

INNOVATING CROSS-DOMAIN SOLUTIONS TO DETECT EMERGING BIOLOGICAL THREATS

Diagnostic Readiness Global Operational Network & Mobile Embedded Diagnostic Capabilities (dragon Medic), A Paradigm For The Rapid Fielding Of Iterative Prototype Technology

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Background/Issues: Current Joint and Service specific acquisition pipelines struggle to keep pace with rapid advances in biotechnology and the evolving threat from emerging infectious diseases and biological warfare agents. The introduction of unknown biological threats into the Force, either intentional or naturally arising, presents a major risk to mission by potentially causing an overwhelming loss of combat power and potential freedom of maneuver restrictions associated with various protective postures needed in the affected area.

Initiative Description: To mitigate this risk, USAMRIID sent a small team of 3 personnel to embed with the 1st Area Medical Laboratory (AML) [HQ, Aberdeen Proving Ground, Maryland]. During these exercises, USAMRIID demonstrated a targeted next generation sequencing capability, based on DTRA's Far-Forward Advanced Sequencing Technology (FFAST) program, tailored for the intended geographical region of use, but flexible enough to detect current and/or emerging threats that might otherwise evade detection. After the experimentation and training, prototype assays and testing platforms were left behind for the unit to continue testing and for tactics, techniques, and procedures integration. Additionally, the technology was successfully demonstrated by the 1st AML in a joint exercise with the Polish Army. The current targeted sequencing panel now employed by the 1st AML will be adapted and sustained for one year, adding specific targets indicated by intelligence as credible threats within COCOM's AORs of interest.

Conclusion: By building defined push/pull technical linkages for this rapidly evolving technical field between field deployable laboratories and fixed facility research and development laboratories, the DRAGON MEDIC program is demonstrating an agile new integrated approach to develop and field technologies in near parallel timeframes.