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| Exhibit R-2, PB 2011 Army RDT&E Budget Item Justification | | | | | | | | | DATE: February 2010 | | |
|--|-------------------|---------------------|-----------------------------|---|------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------|
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | | | | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | | | | | | | |
| COST (\$ in Millions) | FY 2009 Actual | FY 2010 Estimate | Base FY 2011 Estimate | OCO FY 2011 Estimate | Total FY 2011 Estimate | FY 2012 Estimate | FY 2013 Estimate | FY 2014 Estimate | FY 2015 Estimate | Cost To Complete | Total Cost |
| Total Program Element | 329.258 | 339.752 | 71.510 | 0.000 | 71.510 | 63.808 | 66.765 | 69.888 | 74.743 | 0 | 1,087.234 |
| 800: <i>TELEMEDICINE TESTBED</i> | 3.965 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Continuing | Continuing |
| 804: <i>PROSTATE CANCER RSCH</i> | 2.391 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Continuing | Continuing |
| 810: <i>IND BASE ID VACC&DRUG</i> | 21.511 | 20.291 | 18.185 | 0.000 | 18.185 | 18.544 | 18.771 | 19.957 | 21.101 | Continuing | Continuing |
| 814: <i>NEUROFIBROMATOSIS</i> | 9.967 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Continuing | Continuing |
| 819: <i>FLD MED PROT/HUM PERF</i> | 1.217 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Continuing | Continuing |
| 840: <i>COMBAT INJURY MGMT</i> | 29.608 | 43.766 | 44.004 | 0.000 | 44.004 | 34.599 | 35.207 | 36.160 | 36.920 | Continuing | Continuing |
| 938: <i>Tissue Engineering</i> | 1.196 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Continuing | Continuing |
| 945: <i>BREAST CANCER STAMP PROCEEDS</i> | 1.459 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Continuing | Continuing |
| 955: <i>ASSISTIVE TECHNOLOGY</i> | 2.392 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Continuing | Continuing |
| 97A: <i>BIOSENSOR RESEARCH</i> | 0.796 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Continuing | Continuing |
| 97B: <i>BLOOD SAFETY</i> | 1.595 | 2.388 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Continuing | Continuing |
| 97D: <i>CENTER FOR AGING EYE</i> | 1.596 | 2.388 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Continuing | Continuing |
| 97T: <i>NEUROTOXIN EXPOSURE TREATMENT</i> | 24.918 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Continuing | Continuing |
| FH4: <i>FORCE HEALTH PROTECTION - ADV TECH DEV</i> | 2.006 | 1.953 | 1.974 | 0.000 | 1.974 | 2.006 | 2.039 | 2.075 | 2.107 | Continuing | Continuing |
| MB1: <i>ADV DIAGNOSTICS & THERAPEUTIC DIG TECH</i> | 0.000 | 1.591 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Continuing | Continuing |
| MB2: <i>BRAIN, BIOLOGY, AND MACHINE</i> | 1.595 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Continuing | Continuing |

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| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | | | | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | | | | | | | |
| MB3: CENTER FOR INTEGRATION OF MEDICINE & INNOV TECH | 7.973 | 8.953 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Continuing | Continuing |
| MB4: CENTER FOR UNTETHERED HEALTHCARE | 0.997 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Continuing | Continuing |
| MG5: NATIONAL FUNCTIONAL GENOMICS CENTER (CA) | 5.980 | 5.969 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Continuing | Continuing |
| MG7: ON-LINE MEDICAL TRAINING (CA) | 2.791 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Continuing | Continuing |
| MI4: ALLIANCE FOR NANOHEALTH (CA) | 3.190 | 3.979 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Continuing | Continuing |
| MJ2: FIBRINOGEN BANDAGES FOR BATTLEFIELD WOUNDS (CA) | 2.990 | 2.388 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Continuing | Continuing |
| MK1: MEDICAL M&S THROUGH SYNTHETIC DIGITAL GENES (CA) | 0.996 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Continuing | Continuing |
| MK8: PLASMA STERILIZER (CA) | 3.189 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Continuing | Continuing |
| ML3: SOLDIER-MOUNTED EYE-TRACKING & CONTROL SYSTEM (CA) | 4.983 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Continuing | Continuing |
| MM1: WEIGHT MEASUREMENTS & STANDARDS FOR MIL PERSONNEL | 1.995 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Continuing | Continuing |
| MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | 187.962 | 239.536 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Continuing | Continuing |
| MM3: WARFIGHTER MEDICAL PROTECTION & PERFORMANCE STDS | 0.000 | 6.550 | 7.347 | 0.000 | 7.347 | 8.659 | 10.748 | 11.696 | 14.615 | Continuing | Continuing |
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| Exhibit R-2, PB 2011 Army RDT&E Budget Item Justification | | DATE: February 2010 |
| APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 3: <i>Advanced Technology Development (ATD)</i> | | R-1 ITEM NOMENCLATURE PE 0603002A: <i>MEDICAL ADVANCED TECHNOLOGY</i> |
| <u>A. Mission Description and Budget Item Justification</u> This program element (PE) supports development of advanced medical technologies to mature medical technology (drugs, vaccines, medical devices, and diagnostics) and doctrine to effectively protect and improve the survivability of US Forces across the entire spectrum of military operations. Tri-Service coordination and cooperative efforts are focused in four principal medical areas: Combat Casualty Care, Military Operational Medicine, Militarily Relevant Infectious Diseases, and Clinical and Rehabilitative Medicine. During this phase of development, promising medical technologies are refined and validated through extensive testing, which is closely monitored by the US Food and Drug Administration (FDA) and Environmental Protection Agency (EPA), as part of their processes for licensing new medical products for use in. The FDA requires medical products to undergo extensive pre-clinical testing in animals and/or other models to obtain preliminary efficacy and toxicity information, before they can be tested in humans (clinical trials). Clinical trials are conducted in three phases, starting with Phase 1, to prove the safety of a drug, vaccine, or device for the targeted disease or medical condition in a small number of healthy volunteers. Each successive phase includes larger numbers of human subjects and requires FDA cognizance prior to proceeding. Work conducted in this PE primarily focuses on late stages of technology maturation activities required to conduct Phase 2 human expanded safety and efficacy in clinical trials. Some high risk technologies may require additional maturation with FDA guidance prior to initiating these clinical trials. Such things as proof of product stability and purity are necessary to meet FDA standards before entering later stages of testing and prior to transitioning into a formal acquisition program and conducting Phase 3 pivotal trials for licensure. Activities in the PE may include completion of pre-clinical animal studies and Phase 2 clinical studies involving human volunteers according to the FDA and EPA requirements. Blast research efforts in this PE are fully coordinated with the United States Army Natick Soldier Research, Development and Engineering Center. This coordination enables improved body armor design and rations for Soldiers. Additionally the activities funded in this PE are externally peer reviewed. Work funded in this project PE is fully coordinated with efforts undertaken in PE 0602787A. The cited work is consistent with the Director, Defense Research and Engineering Strategic Plan, the Army Modernization Strategy, and the Army Science and Technology Master Plan. Work in this PE is performed by Walter Reed Army Institute of Research, Silver Spring, MD; US Army Medical Research Institute of Infectious Diseases, Fort Detrick, MD; US Army Research Institute of Environmental Medicine, Natick, MA; US Army Institute of Surgical Research, Fort Sam Houston, TX; US Army Aeromedical Research Laboratory, Fort Rucker, AL; the Naval Medical Research Center, Silver Spring, MD; US Army Center for Environmental Health Research; and US Army Medical Research Detachment, Brooks City Base, TX, the US Army Dental Trauma Research Detachment, Great Lakes, IL, and the Armed Forces Institute of Regenerative Medicine, Fort Detrick, MD. | | |

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| Exhibit R-2, PB 2011 Army RDT&E Budget Item Justification | | | | DATE: February 2010 | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | | | |
| B. Program Change Summary (\$ in Millions) | | | | | |
| | FY 2009 | FY 2010 | FY 2011 Base | FY 2011 OCO | FY 2011 Total |
| Previous President's Budget | 321.260 | 72.940 | 73.446 | 0.000 | 73.446 |
| Current President's Budget | 329.258 | 339.752 | 71.510 | 0.000 | 71.510 |
| Total Adjustments | 7.998 | 266.812 | -1.936 | 0.000 | -1.936 |
| • Congressional General Reductions | | -1.779 | | | |
| • Congressional Directed Reductions | | | | | |
| • Congressional Rescissions | | 0.000 | | | |
| • Congressional Adds | | 268.591 | | | |
| • Congressional Directed Transfers | | | | | |
| • Reprogrammings | 16.884 | 0.000 | | | |
| • SBIR/STTR Transfer | -8.886 | 0.000 | | | |
| • Adjustments to Budget Years | 0.000 | 0.000 | -1.936 | 0.000 | -1.936 |
| Change Summary Explanation | | | | | |
| FY10 Congressionally directed increases. | | | | | |

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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | | | | | | DATE: February 2010 | | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | | | | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | | | | PROJECT 800: TELEMEDICINE TESTBED | | | |
| COST (\$ in Millions) | FY 2009 Actual | FY 2010 Estimate | Base FY 2011 Estimate | OCO FY 2011 Estimate | Total FY 2011 Estimate | FY 2012 Estimate | FY 2013 Estimate | FY 2014 Estimate | FY 2015 Estimate | Cost To Complete | Total Cost |
| 800: TELEMEDICINE TESTBED | 3.965 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Continuing | Continuing |
| A. Mission Description and Budget Item Justification | | | | | | | | | | | |
| This project funds the advancement and validation of prototype advanced concepts and enabling technology pertaining to Force Health Protection. Major efforts include collaborative tools for mission planning and rehearsal that enable deployment of optimally tailored medical support for a deployed force; medical command and control; and forward echelon telemedicine presence. The current focus provides increased situational awareness of the operational and health risks of fatigue, exposure to environmental toxins (toxic industrial chemicals and materials), and enabling technologies for reducing these risks. Beginning FY10, project 800 will be consolidated into project MM3. The cited work is consistent with the Director, Defense Research and Engineering Strategic Plan, the Army Modernization Strategy, and the Army Science and Technology Master Plan. Work in this project is performed by the Walter Reed Army Institute of Research (WRAIR), Silver Spring, MD. | | | | | | | | | | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | | | | | | |
| | | | | | | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| Program #1 | | | | | | | 3.965 | 0.000 | 0.000 | 0.000 | 0.000 |
| Sleep Research/Environmental Monitoring: Efforts focus on the evaluation of fatigue countermeasures to validate methods used to mitigate the effects of fatigue and sleep loss that adversely affects the Soldier's ability to sustain both health and performance during prolonged military operations. In FY09, conducted studies to validate whether cognitive enhancers are effective fatigue countermeasures (mobile health monitoring system) in an operational environment. Demonstrated validity of near real-time wireless squad and personal area networks (Spartan Sensor Network) to improve situational awareness of Soldiers during training by modeling hydration and heat strain using physiological and weather data. Demonstrated value of network-enabled predictive biomedical modeling in training mission planning and real-time mission support. Beginning FY10, this effort transferred to project MM3 (Physiological Health and Environmental Protection). | | | | | | | | | | | |
| FY 2009 Accomplishments: FY 2009 | | | | | | | | | | | |

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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | DATE: February 2010 | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | PROJECT 800: TELEMEDICINE TESTBED | | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | |
| | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| FY 2010 Plans: FY 2010 | | | | | |
| Base FY 2011 Plans: FY 2011 Base | | | | | |
| OCO FY 2011 Plans: FY 2011 OCO | | | | | |
| Program #2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Small Business Innovative Research/Small Business Technology Transfer Programs | | | | | |
| FY 2009 Accomplishments: FY 2009 | | | | | |
| FY 2010 Plans: FY 2010 | | | | | |
| Base FY 2011 Plans: FY 2011 Base | | | | | |
| OCO FY 2011 Plans: FY 2011 OCO | | | | | |
| Accomplishments/Planned Programs Subtotals | 3.965 | 0.000 | 0.000 | 0.000 | 0.000 |
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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | DATE: February 2010 |
| APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 3: <i>Advanced Technology Development (ATD)</i> | R-1 ITEM NOMENCLATURE PE 0603002A: <i>MEDICAL ADVANCED TECHNOLOGY</i> | PROJECT 800: <i>TELEMEDICINE TESTBED</i> |
| <u>C. Other Program Funding Summary (\$ in Millions)</u> N/A | | |
| <u>D. Acquisition Strategy</u> N/A | | |
| <u>E. Performance Metrics</u> Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010. | | |

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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | | | | | | | DATE: February 2010 | | |
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| APPROPRIATION/BUDGET ACTIVITY | | | | R-1 ITEM NOMENCLATURE | | | | PROJECT | | | |
| 2040: Research, Development, Test & Evaluation, Army | | | | PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | | | | 804: PROSTATE CANCER RSCH | | | |
| BA 3: Advanced Technology Development (ATD) | | | | | | | | | | | |
| COST (\$ in Millions) | FY 2009 Actual | FY 2010 Estimate | Base FY 2011 Estimate | OCO FY 2011 Estimate | Total FY 2011 Estimate | FY 2012 Estimate | FY 2013 Estimate | FY 2014 Estimate | FY 2015 Estimate | Cost To Complete | Total Cost |
| 804: PROSTATE CANCER RSCH | 2.391 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Continuing | Continuing |
| A. Mission Description and Budget Item Justification | | | | | | | | | | | |
| Congressional Interest Item for Prostate Cancer research. | | | | | | | | | | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | | | | | | |
| | | | | | | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| Program #1 | | | | | | | 2.391 | 0.000 | 0.000 | 0.000 | 0.000 |
| This congressionally directed project conducted research for the UMDNJ Cancer Initiative | | | | | | | | | | | |
| FY 2009 Accomplishments: | | | | | | | | | | | |
| FY 2009 | | | | | | | | | | | |
| FY 2010 Plans: | | | | | | | | | | | |
| FY 2010 | | | | | | | | | | | |
| Base FY 2011 Plans: | | | | | | | | | | | |
| FY 2011 Base | | | | | | | | | | | |
| OCO FY 2011 Plans: | | | | | | | | | | | |
| FY 2011 OCO | | | | | | | | | | | |
| Program #2 | | | | | | | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| SBIR/STTR | | | | | | | | | | | |
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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | | DATE: February 2010 | |
| APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 3: <i>Advanced Technology Development (ATD)</i> | R-1 ITEM NOMENCLATURE PE 0603002A: <i>MEDICAL ADVANCED TECHNOLOGY</i> | PROJECT 804: <i>PROSTATE CANCER RSCH</i> | | | |
| <u>B. Accomplishments/Planned Program (\$ in Millions)</u> | | | | | |
| | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>Base FY 2011 Plans:</i> FY 2011 Base <i>OCO FY 2011 Plans:</i> FY 2011 OCO | | | | | |
| Accomplishments/Planned Programs Subtotals | 2.391 | 0.000 | 0.000 | 0.000 | 0.000 |
| <u>C. Other Program Funding Summary (\$ in Millions)</u> | | | | | |
| N/A | | | | | |
| <u>D. Acquisition Strategy</u> | | | | | |
| N/A | | | | | |
| <u>E. Performance Metrics</u> | | | | | |
| Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010. | | | | | |

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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | | | | | | DATE: February 2010 | | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 3: <i>Advanced Technology Development (ATD)</i> | | | | R-1 ITEM NOMENCLATURE PE 0603002A: <i>MEDICAL ADVANCED TECHNOLOGY</i> | | | | PROJECT 810: <i>IND BASE ID VACC&DRUG</i> | | | |
| COST (\$ in Millions) | FY 2009 Actual | FY 2010 Estimate | Base FY 2011 Estimate | OCO FY 2011 Estimate | Total FY 2011 Estimate | FY 2012 Estimate | FY 2013 Estimate | FY 2014 Estimate | FY 2015 Estimate | Cost To Complete | Total Cost |
| 810: <i>IND BASE ID VACC&DRUG</i> | 21.511 | 20.291 | 18.185 | 0.000 | 18.185 | 18.544 | 18.771 | 19.957 | 21.101 | Continuing | Continuing |

A. Mission Description and Budget Item Justification

This project demonstrates and matures US Food and Drug Administration (FDA) regulated medical countermeasures such as drugs, vaccines, and diagnostic systems to naturally occurring infectious diseases that are threats to US military deployed forces. The focus of the program is on prevention, diagnosis, and treatment of diseases that can adversely impact military mobilization, deployment, and operational effectiveness. Prior to licensure of a new drug or vaccine to treat or prevent disease, the FDA requires testing in human subjects. Studies are conducted stepwise: first to prove the product is safe in humans, second to demonstrate the desired effectiveness and optimal dosage in a small study, and third to demonstrate effectiveness in large, diverse human populations. All test results are submitted to the FDA for evaluation to ultimately obtain approval (licensure) for medical use. This project supports studies for safety and effectiveness testing on small study groups after which they transition to the next phase of development for completion of studies in larger populations. The project also supports testing of personal protective measures that can reduce disease transmission from biting insects and other vectors to include products such as repellents and insecticides which are regulated by the U. S. Environmental Protection Agency (EPA). Research conducted in this project focuses on the following five areas: (1) Drugs to Prevent/Treat Parasitic (symbiotic relationship between two organisms) Diseases: Select promising malaria and leishmaniasis (a disease transmitted by sand flies) drug candidates for testing in human subjects, and prepare data packages required for FDA approval of testing in humans and conduct testing. Studies have shown that the malaria parasite can become resistant to existing drugs, which makes it necessary to continually research new and more effective treatments. (2) Vaccines for Preventing Malaria: Select candidate vaccines; prepare data packages required for FDA approval of testing in humans, and conduct testing of promising malaria vaccine candidates in human subjects. A malaria vaccine against the severe form of malaria (*Plasmodium falciparum*) and the less severe but relapsing form (*Plasmodium vivax*) is another means of protection against malaria. A malaria vaccine would minimize the progression and impact of drug resistance and poor Warfighter compliance with taking preventive anti-malarial drugs. (3) Bacterial Threats: Select promising candidate vaccines against each of the three main bacterial causes of diarrhea (a significant threat during initial deployments) and meningococcal vaccine candidates (a threat to trainee and deployed troops and military families) for testing in human subjects, prepare data packages required for FDA approval and conduct testing in human subjects. (4) Viral Threats: Select most promising vaccine candidates for testing in human subjects against dengue fever (a severe debilitating disease caused by a virus and transmitted by a mosquito) and hantavirus (severe viral infection that causes internal bleeding and is contracted from close contact with rodents). Conduct FDA-required nonclinical safety and protection testing (laboratory-based) in animals, prepare FDA-investigational new drug data packages and conduct clinical testing of candidate vaccines in humans. (5) Diagnostics and Disease Transmission Control: Conduct human subject testing of FDA-regulated field medical diagnostic devices and EPA-approved insect control measures. Research is conducted in compliance with FDA regulations for medical products for human use and EPA-regulations for insect control products that impact humans or the environment (e.g., repellents and insecticides). Promising medical countermeasures identified in this project are further matured under PE 0603807A, project 808. Work is managed by the US Army Medical Research and Materiel Command and coordinated with Naval Medical Research Center. The Army is responsible for programming and funding all DoD naturally occurring infectious disease research requirements, thereby precluding duplication of effort within the Military Departments. The cited work is consistent with the Director, Defense Research and Engineering Strategic Plan, the Army Modernization Strategy, and the Army Science and Technology Master Plan. Work in this project is performed by the Walter Reed Army Institute of Research, Silver Spring, MD,

