Exhibit R-2a, RDT&E Project Justification							Date: February 2003	
Appropriation/Budget Activity RDT&E, D BA 1				Project Name and Number *** Force Health Protection Research, PE 0601105D8Z**				
Cost ($ in millions)	FY 2002	FY 2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
Force Health Protection Res./ P105	36.442	14.787	0	0	0	0	0	0

A. Mission Description and Budget Item Justification:

*** Beginning in FY2004, Force Health Protection Research program management and execution responsibilities will be transferred to the Army under PE-0601105A and will result in a more appropriate policy-level role for OSD.**

(U) Force Health Protection Research seeks to enhance the protection of Service members against health threats in military deployments both by increasing our understanding of military health issues and by applying the findings from a decade of research on the etiology and treatment of Gulf War illnesses (GWI). This program is conducted in close coordination with the Department of Veterans Affairs. The program is divided into 5 thrust areas: (1) global health monitoring (Defense Technology Objective MD.25); (2) health behavior interventions (DTO MD.24); (3) health risk communication, (4) health risk assessment methods, and (5) medical materiel safety.

B. Accomplishments/Planned Program

	FY 2002	FY 2003	FY 2004	FY 2005
Global Health Monitoring (thrust 1)	5.750	3.000	0	0

(U) Develops methods to follow overall health status of service members from recruitment through deployment cycles, and after military careers into the VA health care system. The goal is to identify and incorporate the fewest robust indicators necessary to establish reliable baseline health status, including mental health, and pick up early changes that may signal occupational- or deployment-related health threats, leading to the earliest possible detection and intervention. Keystone studies are the Millennium Cohort Study (MCS) and the Recruit Assessment Program (RAP). A stratified sample of over 70,000 service members across all services has been successfully recruited and assessed in the MCS for the first time point in a 22-year longitudinal study with recurring samplings (the military equivalent of a "Framingham" study). The RAP survey was reviewed by the Armed Forces Epidemiology Board and is being refined and further tested based on their recommendations prior to DoD-wide implementation. These and other projects at the Center for Deployment Health Research are the basis of Defense Reliance Biomedical DTO MD.25.

	FY 2002	FY 2003	FY 2004	FY 2005
Health Behavior Interventions (thrust 2)	3.292	2.500	0	0

(U) Develops and demonstrates cost-effectiveness of bio-behavioral training strategies to modify individual health risk factors important to military readiness. Four health risk factors are targeted: alcohol abuse, tobacco use, unintended pregnancy/sexually transmitted diseases, and weight management. Demonstrated effectiveness of a program to prevent unintended pregnancy and STD in high-risk female recruits from a preliminary view of unblinded 3-year study data; data analysis will continue in the next year and is expected to produce landmark findings and economic analysis of intervention options. Developed a DoD database concept for weight management monitoring required in revised DoDI 1308.3 and initiated major DoD collaborative studies on the effectiveness of internet-based weight management (USAF, Army, Pennington Biomedical Research Center)--data from initial studies are required for specific Service and DoD policy formulations within the next year; longitudinal studies will continue. Initiated field tests by Navy researchers of innovative programs that incorporate command influence and community involvement to modify alcohol abuse in Marine Corps aviation community and to prevent smoking recidivism in new Marine Corp recruits. These projects form Defense Reliance Biomedical DTO MD.24.

Exhibit R-2a, RDT&E Project Justification (continued, page 2 of 3)							Date: February 2003	
Appropriation/Budget Activity RDT&E,D BA 1				Project Name and Number **Force Health Protection Research, PE 0601105D8Z**				
Cost ($ in millions)	FY 2002	FY 2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
Force Health Protection Research/ P105	36.442	14.787	0	0	0	0	0	0

B. Accomplishments/Planned Program (continued from page 1)

	FY 2002	FY 2003	FY2004	FY2005
Health Risk Communication (thrust 3)	21.000	6.814	0	0

(U) Determines the impact of command influence and other sources or methods of providing health risk information, as well as the role of perceptions on the well-being and effectiveness of service members. A current solicitation for new starts calls for studies to discover overarching principles, specific to the military environment, for how leaders most effectively communicate with service members to ensure that they have both the information they need and confidence in it. Related efforts already underway in Army deployments are studying soldier resilience and approaches to psychologically prepare them for uncertainties and adverse experiences. Congressionally directed funding in this line supports new efforts to find objective neurobiological markers of Chronic Multi-Symptom Illnesses (including undiagnosed Gulf War Illnesses symptoms) at University of Michigan ($6 million) and University of Texas Southwestern Medical Center ($5 million). A competitively awarded project is underway at the VA Medical Center (San Francisco) to study the relationship between noninvasive measures of brain biochemistry and Gulf War veteran symptoms ($5 million) and this project will expand neuroimaging diagnostic methods. The Department has been directed in the FY 2003 Congressional authorization language to continue efforts to discover the impact of stress on postdeployment health.

