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Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Defense Health Program **Date:** March 2014

Appropriation/Budget Activity 0130: <i>Defense Health Program I BA 2: RDT&E</i>					R-1 Program Element (Number/Name) PE 0601117HP / <i>Basic Operational Medical Research Sciences</i>							
COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
Total Program Element	1.000	4.000	5.904	7.481	-	7.481	7.897	9.917	10.895	11.331	Continuing	Continuing
100A: <i>CSI - Congressional Special Interests</i>	1.000	1.237	-	-	-	-	-	-	-	-	Continuing	Continuing
371A: <i>GDF-Basic Operational Medical Research Sciences</i>	0.000	2.763	5.904	7.481	-	7.481	7.897	9.917	10.895	11.331	Continuing	Continuing

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

Guidance for Development of the Force-Basic Operational Medical Research Sciences: This program element (PE) provides support for basic medical research directed toward greater knowledge and understanding of the fundamental principles of science and medicine that are relevant to the improvement of Force Health Protection. Research in this PE 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 (JCIDS), and the strategy and initiatives described in the Quadrennial Defense Review (QDR). Program development is peer-reviewed and coordinated with all of the 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 (JPCs), established for the Defense Health Program Research, Development, Test and Evaluation (RDT&E) funding. Research supported by this PE includes polytrauma (multiple traumatic injuries) and blast injury, diagnosis and treatment of brain injury, and psychological health and well-being for military personnel and families. Funds in this PE are for basic research that promises to provide important new approaches to complex military medical problems. As the research efforts mature, the most promising efforts will transition to applied research (PE 0602115HP) or technology development (0603115HP) funding.

The FY13 DHP Congressional Special Interest (CSI) funding supported peer-reviewed, directed basic research for Traumatic Brain Injury and Psychological Health projects. Because of the CSI annual structure, out-year funding is not programmed.

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B. Program Change Summary (\$ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	3.038	6.074	11.121	-	11.121
Current President's Budget	4.000	5.904	7.481	-	7.481
Total Adjustments	0.962	-0.170	-3.640	-	-3.640
• Congressional General Reductions	-0.005	-			
• Congressional Directed Reductions	-0.107	-			
• Congressional Rescissions	-	-			
• Congressional Adds	1.345	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.271	-0.170			
• Reductions related to Departmental Efficiencies - Project 371A	-	-	-3.640	-	-3.640

Congressional Add Details (\$ in Millions, and Includes General Reductions)

Project: 100A: *CSI - Congressional Special Interests*

Congressional Add: 425A - *Traumatic Brain Injury/ Psychological Health*

	FY 2013	FY 2014
	1.237	-
Congressional Add Subtotals for Project: 100A	1.237	-
Congressional Add Totals for all Projects	1.237	-

Change Summary Explanation

FY 2013: Realignment from Defense Health Program, Research, Development, Test and Evaluation (DHP RDT&E), Program Element (PE) 0601117-Basic Operational Medical Research Sciences (-\$0.271 million) to DHP RDT&E, PE 0605502-Small Business Innovation Research (SBIR) Program (+\$0.271 million).

FY 2013: Congressional Special Interest (CSI) Additions to DHP RDT&E, PE 0601117-Basic Operational Medical Research Sciences (+\$1.345 million).

FY 2013: General Congressional Reductions to DHP RDT&E, PE 0601117-Basic Operational Medical Research Sciences (-\$0.005 million).

FY 2013: Congressional Directed Reductions (Sequestration) to DHP RDT&E, PE 0601117-Basic Operational Medical Research Sciences (-\$0.107 million).

FY 2014: Realignment from Defense Health Program, Research, Development, Test and Evaluation (DHP RDT&E), Program Element (PE) 0601117-Basic Operational Medical Research Sciences (-\$0.170 million) to DHP RDT&E, PE 0605502-Small Business Innovation Research (SBIR) Program (+\$0.170 million).

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Appropriation/Budget Activity	R-1 Program Element (Number/Name)	
0130: <i>Defense Health Program / BA 2: RDT&E</i>	PE 0601117HP / <i>Basic Operational Medical Research Sciences</i>	
FY 2015: Reduces non-combat injury research funding in order to focus and continue the pace of progress in critical and high priority research areas for DHP RDT&E, PE 0601117-Basic Operational Medical Research Sciences (-\$3.640 million).		