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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | | DATE: February 2010 | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | | PROJECT 810: IND BASE ID VACC&DRUG | | |
| and its overseas laboratories; the US Army Medical Research Institute of Infectious Diseases, Fort Detrick, MD; and the Naval Medical Research Center, Silver Spring, MD, and its overseas laboratories. | | | | | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | |
| | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| Program #1 | | 3.328 | 3.896 | 3.089 | 0.000 | 3.089 |
| Drugs to Prevent/Treat Parasitic Diseases: In FY09, down selected between two candidate drugs for leishmaniasis treatment (Amphotericin B and Nitric Oxide). Conducted proof-of-concept study to demonstrate whether current antimalarial drug (Malarone) dosing schedule can be extended to reduce drug cost while maintaining effective protection from infection. Tested in humans (20 volunteers) a Chloroquine-tinidazole combination drug at overseas locations to assess effectiveness against the liver (relapsing) form of vivax malaria. In FY10, if results support, expand Malarone testing in an increased number of humans, and continue studies with a Chloroquine-tinidazole combination drug. In FY11, based on selection of promising candidates in previous years, will expand testing in humans of treatment options for malaria and Leishmania. If testing is successful, will work with commercial manufacturer to change the dosing and subsequent labeling of Malarone for other malaria treatment indications. | | | | | | |
| FY 2009 Accomplishments: FY 2009 | | | | | | |
| FY 2010 Plans: FY 2010 | | | | | | |
| Base FY 2011 Plans: FY 2011 Base | | | | | | |
| OCO FY 2011 Plans: FY 2011 OCO | | | | | | |
| Program #2 | | 4.428 | 3.845 | 3.824 | 0.000 | 3.824 |

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| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | | PROJECT 810: IND BASE ID VACC&DRUG | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | |
| | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| Vaccines for Prevention of Malaria: In FY09, proceeded with first-in-human testing of protein-based candidate vivax malaria vaccine upon approval by FDA of study application. Refined the formulation of the falciparum malaria vaccine. Conducted initial testing in humans to demonstrate effectiveness of candidate vaccines. Vaccines found safe and effective transitioned into advanced development. In FY10, partner with industry to conduct initial safety and small-scale effectiveness testing in humans of a new falciparum malaria vaccine candidate; forward promising candidate vaccines for further testing in larger populations where malaria occurs naturally, such as Africa; will initiate vivax malaria candidate vaccine testing in humans pending FDA approval. In FY11, will conduct studies to determine optimal dosing schedule of new falciparum malaria vaccine candidate, and will plan for safety and effectiveness tests in larger populations in endemic areas; will down-select best and most effective vaccine candidates, for further development; will assess efficacy of P. vivax malaria candidate vaccines in humans. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | | | | | |
| Program #3 Bacterial Threats: In FY09, conducted larger scale testing in humans for effectiveness of Shigella component (Invaplex) diarrheal vaccine candidate (200 volunteers) to determine effectiveness and optimal dosing. Conducted human volunteer testing (20-40 volunteers) of a genetically modified single component meningitis | | 7.320 | 6.400 | 5.122 | 0.000 | 5.122 |

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| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | |
| | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| vaccine. In FY10, conduct larger scale testing of Shigella component (Invaplex) candidate vaccine; begin safety and effectiveness trial of live attenuated Shigella vaccine; will begin E. coli vaccine candidate safety and effectiveness testing in humans; in conjunction with partners, will prepare the meningococcal Group B multicomponent vaccine for testing in humans. In FY11, will continue safety and effectiveness trials of Invaplex and live attenuated Shigella vaccine; will continue safety and effectiveness trial to establish most promising E. coli vaccine; will undertake a safety study in humans of the meningococcal Group B multicomponent vaccine. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | | | | | |
| Program #4 Viral Threats Research: In FY09, conducted human volunteer testing of hemorrhagic Hanta virus. Tested several dengue candidate vaccines in humans (70 volunteers) to select most promising technologies. In FY10, conduct larger scale testing in humans of the hantavirus vaccine; down-select to most safe and effective dengue vaccine candidate based on larger scale studies (120 volunteers). In FY11, will further develop the hantavirus vaccine with support of a commercial partner; will conduct testing in humans for safety and effectiveness of the final dengue vaccine candidate. | | 4.035 | 3.505 | 3.086 | 0.000 | 3.086 |

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| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | |
| | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| FY 2009 Accomplishments: FY 2009 | | | | | | |
| FY 2010 Plans: FY 2010 | | | | | | |
| Base FY 2011 Plans: FY 2011 Base | | | | | | |
| OCO FY 2011 Plans: FY 2011 OCO | | | | | | |
| Program #5 Diagnostics and Disease Transmission Control: In FY09, worked with commercial partner on an improved bed net. Complete testing and transition of selected components of sand fly control tools, such as screening tests to PMUs. Refined and tested insect repellent to replace Diethylmetatoluamide or DEET (current ingredient in military insect repellent) in collaboration with commercial partners. Conducted testing of hospital-based leishmaniasis diagnostic device and field-deployable point-of-care diagnostic device for leishmaniasis, dengue and rickettsia diseases. In FY10, test a new repellent and begin evaluation of field deployable tests to detect infectious organisms within insects that cause sand fly fever, Q-fever, and dengue fever. For diagnostics, validate results of testing for leishmaniasis, dengue and Rickettsial disease devices. Modify the Leishmania infection hospital-based diagnostic test technology to be compatible with Joint Biological Agent Identification Diagnostic System (JBAIDS) platform. In FY11, if prior year testing is successful, will transition new repellent to advanced development. In conjunction with commercial partner, will field evaluate a device to detect the dengue virus in mosquitoes; will assist commercial partners in fielding of FDA-approved point-of-care tests for dengue, leishmaniasis. | | 2.400 | 2.200 | 3.064 | 0.000 | 3.064 |

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| B. Accomplishments/Planned Program (\$ in Millions) | | | | | |
| | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| FY 2009 Accomplishments: FY 2009 | | | | | |
| FY 2010 Plans: FY 2010 | | | | | |
| Base FY 2011 Plans: FY 2011 Base | | | | | |
| OCO FY 2011 Plans: FY 2011 OCO | | | | | |
| Program #6 Small Business Innovative Research/Small Business Technology Transfer Programs | 0.000 | 0.445 | 0.000 | 0.000 | 0.000 |
| FY 2009 Accomplishments: FY 2009 | | | | | |
| FY 2010 Plans: FY 2010 | | | | | |
| Base FY 2011 Plans: FY 2011 Base | | | | | |
| OCO FY 2011 Plans: FY 2011 OCO | | | | | |
| Accomplishments/Planned Programs Subtotals | 21.511 | 20.291 | 18.185 | 0.000 | 18.185 |
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| C. Other Program Funding Summary (\$ in Millions) N/A | | |
| D. Acquisition Strategy N/A | | |
| E. Performance Metrics Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010. | | |

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| APPROPRIATION/BUDGET ACTIVITY | | | | R-1 ITEM NOMENCLATURE | | | | PROJECT | | | |
| 2040: Research, Development, Test & Evaluation, Army | | | | PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | | | | 814: NEUROFIBROMATOSIS | | | |
| BA 3: Advanced Technology Development (ATD) | | | | | | | | | | | |
| COST (\$ in Millions) | FY 2009 Actual | FY 2010 Estimate | Base FY 2011 Estimate | OCO FY 2011 Estimate | Total FY 2011 Estimate | FY 2012 Estimate | FY 2013 Estimate | FY 2014 Estimate | FY 2015 Estimate | Cost To Complete | Total Cost |
| 814: NEUROFIBROMATOSIS | 9.967 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Continuing | Continuing |
| A. Mission Description and Budget Item Justification | | | | | | | | | | | |
| Congressional Interest Item funding for Neurofibromatosis research. | | | | | | | | | | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | | | | | | |
| | | | | | | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| Program #1 | | | | | | | 9.967 | 0.000 | 0.000 | 0.000 | 0.000 |
| This congressionally directed project conducted research on Neurofibromatosis (NF). | | | | | | | | | | | |
| FY 2009 Accomplishments: | | | | | | | | | | | |
| FY 2009 | | | | | | | | | | | |
| FY 2010 Plans: | | | | | | | | | | | |
| FY 2010 | | | | | | | | | | | |
| Base FY 2011 Plans: | | | | | | | | | | | |
| FY 2011 Base | | | | | | | | | | | |
| OCO FY 2011 Plans: | | | | | | | | | | | |
| FY 2011 OCO | | | | | | | | | | | |
| Program #2 | | | | | | | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| SBIR/STTR | | | | | | | | | | | |
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| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | |
| | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>Base FY 2011 Plans:</i> FY 2011 Base <i>OCO FY 2011 Plans:</i> FY 2011 OCO | | | | | | |
| Accomplishments/Planned Programs Subtotals | | 9.967 | 0.000 | 0.000 | 0.000 | 0.000 |
| C. Other Program Funding Summary (\$ in Millions) N/A | | | | | | |
| D. Acquisition Strategy N/A | | | | | | |
| E. Performance Metrics Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010. | | | | | | |

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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | | | | | | DATE: February 2010 | | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | | | | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | | | | PROJECT 819: FLD MED PROT/HUM PERF | | | |
| COST (\$ in Millions) | FY 2009 Actual | FY 2010 Estimate | Base FY 2011 Estimate | OCO FY 2011 Estimate | Total FY 2011 Estimate | FY 2012 Estimate | FY 2013 Estimate | FY 2014 Estimate | FY 2015 Estimate | Cost To Complete | Total Cost |
| 819: FLD MED PROT/HUM PERF | 1.217 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Continuing | Continuing |
| A. Mission Description and Budget Item Justification | | | | | | | | | | | |
| The objective of this project is to support the Medical and Survivability technology areas of the Future Force with laboratory validation studies and field demonstrations of biomedical products designed to protect, sustain, and enhance Soldier performance in the face of a myriad of environmental, physiological stressors, and materiel hazards encountered in training and operational environments. This effort focuses on identifying stressors and validating methods for assessing risk to the Soldier due to both physical and operational stressors. Effort matures and demonstrates methodologies and tools associated with biomechanical-based health risks, injury assessment/prediction, Soldier survivability, and performance during continuous operations. In FY10, project 819 will be consolidated into project MM3. The cited work is consistent with the Director, Defense Research and Engineering Strategic Plan, the Army Modernization Strategy, and the Army Science and Technology Master Plan. Work in this project is performed by the US Army Research Institute of Environmental Medicine (USARIEM), Natick, MA. | | | | | | | | | | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | | | | | | |
| | | | | | | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| Program #1 Physical Performance Enhancement: In FY09, validated an integrated longitudinal model for predicting individual Soldier and unit musculoskeletal injury and adverse physical performance outcomes. Beginning in FY10, this effort transferred to the Injury Prevention and Reduction research area of project MM3. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base | | | | | | | 1.217 | 0.000 | 0.000 | 0.000 | 0.000 |

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| B. Accomplishments/Planned Program (\$ in Millions) | | | | | |
| | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| <i>OCO FY 2011 Plans:</i> FY 2011 OCO | | | | | |
| Program #2 Small Business Innovative Research/Small Business Technology Transfer Programs <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>Base FY 2011 Plans:</i> FY 2011 Base <i>OCO FY 2011 Plans:</i> FY 2011 OCO | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Accomplishments/Planned Programs Subtotals | 1.217 | 0.000 | 0.000 | 0.000 | 0.000 |
| C. Other Program Funding Summary (\$ in Millions) N/A | | | | | |
| D. Acquisition Strategy N/A | | | | | |
| E. Performance Metrics Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010. | | | | | |

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| APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 3: <i>Advanced Technology Development (ATD)</i> | | | | R-1 ITEM NOMENCLATURE PE 0603002A: <i>MEDICAL ADVANCED TECHNOLOGY</i> | | | | PROJECT 840: <i>COMBAT INJURY MGMT</i> | | | |
| COST (\$ in Millions) | FY 2009 Actual | FY 2010 Estimate | Base FY 2011 Estimate | OCO FY 2011 Estimate | Total FY 2011 Estimate | FY 2012 Estimate | FY 2013 Estimate | FY 2014 Estimate | FY 2015 Estimate | Cost To Complete | Total Cost |
| 840: <i>COMBAT INJURY MGMT</i> | 29.608 | 43.766 | 44.004 | 0.000 | 44.004 | 34.599 | 35.207 | 36.160 | 36.920 | Continuing | Continuing |

A. Mission Description and Budget Item Justification

This project matures, demonstrates, and validates promising medical technologies and methods to include control of severe bleeding, treatment for traumatic brain injury (TBI), revival and stabilization of trauma patients, and prognostics and diagnostics for life support systems. Post-evacuation medical research focuses on continued care and rehabilitative medicine for extremity (arms and legs), facial/maxillary (jaw bone), and ocular (eye) trauma and leveraging recent innovations in regenerative medicine and tissue engineering techniques. Research conducted in this project focuses on the following seven areas:(1) Hemorrhage (bleeding) Control, Blood, and Resuscitative Fluids: Includes work required to validate safety and effectiveness of drugs and medical procedures to maintain metabolism, minimize inflammation (swelling), including blocking Complement activation (a series of disease fighting proteins and reactions) from damaging healthy cells of the body, and prevent or minimize secondary organ failure (including brain and spinal cord injury) after major trauma. Beginning in FY10, funding shifts to the Damage Control Resuscitation research area below.(2) Damage Control Resuscitation: Includes work required to validate safety and effectiveness of drugs and medical procedures to maintain metabolism, minimize harmful inflammation, including blocking Complement activation (a series of disease fighting proteins and reactions) from damaging healthy cells of the body and prevent or minimize secondary organ failure (including brain and spinal cord injury) after major trauma; this research area starts in FY10.(3) Combat Trauma Therapies: Includes work required to validate safety and effectiveness of drugs, biologics (products derived from living organisms), and medical procedures intended to minimize immediate and long-term effects from battlefield injuries. (4) Far-Forward Medical Systems: Includes diagnostic and therapeutic medical devices, algorithms, software, and data-processing systems for resuscitation, stabilization, life support, and dental care. Beginning in FY10, dental care moves to Combat Trauma Therapies and the remaining research in this area will be captured under Combat Critical Care Engineering.(5) Combat Casualty Bioinformatics and Simulation: Includes testing and validation of a data management system to capture and analyze data, such as heart and respiration rates. Bioinformatics research will merge into the Combat Critical Care Engineering research area in FY10.(6) Combat Critical Care Engineering: Includes diagnostic and therapeutic medical devices, algorithms, software, and data-processing systems for resuscitation, stabilization, and life support; this research area starts in FY10.(7) Clinical and Rehabilitative Medicine: Includes clinical studies of treatment and rehabilitation of ocular and visual system traumatic injury, and restoration of function and appearance by regenerating skin, muscle, and bone tissue in battle-injured casualties. Areas of interest for regenerative medicine include healing without scarring, repair of compartment syndrome (nerve or tendon constriction in an enclosed space), replacement skin, and facial reconstruction. This research area starts in FY10. All research is conducted in compliance with US Food and Drug Administration (FDA) requirements for licensure of medical products for human use. Promising efforts identified through applied research conducted under PE 0602787A, project 874, are further matured under this project. Promising results identified under this project 840 are further matured under PE 0603807A, project 836.The cited work is consistent with the Director, Defense Research and Engineering Strategic Plan, the Army Modernization Strategy, and the Army Science and Technology Master Plan. Work in this project is performed by the US Army Institute of Surgical Research, Fort Sam Houston, TX; the Walter Reed Army Institute of Research, Silver Spring, MD; and the Armed Forces Institute of Regenerative Medicine, Fort Detrick, MD.

