

Defense Health Program
Fiscal Year (FY) 2011 Budget Estimates
Exhibit R-2, DHP RDT&E Budget Item Justification

Appropriation/Budget Activity
Defense Health Program/BA: 2

DATE: February 2010
R1 Item Nomenclature: 6
Medical Technology Development
0603115HP

COST: (Dollars in Millions)

	2009 Actual	2010 Estimate	2011 Estimate	2012 Estimate	2013 Estimate	2014 Estimate	2015 Estimate
Total PE 0603115	766.234	768.347	133.376	165.507	175.907	229.234	257.744
CoE-Breast Cancer Center of Excellence (Army)	0.000	5.177	9.980	10.160	10.342	10.529	10.718
CoE-Gynecological Cancer Center of Excellence (Army)	0.000	4.699	8.720	8.877	9.037	9.199	9.365
CoE-Integrative Cardiac Health Care Center of Excellence (Army)	0.000	3.403	3.680	3.746	3.814	3.882	3.952
CoE-Pain and Neuroscience Center of Excellence (Army)	0.000	3.900	3.680	4.730	4.815	4.902	4.990
CoE-Prostate Cancer Center of Excellence (USUHS)	0.000	3.296	7.285	7.581	7.890	8.211	8.545
CSI-Amyotrophic Lateral Sclerosis (ALS) (Army)	5.000	7.500	0.000	0.000	0.000	0.000	0.000

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CSI-Army Reserve Component Personal Empowerment Package (ARCPEP)(Army)	0.000	3.375	0.000	0.000	0.000	0.000	0.000
CSI-Assistive Technology Research (TMA)	0.000	3.000	0.000	0.000	0.000	0.000	0.000
CSI-Autism Research (Army)	8.000	8.000	0.000	0.000	0.000	0.000	0.000
CSI-Biothreat Test Pouch for Film Array System (AF)	0.798	0.000	0.000	0.000	0.000	0.000	0.000
CSI-Bone Marrow Failure Disorder Research (Army)	5.000	3.750	0.000	0.000	0.000	0.000	0.000
CSI-Breast Cancer Center (Army)	15.000	9.690	0.000	0.000	0.000	0.000	0.000
CSI-Cancer Immunotherapy and Cell Therapy Initiative (Navy)	1.600	0.000	0.000	0.000	0.000	0.000	0.000
CSI-Comprehensive Clinical Phenotyping and Genetic Mapping for Autism Susceptibility (Air Force)	1.600	0.000	0.000	0.000	0.000	0.000	0.000

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CSI-Copper Antimicrobial Research Program (Army)	1.600	0.000	0.000	0.000	0.000	0.000	0.000
CSI-DoD Brain Injury Rescue and Rehabilitation Project (BIRR) (Army)	1.200	0.000	0.000	0.000	0.000	0.000	0.000
CSI-Ex-Rad Radiation Protection Program (USUHS)	4.975	0.000	0.000	0.000	0.000	0.000	0.000
CSI-Genetics Studies of Food Allergies (Army)	2.500	1.875	0.000	0.000	0.000	0.000	0.000
CSI-Global HIV/AIDS Prevention (Navy)	8.000	10.000	0.000	0.000	0.000	0.000	0.000
CSI-Gulf War Illness Peer Reviewed Research Programs (Army)	0.000	8.000	0.000	0.000	0.000	0.000	0.000
CSI-Gynecological Cancer Center (WRAMC/WRNNMC) (Army)	6.000	0.000	0.000	0.000	0.000	0.000	0.000

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CSI-Gynecological Cancer Center at Walter Reed AMC (Army)	0.000	1.180	0.000	0.000	0.000	0.000	0.000
CSI-Hand Transplant Research (Army)	0.000	4.500	0.000	0.000	0.000	0.000	0.000
CSI-Hawaii Federal Healthcare Network (Army)	20.000	18.000	0.000	0.000	0.000	0.000	0.000
CSI-Health Research & Disparities Eradication Program (Army)	14.500	0.000	0.000	0.000	0.000	0.000	0.000
CSI-Health Surveillance System(AF)	1.596	0.000	0.000	0.000	0.000	0.000	0.000
CSI-Health Technology Integration for Clinical, Patient Records and Financial Management (Army)	0.400	0.000	0.000	0.000	0.000	0.000	0.000
CSI-Homeland Emergency Learning and Preparedness Center (AF)	2.992	0.000	0.000	0.000	0.000	0.000	0.000

