

**Defense Health Program
Fiscal Year (FY) 2009 Budget Estimates
Exhibit R-2, DHP RDT&E Budget Item Justification**

Appropriation/Budget Activity
Defense Health Program/BA: 2

DATE: February 2008
R1 Item Nomenclature: 1
In-House Laboratory Independent Research
0601101HP

COST: (Dollars in Thousands)

	2007 Actual	2008 Estimate	2009 Estimate	2010 Estimate	2011 Estimate	2012 Estimate	2013 Estimate
Total PE 0601101	2.363	2.158	2.759	2.817	2.875	2.935	2.997
Infectious Disease	0.330	0.302	0.386	0.395	0.403	0.411	0.419
Military Operational Medicine	1.015	0.926	1.184	1.208	1.233	1.259	1.286
Combat Casualty Care	1.018	0.930	1.189	1.214	1.239	1.265	1.292

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: This program element supports basic medical research at the Uniformed Services University of the Health Sciences (USUHS). It facilitates the recruitment and retention of faculty; supports unique research training for military medical students and resident fellows; and allows the University's faculty researchers to collect pilot data in order to secure research funds from extramural sources (estimated \$25-\$30 million annually). Approximately sixty intramural research projects are active each year, including 22 new starts. Projects are funded on a peer-reviewed, competitive basis. Results from these studies contribute to the fund of knowledge intended to enable technical approaches and investment strategies within Defense Science and Technology (S&T) programs.

The ILIR program at USUHS is designed to answer fundamental questions of importance to the military medical mission of the Department of Defense in the areas of Combat Casualty Care (CCC), Infectious Diseases (ID), and Military Operational Medicine (MOM). The portfolio of research projects will vary annually because this research is investigator-initiated.

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0601101HP

B. PROGRAM CHANGE SUMMARY:

	<u>2007</u>	<u>2008</u>	<u>2009</u>
FY09 Budget Estimate RDT&E	2.363	2.213	2.759
SBIR	0.000	-0.055	0.000
FY09 Budget Submission RDT&E	2.363	2.158	2.759

PROGRAM CHANGE SUMMARY EXPLANATION: Not Required

C. OTHER PROGRAM FUNDING SUMMARY: Not Required

D. ACQUISITION STRATEGY: Not Required

E. PERFORMANCE METRICS:

FY 2009 and out years - Efforts will continue within Infectious Disease, Military Operational Medicine and Combat Casualty Care research areas. Specific investigator-initiated projects compete for funding each year, usually with two or three-year project periods. Therefore, no detailed description of the research is possible at this time.

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Appropriation/Budget Activity
 Defense Health Program/BA: 2

DATE: February 2008
 R1 Item Nomenclature: 2
 Medical Technology (AFRRI)
 0602787HP

COST: (Dollars in Thousands)

	2007 Actual	2008 Estimate	2009 Estimate	2010 Estimate	2011 Estimate	2012 Estimate	2013 Estimate
Total PE 0602787	3.155	3.223	3.381	3.417	3.553	3.694	3.841
Biodosimetry	0.644	0.658	0.690	0.697	0.724	0.753	0.783
Internal Contamination	0.334	0.341	0.358	0.362	0.377	0.391	0.410
Radiation Countermeasures	2.177	2.224	2.333	2.358	2.452	2.550	2.648

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: This program supports developmental research to investigate new approaches that will lead to advancements in biomedical strategies for preventing, treating, assessing and predicting the health effects of human exposure to ionizing radiation. Program objectives focus on mitigating the health consequences from exposures to ionizing radiation that represent the highest probable threat to U.S. forces under current tactical, humanitarian and counter-terrorism mission environments. New protective and therapeutic strategies will broaden the military commander's options for operating within nuclear or radiological environments by minimizing both short-and long-term risks of adverse health consequences. Advancements in field-based biological dose assessment systems to measure radiation exposures will enhance triage, treatment decisions and risk assessment. Accurate models to predict casualties will promote effective command decisions and force structure planning to ensure mission success.

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 Medical Technology (AFRRI)
 0602787HP

B. PROGRAM CHANGE SUMMARY:

	<u>2007</u>	<u>2008</u>	<u>2009</u>
FY09 Budget Estimate RDT&E	3.155	3.306	3.381
SBIR	0.000	-0.083	0.000
FY09 Budget Submission RDT&E	3.155	3.223	3.381

PROGRAM CHANGE SUMMARY EXPLANATION: Not Required

C. OTHER PROGRAM FUNDING SUMMARY: Not Required

D. ACQUISITION STRATEGY: Not Required

E. PERFORMANCE METRICS:

Accomplishments: Identified 6 drugs or therapeutic approaches that are promising for treatment of radiation injury. Identified usefulness of multi-biomarker approach for biodosimetry. Hematological measures (neutrophil/lymphocyte ratios), C-reactive protein, and serum amylase are among the biomarkers that have shown promise.

