To Detect HIV
In May AEMD announced that researchers at the Morehouse School of Medicine used the ELLSA technology to isolate urinary exosomes from HIV infected individuals. Antibody diagnostics were then used to detect the presence of HIV infection. While specifics (i.e. specificity/sensitivity of the data set) of the data were not publicly released, AEMD did note that ELLSA was able to identify HIV-specific exosomes in 111 HIV-infected individuals but did not do so in 35 HIV-negative control individuals. This may provide additional credence to ELLSA's ability to identify other disease conditions and viral pathogens.

Shortly following announcement of these results, AEMD announced that the **USPTO granted them a patent related to methods for capturing an exosome from a patient.**

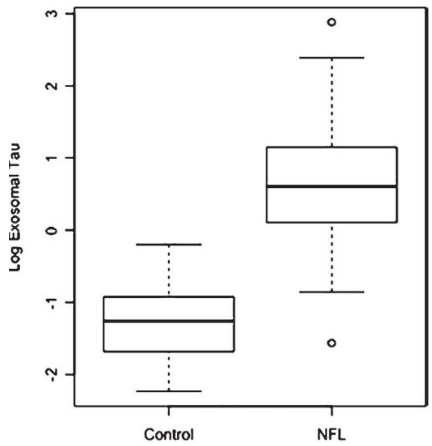
CTE Study Published Online in Journal of Alzheimer's Disease
As a reminder, Aethlon's majority-owned subsidiary Exosome Sciences (ESI) has collaborated with Boston University's CTE Center for the development of a blood-based diagnostic that would be able to identify CTE in living individuals. ESI has used what they learned in how to isolate certain brain-specific biomarkers to evaluate blood/plasma samples collected by participants (former NFL players and a control group) enrolled in BU's DETECT study. The study is the first on CTE funded by the NIH.

In April 2015 investigators presented initial findings of DETECT at the annual Traumatic Brain Injury Conference held in Washington, DC. Results were from 78 former NFL players and 16 controls and showed that the NFL players had significantly higher levels of tausome (tau) in their blood/plasma than those of the controls. Tau levels were also correlated to performance on cognition tests, with higher tau levels corresponding to poorer test performance.

Aethlon submitted a manuscript of the study in 2015, which was published in the online version of the Journal of Alzheimer's Disease in May. Inclusion criteria for the NFL group included age 40-69, a minimum of 12 years of tackle football including a minimum of 2 years in NFL at position associated with extensive head impacts and a self-report of having symptoms associated with CTE including changes in cognition, behavior and mood. Inclusion criteria for control included male age 40-69, minimum of 4 years in non-contact sports including 2 at college level or higher.

The publication provided additional details of the results which included (all charts and graphics[1]);

- Total plasma exosomes did not differ between the NFL and control groups and NFL did have significantly higher (p<0.0001) plasma exosomal tau (results in figure below are unadjusted for age)



- Plasma exosome levels were still statistically significantly higher (p<0.0001) in the NFL group than in control after adjusting for age and body mass (BMI)

Parameter estimates of ANCOVA for exosomal tau

Predictor	Estimate	Standard Error	*t*-test	*p*-value
Difference of control minus NFL exosomal tau levels	–1.93	0.24	–8.05	<0.0001
Age	0.01	0.01	1.20	0.2351
Body Mass Index	0.01	0.02	0.34	0.7319

- The diagnostic demonstrated 82% sensitivity with 100% specificity, 100% positive predictive value and 53% negative predictive value. In other words, all of the elevated tau results came from NFL players, although not all NFL players showed elevated tau levels

- In the NFL cohort, tau levels were statistically significantly inversely correlated to performance on cognition tests (Wechsler Adult Intelligence Scale Digital Symbol and Neuropsychological Assessment Battery List Learning)

- While exosomal tau was statistically correlated to cognition, it was not correlated to any of the mood or behavioral measures

[1] Preliminary Study of Plasma Exosomal Tau as a Potential Biomarker for Chronic Traumatic Encephalopathy. Stern, Robert A. et al. Journal of Alzheimer's Disease, vol. Preprint, no. Preprint, pp. 1-11, 2016