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CSI-Identifying Health Barriers for Military Recruits (Army)	3.000	0.000	0.000	0.000	0.000	0.000	0.000
CSI-Integrated Cardiac Health Care at Walter Reed AMC (Army)	0.000	3.510	0.000	0.000	0.000	0.000	0.000
CSI-Integrated Patient Electronic Records System for Application to Defense Information Technology (Army)	1.200	0.000	0.000	0.000	0.000	0.000	0.000
CSI-Integrated Translational Prostate Disease Research at Walter Reed AMC (USUHS)	4.000	0.620	0.000	0.000	0.000	0.000	0.000
CSI-Integrative Cardiac Health Care (WRAMC/WRNNMC)(Army)	7.000	0.000	0.000	0.000	0.000	0.000	0.000
CSI-Lung Injury Management Program (Navy)	1.200	1.160	0.000	0.000	0.000	0.000	0.000
CSI-Madigan Army Medical Center Digital Pen (Army)	0.200	0.000	0.000	0.000	0.000	0.000	0.000

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CSI-Management of the Wounded Soldier from Air Evac to Rehabilitation (Air Force)	2.500	0.000	0.000	0.000	0.000	0.000	0.000
CSI-Microencapsulation & Vaccine Delivery Research (Army)	0.800	0.000	0.000	0.000	0.000	0.000	0.000
CSI-Military Trauma Training Program (Air Force)	0.800	0.000	0.000	0.000	0.000	0.000	0.000
CSI-Mobile Diabetes Management (Air Force)	1.600	0.000	0.000	0.000	0.000	0.000	0.000
CSI-Multiple Sclerosis (Army)	5.000	4.500	0.000	0.000	0.000	0.000	0.000
CSI-Muscular Dystrophy Research (Army)	4.000	3.750	0.000	0.000	0.000	0.000	0.000
CSI-Neuregulin Research (Army)	1.520	0.000	0.000	0.000	0.000	0.000	0.000
CSI-Neuroscience Clinical Gene Therapy (Air Force)	0.800	0.000	0.000	0.000	0.000	0.000	0.000

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CSI-New National Diabetes Model Program (Air Force)	15.500	15.000	0.000	0.000	0.000	0.000	0.000
CSI-Operating Room of the Future for Application to Mobile Army Surgical Hospital Improvements (Army)	2.400	0.000	0.000	0.000	0.000	0.000	0.000
CSI-Ovarian Cancer Research (Army)	20.000	18.750	0.000	0.000	0.000	0.000	0.000
CSI-Pacific Based Joint Information Technology Ctr (JITC) (Army)	0.920	0.000	0.000	0.000	0.000	0.000	0.000
CSI-Pain and Neuroscience Center (WRAMC/WRNNMC)(Army)	8.000	4.000	0.000	0.000	0.000	0.000	0.000
CSI-Patient Care Improvement Project at Kessler Med Ctr (Air Force)	0.000	3.280	0.000	0.000	0.000	0.000	0.000
CSI-Patient Tracking Ontology (Army)	2.500	0.000	0.000	0.000	0.000	0.000	0.000

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CSI-Pediatric Medication Administration Product & Training (Army)	0.800	0.000	0.000	0.000	0.000	0.000	0.000
CSI-Peer Reviewed Breast Cancer Research (Army)	150.000	150.000	0.000	0.000	0.000	0.000	0.000
CSI-Peer Reviewed Medical Research Program (Army)	50.000	50.000	0.000	0.000	0.000	0.000	0.000
CSI-Peer Reviewed Neurofibromatosis (NF) Research (Army)	0.000	13.750	0.000	0.000	0.000	0.000	0.000
CSI-Peer Reviewed Neurotoxin Exposure Treatment Parkinsons Research Program (Army)	0.000	25.000	0.000	0.000	0.000	0.000	0.000
CSI-Peer Reviewed Prostate Cancer Research (Army)	80.000	80.000	0.000	0.000	0.000	0.000	0.000
CSI-Peer-Reviewed Cancer Research Program (Army)	16.000	15.000	0.000	0.000	0.000	0.000	0.000