B. Accomplishments/Planned Program (\$ in Millions)

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| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | |
| | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| Program #1 Hemorrhage Control, Blood, and Resuscitative Fluids: In FY09, continued to evaluate combinations of products and treatment strategies to best control all forms of bleeding; evaluated safety and effectiveness of freeze dried plasma in an animal model; analyze Platelet Derived Hemostatic Agents (PDHA) data from safety and effectiveness test in human subjects. Beginning in FY10 the work will be funded under Damage Control Resuscitation. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 9.600 | 0.000 | 0.000 | 0.000 | 0.000 |
| Program #2 Damage Control Resuscitation: In FY09, funding was within the Hemorrhage Control, Blood, and Resuscitation Fluids program area. In FY10, begin safety and effectiveness testing in humans of freeze-dried plasma and platelet products to control severe bleeding; conduct additional studies in larger animals to identify optimal timing, dose and mechanisms of action of plasma, clotting factors and complement inhibitor (CIs) in combination. In FY11, will begin human testing of blood substitutes and noninvasive interventions for internal bleeding; will test guidelines for combined use of plasma, clotting factors and CIs using a representative, large animal model to potentially change clinical resuscitation guidelines. | | 0.000 | 14.688 | 14.776 | 0.000 | 14.776 |

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| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | |
| | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| FY 2009 Accomplishments: FY 2009 | | | | | | |
| FY 2010 Plans: FY 2010 | | | | | | |
| Base FY 2011 Plans: FY 2011 Base | | | | | | |
| OCO FY 2011 Plans: FY 2011 OCO | | | | | | |
| Program #3 Combat Trauma Therapies: In FY09, upon approval by FDA, began an initial FDA safety study in 200 humans of neuroprotectants (brain trauma research is coordinated with related efforts in PE 0602787A, project 878); begin extensive, multicenter, clinical validation of the most promising tissue regeneration treatment regimens through AFIRM; and conducted evaluation of new and existing antibacterial compounds for use in controlling infection. In FY10, complete initial FDA safety studies in humans of neuroprotectants and a diagnostic device for brain trauma; refocus dental disease research to facial restorative surgery; begin research in eye trauma to evaluate current repair treatment for improvement and evaluate new alternatives as they are identified; and expand existing in-house capability for human safety and effectiveness testing on newly identified treatments and therapies for battlefield trauma for human use of medical products. In FY11, will begin studies of an anti-seizure cocktail of multiple drugs in combination and studies of silent brain seizures after traumatic brain injury (TBI); will develop a mandibular (jaw) defect model; will continue evaluation of pain management regimens to improve long term outcomes; will use a small animal model to downselect therapeutics for blast induced TBI; and will continue in-house human clinical trials of promising treatments and therapies for battlefield trauma. | | 10.318 | 15.991 | 16.750 | 0.000 | 16.750 |

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| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | |
| | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| FY 2009 Accomplishments: FY 2009 | | | | | | |
| FY 2010 Plans: FY 2010 | | | | | | |
| Base FY 2011 Plans: FY 2011 Base | | | | | | |
| OCO FY 2011 Plans: FY 2011 OCO | | | | | | |
| Program #4 Far-Forward Medical Systems: In FY09, established relationships with industry developing oxygen and ventilation systems for future validation; initiated a human subject safety study of fluid resuscitation algorithms; began building interfaces for use with either the Army's integrated litter or the Navy's lightweight trauma module for casualty transport; and completed prototype and data analysis of a field medic diagnostic device to enhance casualty treatment on the battlefield. Beginning in FY10, dental care moves to Combat Trauma Therapies and the remaining research in this area is captured under Combat Critical Care Engineering. | | 8.849 | 0.000 | 0.000 | 0.000 | 0.000 |
| FY 2009 Accomplishments: FY 2009 | | | | | | |
| FY 2010 Plans: FY 2010 | | | | | | |
| Base FY 2011 Plans: FY 2011 Base | | | | | | |

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| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | |
| | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| OCO FY 2011 Plans: FY 2011 OCO | | | | | | |
| Program #5 Combat Casualty Bioinformatics and Simulation: In FY09, completed prototype development and test validity of an algorithm that incorporates low- and high-frequency signals for an automated decision assist tool used by medical personnel to identify a need for a specific life saving intervention. Bioinformatics research merged into the Combat Critical Care Engineering research area in FY10. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 0.841 | 0.000 | 0.000 | 0.000 | 0.000 |
| Program #6 Combat Critical Care Engineering: In FY10, complete FDA safety study of fluid resuscitation algorithms; will submit FDA data package for the fully integrated automated fluid resuscitation system; collaborate with manufacturers to integrate oxygen and ventilation systems; transition stroke volume algorithm to advanced development for integration with new monitors for triage decision support; and conduct studies for development of a model (algorithm) for early indication of circulatory collapse from severe blood loss. In FY11, will complete evidence-based decision support development for early indicators of reduction in blood volume, the need for | | 0.000 | 3.500 | 3.287 | 0.000 | 3.287 |

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| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | |
| | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| intervention, and closed-loop care during casualty transport; and will continue to support simulation development to reduce reliance on live tissues in training. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | | | | | |
| Program #7 Clinical and Rehabilitative Medicine: In FY10, conduct regenerative medicine studies using human subjects to demonstrate stable engraftment and restoration of sensory-motor function of transplanted limbs and facial skin, fat transfer therapy to manage burn scarring, implantation of engineered cartilage ear transplants, and use of a strain-reducing dressing to reduce wound scarring. In FY11, will conduct studies using relevant, large animals to evaluate the most promising treatments for repairing traumatic eye injuries; and AFIRM will conclude FY10 clinical trials and begin studies of skin cells or tissue from patient engineered and transplanted back into the patient as a replacement for burned tissue. FY 2009 Accomplishments: FY 2009 | | 0.000 | 8.265 | 9.191 | 0.000 | 9.191 |

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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | DATE: February 2010 | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | PROJECT 840: COMBAT INJURY MGMT | | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | |
| | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| FY 2010 Plans: FY 2010 | | | | | |
| Base FY 2011 Plans: FY 2011 Base | | | | | |
| OCO FY 2011 Plans: FY 2011 OCO | | | | | |
| Program #8 | 0.000 | 1.322 | 0.000 | 0.000 | 0.000 |
| Small Business Innovative Research/Small Business Technology Transfer Programs | | | | | |
| FY 2009 Accomplishments: FY 2009 | | | | | |
| FY 2010 Plans: FY 2010 | | | | | |
| Base FY 2011 Plans: FY 2011 Base | | | | | |
| OCO FY 2011 Plans: FY 2011 OCO | | | | | |
| Accomplishments/Planned Programs Subtotals | 29.608 | 43.766 | 44.004 | 0.000 | 44.004 |
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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | DATE: February 2010 |
| APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 3: <i>Advanced Technology Development (ATD)</i> | R-1 ITEM NOMENCLATURE PE 0603002A: <i>MEDICAL ADVANCED TECHNOLOGY</i> | PROJECT 840: <i>COMBAT INJURY MGMT</i> |
| C. Other Program Funding Summary (\$ in Millions) N/A | | |
| D. Acquisition Strategy N/A | | |
| E. Performance Metrics Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010. | | |

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| APPROPRIATION/BUDGET ACTIVITY | | | | R-1 ITEM NOMENCLATURE | | | | PROJECT | | | |
| 2040: Research, Development, Test & Evaluation, Army | | | | PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | | | | 938: Tissue Engineering | | | |
| BA 3: Advanced Technology Development (ATD) | | | | | | | | | | | |
| COST (\$ in Millions) | FY 2009 Actual | FY 2010 Estimate | Base FY 2011 Estimate | OCO FY 2011 Estimate | Total FY 2011 Estimate | FY 2012 Estimate | FY 2013 Estimate | FY 2014 Estimate | FY 2015 Estimate | Cost To Complete | Total Cost |
| 938: Tissue Engineering | 1.196 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Continuing | Continuing |
| A. Mission Description and Budget Item Justification | | | | | | | | | | | |
| Congressional Interest Item funding for Tissue Engineering research. | | | | | | | | | | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | | | | | | |
| | | | | | | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| Program #1 | | | | | | | 1.196 | 0.000 | 0.000 | 0.000 | 0.000 |
| Angiogenesis and Tissue Engineering. This is a Congressional Interest Item. | | | | | | | | | | | |
| FY 2009 Accomplishments: | | | | | | | | | | | |
| FY 2009 | | | | | | | | | | | |
| FY 2010 Plans: | | | | | | | | | | | |
| FY 2010 | | | | | | | | | | | |
| Base FY 2011 Plans: | | | | | | | | | | | |
| FY 2011 Base | | | | | | | | | | | |
| OCO FY 2011 Plans: | | | | | | | | | | | |
| FY 2011 OCO | | | | | | | | | | | |
| Accomplishments/Planned Programs Subtotals | | | | | | | 1.196 | 0.000 | 0.000 | 0.000 | 0.000 |
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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | DATE: February 2010 |
| APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 3: <i>Advanced Technology Development (ATD)</i> | R-1 ITEM NOMENCLATURE PE 0603002A: <i>MEDICAL ADVANCED TECHNOLOGY</i> | PROJECT 938: <i>Tissue Engineering</i> |
| C. Other Program Funding Summary (\$ in Millions) N/A | | |
| D. Acquisition Strategy N/A | | |
| E. Performance Metrics Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010. | | |

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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | | | | | | | DATE: February 2010 | | |
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| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | | | | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | | | | PROJECT 945: BREAST CANCER STAMP PROCEEDS | | | |
| COST (\$ in Millions) | FY 2009 Actual | FY 2010 Estimate | Base FY 2011 Estimate | OCO FY 2011 Estimate | Total FY 2011 Estimate | FY 2012 Estimate | FY 2013 Estimate | FY 2014 Estimate | FY 2015 Estimate | Cost To Complete | Total Cost |
| 945: BREAST CANCER STAMP PROCEEDS | 1.459 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Continuing | Continuing |
| <u>A. Mission Description and Budget Item Justification</u> This project receives funds as proceeds from the sale of Breast Cancer Stamps. | | | | | | | | | | | |
| <u>B. Accomplishments/Planned Program (\$ in Millions)</u> | | | | | | | | | | | |
| | | | | | | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| Program #1 Breast Cancer Stamp Proceeds. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | | | | | | 1.459 | 0.000 | 0.000 | 0.000 | 0.000 |
| Accomplishments/Planned Programs Subtotals | | | | | | | 1.459 | 0.000 | 0.000 | 0.000 | 0.000 |
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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | DATE: February 2010 |
| APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 3: <i>Advanced Technology Development (ATD)</i> | R-1 ITEM NOMENCLATURE PE 0603002A: <i>MEDICAL ADVANCED TECHNOLOGY</i> | PROJECT 945: <i>BREAST CANCER STAMP PROCEEDS</i> |
| C. Other Program Funding Summary (\$ in Millions) N/A | | |
| D. Acquisition Strategy N/A | | |
| E. Performance Metrics Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010. | | |

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| APPROPRIATION/BUDGET ACTIVITY | | | | R-1 ITEM NOMENCLATURE | | | | PROJECT | | | |
| 2040: Research, Development, Test & Evaluation, Army | | | | PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | | | | 955: ASSISTIVE TECHNOLOGY | | | |
| BA 3: Advanced Technology Development (ATD) | | | | TECHNOLOGY | | | | | | | |
| COST (\$ in Millions) | FY 2009 Actual | FY 2010 Estimate | Base FY 2011 Estimate | OCO FY 2011 Estimate | Total FY 2011 Estimate | FY 2012 Estimate | FY 2013 Estimate | FY 2014 Estimate | FY 2015 Estimate | Cost To Complete | Total Cost |
| 955: ASSISTIVE TECHNOLOGY | 2.392 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Continuing | Continuing |
| A. Mission Description and Budget Item Justification | | | | | | | | | | | |
| Congressional Interest Item funding for Assistive Technology. | | | | | | | | | | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | | | | | | |
| | | | | | | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| Program #1 | | | | | | | 2.392 | 0.000 | 0.000 | 0.000 | 0.000 |
| This congressionally directed project supported the Assistive Technology Research Center at the National Rehabilitative Hospital. | | | | | | | | | | | |
| FY 2009 Accomplishments: | | | | | | | | | | | |
| FY 2009 | | | | | | | | | | | |
| FY 2010 Plans: | | | | | | | | | | | |
| FY 2010 | | | | | | | | | | | |
| Base FY 2011 Plans: | | | | | | | | | | | |
| FY 2011 Base | | | | | | | | | | | |
| OCO FY 2011 Plans: | | | | | | | | | | | |
| FY 2011 OCO | | | | | | | | | | | |
| Program #2 | | | | | | | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| SBIR/STTR | | | | | | | | | | | |
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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | | DATE: February 2010 | |
| APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 3: <i>Advanced Technology Development (ATD)</i> | | R-1 ITEM NOMENCLATURE PE 0603002A: <i>MEDICAL ADVANCED TECHNOLOGY</i> | | PROJECT 955: <i>ASSISTIVE TECHNOLOGY</i> | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | |
| | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| <i>FY 2009 Accomplishments:</i> FY 2009 | | | | | |
| <i>FY 2010 Plans:</i> FY 2010 | | | | | |
| <i>Base FY 2011 Plans:</i> FY 2011 Base | | | | | |
| <i>OCO FY 2011 Plans:</i> FY 2011 OCO | | | | | |
| Accomplishments/Planned Programs Subtotals | 2.392 | 0.000 | 0.000 | 0.000 | 0.000 |
| C. Other Program Funding Summary (\$ in Millions) N/A | | | | | |
| D. Acquisition Strategy N/A | | | | | |
| E. Performance Metrics Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010. | | | | | |

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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | | | | | | | DATE: February 2010 | | |
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| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | | | | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | | | | PROJECT 97A: BIOSENSOR RESEARCH | | | |
| COST (\$ in Millions) | FY 2009 Actual | FY 2010 Estimate | Base FY 2011 Estimate | OCO FY 2011 Estimate | Total FY 2011 Estimate | FY 2012 Estimate | FY 2013 Estimate | FY 2014 Estimate | FY 2015 Estimate | Cost To Complete | Total Cost |
| 97A: BIOSENSOR RESEARCH | 0.796 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Continuing | Continuing |
| <u>A. Mission Description and Budget Item Justification</u> Congressional Interest Item funding for Biosensor research. | | | | | | | | | | | |
| <u>B. Accomplishments/Planned Program (\$ in Millions)</u> | | | | | | | | | | | |
| | | | | | | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| Program #1 This congressionally directed project conducted research into Technologies for Metabolic Monitoring (TMM) <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>Base FY 2011 Plans:</i> FY 2011 Base <i>OCO FY 2011 Plans:</i> FY 2011 OCO | | | | | | | 0.796 | 0.000 | 0.000 | 0.000 | 0.000 |
| Program #2 SBIR/STTR | | | | | | | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
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| APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 3: <i>Advanced Technology Development (ATD)</i> | | R-1 ITEM NOMENCLATURE PE 0603002A: <i>MEDICAL ADVANCED TECHNOLOGY</i> | | PROJECT 97A: <i>BIOSENSOR RESEARCH</i> | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | |
| | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 |
| <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>Base FY 2011 Plans:</i> FY 2011 Base <i>OCO FY 2011 Plans:</i> FY 2011 OCO | | | | | |
| Accomplishments/Planned Programs Subtotals | | 0.796 | 0.000 | 0.000 | 0.000 |
| C. Other Program Funding Summary (\$ in Millions) N/A | | | | | |
| D. Acquisition Strategy N/A | | | | | |
| E. Performance Metrics Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010. | | | | | |

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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | | | | | | | DATE: February 2010 | | |
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| APPROPRIATION/BUDGET ACTIVITY | | | | R-1 ITEM NOMENCLATURE | | | | PROJECT | | | |
| 2040: Research, Development, Test & Evaluation, Army | | | | PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | | | | 97B: BLOOD SAFETY | | | |
| BA 3: Advanced Technology Development (ATD) | | | | | | | | | | | |
| COST (\$ in Millions) | FY 2009 Actual | FY 2010 Estimate | Base FY 2011 Estimate | OCO FY 2011 Estimate | Total FY 2011 Estimate | FY 2012 Estimate | FY 2013 Estimate | FY 2014 Estimate | FY 2015 Estimate | Cost To Complete | Total Cost |
| 97B: BLOOD SAFETY | 1.595 | 2.388 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Continuing | Continuing |
| A. Mission Description and Budget Item Justification | | | | | | | | | | | |
| Congressional Interest Item funding for Blood Safety advanced technology development. | | | | | | | | | | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | | | | | | |
| | | | | | | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| Program #1 | | | | | | | 1.595 | 2.388 | 0.000 | 0.000 | 0.000 |
| Blood Safety and Decontamination Technology. This is a Congressional Interest Item. | | | | | | | | | | | |
| FY 2009 Accomplishments: | | | | | | | | | | | |
| FY 2009 | | | | | | | | | | | |
| FY 2010 Plans: | | | | | | | | | | | |
| FY 2010 | | | | | | | | | | | |
| Base FY 2011 Plans: | | | | | | | | | | | |
| FY 2011 Base | | | | | | | | | | | |
| OCO FY 2011 Plans: | | | | | | | | | | | |
| FY 2011 OCO | | | | | | | | | | | |
| Accomplishments/Planned Programs Subtotals | | | | | | | 1.595 | 2.388 | 0.000 | 0.000 | 0.000 |
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| APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 3: <i>Advanced Technology Development (ATD)</i> | R-1 ITEM NOMENCLATURE PE 0603002A: <i>MEDICAL ADVANCED TECHNOLOGY</i> | PROJECT 97B: <i>BLOOD SAFETY</i> |
| C. Other Program Funding Summary (\$ in Millions) N/A | | |
| D. Acquisition Strategy N/A | | |
| E. Performance Metrics Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010. | | |

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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | | | | | | | DATE: February 2010 | | |
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| APPROPRIATION/BUDGET ACTIVITY | | | | R-1 ITEM NOMENCLATURE | | | | PROJECT | | | |
| 2040: Research, Development, Test & Evaluation, Army | | | | PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | | | | 97D: CENTER FOR AGING EYE | | | |
| BA 3: Advanced Technology Development (ATD) | | | | | | | | | | | |
| COST (\$ in Millions) | FY 2009 Actual | FY 2010 Estimate | Base FY 2011 Estimate | OCO FY 2011 Estimate | Total FY 2011 Estimate | FY 2012 Estimate | FY 2013 Estimate | FY 2014 Estimate | FY 2015 Estimate | Cost To Complete | Total Cost |
| 97D: CENTER FOR AGING EYE | 1.596 | 2.388 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Continuing | Continuing |
| A. Mission Description and Budget Item Justification | | | | | | | | | | | |
| Congressional Interest Item funding for Low Vision research. | | | | | | | | | | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | | | | | | |
| | | | | | | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| Program #1 | | | | | | | 1.596 | 2.388 | 0.000 | 0.000 | 0.000 |
| This congressionally directed project conducted Military Low Vision Research. | | | | | | | | | | | |
| FY 2009 Accomplishments: | | | | | | | | | | | |
| FY 2009 | | | | | | | | | | | |
| FY 2010 Plans: | | | | | | | | | | | |
| FY 2010 | | | | | | | | | | | |
| Base FY 2011 Plans: | | | | | | | | | | | |
| FY 2011 Base | | | | | | | | | | | |
| OCO FY 2011 Plans: | | | | | | | | | | | |
| FY 2011 OCO | | | | | | | | | | | |
| Program #2 | | | | | | | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
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| APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 3: <i>Advanced Technology Development (ATD)</i> | | R-1 ITEM NOMENCLATURE PE 0603002A: <i>MEDICAL ADVANCED TECHNOLOGY</i> | | PROJECT 97D: <i>CENTER FOR AGING EYE</i> | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | |
| | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 |
| <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>Base FY 2011 Plans:</i> FY 2011 Base <i>OCO FY 2011 Plans:</i> FY 2011 OCO | | | | | |
| Accomplishments/Planned Programs Subtotals | | 1.596 | 2.388 | 0.000 | 0.000 |
| C. Other Program Funding Summary (\$ in Millions) N/A | | | | | |
| D. Acquisition Strategy N/A | | | | | |
| E. Performance Metrics Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010. | | | | | |