	FY 2002	FY 2003	FY2004	FY2005
Health Risk Assessment (thrust 4)	3.400	2.000	0	0

(U) Builds on Gulf War Illnesses research to identify environmental health risks important to postdeployment health of military forces, using modern technologies such as toxicoproteomics to systematically discover and devise field-expedient detection and monitoring methods suitable to assessment of human health risks from exposure to complex mixtures. The emphasis is on reliable detection of threats to biological systems (e.g., bioassay-based responses, rather than physical or chemical detection of uncertain biological significance). The first objective is to determine fundamental mechanisms and their most reliable indicators for classes of induced hazards in biological systems (e.g., long-term neurotoxic threats, reproductive toxicity, developmental hazards, carcinogenicity, etc.) and individual human variability in susceptibilities. Efforts center on “orphan” environmental/occupational military hazards such as mixtures of toxic industrial chemicals, radiofrequency radiation, and interactions of the two. Recent progress in competitively awarded projects identified biomarkers and evaluated toxicity of specific Gulf War deployment health hazards; e.g., biomarkers of permethrin exposure; establishment of key enzyme systems induced by each of several neurotoxic compounds and studies of their interactions; and neurotoxic and immunotoxic effects of depleted uranium. New efforts planned for FY 2003 include a toxicogenomics initiative (Army, USAF, NATO collaborations) and joint investigation of new emerging RFR threats (Army, Navy). A four year effort on Leishmania was successfully completed in FY 2002 and new diagnostic tests have transitioned to medical advanced development; a new follow-on program in medical entomology has been initiated.

Exhibit R-2a, RDT&E Project Justification (continued, page 3 of 3)							Date: February 2003	
Appropriation/Budget Activity RDT&E,D BA 1				Project Name and Number ***Force Health Protection Research, PE 0601105D8Z**				
Cost ($ in millions)	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006[1]	FY 2007	FY 2008	FY 2009
Force Health Protection Research/ P105	36.442	14.787	0	0	0	0	0	0

B. Accomplishments/Planned Program (continued from page 2)

	FY 2002	FY 2003	FY 2004	FY 2005
Medical Materiel Safety (thrust 5)	3.000	0.473	0	0

(U) Builds on Gulf War Illnesses research to improve safety testing of medical materiel before use in operational environments where interactions with deployment stressors may produce previously unanticipated effects. Significant progress was made on the understanding of individual variations in responses to pyridostigmine bromide and interactions with other chemicals and exposures (20+ projects completed or nearing completion). Individual variation in cholinesterase expression and cholinergic responses continue to be investigated. Postulated effects of psychological and thermal stress on the blood brain barrier, which could produce unwanted neuropsychological responses to some drugs, have not been borne out in several recently completed projects. New starts include an investigation of the relationship between elevated titers of squalene antibodies and undiagnosed symptoms in U.S. Gulf War veterans and a follow-on project to understand the impact of multiple immunizations and health symptoms in deployed U.K. soldiers.

*** Beginning in FY2004, Force Health Protection Research, PE 0601105D8Z will be transferred to the Army under PE-0601105A**

C. Other Program Funding Summary: N/A

D. Acquisition Strategy. N/A

E. Major Performers:

Naval Health Research Center, San Diego, California. Primary performer in thrust areas (1) and (2), with significant contributions to all areas of this program. This includes the DoD Center for Deployment Health Research, which is the coordinating center for all DoD postdeployment health epidemiology research.

University of Michigan, Ann Arbor, Michigan. Recipient of Congressional-directed funding in FY 2001 and FY 2002 totaling $12 million for cooperative agreement grant on investigation of Chronic Multi-Symptom Illnesses (CMI) that will substantially advance understanding of the neurobiology of stress and health (award amendment to be completed by 9/02).

University of Texas, Southwestern Medical Center, Dallas, Texas. Recipient of Congressionally-directed funding in FY 2001 and FY 2002 totaling $10 million for cooperative agreement grant on Gulf War Illnesses research including development of a neuroimaging center. Science program to be reviewed by the National Institutes of Neurological Disorders and Stroke but with program management by DoD (awarded 7/02).