Appropriation/Budget Activity
Defense Health Program/BA-2

Date: January 2006
R-1 Item Nomenclature: 2
Medical Technology (AFRRI) - 0602787HP

COST ($ in Millions)	**FY 2005 Actual**	**FY 2006 Estimate**	**FY 2007 Estimate**	**FY 2008 Estimate**	**FY 2009 Estimate**	**FY 2010 Estimate**	**FY 2011 Estimate**
Total PE 0602787HP Cost	0.000	3.134	3.236	3.306	3.381	3.417	3.553
Medical Technology/P505 Subtotal Cost	0.000	3.134	3.236	3.306	3.381	3.417	3.553

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.

The program has three primary goals: (1) rational development of prophylactic and therapeutic strategies based on fundamental knowledge of radiation-induced path physiology and on leveraging advances in medicine and biotechnology from industry and academia; (2) development o novel biological markers and delivery for rapid, field-based individual dose assessment; and (3) understanding toxic consequences from exposure to internal contamination from isotopes such as uranium.

B. Program Change Summary:

COST ($ in Millions)	**FY 2005 Actual**	**FY 2006 Estimate**	**FY 2007 Estimate**
FY07 Budget Estimates Submission RDT&E	0.000	3.166	3.236
FY07 President's Budget Submission RDT&E	0.000	3.134	3.236
Total Adjustments	0.000	-0.032	0.000
Congressional Program actions			
Congressional rescissions		-0.032	
Congressional increases			
Reprogramming	0.000	0.000	0.000
SBIR/STTR Transfer			
Internal Transfer			

NOTE: Program transfers effective FY 2006 from RDT&E Defense Agencies, Budget Activity 3, Program Element 0602787D8Z to RDT&E Defense Health Program, Budget Activity 2, Program Element 0602787HP.

C. Other Program Funding Summary: Not applicable.

D. Acquisition Strategy: Not applicable.

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(Continued)

E. Program Accomplishments and Plan:

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 ionizing radiation.

FY 2005 Accomplishments: To address the FDA requirements for an understanding of the mechanisms responsible for 5-AED's radioprotective actions, demonstrated that 5-AED modulates the spleen levels of several cytokines, which mediate signals of the immune system.

By FY 2006 identify at least 6 drugs or therapeutic approaches that are promising for treatment of radiation injury.

By FY 2008 identify at least 2 new biodosimetric approaches to determine individual radiation exposure.

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