

Defense Health Program  
 Fiscal Year (FY) 2013 Budget Estimates  
 Exhibit R-2, DHP RDT&E Budget Item Justification

Appropriation/Budget Activity  
 Defense Health Program/BA: 2

DATE: February 2012  
 R1 Item Nomenclature: 3  
 Applied Biomedical Technology  
 0602115HP

COST: (Dollars in Millions)

	2011 Actual	2012 Estimate	2013 Estimate	2014 Estimate	2015 Estimate	2016 Estimate	2017 Estimate
<b>Total PE 0602115</b>	85.147	66.841	42.188	37.785	57.730	62.270	66.484
<b>Advanced Diagnostics &amp; Therapeutics Clinical Translational Applied Research (Air Force)</b>	0.000	3.392	3.566	3.637	3.710	3.840	3.905
<b>CSI-Peer-Reviewed Hemorrhage Control Research (Army)</b>	0.000	2.925	0.000	0.000	0.000	0.000	0.000
<b>CSI-Traumatic Brain Injury/Psychological Health (TBI/PH) (Army)</b>	22.132	30.956	0.000	0.000	0.000	0.000	0.000
<b>GDF-Applied Biomedical Technology (GDF-ABT)</b>	59.706	29.568	38.622	34.148	54.020	58.430	62.579
<b>USAF Advanced Diagnostics &amp; Therapeutics (Air Force)</b>	2.309	0.000	0.000	0.000	0.000	0.000	0.000
<b>USAF Advanced Diagnostics &amp; Therapeutics (Budgeted) (Air Force) at Army</b>	1.000	0.000	0.000	0.000	0.000	0.000	0.000

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**A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:** The Army Medical Command received FY11 funds for USAF Advanced Diagnostics and Therapeutics research. The Army Medical Command also received FY11 DHP Congressional Special Interest (CSI) funding directed for Traumatic Brain Injury/Psychological Health research. For FY12, CSI funding was received for Traumatic Brain Injury and Psychological Health and Peer-Reviewed Hemorrhage Control Research. The strategy for the FY11 and FY12 Congressionally directed research is to stimulate innovative research through a competitive, peer-reviewed research program, and focused medical research at intramural and extramural research sites.

For the Air Force, this Program Element funds applied research which seeks to promote 'Omic-informed personalized medicine with an emphasis on targeted prevention, diagnosis, and treatment. The delivery of pro-active, evidence-based, personalized medicine will improve health in warfighters and beneficiaries by providing care that is specific to the situation and patient, to include preventing disease or injury, early and accurate diagnosis, and selection of appropriate and effective treatment. Personalized medicine will reduce morbidity, mortality, mission impact of illness/injury, and healthcare costs while increasing health and wellness of the AF population and efficiency of the healthcare system. This applied research supports multiple focus areas, each of which represents an identified barrier/gap which must be addressed for successful implementation of 'omic-informed personalized medicine. Focus areas for applied research include knowledge generation research; ethical legal and social issues/policy research; bioinformatics research; educational research; research for development of advanced genomic diagnostic system. For efforts supported by this program element, research will be pursued with the intent to support solutions that answer Air Force specific needs. During this process, the efforts of other government agencies in those areas will be assessed to avoid redundancy.

Guidance for Development of the Force-Applied Biomedical Technology (GDF-ABT): This applied research funding is to refine concepts and ideas into potential solutions to military health and performance problems, with a view towards evaluating technical feasibility. Included are studies and investigations leading to candidate solutions that may involve use of animal models for testing in preparation for initial human testing. Research in this program element is designed to address the following: areas of interest to the Secretary of Defense regarding Wounded Warriors, capabilities identified through the Joint Capabilities Integration and Development System, and the strategy and initiatives described in the Quadrennial Defense Review. Program development is peer-reviewed and fully coordinated with all Military Services, appropriate Defense Agencies or Activities, and other federal agencies, to include the Department of Veterans Affairs, the Department of Health and Human Services, and the Department of Homeland Security. This coordination occurs through the planning and execution activities of the Joint Program Committees, established for the Defense Health Program Research, Development, Test and Evaluation (RDT&E) funding. Research supported by this program element includes polytrauma and blast injury, rehabilitation, diagnosis and treatment of brain injury,

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operational health and performance, radiation countermeasures, and psychological health and well-being for military personnel and families.

**B. PROGRAM CHANGE SUMMARY:**

	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>
FY13 Budget Estimate RDT&E	85.147	33.805	41.776	37.453
Change Proposal	0.000	0.000	0.412	0.332
Congressional Special Interest	0.000	34.750	0.000	0.000
SBIR	0.000	-1.714	0.000	0.000
FY13 Budget Submission RDT&E	85.147	66.841	42.188	37.785

**PROGRAM CHANGE SUMMARY EXPLANATION:**

FY 2011: No Change.

FY 2012: Congressional Special Interest for Peer-Reviewed Traumatic Brain Injury/Psychological Health (TBI/PH) to DHP RDT&E, PE 0602115 - Applied Biomedical Technology (+\$31.750 million).

Congressional Special Interest for Peer-Reviewed Hemorrhage Control Research to DHP RDT&E, PE 0602115 - Applied Biomedical Technology (+\$3.000 million).

SBIR Transfer from DHP RDT&E, PE 0602115 - Applied Biomedical Technology (-\$1.714 million) to DHP RDT&E, PE 0605502 - Small Business Innovation Research (SBIR) program (+\$1.714 million).

FY 2013: Change Proposal for inflation adjustment to DHP RDT&E, PE 0602115 - Applied Biomedical Technology (+\$0.412 million).

FY 2014: Change Proposal for inflation adjustment to DHP RDT&E, PE 0602115 - Applied Biomedical Technology (+\$0.332 million).

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**C. OTHER PROGRAM FUNDING SUMMARY:**

	<u>FY 2011</u> <u>Estimate</u>	<u>FY 2012</u> <u>Estimate</u>	<u>FY 2013</u> <u>Estimate</u>	<u>FY 2014</u> <u>Estimate</u>	<u>FY 2015</u> <u>Estimate</u>	<u>FY 2016</u> <u>Estimate</u>	<u>FY 2017</u> <u>Estimate</u>
DHP Operation & Maintenance	2.350	2.016	2.076	2.139	2.203	2.269	2.337
BA-1, PE 0807714	2.350	2.016	2.076	2.139	2.203	2.269	2.337

**D. ACQUISITION STRATEGY:** Not Required

**E. PERFORMANCE METRICS:**

The benchmark performance metric for transition of research conducted with applied research funding will be the attainment of a maturity level that is at least TRL 4, and typically TRL 5, or the equivalent for knowledge products. Products nearing attainment of TRL 5 will be considered for transition.