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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | | | | | | DATE: February 2010 | | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 3: <i>Advanced Technology Development (ATD)</i> | | | | R-1 ITEM NOMENCLATURE PE 0603002A: <i>MEDICAL ADVANCED TECHNOLOGY</i> | | | | PROJECT 97T: <i>NEUROTOXIN EXPOSURE TREATMENT</i> | | | |
| COST (\$ in Millions) | FY 2009 Actual | FY 2010 Estimate | Base FY 2011 Estimate | OCO FY 2011 Estimate | Total FY 2011 Estimate | FY 2012 Estimate | FY 2013 Estimate | FY 2014 Estimate | FY 2015 Estimate | Cost To Complete | Total Cost |
| 97T: <i>NEUROTOXIN EXPOSURE TREATMENT</i> | 24.918 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Continuing | Continuing |
| <u>A. Mission Description and Budget Item Justification</u> Congressional Interest Item funding for Neurotoxin Exposure Treatment. | | | | | | | | | | | |
| <u>B. Accomplishments/Planned Program (\$ in Millions)</u> | | | | | | | | | | | |
| | | | | | | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| Program #1 This congressionally directed project conducted research for the Neurotoxin Exposure Treatment Parkinsons Research Program. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>Base FY 2011 Plans:</i> FY 2011 Base <i>OCO FY 2011 Plans:</i> FY 2011 OCO | | | | | | | 24.918 | 0.000 | 0.000 | 0.000 | 0.000 |
| Program #2 SBIR/STTR | | | | | | | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

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| APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 3: <i>Advanced Technology Development (ATD)</i> | | R-1 ITEM NOMENCLATURE PE 0603002A: <i>MEDICAL ADVANCED TECHNOLOGY</i> | | PROJECT 97T: <i>NEUROTOXIN EXPOSURE TREATMENT</i> | | |
| <u>B. Accomplishments/Planned Program (\$ in Millions)</u> | | | | | | |
| | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>Base FY 2011 Plans:</i> FY 2011 Base <i>OCO FY 2011 Plans:</i> FY 2011 OCO | | | | | | |
| Accomplishments/Planned Programs Subtotals | | 24.918 | 0.000 | 0.000 | 0.000 | 0.000 |
| <u>C. Other Program Funding Summary (\$ in Millions)</u> N/A | | | | | | |
| <u>D. Acquisition Strategy</u> N/A | | | | | | |
| <u>E. Performance Metrics</u> Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010. | | | | | | |

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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | | | | | | DATE: February 2010 | | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 3: <i>Advanced Technology Development (ATD)</i> | | | | R-1 ITEM NOMENCLATURE PE 0603002A: <i>MEDICAL ADVANCED TECHNOLOGY</i> | | | | PROJECT FH4: <i>FORCE HEALTH PROTECTION - ADV TECH DEV</i> | | | |
| COST (\$ in Millions) | FY 2009 Actual | FY 2010 Estimate | Base FY 2011 Estimate | OCO FY 2011 Estimate | Total FY 2011 Estimate | FY 2012 Estimate | FY 2013 Estimate | FY 2014 Estimate | FY 2015 Estimate | Cost To Complete | Total Cost |
| FH4: <i>FORCE HEALTH PROTECTION - ADV TECH DEV</i> | 2.006 | 1.953 | 1.974 | 0.000 | 1.974 | 2.006 | 2.039 | 2.075 | 2.107 | Continuing | Continuing |

A. Mission Description and Budget Item Justification

This project matures, validates, and supports enhanced Force Health Protection of Soldiers against threats in military operations and training. Health-monitoring tools are matured to rapidly identify deployment stressors that affect the health of Joint Forces. These databases and systems enhance the Department of Defense's (DoD's) ability to monitor and protect against adverse changes in health, especially mental health effects caused by changes in brain function. Force Health Protection work is conducted in close coordination with the Department of Veterans Affairs. The program is maturing the development of global health monitoring (e.g., development of neuropsychological test methodologies), validating clinical signs and symptoms correlating to medical records, diagnosed diseases, and mortality rates. The key databases supporting this program are the Millennium Cohort Study and the Total Army Injury and Health Outcomes Database. These databases allow for the examination of interactions of psychological stress and other deployment and occupational stressors that affect Warfighter health behaviors. This project contains no duplication with any effort within the Military Departments and includes direct participation by other Services. The cited work is consistent with the Director, Defense Research and Engineering Strategic Plan, the Army Modernization Strategy, and the Army Science and Technology Master Plan. Work in this project is performed by the US Army Center for Environmental Health Research, Fort Detrick, MD, the US Army Research Institute of Environmental Medicine, Natick, MA, and the Naval Health Research Center, San Diego, CA.

B. Accomplishments/Planned Program (\$ in Millions)

| | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
|---|----------------|----------------|-------------------------|------------------------|--------------------------|
| Program #1 Health Research: Includes validation of interventions developed from the Millennium Cohort study (a prospective health project in military servicemembers designed to evaluate the long-term health effects of military service, including deployments), validation of biomarkers of exposure and methods to detect environmental contamination and toxic exposure, and validation of thoracic injury prediction models of blast exposure. In FY09, conducted a systematic validation of prospective data to correlate relationships in chronic health effects and multi-symptomatic illnesses, drawing from disability database analysis to isolate causes, and implemented and tracked results for the most promising interventions to fight chronic disabilities. In FY10, validate thoracic blunt trauma and performance decrement models by comparing with data obtained from large animal exercise studies; conduct data | 2.006 | 1.898 | 1.974 | 0.000 | 1.974 |

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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | | DATE: February 2010 | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | | PROJECT FH4: FORCE HEALTH PROTECTION - ADV TECH DEV | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | |
| | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| analysis to correlate relationships in Post-Traumatic Stress Disorder (PTSD), depression, and anxiety symptoms among Millennium Cohort participants in conjunction with increased mental and physical health problems; validate prototype Environmental Sentinel Biomonitor (ESB) system for use with field drinking water production systems and transition to advanced development. In FY11, will transition thoracic blast injury models to Army Research Laboratory and to the US Army Center for Health Promotion and Preventive Medicine (USACHPPM); will transition to the USACHPPM (Health Hazard Assessment Program) and the Army Research Laboratory / Survivability, Lethality Assessment Division (Soldier Survivability Assessment Program) an integrated software version for combined blunt trauma and toxic gas inhalation; will conduct a systematic validation of prospective data to correlate relationships in PTSD and depression. | | | | | | |
| FY 2009 Accomplishments: FY 2009 | | | | | | |
| FY 2010 Plans: FY 2010 | | | | | | |
| Base FY 2011 Plans: FY 2011 Base | | | | | | |
| OCO FY 2011 Plans: FY 2011 OCO | | | | | | |
| Program #2 Small Business Innovative Research/Small Business Technology Transfer Programs | | 0.000 | 0.055 | 0.000 | 0.000 | 0.000 |
| FY 2009 Accomplishments: FY 2009 | | | | | | |

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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | | DATE: February 2010 | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 3: <i>Advanced Technology Development (ATD)</i> | | R-1 ITEM NOMENCLATURE PE 0603002A: <i>MEDICAL ADVANCED TECHNOLOGY</i> | | PROJECT FH4: <i>FORCE HEALTH PROTECTION - ADV TECH DEV</i> | | |
| <u>B. Accomplishments/Planned Program (\$ in Millions)</u> | | | | | | |
| | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| <i>FY 2010 Plans:</i> FY 2010 <i>Base FY 2011 Plans:</i> FY 2011 Base <i>OCO FY 2011 Plans:</i> FY 2011 OCO | | | | | | |
| Accomplishments/Planned Programs Subtotals | | 2.006 | 1.953 | 1.974 | 0.000 | 1.974 |
| <u>C. Other Program Funding Summary (\$ in Millions)</u> N/A | | | | | | |
| <u>D. Acquisition Strategy</u> N/A | | | | | | |
| <u>E. Performance Metrics</u> Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010. | | | | | | |

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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | | | | | | | DATE: February 2010 | | |
|---|----------------|------------------|-----------------------|--|------------------------|------------------|------------------|---|---------------------|------------------|---------------|
| APPROPRIATION/BUDGET ACTIVITY | | | | R-1 ITEM NOMENCLATURE | | | | PROJECT | | | |
| 2040: Research, Development, Test & Evaluation, Army | | | | PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | | | | MB1: ADV DIAGNOSTICS & THERAPEUTIC DIG TECH | | | |
| BA 3: Advanced Technology Development (ATD) | | | | TECHNOLOGY | | | | | | | |
| COST (\$ in Millions) | FY 2009 Actual | FY 2010 Estimate | Base FY 2011 Estimate | OCO FY 2011 Estimate | Total FY 2011 Estimate | FY 2012 Estimate | FY 2013 Estimate | FY 2014 Estimate | FY 2015 Estimate | Cost To Complete | Total Cost |
| MB1: ADV DIAGNOSTICS & THERAPEUTIC DIG TECH | 0.000 | 1.591 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Continuing | Continuing |
| A. Mission Description and Budget Item Justification | | | | | | | | | | | |
| Congressional Interest Item funding for Advanced Diagnostic and Therapeutic Digital Technologies development. | | | | | | | | | | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | | | | | | |
| | | | | | | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| Program #1 | | | | | | | 0.000 | 1.591 | 0.000 | 0.000 | 0.000 |
| Advanced Diagnostic and Therapeutic Digital Technologies. This is a Congressional Interest Item. | | | | | | | | | | | |
| FY 2009 Accomplishments: | | | | | | | | | | | |
| FY 2009 | | | | | | | | | | | |
| FY 2010 Plans: | | | | | | | | | | | |
| FY 2010 | | | | | | | | | | | |
| Base FY 2011 Plans: | | | | | | | | | | | |
| FY 2011 Base | | | | | | | | | | | |
| OCO FY 2011 Plans: | | | | | | | | | | | |
| FY 2011 OCO | | | | | | | | | | | |
| Accomplishments/Planned Programs Subtotals | | | | | | | 0.000 | 1.591 | 0.000 | 0.000 | 0.000 |
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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | DATE: February 2010 |
| APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 3: <i>Advanced Technology Development (ATD)</i> | R-1 ITEM NOMENCLATURE PE 0603002A: <i>MEDICAL ADVANCED TECHNOLOGY</i> | PROJECT MB1: <i>ADV DIAGNOSTICS & THERAPEUTIC DIG TECH</i> |
| <u>C. Other Program Funding Summary (\$ in Millions)</u> N/A | | |
| <u>D. Acquisition Strategy</u> N/A | | |
| <u>E. Performance Metrics</u> Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010. | | |

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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | | | | | | | DATE: February 2010 | | |
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| APPROPRIATION/BUDGET ACTIVITY | | | | R-1 ITEM NOMENCLATURE | | | | PROJECT | | | |
| 2040: Research, Development, Test & Evaluation, Army | | | | PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | | | | MB2: BRAIN, BIOLOGY, AND MACHINE | | | |
| BA 3: Advanced Technology Development (ATD) | | | | | | | | | | | |
| COST (\$ in Millions) | FY 2009 Actual | FY 2010 Estimate | Base FY 2011 Estimate | OCO FY 2011 Estimate | Total FY 2011 Estimate | FY 2012 Estimate | FY 2013 Estimate | FY 2014 Estimate | FY 2015 Estimate | Cost To Complete | Total Cost |
| MB2: BRAIN, BIOLOGY, AND MACHINE | 1.595 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Continuing | Continuing |
| A. Mission Description and Budget Item Justification | | | | | | | | | | | |
| Congressional Interest Item funding for brain, biology and machine advanced technology development. | | | | | | | | | | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | | | | | | |
| | | | | | | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| Program #1 | | | | | | | 1.595 | 0.000 | 0.000 | 0.000 | 0.000 |
| This congressionally directed project conducted Brain, Biology and Machine Applied Research. | | | | | | | | | | | |
| FY 2009 Accomplishments: | | | | | | | | | | | |
| FY 2009 | | | | | | | | | | | |
| FY 2010 Plans: | | | | | | | | | | | |
| FY 2010 | | | | | | | | | | | |
| Base FY 2011 Plans: | | | | | | | | | | | |
| FY 2011 Base | | | | | | | | | | | |
| OCO FY 2011 Plans: | | | | | | | | | | | |
| FY 2011 OCO | | | | | | | | | | | |
| Program #2 | | | | | | | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| SBIR/STTR | | | | | | | | | | | |
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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | | DATE: February 2010 | |
| APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 3: <i>Advanced Technology Development (ATD)</i> | | R-1 ITEM NOMENCLATURE PE 0603002A: <i>MEDICAL ADVANCED TECHNOLOGY</i> | | PROJECT MB2: <i>BRAIN, BIOLOGY, AND MACHINE</i> | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | |
| | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 |
| <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>Base FY 2011 Plans:</i> FY 2011 Base <i>OCO FY 2011 Plans:</i> FY 2011 OCO | | | | | |
| Accomplishments/Planned Programs Subtotals | | 1.595 | 0.000 | 0.000 | 0.000 |
| C. Other Program Funding Summary (\$ in Millions) N/A | | | | | |
| D. Acquisition Strategy N/A | | | | | |
| E. Performance Metrics Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010. | | | | | |

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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | | | | | | DATE: February 2010 | | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 3: <i>Advanced Technology Development (ATD)</i> | | | | R-1 ITEM NOMENCLATURE PE 0603002A: <i>MEDICAL ADVANCED TECHNOLOGY</i> | | | | PROJECT MB3: <i>CENTER FOR INTEGRATION OF MEDICINE & INNOV TECH</i> | | | |
| COST (\$ in Millions) | FY 2009 Actual | FY 2010 Estimate | Base FY 2011 Estimate | OCO FY 2011 Estimate | Total FY 2011 Estimate | FY 2012 Estimate | FY 2013 Estimate | FY 2014 Estimate | FY 2015 Estimate | Cost To Complete | Total Cost |
| MB3: <i>CENTER FOR INTEGRATION OF MEDICINE & INNOV TECH</i> | 7.973 | 8.953 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Continuing | Continuing |
| <u>A. Mission Description and Budget Item Justification</u> Congressional Interest Item funding for the Center for the Integration of Medicine and Innovative Technology. | | | | | | | | | | | |
| <u>B. Accomplishments/Planned Program (\$ in Millions)</u> | | | | | | | | | | | |
| | | | | | | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| Program #1 This congressionally directed project conducted research at the Center for the Integration of Medicine and Innovative Technology (CIMIT). <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>Base FY 2011 Plans:</i> FY 2011 Base <i>OCO FY 2011 Plans:</i> FY 2011 OCO | | | | | | | 7.973 | 8.953 | 0.000 | 0.000 | 0.000 |
| Program #2 SBIR/STTR | | | | | | | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | | DATE: February 2010 | |
| APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 3: <i>Advanced Technology Development (ATD)</i> | | R-1 ITEM NOMENCLATURE PE 0603002A: <i>MEDICAL ADVANCED TECHNOLOGY</i> | | PROJECT MB3: <i>CENTER FOR INTEGRATION OF MEDICINE & INNOV TECH</i> | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | |
| | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| <i>FY 2009 Accomplishments:</i> FY 2009 | | | | | |
| <i>FY 2010 Plans:</i> FY 2010 | | | | | |
| <i>Base FY 2011 Plans:</i> FY 2011 Base | | | | | |
| <i>OCO FY 2011 Plans:</i> FY 2011 OCO | | | | | |
| Accomplishments/Planned Programs Subtotals | 7.973 | 8.953 | 0.000 | 0.000 | 0.000 |
| C. Other Program Funding Summary (\$ in Millions) N/A | | | | | |
| D. Acquisition Strategy N/A | | | | | |
| E. Performance Metrics Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010. | | | | | |

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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | | | | | | | DATE: February 2010 | | |
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| APPROPRIATION/BUDGET ACTIVITY | | | | R-1 ITEM NOMENCLATURE | | | | PROJECT | | | |
| 2040: Research, Development, Test & Evaluation, Army | | | | PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | | | | MB4: CENTER FOR UNTETHERED HEALTHCARE | | | |
| BA 3: Advanced Technology Development (ATD) | | | | TECHNOLOGY | | | | HEALTHCARE | | | |
| COST (\$ in Millions) | FY 2009 Actual | FY 2010 Estimate | Base FY 2011 Estimate | OCO FY 2011 Estimate | Total FY 2011 Estimate | FY 2012 Estimate | FY 2013 Estimate | FY 2014 Estimate | FY 2015 Estimate | Cost To Complete | Total Cost |
| MB4: CENTER FOR UNTETHERED HEALTHCARE | 0.997 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Continuing | Continuing |
| A. Mission Description and Budget Item Justification | | | | | | | | | | | |
| Congressional Interest Item funding for the Center for Untethered Health Care. | | | | | | | | | | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | | | | | | |
| | | | | | | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| Program #1 | | | | | | | 0.997 | 0.000 | 0.000 | 0.000 | 0.000 |
| This congressionally directed project conducted research at the Center for Untethered Health Care | | | | | | | | | | | |
| FY 2009 Accomplishments: | | | | | | | | | | | |
| FY 2009 | | | | | | | | | | | |
| FY 2010 Plans: | | | | | | | | | | | |
| FY 2010 | | | | | | | | | | | |
| Base FY 2011 Plans: | | | | | | | | | | | |
| FY 2011 Base | | | | | | | | | | | |
| OCO FY 2011 Plans: | | | | | | | | | | | |
| FY 2011 OCO | | | | | | | | | | | |
| Program #2 | | | | | | | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| SBIR/STTR | | | | | | | | | | | |
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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | | DATE: February 2010 | |
| APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 3: <i>Advanced Technology Development (ATD)</i> | | R-1 ITEM NOMENCLATURE PE 0603002A: <i>MEDICAL ADVANCED TECHNOLOGY</i> | | PROJECT MB4: <i>CENTER FOR UNTETHERED HEALTHCARE</i> | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | |
| | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 |
| <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>Base FY 2011 Plans:</i> FY 2011 Base <i>OCO FY 2011 Plans:</i> FY 2011 OCO | | | | | |
| Accomplishments/Planned Programs Subtotals | | 0.997 | 0.000 | 0.000 | 0.000 |
| C. Other Program Funding Summary (\$ in Millions) N/A | | | | | |
| D. Acquisition Strategy N/A | | | | | |
| E. Performance Metrics Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010. | | | | | |