By FY 2010 develop decision criteria for antibiotic use after radiation injury.

By FY 2012 identify 4 promising new drugs and/or therapeutic approaches for radiation injury.

By FY 2012 begin characterization of a new large animal model to supplement an alternative to the non-human primate.

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Appropriation/Budget Activity
Defense Health Program/BA: 2

DATE: February 2008
R1 Item Nomenclature: 3
Medical Advanced Technology (AFRRI)
0603002HP

COST: (Dollars in Thousands)

	2007 Actual	2008 Estimate	2009 Estimate	2010 Estimate	2011 Estimate	2012 Estimate	2013 Estimate
Total PE 0603002	0.779	0.797	0.836	0.737	0.752	0.767	0.783
Biodosimetry	0.458	0.476	0.501	0.442	0.451	0.460	0.470
Radiation Countermeasures	0.321	0.321	0.335	0.295	0.301	0.307	0.313

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: The first two programs support applied research for advanced development of biomedical strategies to prevent, treat and assess health consequences from exposure to ionizing radiation. It capitalizes on findings under PE 0602787D, Medical Technology, and from industry and academia to advance novel medical countermeasures into and through pre-clinical studies toward newly licensed products. Program objectives focus on mitigating the health consequences from exposures to ionizing radiation that represent the highest probable threat to US forces under current tactical, humanitarian and counter terrorism mission environments. Findings from basic and developmental research are integrated into highly focused advanced technology development studies to produce the following: (1) protective and therapeutic strategies; (2) novel biological markers and delivery platforms for rapid, field-based individual dose assessment; and (3) experimental data needed to build accurate models for predicting casualties from complex injuries involving radiation and other battlefield insults. The Armed Forces Radiobiology Research Institute (AFRRI), because of its multidisciplinary staff and exceptional laboratory and radiation facilities, is uniquely positioned to execute the program as prescribed by its mission.

B. PROGRAM CHANGE SUMMARY:

	<u>2007</u>	<u>2008</u>	<u>2009</u>
FY09 Budget Estimate RDT&E	0.779	0.817	0.836
SBIR	0.000	-0.020	0.000
FY09 Budget Submission RDT&E	0.779	0.797	0.836

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DATE: February 2008
R1 Item Nomenclature: 3
Medical Advanced Technology (AFRRI)
0603002HP

PROGRAM CHANGE SUMMARY EXPLANATION: Not Required

C. OTHER PROGRAM FUNDING SUMMARY: Not Required

D. ACQUISITION STRATEGY: Not Required

E. PERFORMANCE METRICS:

Accomplishments: Obtained "investigational new drug" status for a therapeutic agent to mitigate radiation injury, and released PC-based software tool for biodosimetric assessment (BAT).

By FY 2010 transition 4 new drugs for FDA approval for treatment of radiation injury.

By FY 2010 provide forward-fieldable biodosimetric tools.

By FY 2012 provide validated automated cytogenetic biodosimetric assay (RICA).

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Appropriation/Budget Activity
Defense Health Program/BA: 2

DATE: February 2008
R1 Item Nomenclature: 4
Biomedical Technology
0602115HP

COST: (Dollars in Thousands)

	2007 Actual	2008 Estimate	2009 Estimate	2010 Estimate	2011 Estimate	2012 Estimate	2013 Estimate
Total PE 0602115	2.925	3.073	3.231	3.311	3.394	3.479	3.566
Clinical Research (Air Force)	0.000	0.780	0.800	0.800	0.800	0.800	0.800
Epidemic Outbreak Surveillance (Air Force)	2.925	0.975	1.000	1.311	1.394	1.479	1.566
Medical Modernization Programs (Air Force)	0.000	1.318	1.431	1.200	1.200	1.200	1.200

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: The Air Force Medical Service Biomedical Research & Development program supports the Air Force Surgeon General's (AFSG's) vision for medical modernization and the capabilities and objectives outlined in the AFMS Concept document for medical modernization in the areas of 1) Ensure a Fit and Healthy Force; 2) Prevent Casualties; 3) Restore Health; 4) Enhance Human Performance. Specific examples of validated Surgeon General's Requirements for Operational Capabilities Council (SGROCC) initiatives that will be addressed by funding in this PE include: Advanced Diagnostics & Therapeutics applied research (Micro array Automation/Gene Expression), Directed Energy Weapon Human Effects Countermeasures, Human Systems Integration, Critical Care Air Transport Modernization, Genetic/Genomic/Proteinomic (Personalized Medicine)/related research efforts to improve care for the Wounded Warrior.