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CSI-Peer-Reviewed Lung Cancer Research Program (Army)	20.000	15.000	0.000	0.000	0.000	0.000	0.000
CSI-Peer-Reviewed Orthopedic Research (Army)	61.000	22.500	0.000	0.000	0.000	0.000	0.000
CSI-Peer-Reviewed Spinal Cord Research Program (Army)	35.000	11.250	0.000	0.000	0.000	0.000	0.000
CSI-Peer-Reviewed Vision Research (Army)	4.000	3.750	0.000	0.000	0.000	0.000	0.000
CSI-Pharmacological Countermeasures to Ionizing Radiation (USUHS)	0.800	0.000	0.000	0.000	0.000	0.000	0.000
CSI-Proton Therapy (Army)	4.800	0.000	0.000	0.000	0.000	0.000	0.000
CSI- Pseudofolliculitis Barbae (PFB) Topical Treatment (Air Force)	0.800	0.000	0.000	0.000	0.000	0.000	0.000
CSI-Regional Telepathology Initiative at Keesler AFB (AF)	2.493	0.000	0.000	0.000	0.000	0.000	0.000

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CSI-Research in Alcohol and Substance Use Disorders (Army)	0.000	6.375	0.000	0.000	0.000	0.000	0.000
CSI-Research to Improve Emotional Health and Quality of Life for Service members w/Disabilities (Army)	2.400	0.000	0.000	0.000	0.000	0.000	0.000
CSI-Reservist Medical Simulation Training Program (Army)	0.800	0.000	0.000	0.000	0.000	0.000	0.000
CSI-Security Solutions from Life in Extreme Environments Ctr (USUHS)	1.200	0.800	0.000	0.000	0.000	0.000	0.000
CSI-Severe Disorders of Consciousness (Army)	6.400	0.000	0.000	0.000	0.000	0.000	0.000
CSI-Stress Disorders Research Initiative at Fort Hood (Army)	1.600	0.000	0.000	0.000	0.000	0.000	0.000
CSI-Traumatic Brain Injury/Psychological Health (TBI/PH) (Army)	76.200	120.000	0.000	0.000	0.000	0.000	0.000

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CSI-Traumatic Brain Injury/Psychological Health (TBI/PH) (Navy)	13.800	0.000	0.000	0.000	0.000	0.000	0.000
CSI-Tuberous Sclerosis Complex (TSC) Research (Army)	6.000	6.000	0.000	0.000	0.000	0.000	0.000
CSI-U.S. Military Cancer Institute (USUHS)	4.000	5.000	0.000	0.000	0.000	0.000	0.000
CSI-Vanadium Safety Readiness (Army)	1.600	0.000	0.000	0.000	0.000	0.000	0.000
CSI-Virtual Medical Trainer (Air Force)	4.000	0.000	0.000	0.000	0.000	0.000	0.000
CSI-Web Based Teaching Programs for Military Social Work (Army)	3.200	0.000	0.000	0.000	0.000	0.000	0.000
Deployed Warfighter Protection (Army)	4.875	4.972	5.202	5.306	5.412	5.520	5.630
Epidemic Outbreak Surveillance (Air Force)	1.560	0.000	0.000	0.000	0.000	0.000	0.000

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GDF-Medical Technology Development(GDF-MTD)	0.000	6.932	26.763	50.747	58.488	109.164	135.070
Medical Development (Lab Support) (Navy)	19.752	32.630	34.208	34.965	35.739	36.454	37.184
Medical Modernization Programs (Air Force)	2.162	0.000	0.000	0.000	0.000	0.000	0.000
Medical Modernization Programs (Army)	0.500	0.000	0.000	0.000	0.000	0.000	0.000
Regenerative Medicine (USUHS)	0.000	3.412	7.000	7.140	7.283	7.428	7.577
USAF Advanced Diagnostics & Therapeutics (Air Force)	0.000	6.630	6.900	11.482	11.886	12.303	12.732
USAF Center for Advanced Molecular Diagnostics (CAMD) (Air Force)	1.255	4.862	4.444	4.905	5.050	5.399	5.649
USAF Directed Energy Injury/Human Effects (Air Force)	0.000	1.073	1.100	1.100	1.100	1.100	1.000

