ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2006

BUDGET ACTIVITY

PE NUMBER AND TITLE 5 - System Development and Demonstration

0604807A - Medical Materiel/Medical Biological Defense Equipm

•	•						O			
	COST (In Thousands)	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
	Total Program Element (PE) Cost	19315	16487	14509	15934	35243	33830	15580	0	185181
812	MIL HIV VAC&DRUG DEV	3565	4141	4561	4701	4735	4573	4573	0	33947
832	COMBAT MEDICAL MATL ED	4258	812	3762	5337	14996	14299	5518	0	63830
834	SOLDIER SYS PROT-ED	1010	0	3012	1870	1798	1698	1691	0	17540
849	INFEC DIS DRUG/VACC ED	3390	593	3174	4026	13714	13260	3798	0	48871
A11	LSTAT MEDICAL TECHNOLOGY (CA)	1727	1971	0	0	0	0	0	0	5703
A12	BIOMEDICAL ENGINEERING TECH & ADV MATERIALS (CA)	0	4633	0	0	0	0	0	0	5588
A14	CHITOSAN BANDAGE COMPONENT (CA)	2012	3351	0	0	0	0	0	0	5363
A15	BIOTERRORISM EDUCATION (CA)	957	0	0	0	0	0	0	0	957
A16	CHEMICAL-BIOLOGICAL CASUALTY TREATMENT (CA)	2396	0	0	0	0	0	0	0	2396
MD3	CARTLEDGE INFUSER	0	986	0	0	0	0	0	0	986

A. Mission Description and Budget Item Justification: This program element (PE) funds advanced development of medical materiel within the System Demonstration and Low Rate Initial Production portions of the Acquisition Life Cycle. It supports products successfully transitioned through the Systems Development and Demonstration In-Process Review (IPR). This largely includes Phase 3 human clinical trials, along with related stability and production manufacturing testing for medical pharmaceuticals, biologics, and devices. Added operational testing and evaluation (OT&E) for military unique requirements is evaluated and fulfilled as required.

Disease and non-battle injuries (DNBI) are the largest contributor to the medical footprint. Infectious disease vaccines and preventive drugs reduce the risk of service members' contracting debilitating or fatal diseases, which reduces levels of DNBI affected soldiers - and in turn, negates the requirement for supporting echelon 3 facilities in the theater of operations, as well as mitigates the strain placed on the Army's personnel replacement and logistical systems. This is especially important due to the higher risk posed by the ever expanding urban warfare environments. The reduction of patient evacuation requirements within Future Force (F2) units will act as a force multiplier, due to the retention of uniquely skilled and combat tested soldiers in the theater.

Combat Casualty Care devices and medicines have the major effects of: (1) enhancing forward care at the first responder level and, (2) reducing the medical footprint. The result is a far greater mobile and more easily sustained medical force. The F2 concept places soldiers into a more austere environment with lengthened evacuation times (both arrival and transit). This requires medics and first responders to improve their ability to save lives and extend stabilization. Reduction in weight, cube, and sustainment allows medical units to increase mobility and maintain contact with their supported Units of Action.

Soldier Performance Enhancers in the form of drugs or diagnostics, allow commanders to increase soldiers' cognitive awareness and stamina. This improves soldiers' operational capabilities and has the potential to reduce casualties.

BUDGET ACTIVITY 5 - System Development and Demonstration PE NUMBER AND TITLE 0604807A - Medical Materiel/Medical Biological Defense Equipm The U.S. Army Medical Research and Materiel Command manages this program. Project 812, Military HIV Vaccine and Development funds militarily relevant human immunodeficiency virus (HIV) research. Major contractors/intra-governmental agencies include Cambridge Consultants Corporation, IGR Enterprises, Army Medical Department Board Test Center, and SeQual Technologies, Inc.												
		ense Equipm										
The U.S. Army Medical Research and Materiel Command mana	ges this program.											
Project 812, Military HIV Vaccine and Development funds milit	tarily relevant human immunodeficiency virus (HIV) research.											
	ge Consultants Corporation, IGR Enterprises, Army Medical Department B	oard Test Center, and SeQual										