Epidemic Outbreak Surveillance (EOS) & Advanced Diagnostic & Therapeutics is a comprehensive effort to accelerate our ability to make informed decisions involving infectious diseases and to provide advance therapies for same. As the Advanced Concept Technology Demonstration project funded in FY05 transitions in FY09, we will begin to build upon the concepts and capabilities demonstrated by focusing efforts on bridge technologies during FY08 and FY09 leading to anticipated technological advancements throughout industry in the arena of Personalized Medicine (G2P).

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Biomedical Technology
0602115HP

The Clinical Research Program promotes/conducts biomedical research and medical education in support of aerospace expeditionary operations and military families and ensures protection of subjects when participating in research projects. Funding for applied research is focused toward specific physical and mental effectiveness of AF personnel as well as public health and epidemiological technologies. This program supports transition of basic research into applied biomedical solutions; research activities are conducted at 9 investigative sites, 3 with active animal laboratories.

The Medical Modernization Program supports the RDT&E efforts needed to address ongoing and planned Air Force Medical Service modernization initiatives, which are directed to meet new or enhanced capabilities including Modernization projects aimed to address critical continuity of care issues for our Wounded Warriors, improve recovery and rates of return to duty/productive members of society. The program funds initiatives across the spectrum of biomedical development to include Directed Energy Weapon Human Effects Countermeasures (as defined by the DETF), Human Systems Integration projects, Critical Care Air Transport Modernization, and Genetic/Genomic/Proteinomic (Personalized Medicine)/related research efforts.

B. PROGRAM CHANGE SUMMARY:

	<u>2007</u>	<u>2008</u>	<u>2009</u>
FY09 Budget Estimate RDT&E	2.925	3.152	3.231
SBIR	0.000	-0.079	0.000
Transfer	0.000	0.000	0.000
FY09 Budget Submission RDT&E	2.925	3.073	3.231

PROGRAM CHANGE SUMMARY EXPLANATION: Not Required

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 R1 Item Nomenclature: 4
 Biomedical Technology
 0602115HP

C. OTHER PROGRAM FUNDING SUMMARY:

	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u>
	<u>Actual</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>
DHP Operation & Maintenance							
BA-1, PE 0807714	1.365	3.823	3.965	2.973	3.062	3.154	3.249

D. ACQUISITION STRATEGY: Not Required

E. PERFORMANCE METRICS: Not Required

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DATE: February 2008
R1 Item Nomenclature: 5
Medical Development
0603115HP

COST: (Dollars in Thousands)

	2007 Actual	2008 Estimate	2009 Estimate	2010 Estimate	2011 Estimate	2012 Estimate	2013 Estimate
Total PE 0603115	598.128	416.572	38.077	38.981	39.898	40.836	41.796
Deployed Warfighter Protection (Army)	4.875	4.875	5.000	5.100	5.202	5.306	5.412
Medical Development (Lab Support) (Navy)	18.962	19.331	20.258	20.742	21.228	21.725	22.234
Epidemic Outbreak Surveillance (Air Force)	5.850	1.560	1.600	5.728	5.854	5.977	6.107
Medical Modernization Programs (Air Force)	1.950	4.101	4.419	3.100	3.200	3.300	3.400
Advanced Diagnostic Laboratory (ADL), San Antonio, TX (Air Force)	1.950	2.048	2.150	2.210	2.260	2.320	2.380
Institute of Aerospace Medicine (IAM) (Air Force)	0.000	1.950	2.050	2.101	2.154	2.208	2.263
Copper Antimicrobial Research Program (Army)	0.000	2.925	0.000	0.000	0.000	0.000	0.000

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	2007 Actual	2008 Estimate	2009 Estimate	2010 Estimate	2011 Estimate	2012 Estimate	2013 Estimate
Defense Graduate Psychology Education Program (USUHS)	2.817	0.000	0.000	0.000	0.000	0.000	0.000
Global HIV/AIDS Prevention (Navy)	0.000	7.800	0.000	0.000	0.000	0.000	0.000
Hawaii Federal Healthcare Network (Army)	0.000	24.375	0.000	0.000	0.000	0.000	0.000
New National Diabetes Model Program (Air Force)	21.369	19.500	0.000	0.000	0.000	0.000	0.000
Ovarian Cancer Research (Army)	9.750	9.750	0.000	0.000	0.000	0.000	0.000
Peer Reviewed Breast Cancer Research (Army)	124.312	134.550	0.000	0.000	0.000	0.000	0.000
Peer Reviewed Prostate Cancer Research (Army)	78.000	78.000	0.000	0.000	0.000	0.000	0.000
Peer Reviewed Medical Research Program (Army)	0.000	48.750	0.000	0.000	0.000	0.000	0.000