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USAF Human Physiology, Systems Integration, Evaluation & Optimization Research (Air Force)	3.001	5.462	6.664	6.665	5.800	4.401	3.606
USAF Operational Medicine Research & Development (Air Force)	2.535	7.459	7.750	8.103	9.251	10.742	11.726
USAMRIID Laboratory (Army)	0.000	16.575	0.000	0.000	0.000	0.000	0.000

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: For the Navy Medical Department, this program element includes RDT&E,DHP funds for operating and miscellaneous support costs at RDT&E,DHP laboratories and other installations, facility and civilian personnel costs not directly chargeable to RDT&E,DHP projects. Also includes RDT&E,DHP funds for RDT&E,DHP laboratories and facilities for research, support, equipment and other investment and materiel support costs not directly chargeable to RDT&E,DHP projects. Excludes military manpower and related costs, non-RDT&E,N base operating costs, and military construction costs which are included in other appropriate programs.

The seven CONUS medical R&D Labs are 100% reimbursable laboratories, all costs related to laboratory management and overhead or salaries of government employees are paid from science/research competitively awarded funding. The OCONUS laboratories conduct focused medical research on vaccine development for Malaria, Diarrhea Diseases, and Dengue Fever. In addition to entomology, HIV studies, surveillance and outbreak response under the GEIS program and risk assessment studies on a number of other infectious diseases that are present in the geographical regions where the laboratories are located. The CONUS laboratories conduct research on Military Operational Medicine, Combat Casualty Care, Diving and Submarine Medicine, Infectious Diseases, Environmental and Occupational Health, Directed Energy, and Aviation Medicine and Human Performance.

The Navy Medical Department also receives two Congressional Special Interest (CSI) directed research programs.
1) Global HIV/AIDS Prevention - Program emphasis is placed on (1) building a national research infrastructure

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by funding large, multidisciplinary program projects focused on detection; (2) encouraging innovative approaches to research by funding new ideas and technology with or without supporting preliminary data; and (3) recruiting new, independent investigators for careers in research, as well as more senior investigators new to the research field. Congressionally directed research in FY 10 includes HIV prevention educational activities undertaken in connection with I.S. military training, exercises, and humanitarian assistance activities. 2) The Lung Injury Management initiative focuses on providing and evaluating a novel antioxidant formulation to U.S. Marines in training who are at risk for developing lung disease during intense exertional environments from their time as recruits on through to active duty. The effectiveness of antioxidant micronutrients for optimal health and as a complement to standard therapy in a variety of diseases is now becoming widely appreciated, if the proper, scientifically-based and comprehensive supplementation is employed. These compounds may reduce acute and chronic (long-term) biological damage caused by increased oxidative stress (tissue damage caused by excessive free radicals/harmful molecules in the cell) and associated inflammation as well as enhance immune function. Formulations of the agents developed by Premier Micronutrient Corporation (PMC) have been approved for evaluation by the U.S. military in several recent investigations.

For the Air Force Medical Service elements, the Medical Research and Development program supports the Research, Development, Test and Evaluation efforts needed to address ongoing and planned modernization initiatives aimed to:

- 1) Improve recovery of individuals from illness and/or injury, enhance clinical response (modernized diagnostics, therapeutics, and critical care air transport capabilities), treatment and management, and return of individuals to duty status. Enhance human health and performance to maximize effectiveness and ability to operate;
- 2) Improve human ability (i.e. visual, auditory, cognitive) to operate under adverse environments to include CBRNE, directed energy, and high operational tempo (human system integration initiatives will play a pivotal role in addressing these requirements);
- 3) Enhance capabilities for the maintenance of a fit and healthy force (example mission foods/special diets for the warfighter based on mission scenarios);
- 4) Enhance Force Health Protection through advanced Health Surveillance capabilities emphasizing improved diagnostics (Epidemic Outbreak Surveillance platforms);
- 5) Improve healthcare delivery effectiveness (diagnosis, treatment) through Advanced diagnostics, therapeutics & forensics with emphasis on organ systems, diseases, vectors, toxins, occupational toxicology and analytical systems-specific technologies such as: molecular diagnostics, surface detection to molecule sensitivity, gene therapy, miniaturization-hand held/point of care delivery tools, and surveillance capabilities;

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6) Optimize warfighter performance through effective Human Systems Integration in all environments; maintain warfighter orientation and awareness; and providing technologies for the detection, prevention, and mitigation of adverse human effects;

a. Optimization efforts will focus on: hydration, nutrition, musculoskeleton, fatigue, cognitive, and fitness factors.