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit) February 2006 BUDGET ACTIVITY PE NUMBER AND TITLE 5 - System Development and Demonstration 0604807A - Medical Materiel/Medical Biological Defense Equipm FY 2007 FY 2005 FY 2006 B. Program Change Summary Previous President's Budget (FY 2006) 19325 5627 14418 Current BES/President's Budget (FY 2007) 19315 16487 14509 Total Adjustments -10 10860 Congressional Program Reductions -73 Congressional Rescissions -167 Congressional Increases 11100 Reprogrammings -10 SBIR/STTR Transfer Adjustments to Budget Years 91

FY 2006 - Congressional Plus-Up (\$11,100) - Cartledge Infuser (\$1,000); Biothreat Database Program (\$1,000); Oxygen Generation Advanced Development (\$1,700); Battlefield Respirator and Ventilator (BRAV) (\$2,000); Life Support for Trauma and Transport (LSTAT) (\$2,000); Chitosan Bandage Component (\$3,400).

February 2006 **ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)** BUDGET ACTIVITY PE NUMBER AND TITLE **PROJECT** 5 - System Development and Demonstration 0604807A - Medical Materiel/Medical Biological Defense Equipm 812 FY 2005 FY 2007 FY 2008 FY 2009 FY 2010 FY 2011 FY 2006 Cost to Total Cost COST (In Thousands) Estimate Estimate Estimate Estimate Estimate Estimate Estimate Complete 812 MIL HIV VAC&DRUG DEV 3565 4141 4561 4701 4735 4573 4573 33947

A. Mission Description and Budget Item Justification: This project funds Congressionally mandated, militarily relevant human immunodeficiency virus (HIV) medical countermeasures. These funds provide for engineering and manufacturing development of multiple candidate vaccines and drugs to permit large-scale field testing. Development efforts are focused on militarily unique needs affecting manning, mobilization, and deployment.

The major contractor is Henry M. Jackson Foundation for the Advancement of Military Medicine, Rockville, MD.

Accomplishments/Planned Program	FY 2005	<u>FY 2006</u>	<u>FY 2007</u>
In FY05, completed enrollment for the multi-year Phase 3 clinical trial of the Prime-Boost HIV Vaccine in Thailand. In FY06, complete immunizations and enter the observation and follow-up phase of the Phase 3 trial. Conduct a Design Readiness Review. In FY07, continue the observation and follow-up phase of the Phase 3 study in Thailand.	3565	4141	4561
Total	3565	4141	4561

C. Acquisition Strategy Test and evaluate commercially developed vaccine candidates in government-managed trials.

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Exhibit R-2A

Budget Item Justification

Subtotal: Contract Method & Type Performing Activity & Total FY 2005 FY 2005 FY 2006 FY 2006 FY 2007 FY 2007 Cost To Cost	ARMY RDT	&E COST	Γ ANALYSIS	(R3)							Februar	y 2006	
Method & Type	BUDGET ACTIVITY 5 - System Development a	and Demons	tration				eriel/Med	dical Bio	logical D	efense E	quipm		СТ
Agreement Foundation, Rockville, MD Subtotal: 4400 2530 2923 3243 0 10896	I. Product Development	Method &	•			Award		Award		Award			Target Value of Contract
II. Support Costs	Product Development		Foundation, Rockville,	4400	2530		2923		3243		0	10896	0
Method & Type	Subto	otal:	•	4400	2530		2923		3243		0	10896	0
No product/contract costs greater than \$1M individually Subtotal: 233 38 42 45 0 358 Subtotal: 233 38 42 45 0 358 III. Test And Evaluation Contract Method & Location Trype Cost Total Performing Activity & Total Pys Cost Total Date Cost Date FY 2005 FY 2006 FY 2006 FY 2007 Cost Date FY 2007 Cost To Total Cost Date Cost Date Total Pys Cost Total Date III. Test And Evaluation Contract Method & Location Trype Cost Date FY 2005 FY 2006 FY 2006 PY 2007 Cost Date FY 2007 Cost To Total Complete Cost Date Total Pys Cost To Cost Date	II. Support Costs	Method &				Award		Award		Award			Target Value of Contract
III. Test And Evaluation Contract Method & Location Pys Cost Cost Award Complete Pys Cost Cost Award Spring, MD IV. Management Services Contract Method & Contract Cost Method & Cost Method & Cost Method & Cost Method & Cost No				233	38		42		45		0	358	0
Method & Type Cost Cost Award Date Cost Award Date Cost Award Date Cost Award Date Cost Date Cost Cost Cost Date Date Cost Date Da	Subto	otal:	1	233	38		42		45		0	358	0
Test and Evaluation Government Laboratory Institute of Research (WRAIR), Silver Spring, MD Subtotal: 806 927 1092 1180 0 4005 1180 0 4005 1180 0 4005 1180 1180 0 4005 1180 1180 0 4005 1180 1180 0 1180	III. Test And Evaluation	Method &				Award		Award		Award			Target Value of Contract
IV. Management Services Contract Method & Location Performing Activity & Total Perfor	Test and Evaluation	Government	Institute of Research (WRAIR), Silver	806	927	Date	1092	Date	1180	Date	0	4005	0
Method & Location PYs Cost Cost Award Cost Award Cost Award Complete Cost V Date Date Date	Subto	otal:		806	927		1092		1180		0	4005	0
71	IV. Management Services	Method &				Award		Award		Award			Target Value of
	No product/contract costs greater	Туре		165	70	Date	84	Date	93	Date	0	412	Contract 0

