

Defense Health Program
 Fiscal Year (FY) 2012 Budget Estimates
 Exhibit R-2, DHP RDT&E Budget Item Justification

Appropriation/Budget Activity
 Defense Health Program/BA: 2

DATE: February 2011
 R1 Item Nomenclature: 5
 Medical Advanced Technology (AFRRI)
 0603002HP

COST: (Dollars in Millions)

	2010 Actual	2011 Estimate	2012 Estimate	2013 Estimate	2014 Estimate	2015 Estimate	2016 Estimate
Total PE 0603002	0.699	0.752	0.767	0.783	0.799	0.815	0.844
Biodosimetry (USUHS)	0.419	0.451	0.460	0.470	0.480	0.489	0.506
Radiation Countermeasures (USUHS)	0.280	0.301	0.307	0.313	0.319	0.326	0.338

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: For the Uniformed Services University of the Health Sciences (USUHS/AFRRI), this program supports 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 0602787HP, 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 (alone or in combination with other injuries) that represent the highest probable threat to US forces in current tactical, humanitarian and counter terrorism mission environments. Findings from basic and developmental research are integrated into 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 medical 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:

	2010	2011	2012	2013
FY12 Budget Estimate RDT&E	0.719	0.752	0.767	0.783
SBIR	-0.020	0.000	0.000	0.000
FY12 Budget Submission RDT&E	0.699	0.752	0.767	0.783

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PROGRAM CHANGE SUMMARY EXPLANATION:

FY 2010: SBIR Transfer from DHP RDT&E, PE 0603002 - Advanced Technology (AFRRI) (-\$0.020 million) to DHP RDT&E, PE 0605502 - Small Business Innovation Research (SBIR) program (+\$0.020 million).

FY 2011: No Change.

FY 2012: No Change.

FY 2013: No Change.

C. **OTHER PROGRAM FUNDING SUMMARY:** None.

D. **ACQUISITION STRATEGY:** Not Required.

E. PERFORMANCE METRICS:

By FY11 - Complete validation of a prototype automated radiation cytome assay; advance the development of progenitor cell bridging therapy; complete validation of multi-parameter biomarker interpretation in mouse and non-human primate.

By FY12 - Apply minipig model to pre-clinical trial of at least one lead candidate countermeasure as final step towards proceeding with an IND application to FDA.

By FY13 - Apply minipig model to pre-clinical trial of at least one additional countermeasure, for isolated radiation injury and for radiation combined injury.