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	2007 Actual	2008 Estimate	2009 Estimate	2010 Estimate	2011 Estimate	2012 Estimate	2013 Estimate
Pharmacological Countermeasures to Ionizing Radiation (USUHS)	1.682	3.705	0.000	0.000	0.000	0.000	0.000
Stress Disorders Research Initiative at Fort Hood (Army)	0.000	2.652	0.000	0.000	0.000	0.000	0.000
Telerobotic and Minimally Invasive Surgery at WRAMC (Army)	0.000	0.975	0.000	0.000	0.000	0.000	0.000
Tuberous Sclerosis Complex (TSC) Research (Army)	0.000	3.900	0.000	0.000	0.000	0.000	0.000
US Military Cancer Institute (USUHS)	0.000	3.900	0.000	0.000	0.000	0.000	0.000
Virtual Medical Trainer (Air Force)	2.137	0.000	0.000	0.000	0.000	0.000	0.000
Preventing Epilepsy After Traumatic Brain Injury (Army)	0.000	1.170	0.000	0.000	0.000	0.000	0.000
Malaria Research (Army)	0.000	1.950	0.000	0.000	0.000	0.000	0.000

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	2007 Actual	2008 Estimate	2009 Estimate	2010 Estimate	2011 Estimate	2012 Estimate	2013 Estimate
Clinical Research (Air Force)	0.000	2.535	2.600	0.000	0.000	0.000	0.000
Fort Jackson Identifying Health Barriers Project (Army)	0.000	2.340	0.000	0.000	0.000	0.000	0.000
Gynecological Cancer Center at Walter Reed AMC (Army)	0.000	3.900	0.000	0.000	0.000	0.000	0.000
Integrated Transitional Prostate Disease Research @ Walter Reed AMC (USUHS)	0.000	4.875	0.000	0.000	0.000	0.000	0.000
Integrated Cardiac Health Care @ Walter Reed AMC (Army)	0.000	3.900	0.000	0.000	0.000	0.000	0.000
LED Wound Healing of Oral and Cutaneous Lesions (Air Force)	0.000	3.120	0.000	0.000	0.000	0.000	0.000
Advanced Military Wound Healing and Treatment (Army)	0.000	0.975	0.000	0.000	0.000	0.000	0.000

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	2007 Actual	2008 Estimate	2009 Estimate	2010 Estimate	2011 Estimate	2012 Estimate	2013 Estimate
Autism Research (Army)	0.000	6.240	0.000	0.000	0.000	0.000	0.000
Universal Immunization Tracking System (Army)	0.000	3.120	0.000	0.000	0.000	0.000	0.000
Vanadium Safety Readiness (Army)	0.000	2.925	0.000	0.000	0.000	0.000	0.000
Nutrition Research (Army)	1.067	0.000	0.000	0.000	0.000	0.000	0.000
Muscular Dystrophy Research (Army)	0.000	3.900	0.000	0.000	0.000	0.000	0.000
Bone Marrow Failure Disorder Research (Army)	0.000	0.975	0.000	0.000	0.000	0.000	0.000
Peer Reviewed Post Traumatic Stress Disorder Research (Army)	146.250	0.000	0.000	0.000	0.000	0.000	0.000
Peer Reviewed Traumatic Brain Injury Research (Army)	146.250	0.000	0.000	0.000	0.000	0.000	0.000

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	2007 Actual	2008 Estimate	2009 Estimate	2010 Estimate	2011 Estimate	2012 Estimate	2013 Estimate
Peer Reviewed Burn, Orthopedic, and Trauma Research (Army)	30.907	0.000	0.000	0.000	0.000	0.000	0.000

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: For the Air Force Medical Service elements, the program supports the Research, Development, Test and Evaluation efforts needed to address ongoing and planned Air Force Medical Service modernization initiatives, which are 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 individuals to duty status. Also, enhances 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); Advanced 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.
- 5) 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. Performance optimization efforts will focus on: hydration, nutrition,

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musculoskeleton, fatigue, cognitive, and fitness factors. Orientation and awareness efforts will address: spatial disorientation countermeasures, ocular enhancement, auditory enhancement, and proprioceptive enhancement issues.

6) 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 transport, organ failure and intervention, traumatic brain injury, PTSD, wound care, pain, infection & clinically-based visual acuity/cognitive assessments (operationally-based vision assessment).

7) Counter threats to Humans from improvised Directed Energy (DE) weapons, with emphasis on threat detection, identification, quantification and mitigation, and counter-proliferation covering threat sensing/warning, threat analytics, standoff detection, exposure analysis/assessment.