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Exhibit R-3 ARMY RDT&E COST ANALYSIS

ARMY RDT&	E COST ANALY	SIS (R3)				February 2006				
BUDGET ACTIVITY 5 - System Development and	d Demonstration	PE NUMBER 0604807A		ateriel/Medical B	iological Defense	Equipm	PROJECT 812			
han \$1M individually										
Subtotal:		165	70	84	93	0	412			
Project Total Cos	:	5604	3565	4141	4561	0	15671			
	•	0001		1 1212	1002		10071			

Schedule Profile (R4 Ex	khibit)									Feb	ruary	20	06		
BUDGET ACTIVITY		PE NUMBE											ROJEC	СТ	
5 - System Development and Demonstr	ration	0604807A	A - Medi	ical N	Materiel/Med	dical B	iologi	cal De	efense l	Equip	m	8	12		
Event Name		FY 05	FY 06		FY 07	-	08		Y 09		FY 10			Y 11	
(1) HIV Vaccine	1		1 2 3	4	1 2 3 4	1 2	3 4	1 2	3 4	1	2 3	4	1 2	2 3	3
	Design	eadiness Revie													

Schedule Detail (R4a Exhibit)					Fe	bruary 200	6
BUDGET ACTIVITY 5 - System Development and Demonstration	 MBER AND TI 807A - Med		PROJECT Defense Equipm 812				
Schedule Detail	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	FY 2008	<u>FY 2009</u>	<u>FY 2010</u>	FY 2011
HIV Vaccine Design Readiness Review (DRR)		2Q					

	ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit) February 2006												
BUDGET ACTIVITY 5 - System Development and Demonstration PE NUMBER AND TITLE 0604807A - Medical Materiel/Medical Biological Defense Equipm 832													
	COST (In Thousands)	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost			
832	COMBAT MEDICAL MATL ED	4258	812	3762	5337	14996	14299	5518	0	63830			

A. Mission Description and Budget Item Justification: This project funds technical development of candidate medical products for the advancement of combat casualty care, especially far forward on the battlefield with first responders, combat lifesavers, and field medics. This primarily funds Phase 3 human clinical trials or mechanical engineering evaluations for efficacy of devices or biologics unique to military operational requirements. This work is frequently completed through a joint laboratory and contractor team with the contractor obtaining ultimate U.S. Food and Drug Administration (FDA) licensure. These products (enhanced location and diagnostic devices of patients and more potent resuscitative biologics) will decrease mortality rates and increase soldiers' morale and willingness to place themselves in danger. Additionally, several products, Dental Field Treatment and Operating System (DEFTOS), Ventilated Assist Device, and Oxygen Generator will reduce medical organizational sustainment footprint through smaller weight and cube or equipment independence from supporting materiels. Priority is given to those products that provide the greatest clinical benefit balanced with the technical and financial risks.

Major contractors/intra-governmental agencies include: Bell Dental Inc., Cambridge Consultants Corporation, IGR Enterprises, Army Medical Department Board Test Center, Smisson-Cartledge Biomedical, SeQual Technologies, Inc., and Enginivity, Inc.

