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| Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Defense Health Program | DATE: March 2013 |
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| APPROPRIATION/BUDGET ACTIVITY | | | | | R-1 ITEM NOMENCLATURE | | | | | | | |
|---|-----------------|---------|----------------------|--------------|--|---------------|---------|---------|---------|---------|------------------|------------|
| 0130: <i>Defense Health Program</i> BA 2: <i>RDT&E</i> | | | | | PE 0605502HP: <i>Small Business Innovation Research (SBIR) Program</i> | | | | | | | |
| COST (\$ in Millions) | All Prior Years | FY 2012 | FY 2013 [#] | FY 2014 Base | FY 2014 OCO ^{##} | FY 2014 Total | FY 2015 | FY 2016 | FY 2017 | FY 2018 | Cost To Complete | Total Cost |
| Total Program Element | - | 36.040 | 0.000 | 0.000 | - | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Continuing | Continuing |
| 470A: <i>Small Business Innovation Research (SBIR) (Army)</i> | - | 36.040 | 0.000 | 0.000 | - | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Continuing | Continuing |

[#] FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

^{##} The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

The Small Business Innovation Research (SBIR) program was established in the Defense Health Program (DHP), Research, Development, Test and Evaluation (RDT&E) appropriation during FY 2001, and is funded in the year of execution. The objective of the DHP SBIR Program includes stimulating technological innovation, strengthening the role of small business in meeting DoD research and development needs, fostering and encouraging participation by minority and disadvantaged persons in technological innovation, and increasing the commercial application of DoD-supported research and development results. The program funds small business proposals chosen to enhance military medical research and information technology research.

| B. Program Change Summary (\$ in Millions) | <u>FY 2012</u> | <u>FY 2013</u> | <u>FY 2014 Base</u> | <u>FY 2014 OCO</u> | <u>FY 2014 Total</u> |
|---|-----------------------|-----------------------|----------------------------|---------------------------|-----------------------------|
| Previous President's Budget | 31.470 | 0.000 | 0.000 | - | 0.000 |
| Current President's Budget | 36.040 | 0.000 | 0.000 | - | 0.000 |
| Total Adjustments | 4.570 | 0.000 | 0.000 | - | 0.000 |
| • Congressional General Reductions | - | - | | | |
| • Congressional Directed Reductions | - | - | | | |
| • Congressional Rescissions | - | - | | | |
| • Congressional Adds | - | - | | | |
| • Congressional Directed Transfers | - | - | | | |
| • Reprogrammings | - | - | | | |
| • SBIR/STTR Transfer | 4.570 | - | | | |

Change Summary Explanation

FY 2012:

Restore FY 2013 President's Budget decrease to Congressional Special Interest from DHP RDT&E PE 0605502-Small Business Innovation Research (SBIR) Program (-\$14.890 million) from the following:

DHP RDT&E, PE 0601117-Basic Operational Medical Research Sciences (+\$0.025 million);

DHP RDT&E, PE 0602115-Applied Biomedical Technology (+\$0.869 million);

DHP RDT&E, PE 0603115-Medical Technology Development (+\$13.302 million);

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| 0130: <i>Defense Health Program</i> BA 2: <i>RDT&E</i> | | PE 0605502HP: <i>Small Business Innovation Research (SBIR) Program</i> |
| <p>DHP RDT&E, PE 0604110-Medical Products Support and Advanced Concept Development (+\$0.694 million).</p> <p>Realign SBIR bill (equivalent to FY 2013 President's Budget decrease of \$14.890 million) to DHP RDT&E PE 0605502-Small Business Innovation Research (SBIR) Program (+\$14.890 million) from the following:</p> <p>DHP RDT&E, PE 0601101-In-House Laboratory Independent Research (-\$0.032 million); DHP RDT&E, PE 0602115-Applied Biomedical Technology (-\$0.345 million); DHP RDT&E, PE 0602787-Medical Technology (AFRRI) (-\$0.040 million); DHP RDT&E, PE 0603002-Advanced Technology (AFRRI) (-\$0.008 million); DHP RDT&E, PE 0603115-Medical Technology Development (-\$1.655 million); DHP RDT&E, PE 0604110-Medical Products Support and Advanced Concept Development (-\$1.789 million); DHP RDT&E, PE 0605013-Information Technology Development (-\$9.944 million); DHP RDT&E, PE 0605145-Medical Products and Support Systems Development (-\$0.392 million); DHP RDT&E, PE 0606105-Medical Program-Wide Activities (-\$0.533 million); DHP RDT&E, PE 0607100-Medical Products and Capabilities Enhancement Activities (-\$0.152 million).</p> <p>Realign additional SBIR to DHP RDT&E, PE 0605502-Small Business Innovation Research (SBIR) Program (+\$4.423 million) from the following:</p> <p>DHP RDT&E, PE 0601101-In-House Laboratory Independent Research (-\$0.003 million); DHP RDT&E, PE 0602115-Applied Biomedical Technology (-\$0.205 million); DHP RDT&E, PE 0602787-Medical Technology (AFRRI) (-\$0.004 million); DHP RDT&E, PE 0603002-Advanced Technology (AFRRI) (-\$0.001 million); DHP RDT&E, PE 0603115-Medical Technology Development (-\$1.080 million); DHP RDT&E, PE 0604110-Medical Products Support and Advanced Concept Development (-\$1.109 million); DHP RDT&E, PE 0605013-Information Technology Development (-\$1.373 million); DHP RDT&E, PE 0605145-Medical Products and Support Systems Development (-\$0.230 million); DHP RDT&E, PE 0606105-Medical Program-Wide Activities (-\$0.320 million); DHP RDT&E, PE 0607100-Medical Products and Capabilities Enhancement Activities (-\$0.098 million).</p> <p>Realign SBIR from Prior Approval Reprogramming to DHP RDT&E, PE 0605502-Small Business Innovation Research (SBIR) Program (+\$0.147 million) from the following:</p> <p>DHP RDT&E, PE 0604110-Medical Products Support and Advanced Concept Development (-\$0.104 million); DHP RDT&E, PE 0605013-Information Technology Development (-\$0.043 million);</p> <p>FY 2013: No Change</p> <p>FY 2014: No Change</p> | | |