The Army Medical Command programs for the Deployed Warfighter Protection project that 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.

The Army Medical Command also receives Congressionally directed research programs. The strategy for the FY 08 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 research efforts include programs such as epilepsy prevention after traumatic brain injury, telerobotic and minimally invasive surgery, copper antimicrobial research, stress disorder research initiatives, malaria research, identifying health barriers, gynecological cancer center studies, integrated cardiac health care, advanced military wound healing and treatment, autism research, universal immunization tracking, vanadium safety readiness, peer reviewed medical research, Hawaii federal healthcare network, tuberous sclerosis complex, and muscular dystrophy, and ongoing programs, such as breast, prostate and ovarian cancer research. Because of their congressional annual structure there are no out-year funds programmed.

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For the Navy, Bureau of Medicine and Surgery (BUMED), this program element includes DHP RDT&E funds for operating and miscellaneous support costs at DHP RDT&E laboratories and other installations, facility and civilian personnel costs not directly chargeable to DHP RDT&E projects. Also includes DHP RDT&E funds for DHP RDT&E laboratories and facilities for research, support, equipment and other investment and materiel support costs. This program element excludes military manpower and related costs, non-RDT&E, Navy base operating costs, and military construction costs, which are included in other appropriations.

For the Uniformed Services University of the Health Sciences (USUHS), this program element contains only Congressionally mandated requirements for medical research. Congressionally mandated medical requirements were appropriated as part of the Defense Health Program, beginning in Fiscal Year 1999 National Defense Appropriation Act, for specific medical RDT&E projects; items which have never been programmed by DoD. The Uniformed Services University of the Health Sciences goals for these programs are (1) building a national research infrastructure by funding large, multidisciplinary program projects focused on detection and disease/injury prevention and treatment; (2) conduct 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.

B. PROGRAM CHANGE SUMMARY:

	<u>2007</u>	<u>2008</u>	<u>2009</u>
FY09 Budget Estimate RDT&E	598.128	37.333	38.077
Congressional Special Interest	0.000	389.920	0.000
SBIR	0.000	-10.681	0.000
Transfer	0.000	0.000	0.000
FY09 Budget Submission RDT&E	598.128	416.572	38.077

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PROGRAM CHANGE SUMMARY EXPLANATION:

In FY 2008, increases for Congressional Special Interest less Small Business Innovative Research is as follows: Bone Marrow Failure Disorder Research (\$975K); New National Diabetes Model Program (\$19,500K); Light Emitting Diode Wound Healing of Oral and Cutaneous Lesions (\$3,120K); Preventing Epilepsy after Traumatic Brain Injury (\$1,170K); Telerobotic and Minimally Invasive Surgery at Walter Reed AMC (\$975K); Copper Antimicrobial Research Program (\$2,925K); Stress Disorders Research Initiative at Fort Hood (\$2,652K); Malaria Research (\$1,950K); Fort Jackson Identifying Health Barriers Project (\$2,340K); Gynecological Cancer Center at Walter Reed AMC (\$3,900K); Integrated Cardiac Health Care at Walter Reed AMC (\$3,900K); Advanced Military Wound Healing and Treatment (\$975K); Autism Research (\$6,240K); Universal Immunization Tracking System (\$3,120K); Vanadium Safety Readiness (\$2,925K); Ovarian Cancer Research (\$9,750K); Peer-Review Breast Cancer Research (\$134,550K); Peer-Review Prostate Cancer Research (\$78,000K); Peer-Review Medical Research (\$48,750K); Hawaii Federal Health Network (\$24,375K); Tuberos Sclerosis Complex (TSC) Research (\$3,900K); Muscular Dystrophy Research (\$3,900K); Global HIV/AIDS Prevention (\$7,800K); Pharmacological Countermeasures to Ionizing Radiation (\$3,705K); Integrated Transitional Prostate Disease Research at Walter Reed AMC (\$4,875K); and US Military Cancer Institute at USUHS (\$3,900K).

C. OTHER PROGRAM FUNDING SUMMARY:

	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u>
	<u>Actual</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>
DHP Operation & Maintenance							
BA-1, PE 0807714	4.990	5.521	5.687	2.857	6.033	6.214	6.400

D. ACQUISITION STRATEGY: Not Required

E. PERFORMANCE METRICS: Not Required

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DATE: February 2008
R1 Item Nomenclature: 6
SBIR Program
0605502HP

COST: (Dollars in Thousands)