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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | | | | | | | DATE: February 2010 | | |
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| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | | | | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | | | | PROJECT MG5: NATIONAL FUNCTIONAL GENOMICS CENTER (CA) | | | |
| COST (\$ in Millions) | FY 2009 Actual | FY 2010 Estimate | Base FY 2011 Estimate | OCO FY 2011 Estimate | Total FY 2011 Estimate | FY 2012 Estimate | FY 2013 Estimate | FY 2014 Estimate | FY 2015 Estimate | Cost To Complete | Total Cost |
| MG5: NATIONAL FUNCTIONAL GENOMICS CENTER (CA) | 5.980 | 5.969 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Continuing | Continuing |
| <u>A. Mission Description and Budget Item Justification</u> Congressional Interest Item funding for Functional Genomics. | | | | | | | | | | | |
| <u>B. Accomplishments/Planned Program (\$ in Millions)</u> | | | | | | | | | | | |
| | | | | | | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| Program #1 National Functional Genomics Center. This is a Congressional Interest Item. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>Base FY 2011 Plans:</i> FY 2011 Base <i>OCO FY 2011 Plans:</i> FY 2011 OCO | | | | | | | 5.980 | 5.969 | 0.000 | 0.000 | 0.000 |
| Accomplishments/Planned Programs Subtotals | | | | | | | 5.980 | 5.969 | 0.000 | 0.000 | 0.000 |
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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | DATE: February 2010 |
| APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 3: <i>Advanced Technology Development (ATD)</i> | R-1 ITEM NOMENCLATURE PE 0603002A: <i>MEDICAL ADVANCED TECHNOLOGY</i> | PROJECT MG5: <i>NATIONAL FUNCTIONAL GENOMICS CENTER (CA)</i> |
| C. Other Program Funding Summary (\$ in Millions) N/A | | |
| D. Acquisition Strategy N/A | | |
| E. Performance Metrics Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010. | | |

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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | | | | | | | DATE: February 2010 | | |
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| APPROPRIATION/BUDGET ACTIVITY | | | | R-1 ITEM NOMENCLATURE | | | | PROJECT | | | |
| 2040: Research, Development, Test & Evaluation, Army | | | | PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | | | | MG7: ON-LINE MEDICAL TRAINING (CA) | | | |
| BA 3: Advanced Technology Development (ATD) | | | | | | | | | | | |
| COST (\$ in Millions) | FY 2009 Actual | FY 2010 Estimate | Base FY 2011 Estimate | OCO FY 2011 Estimate | Total FY 2011 Estimate | FY 2012 Estimate | FY 2013 Estimate | FY 2014 Estimate | FY 2015 Estimate | Cost To Complete | Total Cost |
| MG7: ON-LINE MEDICAL TRAINING (CA) | 2.791 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Continuing | Continuing |
| A. Mission Description and Budget Item Justification | | | | | | | | | | | |
| Congressional Interest Item funding for Online Medical Training. | | | | | | | | | | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | | | | | | |
| | | | | | | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| Program #1 | | | | | | | 2.791 | 0.000 | 0.000 | 0.000 | 0.000 |
| Online Medical Training for Military Personnel. This is a Congressional Interest Item. | | | | | | | | | | | |
| FY 2009 Accomplishments: | | | | | | | | | | | |
| FY 2009 | | | | | | | | | | | |
| FY 2010 Plans: | | | | | | | | | | | |
| FY 2010 | | | | | | | | | | | |
| Base FY 2011 Plans: | | | | | | | | | | | |
| FY 2011 Base | | | | | | | | | | | |
| OCO FY 2011 Plans: | | | | | | | | | | | |
| FY 2011 OCO | | | | | | | | | | | |
| Accomplishments/Planned Programs Subtotals | | | | | | | 2.791 | 0.000 | 0.000 | 0.000 | 0.000 |
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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | DATE: February 2010 |
| APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 3: <i>Advanced Technology Development (ATD)</i> | R-1 ITEM NOMENCLATURE PE 0603002A: <i>MEDICAL ADVANCED TECHNOLOGY</i> | PROJECT MG7: <i>ON-LINE MEDICAL TRAINING (CA)</i> |
| C. Other Program Funding Summary (\$ in Millions) N/A | | |
| D. Acquisition Strategy N/A | | |
| E. Performance Metrics Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010. | | |

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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | | | | | | | DATE: February 2010 | | |
|---|----------------|------------------|-----------------------|---|------------------------|------------------|------------------|--|---------------------|------------------|---------------|
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | | | | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | | | | PROJECT MI4: ALLIANCE FOR NANOHEALTH (CA) | | | |
| COST (\$ in Millions) | FY 2009 Actual | FY 2010 Estimate | Base FY 2011 Estimate | OCO FY 2011 Estimate | Total FY 2011 Estimate | FY 2012 Estimate | FY 2013 Estimate | FY 2014 Estimate | FY 2015 Estimate | Cost To Complete | Total Cost |
| MI4: ALLIANCE FOR NANOHEALTH (CA) | 3.190 | 3.979 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Continuing | Continuing |
| <u>A. Mission Description and Budget Item Justification</u> Congressional Interest Item funding for the Alliance for NanoHealth. | | | | | | | | | | | |
| <u>B. Accomplishments/Planned Program (\$ in Millions)</u> | | | | | | | | | | | |
| | | | | | | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| Program #1 Alliance for NanoHealth. This is a Congressional Interest Item. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>Base FY 2011 Plans:</i> FY 2011 Base <i>OCO FY 2011 Plans:</i> FY 2011 OCO | | | | | | | 3.190 | 3.979 | 0.000 | 0.000 | 0.000 |
| Accomplishments/Planned Programs Subtotals | | | | | | | 3.190 | 3.979 | 0.000 | 0.000 | 0.000 |
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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | DATE: February 2010 |
| APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 3: <i>Advanced Technology Development (ATD)</i> | R-1 ITEM NOMENCLATURE PE 0603002A: <i>MEDICAL ADVANCED TECHNOLOGY</i> | PROJECT MI4: <i>ALLIANCE FOR NANOHEALTH (CA)</i> |
| C. Other Program Funding Summary (\$ in Millions) N/A | | |
| D. Acquisition Strategy N/A | | |
| E. Performance Metrics Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010. | | |

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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | | | | | | | DATE: February 2010 | | |
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| APPROPRIATION/BUDGET ACTIVITY | | | | R-1 ITEM NOMENCLATURE | | | | PROJECT | | | |
| 2040: Research, Development, Test & Evaluation, Army | | | | PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | | | | MJ2: FIBRINOGEN BANDAGES FOR BATTLEFIELD WOUNDS (CA) | | | |
| BA 3: Advanced Technology Development (ATD) | | | | | | | | | | | |
| COST (\$ in Millions) | FY 2009 Actual | FY 2010 Estimate | Base FY 2011 Estimate | OCO FY 2011 Estimate | Total FY 2011 Estimate | FY 2012 Estimate | FY 2013 Estimate | FY 2014 Estimate | FY 2015 Estimate | Cost To Complete | Total Cost |
| MJ2: FIBRINOGEN BANDAGES FOR BATTLEFIELD WOUNDS (CA) | 2.990 | 2.388 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Continuing | Continuing |
| A. Mission Description and Budget Item Justification | | | | | | | | | | | |
| Congressional Interest Item funding for Fibrin Adhesive Stat (FAST) Dressing technology development. | | | | | | | | | | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | | | | | | |
| | | | | | | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| Program #1 | | | | | | | 2.990 | 2.388 | 0.000 | 0.000 | 0.000 |
| Fibrin Adhesive Stat (FAST) Dressing. This is a Congressional Interest Item. | | | | | | | | | | | |
| FY 2009 Accomplishments: | | | | | | | | | | | |
| FY 2009 | | | | | | | | | | | |
| FY 2010 Plans: | | | | | | | | | | | |
| FY 2010 | | | | | | | | | | | |
| Base FY 2011 Plans: | | | | | | | | | | | |
| FY 2011 Base | | | | | | | | | | | |
| OCO FY 2011 Plans: | | | | | | | | | | | |
| FY 2011 OCO | | | | | | | | | | | |
| Accomplishments/Planned Programs Subtotals | | | | | | | 2.990 | 2.388 | 0.000 | 0.000 | 0.000 |
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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | DATE: February 2010 |
| APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 3: <i>Advanced Technology Development (ATD)</i> | R-1 ITEM NOMENCLATURE PE 0603002A: <i>MEDICAL ADVANCED TECHNOLOGY</i> | PROJECT MJ2: <i>FIBRINOGEN BANDAGES FOR BATTLEFIELD WOUNDS (CA)</i> |
| <u>C. Other Program Funding Summary (\$ in Millions)</u> N/A | | |
| <u>D. Acquisition Strategy</u> N/A | | |
| <u>E. Performance Metrics</u> Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010. | | |

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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | | | | | | | DATE: February 2010 | | |
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| APPROPRIATION/BUDGET ACTIVITY | | | | R-1 ITEM NOMENCLATURE | | | | PROJECT | | | |
| 2040: Research, Development, Test & Evaluation, Army | | | | PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | | | | MK1: MEDICAL M&S THROUGH SYNTHETIC DIGITAL GENES (CA) | | | |
| BA 3: Advanced Technology Development (ATD) | | | | TECHNOLOGY | | | | | | | |
| COST (\$ in Millions) | FY 2009 Actual | FY 2010 Estimate | Base FY 2011 Estimate | OCO FY 2011 Estimate | Total FY 2011 Estimate | FY 2012 Estimate | FY 2013 Estimate | FY 2014 Estimate | FY 2015 Estimate | Cost To Complete | Total Cost |
| MK1: MEDICAL M&S THROUGH SYNTHETIC DIGITAL GENES (CA) | 0.996 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Continuing | Continuing |
| A. Mission Description and Budget Item Justification | | | | | | | | | | | |
| Congressional Interest Item funding for Medical Modeling and Simulation advanced technology development. | | | | | | | | | | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | | | | | | |
| | | | | | | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| Program #1 | | | | | | | 0.996 | 0.000 | 0.000 | 0.000 | 0.000 |
| Medical Modeling and Simulation Through Synthetic Digital Genes. This is a Congressional Interest Item. | | | | | | | | | | | |
| FY 2009 Accomplishments: | | | | | | | | | | | |
| FY 2009 | | | | | | | | | | | |
| FY 2010 Plans: | | | | | | | | | | | |
| FY 2010 | | | | | | | | | | | |
| Base FY 2011 Plans: | | | | | | | | | | | |
| FY 2011 Base | | | | | | | | | | | |
| OCO FY 2011 Plans: | | | | | | | | | | | |
| FY 2011 OCO | | | | | | | | | | | |
| Accomplishments/Planned Programs Subtotals | | | | | | | 0.996 | 0.000 | 0.000 | 0.000 | 0.000 |
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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | DATE: February 2010 |
| APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 3: <i>Advanced Technology Development (ATD)</i> | R-1 ITEM NOMENCLATURE PE 0603002A: <i>MEDICAL ADVANCED TECHNOLOGY</i> | PROJECT MK1: <i>MEDICAL M&S THROUGH SYNTHETIC DIGITAL GENES (CA)</i> |
| C. Other Program Funding Summary (\$ in Millions) N/A | | |
| D. Acquisition Strategy N/A | | |
| E. Performance Metrics Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010. | | |

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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | | | | | | | DATE: February 2010 | | |
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| APPROPRIATION/BUDGET ACTIVITY | | | | R-1 ITEM NOMENCLATURE | | | | PROJECT | | | |
| 2040: Research, Development, Test & Evaluation, Army | | | | PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | | | | MK8: PLASMA STERILIZER (CA) | | | |
| BA 3: Advanced Technology Development (ATD) | | | | | | | | | | | |
| COST (\$ in Millions) | FY 2009 Actual | FY 2010 Estimate | Base FY 2011 Estimate | OCO FY 2011 Estimate | Total FY 2011 Estimate | FY 2012 Estimate | FY 2013 Estimate | FY 2014 Estimate | FY 2015 Estimate | Cost To Complete | Total Cost |
| MK8: PLASMA STERILIZER (CA) | 3.189 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Continuing | Continuing |
| A. Mission Description and Budget Item Justification | | | | | | | | | | | |
| Congressional Interest Item funding for Plasma Sterilizer advanced technology development. | | | | | | | | | | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | | | | | | |
| | | | | | | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| Program #1 | | | | | | | 3.189 | 0.000 | 0.000 | 0.000 | 0.000 |
| Plasma Sterilizer. This is a Congressional Interest Item. | | | | | | | | | | | |
| FY 2009 Accomplishments: | | | | | | | | | | | |
| FY 2009 | | | | | | | | | | | |
| FY 2010 Plans: | | | | | | | | | | | |
| FY 2010 | | | | | | | | | | | |
| Base FY 2011 Plans: | | | | | | | | | | | |
| FY 2011 Base | | | | | | | | | | | |
| OCO FY 2011 Plans: | | | | | | | | | | | |
| FY 2011 OCO | | | | | | | | | | | |
| Accomplishments/Planned Programs Subtotals | | | | | | | 3.189 | 0.000 | 0.000 | 0.000 | 0.000 |
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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | DATE: February 2010 |
| APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 3: <i>Advanced Technology Development (ATD)</i> | R-1 ITEM NOMENCLATURE PE 0603002A: <i>MEDICAL ADVANCED TECHNOLOGY</i> | PROJECT MK8: <i>PLASMA STERILIZER (CA)</i> |
| C. Other Program Funding Summary (\$ in Millions) N/A | | |
| D. Acquisition Strategy N/A | | |
| E. Performance Metrics Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010. | | |

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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | | | | | | DATE: February 2010 | | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 3: <i>Advanced Technology Development (ATD)</i> | | | | R-1 ITEM NOMENCLATURE PE 0603002A: <i>MEDICAL ADVANCED TECHNOLOGY</i> | | | | PROJECT ML3: <i>SOLDIER-MOUNTED EYE-TRACKING & CONTROL SYSTEM (CA)</i> | | | |
| COST (\$ in Millions) | FY 2009 Actual | FY 2010 Estimate | Base FY 2011 Estimate | OCO FY 2011 Estimate | Total FY 2011 Estimate | FY 2012 Estimate | FY 2013 Estimate | FY 2014 Estimate | FY 2015 Estimate | Cost To Complete | Total Cost |
| ML3: <i>SOLDIER-MOUNTED EYE-TRACKING & CONTROL SYSTEM (CA)</i> | 4.983 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Continuing | Continuing |
| <u>A. Mission Description and Budget Item Justification</u> Congressional Interest Item funding for Biosensor Communicator and Controller System advanced technology development. | | | | | | | | | | | |
| <u>B. Accomplishments/Planned Program (\$ in Millions)</u> | | | | | | | | | | | |
| | | | | | | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| Program #1 Biosensor Communicator and Controller System. This is a Congressional Interest Item. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>Base FY 2011 Plans:</i> FY 2011 Base <i>OCO FY 2011 Plans:</i> FY 2011 OCO | | | | | | | 4.983 | 0.000 | 0.000 | 0.000 | 0.000 |
| Accomplishments/Planned Programs Subtotals | | | | | | | 4.983 | 0.000 | 0.000 | 0.000 | 0.000 |

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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | DATE: February 2010 |
| APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 3: <i>Advanced Technology Development (ATD)</i> | R-1 ITEM NOMENCLATURE PE 0603002A: <i>MEDICAL ADVANCED TECHNOLOGY</i> | PROJECT ML3: <i>SOLDIER-MOUNTED EYE-TRACKING & CONTROL SYSTEM (CA)</i> |
| C. Other Program Funding Summary (\$ in Millions) N/A | | |
| D. Acquisition Strategy N/A | | |
| E. Performance Metrics Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010. | | |

