



DEPARTMENT OF DEFENSE OSD TRANSITIONS SBIR/ STTR TECHNOLOGIES "OTST" PROGRAM SUCCESS STORY

Topic #: DHA172-010

SBIR Investment: \$4.15 million

Phase III Funding: \$50 million



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THE CHALLENGE

The Defense Health Agency (DHA), on behalf of the U.S. Army Special Operations Command (USASOC), issued a Small Business Innovation Research (SBIR) call in 2018 for development of a small wearable device, easily placed on injured personnel to collect essential biometric data and provide real-time remote data delivery to a range of medical care providers, including on-scene combat medics and surgeons at remote field hospitals.

THE TECHNOLOGY

The DHA and USASOC sought medical-monitoring wearable solutions for austere and combat situations. The device would collect a Warfighter's key biometric data, such as temperature, heart rate variability, pulse, and blood oxidation, and transmit to assigned medical personnel via existing military communication channels.

THE TRANSITION

Defense SBIR funding supported Tiger Tech Solutions, Inc.'s efforts to adapt its pre-existing research and early technology to USASOC needs. The technology's required specifications also evolved during the COVID-19 pandemic to include non-invasive, rapid testing for the disease. During Phase I, Tiger Tech used SBIR funding to demonstrate proof-of-concept of a remote medical-monitoring wearable device. Under SBIR Phase II funding, Tiger Tech created

and tested a continuously monitoring prototype tailored to USASOC-specific Warfighter needs. Currently, Tiger Tech is under contract to refine and deploy the wearable to meet additional DHA and USASOC medical requirements.

THE BENEFIT TO THE U.S. ARMY SPECIAL OPERATIONS COMMAND

The new technology provides DHA and USASOC with more flexibility when monitoring Warfighters' wellbeing and experiences in combat. It will also increase their survivability and help improve both combat effectiveness and situational awareness. It can be used at point of care in austere environments to inform medical treatments and responses. It will also improve communication of a patient's medical records, health status, and care needs, which traditionally relied on both verbal and written methods. Finally, the technology provides DoD with a non-invasive, rapid, reusable, low-cost alternative to traditional COVID-19 testing.

THE FUTURE

The technology's dual-use potential suggests commercialization could improve military and civilian first responders' awareness of a patient's medical needs and prevent loss of life through non-invasive, real-time monitoring.

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