Relationship between log exosomal tau and measures of cognition, mood, and behavior from mixed effects regression analysis adjusted for age and education as well as for associations of multiple tests per subject and correlations of tests within the same domain for the NFL group only

Domain and Measure	Partial Correlation	Beta Estimate	Standard Error	t-test	p-value
Psychomotor Speed					
Wechsler Adult Intelligence Scale-Revised [78] Digit Symbol Test, Raw Score	–0.33	–3.01	1.16	–2.60	0.0093
Trail Making Test [79] Part A, T-Score	–0.18	–2.03	1.52	–1.33	0.1826
Executive Functioning					
Trail Making Test [79] Part B, T-Score	–0.03	–0.11	2.15	–0.05	0.9589
Wisconsin Card Sorting Test [80] Percent Errors, T-score	–0.09	–0.74	1.28	–0.58	0.5605
Rey-Osterreith Complex Figure –Boston Qualitative Scoring System (BQSS) [81] Organization Score, T-score	0.09	1.69	2.06	0.82	0.4117
Behavior Rating Inventory of Executive Function–Adult Version (BRIEF-A) [82] Metacognition Index, T-score	0.01	0.34	1.75	0.20	0.8434
Learning and Memory					
BQSS [81] Immediate Presence & Accuracy, T-score	–0.14	–1.14	1.32	–0.86	0.3879
BQSS [81] Delayed Presence & Accuracy, T-score	–0.19	–1.74	1.44	–1.21	0.2258
Neuropsychological Assessment Battery (NAB) [83] List Learning Test List A Immediate Recall, T-score	–0.31	–2.84	1.14	–2.50	0.0126
NAB [83] List Learning Test List A Short Delay Recall, T-score	–0.29	–3.41	1.63	–2.09	0.0365
NAB [83] List Learning Test List A Long Delay Recall, T-score	–0.30	–4.35	1.78	–2.44	0.0147
Visuospatial Skills					
NAB [83] Map Reading Test, T-score	0.11	1.38	1.25	1.10	0.2709
Language					
NAB [83] Naming Test, T-Score	–0.12	–1.41	1.46	–0.97	0.3336
Mood					

Key Takeaways:

- ESI's CTE diagnostic demonstrated
    - exosome tau was significantly higher in NFL players than in control
    - exosome tau was significantly correlated to performance on cognition tests. Higher levels of tau correlated to poorer test performance on memory and psychomotor speed tests

- Exosome tau was not correlated to mood or behavior measures
- Highest levels of tau were found only in NFL players although not all NFL players had high levels of tau
- Confirmation that the diagnostic can accurately identify individuals with CTE would require neuropathological examination of the brain

Relative to the lack of association between tau levels and mood/behavior test results, the investigators noted that there is evidence suggesting tau is a better indicator of cognitive function than it is of mood/behavior and that CTE-related cognitive functionality impairments have been reported to be more prevalent in later stage of the disease as compared to mood/behavior changes. In addition, they note "It is possible that the mood and behavioral features may have multiple potential etiologies, in addition to CTE-associated tau degeneration, whereas the cognitive changes are more consistently due to the tau degeneration."

Relative to the fact that not all NFL players had high levels of tau – the investigators indicated that this was not a surprise as it should be expected that not all NFL players, even those in the study (i.e. – which have at least some symptoms), would have CTE.

While the investigators concluded that these findings suggest exosomal tau in plasma may be an accurate biomarker for CTE, additional research needs to be done. They note some limitations of the study including that;

- confirmation of association between exosome tau and CTE would require a neuropathological exam
- the study did not include markers for where the tau originated so there was not complete confidence that these were all brain-derived exosomes (tau is also present in other areas of the body besides the brain)
- and if these were brain-derived exosomes, the study was also not powered to differentiate between where in the brain they came from (i.e. – neuronal vs, non-neuronal, which may have implications)
- small sample size of the study (particularly control)
- lack of an additional biomarker for CTE

Additional research is moving forward which includes a new $16M NIH funded study focused on detecting and diagnosing CTE in living individuals which ESI and their CTE diagnostic is part of. This and other studies should provide additional data points and provide more insight into the potential future utility of the diagnostic for CTE – and potentially other conditions such as Alzheimer's disease.