Accomplishments/Planned Program	FY 2005	FY 2006	FY 2007
Conduct testing & milestone reviews for the following field medical treatment and treatment aid devices: (1) Dental Field Treatment & Operating System (DEFTOS): In FY05, deployed first 30 units of production item to IRAQ. Conducting a long term user evaluation.(2) Thawed Blood Processing System (TBPS): In FY05, terminated development program. (3) Ceramic Oxygen Generator (COG): In FY05, fabricated first portable Oxygen Generator prototype. In FY06, conduct user and technical testing and conduct Milestone B review. In FY07, develop the engineering pre-production prototype and obtain FDA clearance. (4) Rotary Valve Pressure Swing Adsorption Oxygen Generator (RVPSAOG): In FY05, reduced oxygen generator weight and size. Determined current air compressor unsuitable. Found potentially more reliable candidate. In FY06, conduct Milestone B in-progress review. Develop engineering pre-production prototype and conduct technical and user testing and evaluation. In FY07, conduct Milestone C in-progress review. Initiate low rate production. (5) Ventilatory Assist Device (VAD): In FY05, conducted technical and user testing, made required modifications, and held Milestone C in-progress review. Supported the fielding process. (6) Cartledge Infuser (CI): In FY05, finalized prototype design. In FY06 conduct technical/user testing, and obtain FDA clearance for infuser system. FY07, conduct Milestone C. (7) Battery Powered IV Fluid Warmer: In FY07, develop engineering model, conduct user evaluation and conduct Milestone C.	4258	812	3762
Total	4258	812	3762

<u>C. Acquisition Strategy</u> Evaluate commercially developed materiel in government-managed trials.

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719 Budget Item Justification

ARMY RDT&	E COST	Γ ANALYSIS	(R3)							February	y 2006	
BUDGET ACTIVITY			PE NUMBI	ER AND TI	ΓLE						PROJE	CT
5 - System Development an	nd Demons	tration	0604807	A - Medi	ical Mate	eriel/Med	lical Biol	logical E	Oefense E	quipm	832	
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost		Cost To Complete	Total Cost	Target Value of Contract
Rotary Valve Pressure Swing Adsorption oxygen Generator		Sequal Technologies,Inc., San Diego, CA	482	1298		413		800		0	2511	C
Cartledge Infuser		Smisson-Cartledge Biomedical L.L.C., Macon, GA	3110	0		0		0		0	3110	C
Subtota	ւլ:		3592	1298		413		800		0	5621	C
II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	Date		Total Cost	Value of Contrac
Not Applicable			0	0		0		0		0	0	C
Subtota	11:		0	0		0		0		0	0	С
III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Not Applicable			0	0		0		0		0	0	C
Subtota	ıl:		0	0		0		0		0	0	C
IV. Management Services	Contract Method &	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award	FY 2006 Cost	FY 2006 Award	FY 2007 Cost	FY 2007 Award	Cost To	Total Cost	Targe Value of
	Туре				Date		Date		Date	7		Contrac
No product/contract costs greater than \$1M individually			11753	2960		399		2962		Continue	0	C

0604807A (832) COMBAT MEDICAL MATL ED Item No. 113 Page 10 of 23 720

Exhibit R-3 ARMY RDT&E COST ANALYSIS

ARMY RDT&E COST ANAL	LYSIS (R3)	S (R3)						
BUDGET ACTIVITY 5 - System Development and Demonstration	PE NUMBER AND TITLE 0604807A - Medical Ma	ateriel/Medical B	iological Defen	se Equipm	PROJECT 832			
Subtotal:	11753 2960	399	2962	Continue	0			
Project Total Cost:	15345 4258	812	3762	Continue	5621			