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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | | | | | | | DATE: February 2010 | | |
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| APPROPRIATION/BUDGET ACTIVITY | | | | R-1 ITEM NOMENCLATURE | | | | PROJECT | | | |
| 2040: Research, Development, Test & Evaluation, Army | | | | PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | | | | MM1: WEIGHT MEASUREMENTS & STANDARDS FOR MIL PERSONNEL | | | |
| BA 3: Advanced Technology Development (ATD) | | | | | | | | | | | |
| COST (\$ in Millions) | FY 2009 Actual | FY 2010 Estimate | Base FY 2011 Estimate | OCO FY 2011 Estimate | Total FY 2011 Estimate | FY 2012 Estimate | FY 2013 Estimate | FY 2014 Estimate | FY 2015 Estimate | Cost To Complete | Total Cost |
| MM1: WEIGHT MEASUREMENTS & STANDARDS FOR MIL PERSONNEL | 1.995 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Continuing | Continuing |
| A. Mission Description and Budget Item Justification | | | | | | | | | | | |
| Congressional Interest Item funding for Weight Measurements and Standards for Military Personnel. | | | | | | | | | | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | | | | | | |
| | | | | | | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| Program #1 | | | | | | | 1.995 | 0.000 | 0.000 | 0.000 | 0.000 |
| Weight Measurements and Standards for Military Personnel. This is a Congressional Interest Item. | | | | | | | | | | | |
| FY 2009 Accomplishments: | | | | | | | | | | | |
| FY 2009 | | | | | | | | | | | |
| FY 2010 Plans: | | | | | | | | | | | |
| FY 2010 | | | | | | | | | | | |
| Base FY 2011 Plans: | | | | | | | | | | | |
| FY 2011 Base | | | | | | | | | | | |
| OCO FY 2011 Plans: | | | | | | | | | | | |
| FY 2011 OCO | | | | | | | | | | | |
| Accomplishments/Planned Programs Subtotals | | | | | | | 1.995 | 0.000 | 0.000 | 0.000 | 0.000 |
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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | DATE: February 2010 |
| APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 3: <i>Advanced Technology Development (ATD)</i> | R-1 ITEM NOMENCLATURE PE 0603002A: <i>MEDICAL ADVANCED TECHNOLOGY</i> | PROJECT MM1: <i>WEIGHT MEASUREMENTS & STANDARDS FOR MIL PERSONNEL</i> |
| C. Other Program Funding Summary (\$ in Millions) N/A | | |
| D. Acquisition Strategy N/A | | |
| E. Performance Metrics Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010. | | |

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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | | | | | | | DATE: February 2010 | | |
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| APPROPRIATION/BUDGET ACTIVITY | | | | R-1 ITEM NOMENCLATURE | | | | PROJECT | | | |
| 2040: Research, Development, Test & Evaluation, Army | | | | PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | | | | MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | | | |
| BA 3: Advanced Technology Development (ATD) | | | | TECHNOLOGY | | | | | | | |
| COST (\$ in Millions) | FY 2009 Actual | FY 2010 Estimate | Base FY 2011 Estimate | OCO FY 2011 Estimate | Total FY 2011 Estimate | FY 2012 Estimate | FY 2013 Estimate | FY 2014 Estimate | FY 2015 Estimate | Cost To Complete | Total Cost |
| MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | 187.962 | 239.536 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Continuing | Continuing |
| A. Mission Description and Budget Item Justification | | | | | | | | | | | |
| Congressional Interest Item funding for Medical Advanced Technology Initiatives. | | | | | | | | | | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | | | | | | |
| | | | | | | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| Program #1 | | | | | | | 0.797 | 0.000 | 0.000 | 0.000 | 0.000 |
| Battlefield Exercise and Combat Related Spinal Cord Injury Research. This is a Congressional Interest Item. | | | | | | | | | | | |
| FY 2009 Accomplishments: | | | | | | | | | | | |
| FY 2009 | | | | | | | | | | | |
| FY 2010 Plans: | | | | | | | | | | | |
| FY 2010 | | | | | | | | | | | |
| Base FY 2011 Plans: | | | | | | | | | | | |
| FY 2011 Base | | | | | | | | | | | |
| OCO FY 2011 Plans: | | | | | | | | | | | |
| FY 2011 OCO | | | | | | | | | | | |
| Program #2 | | | | | | | 1.595 | 2.785 | 0.000 | 0.000 | 0.000 |
| Cellular Therapy for Battlefield Medical Care. This is a Congressional Interest Item. | | | | | | | | | | | |

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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | DATE: February 2010 | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | PROJECT MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | |
| | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| FY 2009 Accomplishments: FY 2009 | | | | | |
| FY 2010 Plans: FY 2010 | | | | | |
| Base FY 2011 Plans: FY 2011 Base | | | | | |
| OCO FY 2011 Plans: FY 2011 OCO | | | | | |
| Program #3 Center for Genetic Origins of Cancer. This is a Congressional Interest Item. | 2.392 | 1.990 | 0.000 | 0.000 | 0.000 |
| FY 2009 Accomplishments: FY 2009 | | | | | |
| FY 2010 Plans: FY 2010 | | | | | |
| Base FY 2011 Plans: FY 2011 Base | | | | | |
| OCO FY 2011 Plans: FY 2011 OCO | | | | | |
| Program #4 | 1.595 | 2.387 | 0.000 | 0.000 | 0.000 |
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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | DATE: February 2010 | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | PROJECT MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | |
| | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| Combat Wound Initiative at Walter Reed Army Medical Center. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | | | | |
| Program #5 Composite Tissue Allotransplantation Research and Clinical Program. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | 1.595 | 0.000 | 0.000 | 0.000 | 0.000 |

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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | | DATE: February 2010 | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | | PROJECT MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | |
| | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| Program #6 Feeding Tube for Trauma and Burn Patients. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 1.595 | 0.000 | 0.000 | 0.000 | 0.000 |
| Program #7 Host Pathogen Interaction Study. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 3.189 | 0.000 | 0.000 | 0.000 | 0.000 |

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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | | DATE: February 2010 | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | | PROJECT MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | |
| | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| Program #8 Human Genomics, Molecular Epidemiology and Clinical Diagnostics for Infectious Diseases. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 1.156 | 1.194 | 0.000 | 0.000 | 0.000 |
| Program #9 Medical Surveillance Initiative-Clinical Looking Glass. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base | | 0.797 | 1.194 | 0.000 | 0.000 | 0.000 |
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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | DATE: February 2010 | | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | PROJECT MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | | | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | |
| | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| OCO FY 2011 Plans: FY 2011 OCO | | | | | | |
| Program #10 National Oncogenomics and Molecular Imaging Center. This is a Congressional Interest Item. | | 3.189 | 4.735 | 0.000 | 0.000 | 0.000 |
| FY 2009 Accomplishments: FY 2009 | | | | | | |
| FY 2010 Plans: FY 2010 | | | | | | |
| Base FY 2011 Plans: FY 2011 Base | | | | | | |
| OCO FY 2011 Plans: FY 2011 OCO | | | | | | |
| Program #11 National Warfighter Health Sustainment Study. This is a Congressional Interest Item. | | 0.797 | 0.000 | 0.000 | 0.000 | 0.000 |
| FY 2009 Accomplishments: FY 2009 | | | | | | |
| FY 2010 Plans: FY 2010 | | | | | | |

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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | | DATE: February 2010 | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | | PROJECT MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | |
| | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| Base FY 2011 Plans: FY 2011 Base | | | | | | |
| OCO FY 2011 Plans: FY 2011 OCO | | | | | | |
| Program #12 Neuroimaging & Neuropsychiatric Trauma in US Warfighters. This is a Congressional Interest Item. | | 4.984 | 6.217 | 0.000 | 0.000 | 0.000 |
| FY 2009 Accomplishments: FY 2009 | | | | | | |
| FY 2010 Plans: FY 2010 | | | | | | |
| Base FY 2011 Plans: FY 2011 Base | | | | | | |
| OCO FY 2011 Plans: FY 2011 OCO | | | | | | |
| Program #13 Telepharmacy Robotic Medicine Device Unit. This is a Congressional Interest Item. | | 1.395 | 0.796 | 0.000 | 0.000 | 0.000 |
| FY 2009 Accomplishments: FY 2009 | | | | | | |
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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | DATE: February 2010 | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | PROJECT MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | |
| | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | | | | |
| Program #14 Institute for the Advancement of Bloodless Medicine. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | 1.595 | 1.485 | 0.000 | 0.000 | 0.000 |
| Program #15 Battlefield Tracheal Intubation for Wounded Soldiers. This is a Congressional Interest Item. | 4.186 | 0.000 | 0.000 | 0.000 | 0.000 |
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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | DATE: February 2010 | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | PROJECT MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | |
| | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| FY 2009 Accomplishments: FY 2009 | | | | | |
| FY 2010 Plans: FY 2010 | | | | | |
| Base FY 2011 Plans: FY 2011 Base | | | | | |
| OCO FY 2011 Plans: FY 2011 OCO | | | | | |
| Program #16 Integrated Patient Quality Program. This is a Congressional Interest Item. | 1.595 | 0.000 | 0.000 | 0.000 | 0.000 |
| FY 2009 Accomplishments: FY 2009 | | | | | |
| FY 2010 Plans: FY 2010 | | | | | |
| Base FY 2011 Plans: FY 2011 Base | | | | | |
| OCO FY 2011 Plans: FY 2011 OCO | | | | | |
| Program #17 | 2.990 | 0.000 | 0.000 | 0.000 | 0.000 |
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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | | DATE: February 2010 | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | | PROJECT MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | |
| | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| Limb Tissue Regeneration after Battlefield Injuries Using Bone Marrow Stem Cells. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | | | | | |
| Program #18 National Biodefense Training. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 4.984 | 4.974 | 0.000 | 0.000 | 0.000 |

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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | DATE: February 2010 | | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | PROJECT MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | | | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | |
| | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| Program #19 Rugged Electronic Textile Vital Signs Monitoring. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 2.990 | 2.387 | 0.000 | 0.000 | 0.000 |
| Program #20 Control of Inflammation and Tissue Repair (CITR). This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 3.189 | 0.000 | 0.000 | 0.000 | 0.000 |

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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | | DATE: February 2010 | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | | PROJECT MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | |
| | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| Program #21 Trauma Care, Research and Training. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 2.392 | 2.387 | 0.000 | 0.000 | 0.000 |
| Program #22 Maine Institute for Human Genetics. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 1.595 | 1.592 | 0.000 | 0.000 | 0.000 |

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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | | DATE: February 2010 | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | | PROJECT MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | |
| | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| Program #23 Ultra High-Speed MEMS Electromagnetic Cell Sorter. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 2.392 | 0.000 | 0.000 | 0.000 | 0.000 |
| Program #24 Warfighter Cancer Care Engineering. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 2.392 | 0.000 | 0.000 | 0.000 | 0.000 |

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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | | DATE: February 2010 | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | | PROJECT MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | |
| | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| Program #25 Institute for Regenerative Medicine. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 2.990 | 3.183 | 0.000 | 0.000 | 0.000 |
| Program #26 Wireless Electronic Patient Records, WPIC-Personal Information Center. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 3.189 | 0.000 | 0.000 | 0.000 | 0.000 |

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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | | DATE: February 2010 | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | | PROJECT MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | |
| | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| Program #27 Integrated Functional Materials Initiative. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 0.797 | 0.000 | 0.000 | 0.000 | 0.000 |
| Program #28 National Center of Ophthalmology Training and Education al Wills Eye Health System. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base | | 0.997 | 2.387 | 0.000 | 0.000 | 0.000 |
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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | DATE: February 2010 | | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | PROJECT MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | | | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | |
| | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| OCO FY 2011 Plans: FY 2011 OCO | | | | | | |
| Program #29 Rural Health - CERMUSA. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 2.392 | 1.592 | 0.000 | 0.000 | 0.000 |
| Program #30 Spinal Muscular Atrophy (SMA) Research Program. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 | | 3.189 | 2.984 | 0.000 | 0.000 | 0.000 |
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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | DATE: February 2010 | | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | PROJECT MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | | | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | |
| | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| Base FY 2011 Plans: FY 2011 Base | | | | | | |
| OCO FY 2011 Plans: FY 2011 OCO | | | | | | |
| Program #31 Ultra-High Resolution Display for Army Medicine. This is a Congressional Interest Item. | | 3.987 | 0.000 | 0.000 | 0.000 | 0.000 |
| FY 2009 Accomplishments: FY 2009 | | | | | | |
| FY 2010 Plans: FY 2010 | | | | | | |
| Base FY 2011 Plans: FY 2011 Base | | | | | | |
| OCO FY 2011 Plans: FY 2011 OCO | | | | | | |
| Program #32 Advanced Lower Limb Prosthesis for Battlefield Amputees. This is a Congressional Interest Item. | | 1.595 | 3.183 | 0.000 | 0.000 | 0.000 |
| FY 2009 Accomplishments: FY 2009 | | | | | | |
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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | DATE: February 2010 | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | PROJECT MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | |
| | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | | | | |
| Program #33 Advanced Restoration Therapies in Spinal Cord Injuries. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | 1.994 | 1.592 | 0.000 | 0.000 | 0.000 |
| Program #34 Advanced Surface Technologies for Prosthetic Development. This is a Congressional Interest Item. | 1.595 | 0.000 | 0.000 | 0.000 | 0.000 |
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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | DATE: February 2010 | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | PROJECT MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | |
| | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| FY 2009 Accomplishments: FY 2009 | | | | | |
| FY 2010 Plans: FY 2010 | | | | | |
| Base FY 2011 Plans: FY 2011 Base | | | | | |
| OCO FY 2011 Plans: FY 2011 OCO | | | | | |
| Program #35 Prader-Willi Syndrome (PWS) Research. This is a Congressional Interest Item. | 1.595 | 1.592 | 0.000 | 0.000 | 0.000 |
| FY 2009 Accomplishments: FY 2009 | | | | | |
| FY 2010 Plans: FY 2010 | | | | | |
| Base FY 2011 Plans: FY 2011 Base | | | | | |
| OCO FY 2011 Plans: FY 2011 OCO | | | | | |
| Program #36 | 1.994 | 2.785 | 0.000 | 0.000 | 0.000 |
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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | | DATE: February 2010 | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | | PROJECT MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | |
| | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| Remote Bio-Medical Detector. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | | | | | |
| Program #37 Gulf War Illness Peer Reviewed Research. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 7.973 | 0.000 | 0.000 | 0.000 | 0.000 |
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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | | DATE: February 2010 | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | | PROJECT MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | |
| | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| Program #38 Advanced Regenerative Medicine Therapies for Combat Injuries. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 2.990 | 3.183 | 0.000 | 0.000 | 0.000 |
| Program #39 Portable Autonomous Fluid-less Near-infrared Non-Invasive Alcohol Testing Devices. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base | | 0.498 | 0.000 | 0.000 | 0.000 | 0.000 |
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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | | DATE: February 2010 | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | | PROJECT MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | |
| | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| OCO FY 2011 Plans: FY 2011 OCO | | | | | | |
| Program #40 Controlled Release of Anti-Inflammatory & Tissue Repair Agents f/Prosthetic Devices & Burn Treatment. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 5.981 | 0.000 | 0.000 | 0.000 | 0.000 |
| Program #41 Corneal Wound Repair. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 | | 5.482 | 0.000 | 0.000 | 0.000 | 0.000 |

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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | | DATE: February 2010 | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | | PROJECT MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | |
| | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| Base FY 2011 Plans: FY 2011 Base | | | | | | |
| OCO FY 2011 Plans: FY 2011 OCO | | | | | | |
| Program #42 Center of Cardiac Surgery Robotic Computerized Telemanipulation. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 1.595 | 0.000 | 0.000 | 0.000 | 0.000 |
| Program #43 Chronic Tinnitus Treatment Program. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 | | 0.997 | 0.796 | 0.000 | 0.000 | 0.000 |
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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | | DATE: February 2010 | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | | PROJECT MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | |
| | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| FY 2010 Plans: FY 2010 | | | | | | |
| Base FY 2011 Plans: FY 2011 Base | | | | | | |
| OCO FY 2011 Plans: FY 2011 OCO | | | | | | |
| Program #44 Infectious and Inflammatory Disease Center at the Burham Institute for Medical Research. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 2.392 | 0.000 | 0.000 | 0.000 | 0.000 |
| Program #45 Institute of Surgical and Interventional Simulation (ISIS). This is a Congressional Interest Item. | | 4.385 | 0.000 | 0.000 | 0.000 | 0.000 |
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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | DATE: February 2010 | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | PROJECT MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | |
| | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| FY 2009 Accomplishments: FY 2009 | | | | | |
| FY 2010 Plans: FY 2010 | | | | | |
| Base FY 2011 Plans: FY 2011 Base | | | | | |
| OCO FY 2011 Plans: FY 2011 OCO | | | | | |
| Program #46 Bioelectrics Research for Casualty Care and Management. This is a Congressional Interest Item. | 1.595 | 1.194 | 0.000 | 0.000 | 0.000 |
| FY 2009 Accomplishments: FY 2009 | | | | | |
| FY 2010 Plans: FY 2010 | | | | | |
| Base FY 2011 Plans: FY 2011 Base | | | | | |
| OCO FY 2011 Plans: FY 2011 OCO | | | | | |
| Program #47 | 0.797 | 0.796 | 0.000 | 0.000 | 0.000 |
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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | | DATE: February 2010 | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | | PROJECT MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | |
| | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| Advanced Medical Multi-Missions and CASEVAC Roles. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | | | | | |
| Program #48 Automated and Portable Field System for the Rapid Detection and Diagnosis of Diseases. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 1.595 | 0.000 | 0.000 | 0.000 | 0.000 |

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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | | DATE: February 2010 | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | | PROJECT MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | |
| | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| Program #49 Brain Interventional-Surgical Hybrid Initiative. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 1.595 | 2.387 | 0.000 | 0.000 | 0.000 |
| Program #50 101st Airborne Injury Prevention & Performance Enhancement Research Initiative. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base | | 1.994 | 2.984 | 0.000 | 0.000 | 0.000 |
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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | DATE: February 2010 | | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | PROJECT MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | | | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | |
| | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| OCO FY 2011 Plans: FY 2011 OCO | | | | | | |
| Program #51 Blood, Medical & Food Safety Via Eco-Friendly Wireless Sensing. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 0.997 | 1.592 | 0.000 | 0.000 | 0.000 |
| Program #52 International Heart Institute/U.S. Army Vascular Graft Research Project. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 | | 0.997 | 1.592 | 0.000 | 0.000 | 0.000 |
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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | | DATE: February 2010 | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | | PROJECT MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | |
| | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| Base FY 2011 Plans: FY 2011 Base | | | | | | |
| OCO FY 2011 Plans: FY 2011 OCO | | | | | | |
| Program #53 Military Burn Trauma Research Program. This is a Congressional Interest Item. | | 3.987 | 4.477 | 0.000 | 0.000 | 0.000 |
| FY 2009 Accomplishments: FY 2009 | | | | | | |
| FY 2010 Plans: FY 2010 | | | | | | |
| Base FY 2011 Plans: FY 2011 Base | | | | | | |
| OCO FY 2011 Plans: FY 2011 OCO | | | | | | |
| Program #54 Military Nutrition Research: Personnel Readiness and Warfighter Performance. This is a Congressional Interest Item. | | 1.595 | 0.796 | 0.000 | 0.000 | 0.000 |
| FY 2009 Accomplishments: FY 2009 | | | | | | |