	2007 Actual	2008 Estimate	2009 Estimate	2010 Estimate	2011 Estimate	2012 Estimate	2013 Estimate
Total PE 0605502	19.307	13.408	0.000	0.000	0.000	0.000	0.000
Small Business Innovative Research (SBIR) for Medical (Army)	15.574	11.216	0.000	0.000	0.000	0.000	0.000
Small Business Innovative Research (SBIR) for IM/IT (Army)	3.733	2.192	0.000	0.000	0.000	0.000	0.000

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: Small Business Innovation Research program was established in the Defense Health Program, Research, Development, Test and Evaluation appropriation during FY 2001, and is funded in the year of execution. The program funds small business proposals chosen to enhance military medical research and information technology research. The focus for this period will be developing new technology-based approaches for near real-time surveillance of the health threats and health status of the Force, for epidemiology research, and for delivery of health education and training. Funds have been transferred from DHP RDT&E programs at the rate of two and one-half percent.

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R1 Item Nomenclature: 6
SBIR Program
0605502HP

B. PROGRAM CHANGE SUMMARY:

	<u>2007</u>	<u>2008</u>	<u>2009</u>
FY09 Budget Estimate RDT&E	17.942	0.000	0.000
SBIR	1.365	13.408	0.000
FY09 Budget Submission RDT&E	19.307	13.408	0.000

PROGRAM CHANGE SUMMARY EXPLANATION: Not Required

C. OTHER PROGRAM FUNDING SUMMARY: Not Required

D. ACQUISITION STRATEGY: Not Required

E. PERFORMANCE METRICS: Not Required

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DATE: February 2008
R1 Item Nomenclature: 7
Information Technology Development
0605013HP

COST: (Dollars in Thousands)

	2007 Actual	2008 Estimate	2009 Estimate	2010 Estimate	2011 Estimate	2012 Estimate	2013 Estimate
Total PE 0605013	145.665	97.099	145.654	88.859	75.322	70.875	59.560
Defense Blood Standard System (DBSS) TMA	0.054	5.668	3.050	2.725	2.205	2.924	2.986
Defense Medical Human Resources System (internet) DMHRSI	4.960	0.525	9.472	1.317	0.000	3.536	2.269
Defense Medical Logistics Standard Support (DMLSS)	2.660	6.478	17.064	17.450	11.618	5.424	4.005
Defense Occupational and Environmental Health Readiness System - Industrial Hygiene (DOEHRs-IH)	0.000	0.220	6.229	4.349	12.431	12.930	0.000
Enterprise Wide Scheduling and Registration (EWS-R)	1.925	5.168	4.387	0.000	0.000	0.000	0.000
Executive Information/Decision Support (EI/DS)	13.420	7.911	2.863	2.318	1.771	0.000	0.000

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	2007 Actual	2008 Estimate	2009 Estimate	2010 Estimate	2011 Estimate	2012 Estimate	2013 Estimate
Expense Assignment System IV (EAS IV)	0.000	0.621	4.834	8.433	0.000	0.000	0.000
Joint Electronic Health Record Interoperability (JEHRI)	6.591	8.784	7.522	5.760	0.000	0.000	0.000
Bethesda Hospital's Emergency Preparedness Partnership (Navy)	1.463	0.000	0.000	0.000	0.000	0.000	0.000
MHS CIO Management Operations	0.957	0.000	0.000	0.000	0.000	0.000	0.000
Military Computer-Based Patient Record (MCPR)	40.357	26.601	7.774	4.794	5.266	2.736	2.796
Patient Accounting System (PAS)	0.000	1.216	11.212	4.582	7.800	7.865	8.402
Patient Safety Reporting (PSR)	0.000	2.292	2.372	2.797	2.943	2.970	3.051
Theater Medical Information Program (TMIP)	23.597	5.134	27.545	12.877	9.773	10.612	13.918
Tricare on Line (TOL)	2.971	0.519	1.462	1.462	1.462	1.488	1.569

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	2007 Actual	2008 Estimate	2009 Estimate	2010 Estimate	2011 Estimate	2012 Estimate	2013 Estimate
Veterinary Service Information Management System (VSIMS)	1.088	0.000	0.000	0.000	0.000	0.000	0.000
Other Related Technical Activities	0.618	0.000	2.795	1.767	1.420	1.296	1.000
TRANSCOM Regulation and Command and Control Evacuation System (TRAC2ES)	5.661	4.356	3.169	0.000	0.000	0.000	0.000
Air Force Integrated Healthcare Toolset (AFIFHCT)	0.487	0.975	1.000	1.000	1.000	1.000	1.000
Assessment Demonstration Center (Air Force)	0.487	1.271	1.511	1.600	1.800	2.000	2.100
Composite Occupational Health & Risk Tracking (COHORT)	0.975	1.170	1.300	1.323	1.438	1.408	1.482
Enterprise Environmental Safety Occupational Health Mgmt Info System (EESOH-MIS/COHORT)	1.268	0.000	0.000	0.000	0.000	0.000	0.000