Schedule Profile (R4 Exhibit	()							February 20	106			
BUDGET ACTIVITY 5 - System Development and Demonstration			PE NUMBER AND TITLE 0604807A - Medical Materiel/Medical Biological Defense Equipm PROJECT 832									
Event Name	1	FY 05 2 3	4 1	FY 06 1 2 3 4	FY 07 1 2 3 4	FY 08 1 2 3 4	FY 09 1 2 3 4	FY 10 1 2 3 4	FY 11 1 2 3			
(1) Ceramic Oxygen Gen Sys, (2) Ceramic Oxygen GenSys		2 3	1000000000000	1 2 3 4 MS B 1	1 2 3 4 MS C 2	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3			
(3) Ventilatory Assist Device	MS C	3										
4) Rotary Valve Press Swing Oxy, (5) Rotary Valve Press			N	MS B	MS C 5							
(6) Cartledge Infuser	50 00 00 00 00 00 00 00 00 00 00 00 00 0				MS C 6							
(7) Battery Powered Iv Fld Warm, (8) Battery Powered Iv			1	MS B 7	MS C							

February 2006 Schedule Detail (R4a Exhibit) BUDGET ACTIVITY PROJECT PE NUMBER AND TITLE 5 - System Development and Demonstration 832 0604807A - Medical Materiel/Medical Biological Defense Equipm Schedule Detail FY 2005 FY 2006 FY 2007 FY 2008 FY 2009 FY 2010 FY 2011 Dental Field Treatment and Operating System (FRPND) Ceramic Oxygen Generator Systems (MS B); (MS C) 3Q 4Q Rotary Valve Pressure Swing Oxygen (MS B); (MS C) 4Q 3Q Ventilatory Assist Device (MS C) 2Q Cartledge Infuser (MS C) 3Q

3Q

3Q

Battery Powered IV Fluid Warmer (MS B, MS C)

February 2006 **ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)** BUDGET ACTIVITY PE NUMBER AND TITLE **PROJECT** 5 - System Development and Demonstration 0604807A - Medical Materiel/Medical Biological Defense Equipm 834 FY 2005 FY 2008 FY 2009 FY 2011 FY 2006 FY 2007 FY 2010 Cost to Total Cost COST (In Thousands) Estimate Estimate Estimate Estimate Estimate Estimate Estimate Complete 834 SOLDIER SYS PROT-ED 1010 0 3012 1870 1798 1698 1691 17540

A. Mission Description and Budget Item Justification: This project supports system development and demonstration of preventive medicine materiels to include devices, medicines in order to provide protection, sustainment, and enhancement of the physical and psychological capabilities of soldiers engaged in combat operations across varied environmental conditions. The focus is on reduction of personnel losses due to preventable disease and non-battle injuries through development of environmental and physiological performance monitors and other preventive medicine countermeasures.

A major contractor is Allermed Laboratories, Inc., San Diego, CA.

Accomplishments/Planned Program	FY 2005	FY 2006	FY 2007
In FY05, funded the Air Worthiness Certification of the Special Medical Emergency Evacuation Device (SMEED) and Life Support for Trauma and Transport (LSTAT) Next Generation. FY07, begin the development of coliform analyzer. Conduct Milestone B.	279	0	3012
In FY05, began termination phase of contract for Leishmania skin tests.	731	0	0
Total	1010	0	3012

C. Acquisition Strategy Test and evaluate in-house and commercially developed vaccine candidates in government-managed trials to meet FDA requirements.

0604807A (834) SOLDIER SYS PROT-ED Item No. 113 Page 14 of 23 724

Exhibit R-2A Budget Item Justification

ARMY RDT&	EE COST	T ANALYSIS	(R3)							February	2006	
BUDGET ACTIVITY 5 - System Development a	nd Demons	tration	PE NUMBI 0604807			eriel/Med	lical Bio	logical D	efense E	quipm	PROJEC 834	СТ
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
No product/contract costs greater than \$1M individually			1834	483		0		1439		0	3206	C
Congressional Add in Support of Chem-Bio Protection			4550	0		0		0		0	4550	C
Subtot	al:		6384	483		0		1439		0	7756	C
II. Support Costs No product/contract costs greater	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
than \$1M individually				-								
Subtot	al:		42	32		0		89		0	163	C
W. W. A. 15. 1		D 0 1 4 1 1 1 0		TV 2005	FV 2005	FT. 200 c	FW 2006	EN 2005	EV 2005	G . T		
III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
No product/contract costs greater than \$1M individually			241	239		0		545		0	1025	C
Subtot	al:		241	239		0		545		0	1025	C
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
No product/contract costs greater than \$1M individually			645	256		0		939		0	1840	C

