Setting the Stage: TATRC’s Portfolio

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### Report Documentation Page

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Telemedicine and Advanced Technology Research Center (TATRC)

Mission
Execute a congressional special interest program of medical science and engineering technology research that maximizes benefits to military medicine

Vision
Be the model of government enablement of technology transfer to use
**Key Objectives**

**Explore new science and engineering options**
for the DoD in advance of core funded medical research programs

**Lead and conduct DoD research in e-Health**
in core competencies of computational biology and clinical informatics

**Bridge gaps and help researchers find success**
in starting innovative research; transition of discovery to applications; and integration of products, systems, and standards to DoD needs
CREATING THE FUTURE FOR MILITARY MEDICINE

TATRC Product Lines & Core Competencies

- Medical Robotics
- Health Information Technologies
- Medical Imaging Technologies
- Advanced Prosthetics & Human Performance

TATRC CORE COMPETENCIES

- Neurosciences
- Biomaterials & Nanomedicine
- Regenerative Medicine
- Disease Models with Dual Use Applications
- Genomics/Proteomics
- Computational Biology
- Biomonitoring Technologies
- Simulation and Training Technology

TATRC
Biomonitoring Technologies – Personal Health Monitoring
Personal health monitoring enables

**Continuity of health & medical situational awareness**

- in the field for effective management/utilization of operational forces and resources to meet mission requirements for attacks or for medical evacuation
- at hospitals for improved medical care management of staff and resources
- at home to help patient resume normalcy without unnecessary delays, integrate back to family and community with knowledge and comfort that help is just minutes away
**Challenges**

**In the field, at hospitals, or at home**
- know what variables to measure (e.g. vital signs, functions, or biomarkers)
  - modify / develop tools, know its limitations
  - analyze / translate data (e.g. making sense of the data) into useful tools (e.g. decision-making for preventions, countermeasures, or interventions)
- accuracy and reliability of measurement / data
- make it “invisible” (i.e. wireless, minimal, unobtrusive, comfortable)
- develop smart network for transmitting information to a central location / command; this includes device interoperability
- building a readily accessible comprehensive e-health/medical record
- continuous monitoring is key to averting crises
**Identify projects for transition**

Work with TATRC research partners to help advance research / product with demonstrated results or proven concepts to move forward... commercial partners or other investment vehicles

**Invest in high risk, high payoff projects, and fill gap**

Provide opportunities to help investigators with great ideas to test highly innovative ideas as well as bring in investigators and/or relevant research areas to help bridge currently funded CSI programs

**Integrate information for effective program management**

Work with multiple organizations inside/outside DoD to exchange information, collaborate with the aim to create a more integrated program (i.e. TMIP-J, USARIEM, USAISR, TRADOC, VA, NIBIB, DARPA, NIST, etc.)
Convergence of Effort

Army & Navy
- Infectious Disease
- Combat Casualty Care
- Military Operational Medicine
- Naval Health Research Center
- Health Facilities Planning Agency

Congressional Special Interest (CSI) Programs

SBIR/STTR

AMEDD Advanced Medical Technology Initiative (AAMTI)

Reimbursables and Grants

Other DOD Programs
- DARPA
- TMA
- TMIP

Products & Systems for the Warfighter
Questions...