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	2007 Actual	2008 Estimate	2009 Estimate	2010 Estimate	2011 Estimate	2012 Estimate	2013 Estimate
IM/IT Test Bed	1.170	1.462	1.900	2.200	2.300	2.300	2.300
Integrated Clinical Database (ICDB-AF)	1.463	1.268	0.750	0.500	0.250	0.250	0.250
MHS CIO Management Operation (Navy)	3.730	3.830	3.995	4.075	4.156	4.239	4.323
Assessment & Demo Center for USAF SG (AF)	1.360	0.000	0.000	0.000	0.000	0.000	0.000
Deployment of Environmental and Biological Survey (DEBS)	0.971	0.000	0.000	0.000	0.000	0.000	0.000
Air Force Medical Service Personnel Health Record	1.069	0.000	0.000	0.000	0.000	0.000	0.000
AHLTA (Army)	2.837	0.000	1.467	1.511	1.556	1.603	1.651
Theater Enterprise Wide Logistics System (TEWLS)	7.743	0.000	5.538	0.000	0.000	0.000	0.000
Medical Operational Data System (MODS)	2.692	0.000	7.532	3.201	3.253	3.350	3.450

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	2007 Actual	2008 Estimate	2009 Estimate	2010 Estimate	2011 Estimate	2012 Estimate	2013 Estimate
Defense Occupational Health Readiness System (DOEHRS)(TMA)	0.000	11.630	0.000	0.000	0.000	0.000	0.000
TMA E-Commerce	7.551	0.000	7.211	2.818	2.880	2.944	3.008
Post Traumatic Stress Disorder (PTSD)(TMA)	0.975	0.000	0.000	0.000	0.000	0.000	0.000
Theater Electronics Health Records	0.000	0.000	1.700	0.000	0.000	0.000	0.000
Composite Occupational Health & Operational Risk Tracking System (COHORT)	2.914	0.000	0.000	0.000	0.000	0.000	0.000
Retinal Eye Scan	0.486	0.000	0.000	0.000	0.000	0.000	0.000
RFID Inventory Management and Patient ID (AF)	1.165	0.000	0.000	0.000	0.000	0.000	0.000

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: The MHS centrally-managed IM/IT program is linked to the overall MHS Strategic Plan, the Quadrennial Defense Review (QDR), and supports military medical readiness and MHS transformation. The MHS IM/IT Program ensures compliance with the Federal Enterprise Architecture and the DoD Business Enterprise Architecture through the MHS Enterprise Architecture which is a mapping of all system requirements to one of the four MHS core business processes (Manage the Business, Access to Care, Population Health Management, and Provision of Health Services). The enterprise strategy, which creates a prioritized Portfolio of requirements, incorporates reengineering and business process improvements, use of

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innovative acquisition techniques, integration of commercial off-the-shelf products as well as modular development, where necessary; and integration and/or elimination of legacy systems.

The MHS centrally-managed, IM/IT program includes the following major (Acquisition Category (ACAT) I) initiatives: 1) AHLTA (included in the Military Computer-Based Patient Record (MCPR) initiative) integrates patient data from different times, providers and sites for all Service members, retirees and family members. AHLTA will be a life-long medical record of all illnesses, injuries, exposure and vaccines of the patient; 2) Theater Medical Information Program-Joint (TMIP-J), integrates the military health information systems to ensure timely interoperable medical support for mobilization, deployment and sustainment of all missions. TMIP-J adapts these systems to Theater-specific requirements; 3) Defense Medical Logistics Standard Support (DMLSS), supports the DoD medical logistics needs as an integrated component of the delivery of healthcare and Force Health Protection. DMLSS ensures responsive access to pharmaceuticals, medical supplies, material, facilities, services and data. DMLSS is in sustainment with pre-planned product improvements; and 4) Executive Information/Decision Support (EI/DS), which receives and stores data from MHS systems, processes those data through a variety of business rules, and makes the data available, in various data marts, to managers, clinicians, and analysts for the management of the business of health care. EI/DS is in sustainment with pre-planned product improvements. The Central IM/IT Program also contains funding for ACAT III initiatives such as the following: the Defense Medical Human Resources System (internet) (DMHRSi), the Patient Accounting System (PAS), Defense Blood Standard System (DBSS), TRICARE On Line (TOL), Enterprise Wide Scheduling and Registration (EWS-R), and the Defense Occupational and Environmental Health Readiness System - Industrial Hygiene (DOEHRS-IH). The Joint Electronic Health Record Interoperability (JEHRI), a joint DoD/VA sharing effort, is also included in the Central IM/IT Program for the DoD portion of this effort.

