

'Trauma Pod' Robot to Save Soldiers' Lives on the Battlefield

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Imagine an automated medical treatment system that does not require onsite medical personnel on the front lines of battle, and is ready to receive, assess, and stabilize wounded soldiers during the critical hours following injury. The Defense Advanced Research Projects Agency (DARPA) Defense Sciences Office (DSO) has taken a significant step toward that goal by awarding an SRI International-led multi-organization team a \$12 million, two-year contract to develop such a revolutionary system. The groundbreaking program is an important step toward ensuring a future generation of battlefield-based unmanned medical treatment systems, or "trauma pods," to stabilize injured soldiers within minutes after a battlefield trauma and administer life-saving medical and

surgical care prior to evacuation and during transport.

The first phase of the program is an effort to develop robotic technology to perform a totally unmanned surgical procedure within a fixed facility. When fully developed, the Trauma Pod will not require human medical personnel on-site to conduct the surgery, and will be small enough to be carried by a medical ground or air vehicle. A human surgeon will conduct all the required surgical procedures from a remote location using a system of surgical manipulators. The system's actions are then communicated wirelessly to the surgery site. Automated robotic systems will provide necessary support to the surgeon to conduct all phases of the operation.

Find the Trauma Pod conceptual video at www.xvivo.net/Medical2004/Index.html

The program will leverage substantial technology and expertise from a team of leading companies. SRI, an independent research and development organization, will serve as lead systems integrator on the collaborative project. The team includes:

- SRI International, developer of pioneering telesurgery systems
- General Dynamics Robotic Systems, a leader in unmanned ground vehicle systems and developer of the automated pharmacy system
- Oak Ridge National Laboratory, a leader in weapons and material handling robotics
- University of Texas, a research leader in software control systems for material disposal and space manipulators
- University of Washington, a research leader in surgical robotics
- University of Maryland, a research leader in Operating Room of the Future
- Robotic Surgical Tech, Inc., developers of the first robotic nurse systems for the operating room

“SRI is excited about working with the team to innovate and apply its interdisciplinary technical skills, rigorous approach to system integration, and comprehensive testing and demonstration abilities to tackle the challenge of developing a functional system,” said Scott Seaton, executive director of SRI's Engineering and Systems Division. “The result will be a major step forward in saving lives on the battlefield. SRI has a long history of meeting our nation's defense needs, and this program continues in that tradition.”

The Trauma Pod program is funded by DARPA through the Telemedicine and Advanced Technology Research Center (TATRC), a subordinate element of the U.S. Army Research and Materiel Command.

Source: [SRI International](#)

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