b. Orientation and awareness efforts will address: spatial disorientation countermeasures, ocular enhancement, auditory enhancement, and proprioceptive enhancement issues

7) Improve clinical processes, methods, tools and techniques for prevention, diagnosis, treatment, and rehabilitation of critically wounded warriors, addressing the needs for advanced devices and protocols for trauma resuscitation, enroute critical care air transport, organ failure and intervention, TBI, PTSD, wound care, pain, infection & clinically-based visual acuity/cognitive assessments (operationally-based vision assessment).

8) Address injury/effects to Humans from Directed Energy (DE), with emphasis on injury /effect detection, identification, quantification and mitigation (DIQM).

For the Army, the Deployed Warfighter Protection project provides for the development of new or improved protection of ground forces from disease-carrying insects. The focus of this program is to: develop new or improved systems for controlling insects that carry disease under austere, remote, and combat conditions; understand the physiology of insecticidal activity to develop new compounds with greater specific activity and/or higher user acceptability; examine existing area repellents for efficacy and develop new spatially effective repellent systems useful in military situations; develop new methods or formulations for treating cloth to prevent vector biting; and expand the number of active ingredients and formulations available for safe, insecticidal application.

Five Centers of Excellence (CoE) have also been established. These include the Breast Cancer CoE, Gynecological CoE, Integrative Cardiac Health Care CoE, Prostate Cancer CoE and the Pain and Neuroscience CoE.

The Breast Cancer CoE will provide a multidisciplinary approach as the standard of care for treating breast diseases and breast cancer. This approach integrates prevention, screening, diagnosis, treatment and continuing care, incorporation of advances in risk reduction, biomedical informatics, tissue banking and translational research. It will provide a balance environment between two competing and yet complementary research paradigms of hypothesis-driven research and hypothesis-generating research.

The Gynecological CoE will focus on characterizing the molecular alterations associated with benign and

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malignant gynecologic disease and facilitate the development of novel early detection, prevention and novel biologic therapeutics for the management of gynecologic disease. The objective of this research is to reduce the incidence, morbidity, and mortality of gynecologic diseases among all military beneficiaries.

The Integrative Cardiac Health Care CoE will use cutting edge patient centric approaches to comprehensive cardiac event prevention as well as molecular research to detect cardiovascular disease at an early stage to find new genes that significantly increase risk for heart attack in service members and identify molecular markers of obesity and weight loss.

The Pain and Neuroscience CoE will focus on a wide range of pain, neurological and neurosurgical disorders affecting the uniformed service member. Pain efforts will provide inpatient acute pain services, outpatient chronic pain, pain behavioral health, and addiction medical services. Further advancements in battlefield pain control from point of injury, air evacuation, to CONUS will continue. The neuroscience component will conduct research in three core areas: acute neurology, neuromuscular disorders and headache. Research to be conducted will examine the relationship between acute and chronic pain focusing on finding, implementing, and evaluating the most effective methods of relieving the acute pain caused by combat trauma and the effect this has throughout the continuum to rehabilitation and reintegration.

For FY10 a one-time requirement is established to provide funds to support USAMRIID initial outfitting research equipment and transition costs related to their new MILCON.

The Army also receives Congressional Special Interest (CSI) directed research programs. The strategy for Congressionally directed research identified above is to stimulate innovative research through a competitive, peer reviewed research program, as well as focused medical research at selected Army sites.

Specific CSI research efforts for FY09 include: Amyotrophic Lateral Sclerosis (ALS); Autism Research; Bone Marrow Failure Research; a Breast Cancer Center; DoD Brain Injury Rescue and Rehabilitation Project; Copper Antimicrobial Research Program; Genetics Studies of Food Allergies; a Gynecological Cancer Center; Hawaii Federal Health Care Network; Health Research and Disparities Eradication Program; Health Technology Integration for Clinical, Patient Records and Financial Management; Identifying Health Barriers for Military Recruits; Integrative Cardiac Health Care; Integrated Patient Electronic Records System for Application to Defense Information Technology; Madigan Army Medical Center Digital Pen; Microencapsulation and Vaccine Delivery; Multiple Sclerosis; Muscular Dystrophy Research; Neuregulin Research; Operating Room of the Future for Application to Mobile Army Surgical Hospital Improvements; Pacific Based Joint Information Technology