0604807A (834) SOLDIER SYS PROT-ED Item No. 113 Page 15 of 23 725

Exhibit R-3 ARMY RDT&E COST ANALYSIS

ARMY RDT&E COST ANALY	SIS (R3)			February	2006	
BUDGET ACTIVITY 5 - System Development and Demonstration	PE NUMBER AND TITLE 0604807A - Medical Ma	teriel/Medical B	iological Defense l	Equipm	PROJECT 834	
Subtotal:	645 256	0	939	0	1840	
Project Total Cost:	7312 1010	0	3012	0	10784	

Schedule Profile (R4 Exhibit)																		Feb	rua	ry 2	006					
BUDGET ACTIVITY 5 - System Development and Demonstration		PE NUM 060480				Ma	teri	iel/I	Med	dica	al B	Siol	ogio	cal I	PROJECT 834											
Event Name		FY 05		FY (\vdash	FY					08			FY				FY 1	-			7 11			
(1) Coliform Analyzer	1	2 3 4	4 1		3 4 MS B	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3 4	1	2	3			
(1) Comorni Analyzei				1	MS B	1																				

Schedule Detail (R4a Exhibit)					Fe	bruary 200	6
BUDGET ACTIVITY 5 - System Development and Demonstration	 MBER AND TI 807A - Med		el/Medical]	Biological I	Defense Equ	0.0	ОЈЕСТ 4
Schedule Detail	FY 2005	FY 2006	FY 2007	<u>FY 2008</u>	<u>FY 2009</u>	FY 2010	<u>FY 2011</u>
Coliform Analyzer (MS B)			1Q				

•	ARMY RDT&E BUDGET IT	TEM JU	STIFIC	ATION	(R2a Ex	khibit)]	February 2	2006
	TT ACTIVITY stem Development and Demonstration		PE NUMBER A 0604807A •		/lateriel/M	edical Bio	logical Defe	ense Equip		DJECT)
	COST (In Thousands)	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
849	INFEC DIS DRUG/VACC ED	3390	593	3174	4026	13714	13260	3798	0	48871

A. Mission Description and Budget Item Justification: This project funds technical development of candidate medical countermeasures for infectious diseases that occur within militarily relevant areas of the world. These products fall within three major areas: vaccines, drugs, and diagnostic kits. The funds support Phase 3 human clinical trials for large-scale efficacy testing, long-term animal studies, and related manufacturing tests. This work, which is jointly performed by military laboratories and civilian contracted pharmaceutical firms, is directed toward the prevention of disease, early diagnosis if contracted, and speeding recovery once diagnosed. These trials are required to meet U.S. Food and Drug Administration (FDA) regulatory approval guidance, a mandatory obligation for all military products placed into the hands of medical providers or service members. Priority is based upon four major factors: the extent of the disease within the Combatant Command's theater of operations, the clinical severity of the disease, the technical maturity of the proposed solution, and the affordability of the solution (development and production). Consequently, malaria, dysentery, hepatitis, and dengue diseases (which are found in Central Command, European Command, Southern Command, and Pacific Command areas) rise to the top of the requirement list.

Accomplishments/Planned Program	FY 2005	FY 2006	FY 2007
Clinical trials, developmental testing, and appropriate reviews of malarial/antimalarial vaccines, drugs, and diagnostics: In FY05, continued the FDA-mandated Phase 1 safety trial of the Antimalarial Drug, Tafenoquine; with user approval, shifted the acquisition strategy for Tafenoquine to development for acute treatment and post-exposure prophylaxis of Plasmodium vivax malaria. In FY06, complete mandated Phase 1 safety trial, conduct a Design Readiness Review to re-baseline product development plan for tafenoquine and initiate the necessary clinical field trials to bring Tafenoquine to FDA licensure. In FY07, continue field testing of Tafenoquine.	2955	510	3042
Prepare for conducting clinical studies, trials, and appropriate reviews of grouped vaccines, drugs, and diagnostics (Hepatitis E Vaccine, Combined Camouflage Face Paint/Insect Repellent): In FY05, completed data analysis of the Hepatitis field trial and met with industry partner to determine future development strategy. Contractor for the Combined Camouflage Face Paint/Insect Repellent (CCFP) completed pre-clinical testing of the new stick formulation. In FY06, conduct a Design Readiness Review (DRR) to re-baseline Hepatitis E development based on agreement with industry partner. Conduct a DRR for the CCFP and initiate clinical testing of the new CCFP formulation. In FY07, complete clinical testing and data analysis for the CCFP.	435	83	132
Total	3390	593	3174

<u>C. Acquisition Strategy</u> Test and evaluate in-house and commercially developed products in government-managed trials to meet FDA requirements and Environmental Protection Agency registration.