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Appropriation/Budget Activity 0130 / 2					R-1 Program Element (Number/Name) PE 0601117HP / <i>Basic Operational Medical Research Sciences</i>				Project (Number/Name) 100A / <i>CSI - Congressional Special Interests</i>															
COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost												
100A: <i>CSI - Congressional Special Interests</i>	1.000	1.237	-	-	-	-	-	-	-	-	Continuing	Continuing												
<p># The FY 2015 OCO Request will be submitted at a later date.</p> <p>A. Mission Description and Budget Item Justification The FY13 DHP Congressional Special Interest (CSI) funding is directed research for TBI/PH. Because of the CSI annual structure, out-year funding is not programmed.</p> <p>B. Accomplishments/Planned Programs (\$ in Millions)</p> <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>FY 2013</th> <th>FY 2014</th> </tr> </thead> <tbody> <tr> <td>Congressional Add: 425A - Traumatic Brain Injury/ Psychological Health</td> <td align="center">1.237</td> <td align="center">-</td> </tr> <tr> <td>FY 2013 Accomplishments: The Traumatic Brain Injury/Psychological Health Congressional Special Interest project funding was divided into basic science, applied research, technology development and concept development efforts. For the basic science funding in the area of Psychological Health, Military Operational Medicine released a program announcement seeking proposals to understand fundamental mechanisms of psychological injuries such as post-traumatic stress disorder (PTSD) and depression, psychosocial (psychological development in, and interaction with, a social environment) issues related to sexual trauma, workplace violence in the military, and alcohol and substance abuse in the military.</td> <td></td> <td></td> </tr> <tr> <td align="right">Congressional Adds Subtotals</td> <td align="center">1.237</td> <td align="center">-</td> </tr> </tbody> </table> <p>C. Other Program Funding Summary (\$ in Millions) N/A</p> <p>Remarks</p> <p>D. Acquisition Strategy N/A</p> <p>E. Performance Metrics N/A</p>														FY 2013	FY 2014	Congressional Add: 425A - Traumatic Brain Injury/ Psychological Health	1.237	-	FY 2013 Accomplishments: The Traumatic Brain Injury/Psychological Health Congressional Special Interest project funding was divided into basic science, applied research, technology development and concept development efforts. For the basic science funding in the area of Psychological Health, Military Operational Medicine released a program announcement seeking proposals to understand fundamental mechanisms of psychological injuries such as post-traumatic stress disorder (PTSD) and depression, psychosocial (psychological development in, and interaction with, a social environment) issues related to sexual trauma, workplace violence in the military, and alcohol and substance abuse in the military.			Congressional Adds Subtotals	1.237	-
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COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
371A: GDF-Basic Operational Medical Research Sciences	-	2.763	5.904	7.481	-	7.481	7.897	9.917	10.895	11.331	Continuing	Continuing
# The FY 2015 OCO Request will be submitted at a later date.												
A. Mission Description and Budget Item Justification												
Guidance for Development of the Force-Basic Operational Medical Research Sciences: Basic research described here will be focused on enhancement of knowledge to support capabilities identified through the Joint Capabilities Integration and Development System (JCIDS) process and the strategy and initiatives addressed in the Quadrennial Defense Review (QDR). Apart from prevailing in current conflicts, the QDR states that taking care of our wounded warriors is DoD’s highest priority. Within this Program Element, research will be conducted in the general categories of polytrauma (multiple traumatic injuries) and blast injury, diagnosis and treatment of brain injury, military infectious diseases, and operational medicine. Polytrauma and blast injury efforts will focus on fundamental mechanisms to support devices and therapeutics for hemorrhage (bleeding) control, resuscitation and blood products, and blast injury models and performance standards for protections systems. Military infectious diseases research will conduct basic research to identify biomarkers for detecting bacterial wound infections. Operational medicine will focus on fundamental mechanisms to support research on fatigue mechanisms, prevention of training and operational injury, and military operational computational modeling.												
B. Accomplishments/Planned Programs (\$ in Millions)									FY 2013	FY 2014	FY 2015	
Title: Project 371 GDF – Basic Operational Medical Research Sciences									2.763	5.904	7.481	
Description: Provide support for basic medical research directed toward attaining greater knowledge and understanding of fundamental principles of science and medicine relevant to the improvement of medical care in operationally relevant environments.												
FY 2013 Accomplishments: Combat casualty care research conducted studies to understand the fundamental mechanisms in support of diagnosis and treatment of excessive hemorrhage resulting from severe trauma. This research responds to the Joint Capabilities Integration Development System requirement to stop life-threatening bleeding, and the Quadrennial Defense Review requirement to improve treatment for wounded warriors.												
FY 2014 Plans: Military operational medicine research is conducting studies to understand fundamental effects of exposure to blast, which will inform the development of performance standards for protection systems. Other research efforts aim to advance knowledge in methods to prevent training and operational injury, understand fatigue mechanisms, and develop computational models to study heat stress, bone fractures, and airway diseases.												
FY 2015 Plans:												

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2013	FY 2014
<p>Military infectious diseases research will support a number of basic research studies in wound infection prevention and management to identify host and pathogen biomarkers for detection of bacterial infections.</p> <p>Military operational medicine research will continue studies initiated in FY14 to understand effects of exposure to blast, methods to prevent training and operational injury, fatigue mechanisms and development of computational models to study heat stress, bone fractures, and airway diseases. The Military Operational Medicine Joint Program Committee will issue program announcements with topics in the areas of physiological health, injury prevention and reduction, environmental health and protection, and psychological health.</p> <p>Combat casualty care basic research will identify underlying pathophysiologic (functional changes associated with injury) mechanisms associated with coagulopathy (inability of blood to clot normally) of trauma, and conduct basic research studies to identify potential diagnostic and therapeutic targets of coagulopathy of trauma.</p>			
Accomplishments/Planned Programs Subtotals		2.763	5.904
C. Other Program Funding Summary (\$ in Millions)			
N/A			
Remarks			
D. Acquisition Strategy			
N/A			
E. Performance Metrics			
Principal investigators will participate in in-progress reviews, DHP-sponsored review & analysis meetings, submit quarterly and annual status reports, and are subjected to Program Sponsor Representative progress reviews to ensure that milestones are being met and deliverables will be transitioned on schedule. The benchmark performance metric for transition of research conducted with basic science funding will be the attainment of a maturity level that is typical of Technology Readiness Level 2 or the equivalent for knowledge products.			