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Center; a Pain and Neuroscience Center; Patient Tracking Ontology; Pediatric Medication Administration Product and Training; Peer Reviewed Programs to include: Medical Research, Breast Cancer Research, Cancer Research, Lung Cancer Research, Orthopedic Research, Ovarian Cancer Research, Prostate Cancer Research, Spinal Cord Research, and Vision Research; Proton Therapy; Research to Improve Emotional Health and Quality of Life for Service Members with Disabilities; Reservist Medical Simulation Training Program; Severe Disorders of Consciousness; Stress Disorders Research Initiative at Fort Hood; Traumatic Brain Injury/Psychological Health; Tuberous Sclerosis Complex (TSC); and Vanadium Safety Readiness. Because of the CSI annual structure out-year funding is not programmed.

CSI programs for FY10 include: Amyotrophic Lateral Sclerosis (ALS); Army Reserve Component Personal Empowerment Package; Autism Research; Bone Marrow Failure Disease Research; Breast Cancer Center; Duchenne Muscular Dystrophy; Genetics Studies of Food Allergies; Gynecological Cancer Center; Hand Transplant Research; Hawaii Federal Health Care Network; Integrative Cardiac Health Care; Military Medical Research (TBI and PH); Multiple Sclerosis; Pain and Neuroscience Center; Peer-Reviewed Programs: Breast Cancer Research, Cancer Research, Gulf War Illness, Lung Cancer Research, Medical Research, Neurofibromatosis (NF) Research, Neurotoxin Exposure Treatment, Orthopedic Research, Ovarian Cancer Research, Prostate Cancer Research, Spinal Cord Research, and Vision Research; Research in Alcohol and Substance Use Disorders; Traumatic Brain Injury and Psychological Health; and Tuberous Sclerosis Complex. As with FY09 CSIs, due to the CSI annual structure out-year funding is not programmed.

For the Uniformed Services University of the Health Sciences (USUHS), Medical Development programs include the Prostate Cancer Center of Excellence, the Center for Neuroscience and Regenerative Medicine, and Congressional Special Interest medical research programs.

The Prostate Cancer Center of Excellence (COE), formerly a Congressional Special Interest program, was chartered in 1992 to conduct basic, clinical and translational research programs to combat diseases of the prostate. The program has affiliations with the Walter Reed Army Medical Center, the Armed Forces Institute of Pathology, the Walter Reed Army Institute of Research, the National Human Genome Project and nine Tri-Service medical centers located throughout the United States.

The Center for Neuroscience and Regenerative Medicine is a unique collaborative effort of USUHS, the National Institutes of Health, the DoD Center of Excellence for Traumatic Brain Injury and Psychological Health, and

the military hospitals to advance research aimed at improving the treatment of traumatic brain injury and post

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traumatic stress disorder.

USUHS goals for Congressional Special Interest medical research programs are: (1) building a national research infrastructure by funding large, multidisciplinary program projects focused on detection and disease/injury prevention and treatment; (2) conducting research into biomedical strategies for preventing, treating, assessing and predicting the health effects of human exposure to ionizing radiation; (3) encouraging innovative approaches to research by funding new ideas and technology with or without supporting preliminary data; and (4) recruiting new, independent investigators for careers in research, as well as more senior investigators new to the research field.

This PE also provides funds for promising candidate solutions are selected for initial safety and efficacy testing in small scale human clinical trials regulated by the U.S. Food and Drug Administration (FDA) prior to licensing for human use. Research in this PE is designed to address areas of interest to the Secretary of Defense and to close medical capability gaps associated with the Joint Force Health Protection Concept of Operations (JFHP CONOPS) and derivative Joint Capability Documents (JCD). Program development and execution is peer-reviewed and fully coordinated with all Services and other agencies through the Expanded-Joint Technology Coordinating Groups under the Armed Services Biomedical Evaluation and Management (ASBREM) Committee to assure quality, relevance, and responsiveness to military operational needs, the needs of the Military Health System and the JFHP CONOPS and JCDs. Research supported by this PE includes Trauma, Polytrauma and Blast Injury, Rehabilitation, Diagnosis and Treatment of Brain Injury, Operational Health and Performance, Psychological Health and Well-Being for Military Personnel and Families, and Medical Informatics, Modeling and Simulation.