The Army Medical Command focus is to identify, explore, and demonstrate key technologies to overcome medical and military unique technology barriers. FY 2009 funding is programmed for the following development projects to include Army service level support for the Armed Forces Health Longitudinal Technology Application (AHLTA); Theater Enterprise Wide Medical Logistics System (TEWLS) which ties the national, regional, and deployed units into a single business environment to accomplish essential care in the theater through a single customer facing portal; and Medical Occupational Data System (MODS) that provides a responsive and reliable human resource and readiness information management data system for all categories of military and civilian medical and support personnel.

Navy Medical IM/IT service RDT&E funds the development required for those systems that are integral to Navy Medicine (i.e. Shipboard Medical Immunization Tracking and SAMS). Navy Medicine also funds, when appropriate,

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a number of small scale, opportunistic business improvements when the technology makes a sudden advance. These projects are generally not in the scope of the TMA Central Programs. This year Navy Medicine has taken advantage of world wide web (WWW) technology and communications protocols to initiate Navy specific improvements in how we process Special Pays and our Medical Reserve Utilization.

The Air Force Medical Service IM/IT modernization program includes the following initiatives: Air Force - Integrated Clinical Database which integrates disparate systems to provide decision support for Air Force medical clinical and business activities; Composite Occupational Health & Risk Tracking System (COHORT) to monitor disease morbidity factors and alert epidemiologists that an infectious disease could affect a portion of the serviced beneficiary population; AFIF Health Care Tools (AFIFHCT) which provides for rapid integration of advanced toolsets and Air Force Integrated Framework enhancements to address capability gaps; Assessment Demonstration Center (ASC) builds prototypes for concept and technology demonstration applications of various health related activities; IM/IT Test Bed (IMIT-TB) is a dedicated OT location and staff encompassing the entire spectrum of healthcare services and products available in MTFs, to provide risk controlled testing of designated core and interim medical applications in a live environment.

The TMA managed IM/IT program includes the following initiative: Electronic Commerce System (TMA ECS) supports purchases of healthcare for uniformed services beneficiaries. The TRICARE E-Commerce System provides an integrated system for the solicitation, contract award, deliverable tracking, financial accounting, receivables, and payables for the purchased health care.

B. PROGRAM CHANGE SUMMARY:

	<u>2007</u>	<u>2008</u>	<u>2009</u>
FY09 Budget Estimate RDT&E	92.394	87.661	143.954
Congressional Special Interest	0.000	11.928	0.000
Reprogram	53.842	0.000	1.700
SBIR	-0.571	-2.490	0.000
FY09 Budget Submission RDT&E	145.665	97.099	145.654

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PROGRAM CHANGE SUMMARY EXPLANATION:

FY 2007 Internal Reprogramming from DHP O&M to DHP RDT&E included support of three (3) Army projects: Armed Forces Health Longitudinal Technology Application (AHLTA), \$2,910K, Theater Enterprise Wide Logistic System (TEWLS), \$7,941K, and Medical Operational Data System (MODS), \$2,761K; one Navy project, Bethesda Hospital's Emergency Preparedness Partnership, \$1,500K; and six (6) TMA projects: E-Commerce, \$7,745K, Post Traumatic Stress Disorder (PTSD), \$0,975K, Defense Medical Logistics Standard Support (DMLSS), \$2,660K, Executive Information/Decision Support (EI/DS), \$5,168K, Joint Electronic Health Record Interoperability (JEHRI), \$1,569K, and Theater Medical Information Program (TMIP), \$20,613K.

FY 2008 Congressional Special Interest supports TMA's Defense Occupational and Environmental Health Readiness System (DOEHRS), \$11,928.

FY 2009 Internal Reprogramming from DHP O&M to DHP RDT&E to support TMA's Joint Logistics' Theater Electronic Health Record, \$1,700K.

C. OTHER PROGRAM FUNDING SUMMARY:

	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u>
	<u>Actual</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>
DHP Operation & Maintenance	587.765	563.105	626.840	634.172	649.742	652.646	664.846
BA-1, PE 0807724	3.349	3.524	3.709	0.000	0.000	0.000	0.000
BA-1, PE 0807781	25.107	24.664	26.017	17.825	18.199	18.609	19.028
BA-1, PE 0807793	559.309	534.917	597.114	616.347	631.543	634.037	645.818

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DHP Procurement	193.558	169.925	124.719	150.384	159.520	164.105	154.657
BA-3, PE 0807720							
BA-3, PE 0807721	193.558	169.925	124.719	150.384	159.520	164.105	154.657

D. ACQUISITION STRATEGY: Not required

E. PERFORMANCE METRICS: Not required