

Battelle Team Wins DARPA Contract to Build Medical Device to Treat Sepsis

Marketwire

Up to \$22.83M in Funds to Be Allocated for the Battelle, NxStage and Aethlon Collaboration to Develop an Advanced Portable Medical Device for DARPA -- and Ultimately Civilian -- Use

At [Battelle](#) [1], supporting America's military personnel is woven into the fabric of its business. In that pursuit, a team consisting of Battelle, [NxStage Medical](#) [2], Inc. and [Aethlon Medical](#) [3] has won a contract from the Defense Advanced Research Projects Agency, or DARPA, to develop an innovative, new medical device that may save the lives of soldiers -- and civilians as well -- by treating sepsis.

The problem to be confronted is more severe than is commonly known -- as many as 10 percent of combat wounds result in life threatening infections that ultimately lead to septicemia and/or sepsis. "This device could not only save many of our soldiers' lives, it could be profoundly important in saving thousands of civilian lives each year in the United States alone," said Martin Toomajian, President of Battelle Energy, Health and Environment.

DARPA created the Dialysis-Like Therapeutics (DLT) program to develop a portable device that creates a holistic treatment for sepsis. The device is intended to remove blood from the body, separate harmful "dirty" agents from the blood and return "cleaned" blood to the body in a manner similar to dialysis treatment for kidney failure. DARPA has made significant investments in its DLT effort to date to multiple contractors for the development of key blood purification and diagnostic technologies that could contribute to the ultimate device.

This contract -- which is funded in phases and could be as large as \$22.83 million and last as long as four years -- is for leading one of DARPA's DLT System Integration projects. The project calls for Battelle and key subcontractors, NxStage and Aethlon, to design, develop, test and validate an advanced, portable medical device that exhibits the technical innovation for which DARPA projects are known, and to coordinate integration of key technologies developed during the overall DLT program. This funding does not include human clinical trials that may be required prior to military use and/or United States Food and Drug Administration clearance for sepsis-treatment technologies.

Beyond the military need for sepsis therapies, the DLT device may play an important role in saving the lives of civilian patients, as infection leading to sepsis is a significant cause of mortality. When sepsis is complicated by shock, approximately half of patients do not survive for 30 days, even if effective antibiotics are used.

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Because of the interdisciplinary nature of the program, it will draw experts from many scientific and engineering segments at Battelle and its development team members. "This program will utilize a highly diverse set of resources, ranging from medical device design to biological testing to meeting the exacting needs of the military-medical environment," said Steve Kelly, President of Battelle National Security. "Battelle is exceptionally qualified, together with the collaboration of NxStage and Aethlon, to bring the necessary diversity of expertise to this complex program."

Battelle will lead a project team focusing on military user needs, systems engineering, integration of DLT technologies and pre-clinical testing. Working closely with Battelle, NxStage will design, develop and ultimately manufacture and distribute the medical device upon regulatory approval. Aethlon is developing and plans to distribute key blood separation component technologies for the DLT system.

"NxStage is pleased to be chosen as part of this team based upon our recognized expertise in developing and commercializing innovative, portable technology for the purification of blood, which includes use of the System One in the military environment," said Jeffrey H. Burbank, Chief Executive Officer of NxStage Medical, Inc. "We are confident that our leadership in device design will lead to a good outcome for this important DARPA project, ultimately benefitting military personnel and civilians alike."

"We are honored to be part of the DLT System Integration team and appreciate the continued opportunity to innovate an effective therapeutic solution to address sepsis," said Aethlon Medical Chairman and CEO Jim Joyce. Aethlon is the previous recipient of a \$6.8 million DARPA DLT contract.

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