Outlook

The company continues to make substantive positive progress on several fronts including strengthening the balance sheet and ongoing ability to raise capital, diligence on cash burn and operating expenses, enrollment of the U.S. feasibility study and broadening into what we believe are more commercializable and attractive markets for Hemopurifier. Emergency Use Authorization, Humanitarian Use Device status as well as scoring additional government contracts (such as those recently submitted for to U.S. Department of Infectious Disease and National Cancer Institute) could provide for some near-term revenue. While we have yet to incorporate any potential contribution from these or any other sources, our model will be updated if and when we have reasonable confidence in fruition of new revenue sources.

The ESI division and ELLSA platform have also rapidly progressed in areas such as exosome capture (viruses and cancer) and CTE diagnosis - while still in somewhat of a proof-of-concept phase, several near-term milestones in these areas could offer further validation.

Using sum-of-the-parts valuation and based on current development progress in each respective category we place value of $90M for Hemopurifier in virus, pathogen, bioterror and cancer applications and combined value of ESI and ELLSA technology of $30M. As such, we value AEMD at approximately $120M or ~$15/share. We will revisit our valuation upon further development progress.

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.

Milestone 2.4.2.2 – Determine capacity requirements of affinity resin to multiple simultaneous targets. 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 were able to determine the capacity requirements of affinity resin to multiple simultaneous targets. The report was accepted by the contracting officer's representative and the invoice was submitted thereafter.

Milestone 2.4.2.4 – Finish construction and delivery of 25 experimental cartridges for testing by the system integrator. The milestone payment was $50,000. 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 delivered the 25 cartridges to the systems integrator as part of our submission for approval. The report was accepted by the contracting officer's representative and the invoice was submitted thereafter.

Milestone M9 – Target capture > 90% in 24 hours for at least 3 targets ex vivo in blood or blood components using the optimized cartridge. The milestone payment was $197,361. 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 approximately 90% in 24 hours for at least 3f targets ex vivo in blood or blood components using the optimized cartridge. The report was accepted by the contracting officer's representative and the invoice was submitted thereafter.

Milestones Related to DARPA Year-4 Contract

Milestone M11 - Develop a strategic plan for developing an alternate method of producing galanthus nivalis agglutinin by cloning the gene into an alternate vector and identify potential partners for such production. 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 developed a strategic plan for developing an alternate method of producing GNA by cloning the gene into an alternate vector and identified potential partners for such production. The report was accepted by the contracting officer's representative and the invoice was submitted thereafter.

Milestone M6 – Define Aethlon’s GMP manufacturing process and revise and upgrade Aethlon’s quality procedures and policies to the current state of the art. 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 defined our GMP manufacturing process and that we revised and upgraded our quality procedures and policies to the current state of the art for a company of our size. The report was accepted by the contracting officer's representative and the invoice was submitted thereafter.

Milestone 2.5.1.1 - Complete Aethlon’s GMP procedure and establish and maintain all GMP documentation for the company. 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 completed our GMP procedures and established and maintained all GMP documentation for the company. The report was accepted by the contracting officer's representative and the invoice was submitted thereafter.

Milestone 2.5.2.2 – Finish construction and begin delivery of 50 prototype cartridges for testing by the systems integrator. The milestone payment was $296,964. 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 completed the construction of 50 prototype cartridges and were prepared to deliver the cartridges to the systems integrator. The report was accepted by the contracting officer's representative and the invoice was submitted thereafter.

Milestone 2.6.1.1 – System integrator acceptance of the hemofilter device. The milestone payment was $193,719. 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 completed this milestone by confirmation by the systems integrator that it was accepting the hemofilter device as part of their overall system.