0604807A (849) INFEC DIS DRUG/VACC ED Item No. 113 Page 19 of 23

ARMY RDT&	E COST	T ANALYSIS	(R3)							February	7 2006	
BUDGET ACTIVITY 5 - System Development a	nd Demons	tration	PE NUMBE 0604807	ER AND TI		eriel/Med	lical Biol	ogical D	efense E	quipm	PROJEC 849	СТ
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
No product/contract costs greater than \$1M individually			5791	1247		206		1094		Continue	7185	Continue
Subtot	al:		5791	1247		206		1094		Continue	7185	Continue
II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
No product/contract costs greater than \$1M individually			440	70		71		63		Continue	644	Continue
Subtot	al:		440	70		71		63		Continue	644	Continue
III. Test And Evaluation	Contract	Performing Activity &	Total	FY 2005	FY 2005	FY 2006	FY 2006	FY 2007	FY 2007	Cost To	Total	Target
	Method & Type	Location	PYs Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Complete	Cost	Value of Contract
No product/contract costs greater than \$1M individually			8839	1506		173		1474		Continue	10211	Continue
Subtot	al:		8839	1506		173		1474		Continue	10211	Continue
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
No product/contract costs greater than \$1M individually			2399	567		143		543		Continue	3652	Continue
than \$111 mar radally												

0604807A (849) INFEC DIS DRUG/VACC ED Item No. 113 Page 20 of 23 730

Exhibit R-3 ARMY RDT&E COST ANALYSIS

ARMY RDT&E COST ANALY	SIS (R3)			February	2006	
BUDGET ACTIVITY 5 - System Development and Demonstration	PE NUMBER AND TITLE 0604807A - Medical	Materiel/Medical I	Biological Defen	se Equipm	PROJECT 849	
Project Total Cost:	17469 3390	593	3174	Continue	21692 Con	tinue

Schedule Profile (R4)	Exhibit)																		Fel	oru	ary	20	06		
BUDGET ACTIVITY 5 - System Development and Demoi			E NUMB				Ma	iteri	iel/	Med	dica	al I	Biol	ogi	cal l	Def	ens	e E	qui	pm	l		ROJI 49	ECT	
Event Name	_		Y 05	1	FY 0		_	FY		1	1	-	7 08		1 1	FY		4	1	FY	-	4	t t	FY	
(1) Malaria Rapid Diagnostic Device	1		3 4 IS C 1	1	2 3	3 4	1	2	3	4	1		3	4	1	2	3	4	1	2	3	4	1	2	3
2) Tafenoquine Antimalarial Drug	Design Rea <mark>di</mark>	iness	Review	2																					
3) Comb Camoufl Face Paint/Insect Rep	Design Rea <mark>di</mark>	iness	Review	3																					
4) Hepatitis E Vaccine	Design Rea <mark>di</mark>	iness	Review	A																					
	98 588 98 59 98 59 98 50 98 50 98 50																								
	10 00 00 00 00 00 00 00 00 00 00 00 00 0																								
	20 50 50 50 50 50 50 50 50 50 50 50 50 50																								
	2 000 2 000 2 000 2 000																								

February 2006 Schedule Detail (R4a Exhibit) BUDGET ACTIVITY PROJECT PE NUMBER AND TITLE 5 - System Development and Demonstration 849 0604807A - Medical Materiel/Medical Biological Defense Equipm Schedule Detail FY 2005 FY 2006 FY 2007 FY 2008 FY 2009 FY 2010 FY 2011 Malaria Rapid Diagnostic Device (MS C) 4Q Tafenoquine antimalarial drug Design Readiness Review (DRR) 1Q Combined Camouflage Face Paint/Insect Repellent (DRR) 1Q Hepatitis E Vaccine (DRR) 1Q

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