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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | DATE: February 2010 | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | PROJECT MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | |
| | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | | | | |
| Program #55 Modular Stethoscope For Harsh Environments. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | 1.196 | 0.000 | 0.000 | 0.000 | 0.000 |
| Program #56 Novel Approaches to Reduce the Severity of Battlefield Combined Tissue Injury. This is a Congressional Interest Item. | 1.595 | 0.000 | 0.000 | 0.000 | 0.000 |

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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | DATE: February 2010 | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | PROJECT MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | |
| | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| FY 2009 Accomplishments: FY 2009 | | | | | |
| FY 2010 Plans: FY 2010 | | | | | |
| Base FY 2011 Plans: FY 2011 Base | | | | | |
| OCO FY 2011 Plans: FY 2011 OCO | | | | | |
| Program #57 Safe Airway Access in Combat. This is a Congressional Interest Item. | 1.994 | 0.000 | 0.000 | 0.000 | 0.000 |
| FY 2009 Accomplishments: FY 2009 | | | | | |
| FY 2010 Plans: FY 2010 | | | | | |
| Base FY 2011 Plans: FY 2011 Base | | | | | |
| OCO FY 2011 Plans: FY 2011 OCO | | | | | |
| Program #58 | 1.595 | 0.000 | 0.000 | 0.000 | 0.000 |
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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | DATE: February 2010 | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | PROJECT MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | |
| | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| Smart Prosthetic Hand Technology. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | | | | |
| Program #59 Solutions for Infection Control in Military Hospitals. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | 1.994 | 0.000 | 0.000 | 0.000 | 0.000 |

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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | | DATE: February 2010 | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | | PROJECT MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | |
| | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| Program #60 Staph Vaccine. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 3.987 | 6.367 | 0.000 | 0.000 | 0.000 |
| Program #61 Biodefense Tech Transfer Initiative. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 1.495 | 0.000 | 0.000 | 0.000 | 0.000 |

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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | | DATE: February 2010 | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | | PROJECT MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | |
| | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| Program #62 Extremity War Injury Research Foundation. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 0.797 | 0.000 | 0.000 | 0.000 | 0.000 |
| Program #63 Limb Regeneration Through Biometrics Technology. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 0.797 | 0.000 | 0.000 | 0.000 | 0.000 |

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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | | DATE: February 2010 | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | | PROJECT MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | |
| | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| Program #64 Linear Accelerator Cancer Research. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 0.797 | 0.796 | 0.000 | 0.000 | 0.000 |
| Program #65 Mary Bird Perkins Cancer Center. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 2.392 | 0.000 | 0.000 | 0.000 | 0.000 |

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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | | DATE: February 2010 | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | | PROJECT MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | |
| | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| Program #66 Mass Scale Biosensor Threat Diagnostic for In-Theater Defense Utilization (FIU). This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 1.595 | 0.000 | 0.000 | 0.000 | 0.000 |
| Program #67 Midwest Traumatic Injury Rehabilitation Center. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base | | 1.455 | 1.162 | 0.000 | 0.000 | 0.000 |
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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | DATE: February 2010 | | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | PROJECT MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | | | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | |
| | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| OCO FY 2011 Plans: FY 2011 OCO | | | | | | |
| Program #68 MUSC Cancer Genomics Research Collaborative. This is a Congressional Interest Item. | | 0.797 | 0.000 | 0.000 | 0.000 | 0.000 |
| FY 2009 Accomplishments: FY 2009 | | | | | | |
| FY 2010 Plans: FY 2010 | | | | | | |
| Base FY 2011 Plans: FY 2011 Base | | | | | | |
| OCO FY 2011 Plans: FY 2011 OCO | | | | | | |
| Program #69 Oncology Group Pediatric Cancer Research (CH). This is a Congressional Interest Item. | | 1.595 | 1.592 | 0.000 | 0.000 | 0.000 |
| FY 2009 Accomplishments: FY 2009 | | | | | | |
| FY 2010 Plans: FY 2010 | | | | | | |
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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | DATE: February 2010 | | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | PROJECT MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | | | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | |
| | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| Base FY 2011 Plans: FY 2011 Base | | | | | | |
| OCO FY 2011 Plans: FY 2011 OCO | | | | | | |
| Program #70 Prostate and Ovarian Cancer Biomarkers. This is a Congressional Interest Item. | | 1.196 | 0.000 | 0.000 | 0.000 | 0.000 |
| FY 2009 Accomplishments: FY 2009 | | | | | | |
| FY 2010 Plans: FY 2010 | | | | | | |
| Base FY 2011 Plans: FY 2011 Base | | | | | | |
| OCO FY 2011 Plans: FY 2011 OCO | | | | | | |
| Program #71 Proteomics Project (CH-LA). This is a Congressional Interest Item. | | 1.196 | 0.000 | 0.000 | 0.000 | 0.000 |
| FY 2009 Accomplishments: FY 2009 | | | | | | |
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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | DATE: February 2010 | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | PROJECT MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | |
| | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| FY 2010 Plans: FY 2010 | | | | | |
| Base FY 2011 Plans: FY 2011 Base | | | | | |
| OCO FY 2011 Plans: FY 2011 OCO | | | | | |
| Program #72 Rehabilitation and Assistive Technologies to Enhance the Life of Individuals with Disabilities. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | 0.797 | 0.000 | 0.000 | 0.000 | 0.000 |
| Program #73 Strattice Dermal Matrix Research. This is a Congressional Interest Item. | 2.392 | 1.990 | 0.000 | 0.000 | 0.000 |
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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | | DATE: February 2010 | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | | PROJECT MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | |
| | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| FY 2009 Accomplishments: FY 2009 | | | | | | |
| FY 2010 Plans: FY 2010 | | | | | | |
| Base FY 2011 Plans: FY 2011 Base | | | | | | |
| OCO FY 2011 Plans: FY 2011 OCO | | | | | | |
| Program #74 Trauma Hemostat. This is a Congressional Interest Item. | | 0.797 | 0.000 | 0.000 | 0.000 | 0.000 |
| FY 2009 Accomplishments: FY 2009 | | | | | | |
| FY 2010 Plans: FY 2010 | | | | | | |
| Base FY 2011 Plans: FY 2011 Base | | | | | | |
| OCO FY 2011 Plans: FY 2011 OCO | | | | | | |
| Program #75 | | 3.110 | 0.000 | 0.000 | 0.000 | 0.000 |
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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | DATE: February 2010 | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | PROJECT MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | |
| | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| Returning Soldier Adjustment Assessment Remote Monitoring System. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | | | | |
| Program #76 Green Environmentally Sustainable Laboratories and Clean Rooms (USAMRMC). This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | 0.797 | 0.000 | 0.000 | 0.000 | 0.000 |

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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | | DATE: February 2010 | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | | PROJECT MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | |
| | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| Program #77 Battlefield Nursing Program. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 1.595 | 1.592 | 0.000 | 0.000 | 0.000 |
| Program #78 Intensive Care Unit to Intensive Care Hospital. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 2.392 | 0.000 | 0.000 | 0.000 | 0.000 |

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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | | DATE: February 2010 | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | | PROJECT MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | |
| | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| Program #79 Total Quality System for FDA Regulated Activities Database. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 1.435 | 0.000 | 0.000 | 0.000 | 0.000 |
| Program #80 Accelerating Treatment for Trauma Wounds. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 1.197 | 0.000 | 0.000 | 0.000 | 0.000 |

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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | | DATE: February 2010 | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | | PROJECT MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | |
| | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| Program #81 Military Adult Stem Cell Collection and Storage Project. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 0.797 | 0.000 | 0.000 | 0.000 | 0.000 |
| Program #82 Medical Errors Reduction Initiative. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 0.398 | 1.990 | 0.000 | 0.000 | 0.000 |

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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | | DATE: February 2010 | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | | PROJECT MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | |
| | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| Program #83 Joint Collaborative Medical Information System (JCMIS). This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 3.189 | 0.000 | 0.000 | 0.000 | 0.000 |
| Program #84 Southeast Nebraska Cancer Center-National Functional Genomics Center. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 1.197 | 0.000 | 0.000 | 0.000 | 0.000 |

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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | | DATE: February 2010 | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | | PROJECT MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | |
| | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| Program #85 Personal Status Monitor (Nightengale). This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 1.994 | 0.796 | 0.000 | 0.000 | 0.000 |
| Program #86 Smart Prosthetics Research. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 1.595 | 0.000 | 0.000 | 0.000 | 0.000 |

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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | | DATE: February 2010 | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | | PROJECT MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | |
| | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| Program #87 Anti-Terror Medical Technology Program. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 2.791 | 0.000 | 0.000 | 0.000 | 0.000 |
| Program #88 Advanced Cancer Genome Institute. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 0.000 | 1.989 | 0.000 | 0.000 | 0.000 |

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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | | DATE: February 2010 | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | | PROJECT MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | |
| | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| Program #89 Advanced Military Wound Healing Research and Treatment. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 0.000 | 0.796 | 0.000 | 0.000 | 0.000 |
| Program #90 ALS Therapy Development for Gulf War Research. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 0.000 | 1.592 | 0.000 | 0.000 | 0.000 |

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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | | DATE: February 2010 | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | | PROJECT MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | |
| | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| Program #91 Anti-Microbial Bone Graft Product. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 0.000 | 1.592 | 0.000 | 0.000 | 0.000 |
| Program #92 Antioxidant Micronutrient Therapeutic Countermeasures. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 0.000 | 0.796 | 0.000 | 0.000 | 0.000 |

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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | DATE: February 2010 | | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | PROJECT MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | | | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | |
| | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| Program #93 Automated Portable Field System f/Rapid Detection & Diagnosis of Endemic Diseases & Other Pathogens. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 0.000 | 1.592 | 0.000 | 0.000 | 0.000 |
| Program #94 Battlefield Related Injury Translational Research Strategies. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base | | 0.000 | 1.791 | 0.000 | 0.000 | 0.000 |
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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | DATE: February 2010 | | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | PROJECT MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | | | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | |
| | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| OCO FY 2011 Plans: FY 2011 OCO | | | | | | |
| Program #95 Bio-Printing of Skin for Battlefield Burn Repairs. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 0.000 | 1.990 | 0.000 | 0.000 | 0.000 |
| Program #96 Bio-Surveillance in a Highly Mobile Population. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 | | 0.000 | 1.592 | 0.000 | 0.000 | 0.000 |
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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | DATE: February 2010 | | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | PROJECT MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | | | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | |
| | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| Base FY 2011 Plans: FY 2011 Base | | | | | | |
| OCO FY 2011 Plans: FY 2011 OCO | | | | | | |
| Program #97 Blood and Bone Marrow Collection Fellowship. This is a Congressional Interest Item. | | 0.000 | 1.990 | 0.000 | 0.000 | 0.000 |
| FY 2009 Accomplishments: FY 2009 | | | | | | |
| FY 2010 Plans: FY 2010 | | | | | | |
| Base FY 2011 Plans: FY 2011 Base | | | | | | |
| OCO FY 2011 Plans: FY 2011 OCO | | | | | | |
| Program #98 Brain Safety Net. This is a Congressional Interest Item. | | 0.000 | 2.387 | 0.000 | 0.000 | 0.000 |
| FY 2009 Accomplishments: FY 2009 | | | | | | |
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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | DATE: February 2010 | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | PROJECT MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | |
| | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| FY 2010 Plans: FY 2010 | | | | | |
| Base FY 2011 Plans: FY 2011 Base | | | | | |
| OCO FY 2011 Plans: FY 2011 OCO | | | | | |
| Program #99 Breast Cancer Medical Information Network Decision Support. This is a Congressional Interest Item. | 0.000 | 0.796 | 0.000 | 0.000 | 0.000 |
| FY 2009 Accomplishments: FY 2009 | | | | | |
| FY 2010 Plans: FY 2010 | | | | | |
| Base FY 2011 Plans: FY 2011 Base | | | | | |
| OCO FY 2011 Plans: FY 2011 OCO | | | | | |
| Program #100 Center for Cancer Immunology Research. This is a Congressional Interest Item. | 0.000 | 1.592 | 0.000 | 0.000 | 0.000 |
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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | DATE: February 2010 | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | PROJECT MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | |
| | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| FY 2009 Accomplishments: FY 2009 | | | | | |
| FY 2010 Plans: FY 2010 | | | | | |
| Base FY 2011 Plans: FY 2011 Base | | | | | |
| OCO FY 2011 Plans: FY 2011 OCO | | | | | |
| Program #101 Center for Ophthalmic Innovation. This is a Congressional Interest Item. | 0.000 | 2.387 | 0.000 | 0.000 | 0.000 |
| FY 2009 Accomplishments: FY 2009 | | | | | |
| FY 2010 Plans: FY 2010 | | | | | |
| Base FY 2011 Plans: FY 2011 Base | | | | | |
| OCO FY 2011 Plans: FY 2011 OCO | | | | | |
| Program #102 | 0.000 | 1.194 | 0.000 | 0.000 | 0.000 |
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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | | DATE: February 2010 | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | | PROJECT MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | |
| | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| Center for Virtual Reality Medical Simulation Training. This is a Congressional Interest Item. | | | | | | |
| FY 2009 Accomplishments: FY 2009 | | | | | | |
| FY 2010 Plans: FY 2010 | | | | | | |
| Base FY 2011 Plans: FY 2011 Base | | | | | | |
| OCO FY 2011 Plans: FY 2011 OCO | | | | | | |
| Program #103 | | 0.000 | 2.387 | 0.000 | 0.000 | 0.000 |
| Center of Excellence in Infectious Diseases and Human Microbiome. This is a Congressional Interest Item. | | | | | | |
| FY 2009 Accomplishments: FY 2009 | | | | | | |
| FY 2010 Plans: FY 2010 | | | | | | |
| Base FY 2011 Plans: FY 2011 Base | | | | | | |
| OCO FY 2011 Plans: FY 2011 OCO | | | | | | |

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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | DATE: February 2010 | | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | PROJECT MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | | | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | |
| | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| Program #104 Clinical Development of a Norovirus Gastroenteritis Vaccine. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 0.000 | 3.581 | 0.000 | 0.000 | 0.000 |
| Program #105 Clinical Technology Integration for Military Health. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 0.000 | 1.591 | 0.000 | 0.000 | 0.000 |

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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | | DATE: February 2010 | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | | PROJECT MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | |
| | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| Program #106 Collagen-Based Wound Dressing. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 0.000 | 0.796 | 0.000 | 0.000 | 0.000 |
| Program #107 Cooperative International Neuromuscular Research. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 0.000 | 3.263 | 0.000 | 0.000 | 0.000 |

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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | | DATE: February 2010 | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | | PROJECT MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | |
| | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| Program #108 Countermeasures to Hemorrhaging (Liquid Bandage and Tissue Rengeneration). This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 0.000 | 5.730 | 0.000 | 0.000 | 0.000 |
| Program #109 Customized Nursing Programs for Fort Benning. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base | | 0.000 | 1.592 | 0.000 | 0.000 | 0.000 |
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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | DATE: February 2010 | | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | PROJECT MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | | | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | |
| | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| OCO FY 2011 Plans: FY 2011 OCO | | | | | | |
| Program #110 Enhancing Wound Healing, Tissue Regeneration, and Biomarker Discovery. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 0.000 | 1.990 | 0.000 | 0.000 | 0.000 |
| Program #111 Exceptional Family Transition (EFTT) for Soldiers, Sailors, Marines, and Airmen. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 | | 0.000 | 0.637 | 0.000 | 0.000 | 0.000 |

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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | DATE: February 2010 | | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | PROJECT MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | | | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | |
| | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| Base FY 2011 Plans: FY 2011 Base | | | | | | |
| OCO FY 2011 Plans: FY 2011 OCO | | | | | | |
| Program #112 Hadron Particle Therapy. This is a Congressional Interest Item. | | 0.000 | 1.592 | 0.000 | 0.000 | 0.000 |
| FY 2009 Accomplishments: FY 2009 | | | | | | |
| FY 2010 Plans: FY 2010 | | | | | | |
| Base FY 2011 Plans: FY 2011 Base | | | | | | |
| OCO FY 2011 Plans: FY 2011 OCO | | | | | | |
| Program #113 Health Disparaties in Troop Readiness. This is a Congressional Interest Item. | | 0.000 | 7.958 | 0.000 | 0.000 | 0.000 |
| FY 2009 Accomplishments: FY 2009 | | | | | | |
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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | DATE: February 2010 | | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | PROJECT MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | | | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | |
| | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| FY 2010 Plans: FY 2010 | | | | | | |
| Base FY 2011 Plans: FY 2011 Base | | | | | | |
| OCO FY 2011 Plans: FY 2011 OCO | | | | | | |
| Program #114 Highly Functional Neurally Controlled Skeletally Attached and Intelligent Prosthetic Devices. This is a Congressional Interest Item. | | 0.000 | 3.024 | 0.000 | 0.000 | 0.000 |
| FY 2009 Accomplishments: FY 2009 | | | | | | |
| FY 2010 Plans: FY 2010 | | | | | | |
| Base FY 2011 Plans: FY 2011 Base | | | | | | |
| OCO FY 2011 Plans: FY 2011 OCO | | | | | | |
| Program #115 Identification of Pain Mechanisms and Therapeutic Targets. This is a Congressional Interest Item. | | 0.000 | 0.796 | 0.000 | 0.000 | 0.000 |
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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | DATE: February 2010 | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | PROJECT MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | |
| | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| FY 2009 Accomplishments: FY 2009 | | | | | |
| FY 2010 Plans: FY 2010 | | | | | |
| Base FY 2011 Plans: FY 2011 Base | | | | | |
| OCO FY 2011 Plans: FY 2011 OCO | | | | | |
| Program #116 Imaging and Cognitive Evaluation of Soldiers. This is a Congressional Interest Item. | 0.000 | 0.637 | 0.000 | 0.000 | 0.000 |
| FY 2009 Accomplishments: FY 2009 | | | | | |
| FY 2010 Plans: FY 2010 | | | | | |
| Base FY 2011 Plans: FY 2011 Base | | | | | |
| OCO FY 2011 Plans: FY 2011 OCO | | | | | |
| Program #117 | 0.000 | 1.592 | 0.000 | 0.000 | 0.000 |
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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | DATE: February 2010 | | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | PROJECT MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | | | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | |
| | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| Infection Prevention Program for Battlefield Wounds. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | | | | | |
| Program #118 Infectious and Airborne Pathogen Reduction. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 0.000 | 2.228 | 0.000 | 0.000 | 0.000 |
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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | | DATE: February 2010 | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | | PROJECT MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | |
| | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| Program #119 In-field Body Temperature Conditioner. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 0.000 | 2.386 | 0.000 | 0.000 | 0.000 |
| Program #120 Institute for Simulation and Interprofessional Studies. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 0.000 | 4.615 | 0.000 | 0.000 | 0.000 |