Milestone 2.6.1.3 - Quantify the degree to which the MERS virus can be extracted from circulation in vitro using miniature Hemopurifiers. The milestone payment was $193,719. 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 quantified the degree to which the MERS virus can be extracted from circulation in vitro using miniature Hemopurifiers. The report was accepted by the contracting officer's representative and the invoice was submitted thereafter.

Milestone 2.6.1.4 – Prepare and present Final Report for DARPA. The milestone payment was $193,719. 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 prepared and presented the Final Report for DARPA. The report was accepted by the contracting officer's representative and the invoice was submitted thereafter.

PROJECTED INCOME STATMENT

Aethlon Medical, Inc.

	2014 A	2015 A	Q1 A	Q2 A	Q3 A	Q4 A	2016 A	Q1 A	Q2 A	Q3 E	Q4 E	2017 E
Revenue	$1,623.8	$762.4	$192.5	$188.4	$301.0	$204.6	$886.6	$4.6	$387.4	$8.0	$8.0	$408.1
YOY Growth	*32.0%*	*-53.0%*	*275.3%*	*-60.7%*	*800.4%*	*3.0%*	*16.3%*	*-97.6%*	*105.7%*	*-97.3%*	*-96.1%*	*-54.0%*
Cost of Goods Sold	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Gross Income	$1,623.8	$762.4	$192.5	$188.4	$301.0	$204.6	$886.6	$4.6	$387.4	$8.0	$8.0	$408.1
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%*
SG&A	$3,170.4	$3,727.7	$1,100.5	$1,105.1	$1,237.4	$1,046.5	$4,489.4	$1,018.3	$2,333.3	$1,131.0	$1,144.0	$5,626.5
%SG&A	*195.2%*	*488.9%*	*571.7%*	*586.7%*	*411.0%*	*511.4%*	*506.4%*	*21969.5%*	*602.2%*	*14137.5%*	*14300.0%*	*1378.8%*
R&D	$1,509.0	$1,027.6	$182.0	$207.7	$147.8	$244.5	$782.0	$118.0	$280.9	$120.0	$204.0	$722.9
%R&D	*92.9%*	*134.8%*	*94.5%*	*110.3%*	*49.1%*	*119.5%*	*88.2%*	*2545.8%*	*72.5%*	*1500.0%*	*2550.0%*	*177.1%*
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
Operating Income	($3,055.6)	($3,992.8)	($1,090.0)	($1,124.4)	($1,084.1)	($1,086.4)	($4,384.8)	($1,131.7)	($2,226.7)	($1,243.0)	($1,340.0)	($5,941.3)
Operating Margin	-	-	-	-	-	-	*-494.6%*	-	-	-	-	*-1455.9%*
Loss on extinguishment of debt	$40.3	$2,754.0	$0.0	$0.0	$0.0	$0.0	$0.0	$616.9	$0.0	$0.0	$0.0	$616.9
(Gain)/loss on derivative liability	$8,547.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Interest (income), net	$1,287.2	$452.3	$126.7	$127.2	$148.9	$171.0	$573.8	$42.2	$36.6	$37.0	$37.0	$152.7
Other expense	$508.6	($219.6)	$0.0	$0.0	$0.0	$0.0	$0.0	$345.8	$0.0	$0.0	$0.0	$345.8
Pre-Tax Income	($13,438.6)	($6,979.5)	($1,216.7)	($1,251.6)	($1,233.0)	($1,257.3)	($4,958.6)	($2,136.5)	($2,263.3)	($1,280.0)	($1,377.0)	($7,056.8)
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
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%*
Net Income	($13,356.9)	($6,797.2)	($1,183.0)	($1,224.6)	($1,217.2)	($1,247.5)	($4,872.4)	($2,128.8)	($2,255.6)	($1,280.0)	($1,377.0)	($7,041.4)
Net Margin	-	*-891.5%*	-	-	-	-	*-549.6%*	-	-	-	-	*-1725.5%*
EPS	($3.44)	($1.22)	($0.18)	($0.16)	($0.16)	($0.16)	($0.66)	($0.28)	($0.29)	($0.16)	($0.17)	($0.90)
YOY Growth	*110.0%*	*-64.7%*	*-78.1%*				*-45.8%*					*37.1%*
Diluted Shares O/S	3,881	5,594	6,720	7,610	7,617	7,627	7,394	7,622	7,757	7,800	8,000	7,795