B. PROGRAM CHANGE SUMMARY:

	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>
FY11 Budget Estimate RDT&E	758.144	113.316	133.376	165.507
CSI	0.000	657.865	0.000	0.000
Reprogram	11.200	0.000	0.000	0.000
SBIR	-0.110	-2.834	0.000	0.000
Transfer	-3.000	0.000	0.000	0.000
FY11 Budget Submission RDT&E	766.234	768.347	133.376	165.507

Defense Health Program
Fiscal Year (FY) 2011 Budget Estimates
Exhibit R-2, DHP RDT&E Budget Item Justification

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PROGRAM CHANGE SUMMARY EXPLANATION:

FY 09:

- Internal Reprogramming, FY 09-21 IR, for Congressional Special Interest item Web-Based Teaching Programs for Military Social Work (+\$3.200 million)

- Prior Approval Reprogramming, FY 09-26 PA, for Congressional Special Interest item CSI-Health Research and Disparities Eradication Program (+\$8.000 million)

SBIR Transfer from DHP RDT&E, PE 0603115-Medical Technology Development to DHP RDT&E PE 0605502-SBIR (-\$0.110 million).

- Transfer of partial Congressional Special Interest item Hawaii Federal Healthcare Network from DHP RDT&E PE 0603115-Medical Technology Development to DHP RDT&E PE 0605013-Information Technology Development (-\$3.000 million).

FY 10:

- DoD Appropriation Act, FY 2010 (P.L. 111-118) increase for Congressional Special Interest items (+\$657.865 million).

SBIR Transfer from DHP RDT&E PE 0603115-Medical Technology Development to DHP RDT&E PE 0605502-SBIR (-\$2.834 million).

FY11:

No Change.

FY12:

No Change.

Defense Health Program
Fiscal Year (FY) 2011 Budget Estimates
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C. OTHER PROGRAM FUNDING SUMMARY:

	<u>FY 2009</u> <u>Estimate</u>	<u>FY 2010</u> <u>Estimate</u>	<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>
DHP Operation & Maintenance	1.000	7.000	12.017	12.382	12.757	13.144	13.543
BA-1, PE 0806721	0.000	4.000	8.000	8.244	8.495	8.755	9.022
BA-1, PE 0807714	1.000	3.000	4.017	4.138	4.262	4.389	4.521
BA-1, PE 0807724	0.000	0.000	0.000	0.000	0.000	0.000	0.000
BA-1, PE 0807781	0.000	0.000	0.000	0.000	0.000	0.000	0.000
DHP Procurement	1.000	0.000	0.000	0.000	0.000	0.000	0.000
BA-3, PE 0807721	1.000	0.000	0.000	0.000	0.000	0.000	0.000
DTRA. RDT&E	0.000	5.020	0.000	0.000	0.000	0.000	0.000
BA-6, 0605384 (CBDP)	0.000	5.020	0.000	0.000	0.000	0.000	0.000

D. ACQUISITION STRATEGY: Not Required

Defense Health Program
Fiscal Year (FY) 2011 Budget Estimates
Exhibit R-2, DHP RDT&E Budget Item Justification

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E. PERFORMANCE METRICS:

Prostate Cancer Center of Excellence: Performance is judged on the amount of extramural funding received, the number of active protocols, the number of articles that appear in peer reviewed journals, and the number of contact hours in support of the training of residents and fellows in the Military Health System.

Center for Neuroscience and Regenerative Medicine: In FY10 through FY12, identify, design protocols, perform scientific and program reviews, and conduct research in Clinical Core activities such as Phenotyping, Imaging and Imaging Analysis, to aid in patient diagnosis and evaluation.

US Military Cancer Institute: Continue to access specimens to the Biospecimen Network for proteomic and genomic analyses.

Security Solutions from Life in Extreme Environments Center: Conduct basic research of "extremophilic" microorganisms radiation resistance to aid in the development of biotechnological innovations in radiation countermeasures, cancer radiation/chemical therapy, and other applications relevant to humans, livestock and/or crops.

The benchmark performance metric for transition of research conducted with Advanced Technology Development funding will be the attainment of maturity level that is typical of TRL 6 or the equivalent for knowledge products.