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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | | DATE: February 2010 | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | | PROJECT MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | |
| | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| Program #121 Integrated Patient Electronic Record System. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 0.000 | 1.592 | 0.000 | 0.000 | 0.000 |
| Program #122 Intelligent Orthopedic Fracture Implant Program. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 0.000 | 0.796 | 0.000 | 0.000 | 0.000 |

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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | DATE: February 2010 | | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | PROJECT MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | | | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | |
| | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| Program #123 Malaria Vaccine Development. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 0.000 | 3.978 | 0.000 | 0.000 | 0.000 |
| Program #124 Marty Driesler Lung Cancer Project. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 0.000 | 1.592 | 0.000 | 0.000 | 0.000 |

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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | DATE: February 2010 | | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | PROJECT MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | | | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | |
| | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| Program #125 Mass Casualty First Responders Disaster Surge Technology Program. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 0.000 | 2.387 | 0.000 | 0.000 | 0.000 |
| Program #126 Medical Biosurveillance and Efficiency Program. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 0.000 | 1.592 | 0.000 | 0.000 | 0.000 |

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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | | DATE: February 2010 | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | | PROJECT MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | |
| | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| Program #127 Microencapsulation and Vaccine Delivery Research. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 0.000 | 0.796 | 0.000 | 0.000 | 0.000 |
| Program #128 Military Drug Management System. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 0.000 | 2.387 | 0.000 | 0.000 | 0.000 |

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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | | DATE: February 2010 | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | | PROJECT MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | |
| | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| Program #129 Military Medical Decontamination System. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 0.000 | 4.477 | 0.000 | 0.000 | 0.000 |
| Program #130 Military Mental Health Initiative. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 0.000 | 0.597 | 0.000 | 0.000 | 0.000 |

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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | DATE: February 2010 | | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | PROJECT MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | | | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | |
| | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| Program #131 Military Pediatric Training and Support. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 0.000 | 3.979 | 0.000 | 0.000 | 0.000 |
| Program #132 Mission Hospital Computerized Physician Order Entry. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 0.000 | 0.796 | 0.000 | 0.000 | 0.000 |

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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | DATE: February 2010 | | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | PROJECT MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | | | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | |
| | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| Program #133 Mobile Aerosol Monitoring for the Department of Defense. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 0.000 | 1.194 | 0.000 | 0.000 | 0.000 |
| Program #134 Mobile Integrated Diagnostic and Data Analysis System (MIDDAS). This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 0.000 | 1.592 | 0.000 | 0.000 | 0.000 |

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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | | DATE: February 2010 | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | | PROJECT MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | |
| | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| Program #135 Multi-Dose Closed Loop pH Monitoring System for Platelets. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 0.000 | 1.591 | 0.000 | 0.000 | 0.000 |
| Program #136 Multiplexed Human Fungal Infection Diagnostic. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 0.000 | 1.592 | 0.000 | 0.000 | 0.000 |

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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | | DATE: February 2010 | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | | PROJECT MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | |
| | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| Program #137 Musculoskeletal Interdisciplinary Research Initiative. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 0.000 | 1.592 | 0.000 | 0.000 | 0.000 |
| Program #138 NAU-TGen North Dangerous Pathogens DNA Forensics Center Upgrades. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 0.000 | 1.592 | 0.000 | 0.000 | 0.000 |

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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | | DATE: February 2010 | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | | PROJECT MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | |
| | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| Program #139 Near Infrared Spectroscopy Military Personnel Assessment. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 0.000 | 0.796 | 0.000 | 0.000 | 0.000 |
| Program #140 Neural Control of External Devices. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 0.000 | 1.990 | 0.000 | 0.000 | 0.000 |

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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | | DATE: February 2010 | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | | PROJECT MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | |
| | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| Program #141 Nicholson center for Surgical Advancement Medical Robotics and Simulation. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 0.000 | 4.178 | 0.000 | 0.000 | 0.000 |
| Program #142 Northern Illinois Proton Treatment and Research Center. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base | | 0.000 | 2.784 | 0.000 | 0.000 | 0.000 |
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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | DATE: February 2010 | | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | PROJECT MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | | | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | |
| | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| OCO FY 2011 Plans: FY 2011 OCO | | | | | | |
| Program #143 Nurse Education Center of Excellence for Remote and Medically Underserved Populations (CERMUSA). This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 0.000 | 1.592 | 0.000 | 0.000 | 0.000 |
| Program #144 Nursing Teaching and Leadership Program. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 | | 0.000 | 0.796 | 0.000 | 0.000 | 0.000 |

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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | DATE: February 2010 | | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | PROJECT MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | | | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | |
| | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| Base FY 2011 Plans: FY 2011 Base | | | | | | |
| OCO FY 2011 Plans: FY 2011 OCO | | | | | | |
| Program #145 Operation Re-Entry NC. This is a Congressional Interest Item. | | 0.000 | 2.387 | 0.000 | 0.000 | 0.000 |
| FY 2009 Accomplishments: FY 2009 | | | | | | |
| FY 2010 Plans: FY 2010 | | | | | | |
| Base FY 2011 Plans: FY 2011 Base | | | | | | |
| OCO FY 2011 Plans: FY 2011 OCO | | | | | | |
| Program #146 Parsons Institute for Information Mapping. This is a Congressional Interest Item. | | 0.000 | 1.194 | 0.000 | 0.000 | 0.000 |
| FY 2009 Accomplishments: FY 2009 | | | | | | |
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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | DATE: February 2010 | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | PROJECT MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | |
| | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | | | | |
| Program #147 Plant-Based Vaccine Research. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | 0.000 | 1.990 | 0.000 | 0.000 | 0.000 |
| Program #148 Plug-In Architecture for DoD Medical Imaging. This is a Congressional Interest Item. | 0.000 | 1.194 | 0.000 | 0.000 | 0.000 |
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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | DATE: February 2010 | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | PROJECT MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | |
| | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| FY 2009 Accomplishments: FY 2009 | | | | | |
| FY 2010 Plans: FY 2010 | | | | | |
| Base FY 2011 Plans: FY 2011 Base | | | | | |
| OCO FY 2011 Plans: FY 2011 OCO | | | | | |
| Program #149 Power Efficient Microdisplay Development for US Army Night Vision. This is a Congressional Interest Item. | 0.000 | 2.387 | 0.000 | 0.000 | 0.000 |
| FY 2009 Accomplishments: FY 2009 | | | | | |
| FY 2010 Plans: FY 2010 | | | | | |
| Base FY 2011 Plans: FY 2011 Base | | | | | |
| OCO FY 2011 Plans: FY 2011 OCO | | | | | |
| Program #150 | 0.000 | 1.592 | 0.000 | 0.000 | 0.000 |
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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | DATE: February 2010 | | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | PROJECT MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | | | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | |
| | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| Pride Center for America's Wounded Veterans. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | | | | | |
| Program #151 Rapid Burn Wound Therapies. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 0.000 | 1.989 | 0.000 | 0.000 | 0.000 |
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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | | DATE: February 2010 | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | | PROJECT MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | |
| | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| Program #152 Regenerative Medicine to Address Acute Hearing Loss. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 0.000 | 2.386 | 0.000 | 0.000 | 0.000 |
| Program #153 Sensor Tape Physiological Monitoring. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 0.000 | 1.990 | 0.000 | 0.000 | 0.000 |

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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | | DATE: February 2010 | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | | PROJECT MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | |
| | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| Program #154 Silicon Nanomaterial for Battlefield Medical Devices. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 0.000 | 2.785 | 0.000 | 0.000 | 0.000 |
| Program #155 Smart Wound Dressing for MRSA-Infected Battle Wounds. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 0.000 | 0.796 | 0.000 | 0.000 | 0.000 |

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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | | DATE: February 2010 | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | | PROJECT MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | |
| | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| Program #156 Stress Disorders Research Initiative at Fort Hood. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 0.000 | 2.387 | 0.000 | 0.000 | 0.000 |
| Program #157 Techniques to Manage Noncompressible Hemorrhage Following Combat Injury. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base | | 0.000 | 1.990 | 0.000 | 0.000 | 0.000 |
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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | | DATE: February 2010 | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | | PROJECT MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | |
| | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| OCO FY 2011 Plans: FY 2011 OCO | | | | | | |
| Program #158 Testing of Microneedle Device for Multiple Applications. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 0.000 | 0.955 | 0.000 | 0.000 | 0.000 |
| Program #159 Translational Research for Muscular Dystrophy. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 | | 0.000 | 1.592 | 0.000 | 0.000 | 0.000 |
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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | DATE: February 2010 | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | PROJECT MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | |
| | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| Base FY 2011 Plans: FY 2011 Base | | | | | |
| OCO FY 2011 Plans: FY 2011 OCO | | | | | |
| Program #160 Transportable Renal Replacement Therapy for Battlefield Applications. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | 0.000 | 0.796 | 0.000 | 0.000 | 0.000 |
| Program #161 Trauma Response Simulation Training. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 | 0.000 | 1.194 | 0.000 | 0.000 | 0.000 |
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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | DATE: February 2010 | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | PROJECT MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | |
| | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | | | | |
| Program #162 Treatment of Battlefield Spinal Cord and Burn Injuries. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | 0.000 | 0.358 | 0.000 | 0.000 | 0.000 |
| Program #163 Vanadium Safety Readiness. This is a Congressional Interest Item. | 0.000 | 3.342 | 0.000 | 0.000 | 0.000 |
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| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | PROJECT MM2: MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA) | | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | |
| | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| FY 2009 Accomplishments: FY 2009 | | | | | |
| FY 2010 Plans: FY 2010 | | | | | |
| Base FY 2011 Plans: FY 2011 Base | | | | | |
| OCO FY 2011 Plans: FY 2011 OCO | | | | | |
| Program #164 Health Information Technology Demonstration Project at Madigan and Puget Sound VA Medical Center. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | 0.997 | 0.000 | 0.000 | 0.000 | 0.000 |
| Program #165 | 2.392 | 0.000 | 0.000 | 0.000 | 0.000 |

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| B. Accomplishments/Planned Program (\$ in Millions) | | | | | |
| | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| Norfolk State University Center for Systems and Modeling & Simulation. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | | | | |
| Program #166 Health Informatics Initiative. This is a Congressional Interest Item. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | 2.492 | 0.000 | 0.000 | 0.000 | 0.000 |

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| APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 3: <i>Advanced Technology Development (ATD)</i> | R-1 ITEM NOMENCLATURE PE 0603002A: <i>MEDICAL ADVANCED TECHNOLOGY</i> | PROJECT MM2: <i>MEDICAL ADVANCE TECHNOLOGY INITIATIVES (CA)</i> | | | | | | |
| <u>B. Accomplishments/Planned Program (\$ in Millions)</u> | | | | | | | | |
| | | | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| Accomplishments/Planned Programs Subtotals | | | | 187.962 | 239.536 | 0.000 | 0.000 | 0.000 |
| <u>C. Other Program Funding Summary (\$ in Millions)</u> N/A | | | | | | | | |
| <u>D. Acquisition Strategy</u> N/A | | | | | | | | |
| <u>E. Performance Metrics</u> Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010. | | | | | | | | |

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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | | | | | | DATE: February 2010 | | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 3: <i>Advanced Technology Development (ATD)</i> | | | | R-1 ITEM NOMENCLATURE PE 0603002A: <i>MEDICAL ADVANCED TECHNOLOGY</i> | | | | PROJECT MM3: <i>WARFIGHTER MEDICAL PROTECTION & PERFORMANCE STDS</i> | | | |
| COST (\$ in Millions) | FY 2009 Actual | FY 2010 Estimate | Base FY 2011 Estimate | OCO FY 2011 Estimate | Total FY 2011 Estimate | FY 2012 Estimate | FY 2013 Estimate | FY 2014 Estimate | FY 2015 Estimate | Cost To Complete | Total Cost |
| MM3: <i>WARFIGHTER MEDICAL PROTECTION & PERFORMANCE STDS</i> | 0.000 | 6.550 | 7.347 | 0.000 | 7.347 | 8.659 | 10.748 | 11.696 | 14.615 | Continuing | Continuing |

A. Mission Description and Budget Item Justification

This project supports the Medical and Survivability technology areas of the future force with laboratory validation studies and field demonstrations of biomedical products designed to protect, sustain, and enhance Soldier performance in the face of a myriad of environmental, physiological stressors, and materiel hazards encountered in training and operational environments. This effort focuses on demonstrating and transitioning technologies and validated tools associated with biomechanical-based health risks, injury assessment and prediction, Soldier survivability, and performance during continuous operations. The three main thrust areas are (1) Physiological Health and Environmental Protection, (2) Injury Prevention and Reduction, and (3) Psychological Health and Resilience. This project contains no duplication with any effort within the Military Departments, and includes direct participation by other Services. Beginning in FY10, projects 800 and 819 will be consolidated into project MM3. The cited work is consistent with the Director, Defense Research and Engineering Strategic Plan, the Army Modernization Strategy, and the Army Science and Technology Master Plan. Work in this project is performed by the US Army Research Institute of Environmental Medicine (USARIEM), Natick, MA, and the U.S. Army Aeromedical Research Laboratory (USAARL), Fort Rucker, AL.

B. Accomplishments/Planned Program (\$ in Millions)

| | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
|---|----------------|----------------|---------------------|--------------------|----------------------|
| Program #1 Physiological Health and Environmental Protection (transferred from project 800 (Sleep Research/Environmental Monitoring)): Validation of physiological awareness and prediction tools for Soldier performance in extreme environments. In FY10, transition heat strain decision aid to US Army Ranger School; refine hydration sensor technologies and conduct early prototype evaluations. In FY11, will validate the next generation of individual physiological sensors; will perform advanced testing of promising hydration sensor technologies. <i>FY 2009 Accomplishments:</i> FY 2009 | 0.000 | 2.145 | 2.608 | 0.000 | 2.608 |

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| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | |
| | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| FY 2010 Plans: FY 2010 | | | | | | |
| Base FY 2011 Plans: FY 2011 Base | | | | | | |
| OCO FY 2011 Plans: FY 2011 OCO | | | | | | |
| Program #2 Injury Prevention and Reduction (transferred from project 819 (Physical Performance Enhancement)): Validation of injury prediction tools for brain, spine, and thoracic injury from blast, blunt, and ballistic impact. In FY10, field test loading assessment system for the prediction of spinal injury; validate thoracic blunt trauma and performance decrement models by comparing with data obtained from large animal exercise studies; validate a battery of Soldier performance tests based on common Soldiering tasks. In FY11, will validate safe, rapid assessment criteria for spinal injury risk prediction; will complete validation of facial fracture dose-response models and injury risk functions using an instrumented headform; will transition integrated software version for combined blunt trauma and toxic gas inhalation; will refine analysis tools which can use non or minimally invasive techniques to detect bone injury. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base | | 0.000 | 3.356 | 3.345 | 0.000 | 3.345 |

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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | | DATE: February 2010 | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD) | | R-1 ITEM NOMENCLATURE PE 0603002A: MEDICAL ADVANCED TECHNOLOGY | | PROJECT MM3: WARFIGHTER MEDICAL PROTECTION & PERFORMANCE STDS | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | |
| | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| OCO FY 2011 Plans: FY 2011 OCO | | | | | | |
| Program #3 Psychological Health and Resilience: Validation of neuro-cognitive assessment and brain injury detection methods. Validate tools and pre-clinical methods to treat Post-Traumatic Stress Disorder in a military population. In FY10, conduct field study to determine the extent to which baseline psychological and neurological functioning impacts resilience and sensitivity to concussion. In FY11, will validate utility of neurocognitive measures for tracking and monitoring recovery rate after concussion; will validate rodent Post-Traumatic Stress Disorder model using current treatment methods. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO | | 0.000 | 0.933 | 1.394 | 0.000 | 1.394 |
| Program #4 Small Business Innovative Research FY 2009 Accomplishments: FY 2009 | | 0.000 | 0.116 | 0.000 | 0.000 | 0.000 |

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| Exhibit R-2A, PB 2011 Army RDT&E Project Justification | | | | DATE: February 2010 | | |
| APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 3: <i>Advanced Technology Development (ATD)</i> | | R-1 ITEM NOMENCLATURE PE 0603002A: <i>MEDICAL ADVANCED TECHNOLOGY</i> | | PROJECT MM3: <i>WARFIGHTER MEDICAL PROTECTION & PERFORMANCE STDS</i> | | |
| <u>B. Accomplishments/Planned Program (\$ in Millions)</u> | | | | | | |
| | | FY 2009 | FY 2010 | Base FY 2011 | OCO FY 2011 | Total FY 2011 |
| <i>FY 2010 Plans:</i> FY 2010 <i>Base FY 2011 Plans:</i> FY 2011 Base <i>OCO FY 2011 Plans:</i> FY 2011 OCO | | | | | | |
| Accomplishments/Planned Programs Subtotals | | 0.000 | 6.550 | 7.347 | 0.000 | 7.347 |
| <u>C. Other Program Funding Summary (\$ in Millions)</u> N/A | | | | | | |
| <u>D. Acquisition Strategy</u> N/A | | | | | | |
| <u>E. Performance Metrics</u> Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010. | | | | | | |

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