Brian Marckx, CFA

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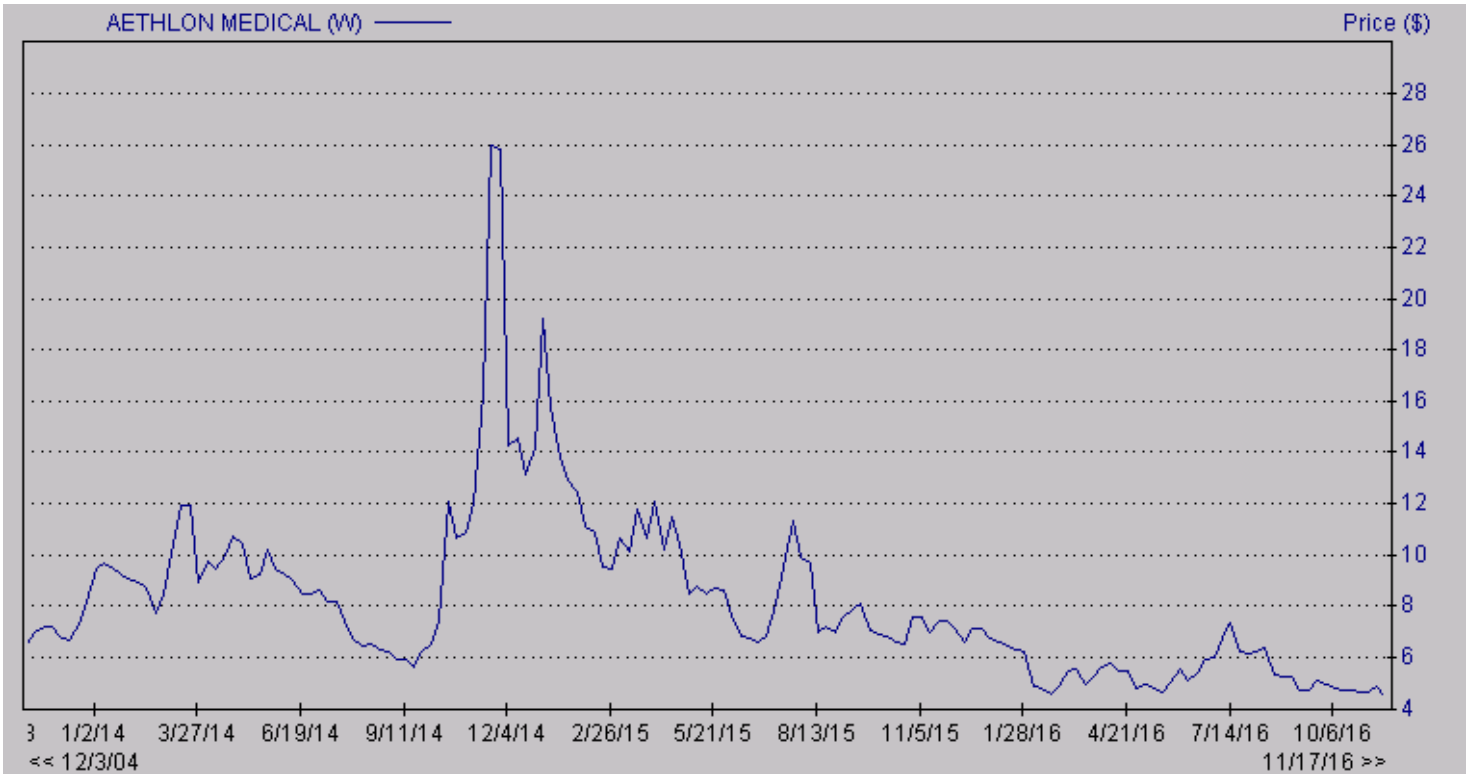

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