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| Exhibit R-2A, RDT&E Project Justification: PB 2014 Defense Health Program | | | | | | | | | | DATE: March 2013 | | |
| APPROPRIATION/BUDGET ACTIVITY 0130: Defense Health Program BA 2: RDT&E | | | | | R-1 ITEM NOMENCLATURE PE 0605502HP: Small Business Innovation Research (SBIR) Program | | | | PROJECT 470A: Small Business Innovation Research (SBIR) (Army) | | | |
| COST (\$ in Millions) | All Prior Years | FY 2012 | FY 2013 [#] | FY 2014 Base | FY 2014 OCO ^{##} | FY 2014 Total | FY 2015 | FY 2016 | FY 2017 | FY 2018 | Cost To Complete | Total Cost |
| 470A: Small Business Innovation Research (SBIR) (Army) | - | 36.040 | 0.000 | 0.000 | - | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Continuing | Continuing |
| # FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012 | | | | | | | | | | | | |
| ## The FY 2014 OCO Request will be submitted at a later date | | | | | | | | | | | | |
| A. Mission Description and Budget Item Justification | | | | | | | | | | | | |
| Small Business Innovation Research (SBIR): The SBIR program was established in the Defense Health Program (DHP) Research, Development, Test and Evaluation (RDT&E) appropriation during FY 2001, and is funded in the year of execution. The program funds small business proposals chosen to enhance military medical research and information technology research. | | | | | | | | | | | | |
| B. Accomplishments/Planned Programs (\$ in Millions) | | | | | | | | | | FY 2012 | FY 2013 | FY 2014 |
| Title: Small Business Innovation Research (SBIR) Program | | | | | | | | | | 36.040 | 0.000 | 0.000 |
| Description: The program funds small business proposals chosen to enhance military medical research and information technology research. The following reflects the FY12 research area topics sought for proposals. | | | | | | | | | | | | |
| FY 2012 Accomplishments: | | | | | | | | | | | | |
| For FY12 (DHP SBIR 12.2), sixteen research area topics were developed for solicitation of biomedical technology SBIRs proposals. Funding for each research area topic will be based on the merits of responses to solicitations. Topics include development of a simulation-based training system to assist in teaching and training junctional and non-compressible hemorrhage control; integration of advanced sensor technology into synthetic mannequins; multi-substrate 3D printer with the ability to render high-fidelity anatomically accurate synthetic physical tissue models; prototype architecture to execute an open source, universal health exchange language; a mobile, cloud-based architecture that can integrate with existing or improved clinical workflow; architectural alternatives resulting in an easy-to use cohort builder for clinicians, nurses, and QA personnel; freestanding, lightweight, compact, portable sampling device to collect a broad spectrum of adult flying insect disease vectors; integration of networked sensors to assess accurate center of-gravity and center-of-pressure in real time; user-friendly, portable, universal hearing protection device field attenuation estimation system; self-powered wearable biosensors to provide continuous health monitoring; durable, scalable, robust and effective long-term antimicrobial textile finish; closed loop anesthesia delivery system; controlled, target-specific delivery system for topical treatment of peripheral neuropathy (damage to nerves outside of the brain and spinal cord); biometric model for use by the medical research community to address dismounted complex blast injury; rapid and reliable detection/diagnosis of pain and its intensity; and new innovative technology to intervene during the wound healing | | | | | | | | | | | | |

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| APPROPRIATION/BUDGET ACTIVITY 0130: <i>Defense Health Program</i> BA 2: <i>RDT&E</i> | | R-1 ITEM NOMENCLATURE PE 0605502HP: <i>Small Business Innovation Research (SBIR) Program</i> | | PROJECT 470A: <i>Small Business Innovation Research (SBIR) (Army)</i> |
| B. Accomplishments/Planned Programs (\$ in Millions) | | FY 2012 | FY 2013 | FY 2014 |
| process following deep tissue burn injuries. Selection of proposals are planned to be completed in September 2012. Anticipated contract awards will be in November 2012. | | | | |
| FY 2013 Plans: No funding programmed. | | | | |
| FY 2014 Plans: No funding programmed. | | | | |
| Accomplishments/Planned Programs Subtotals | | 36.040 | 0.000 | 0.000 |
| C. Other Program Funding Summary (\$ in Millions) N/A | | | | |
| Remarks | | | | |
| D. Acquisition Strategy Test and evaluate commercially developed prototypes funded by the SBIR program to ensure military and regulatory requirements are met prior to production and fielding, to include FDA licensure and Environmental Protection Agency registration. | | | | |
| E. Performance Metrics The number of Phase I awards supporting innovative technology development. The number of Phase II and III awards leading to technology transition. | | | | |