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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 Office of Secretary Of Defense **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 1: <i>Basic Research</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0601111D8Z: <i>Government/Industry Co-sponsorship of University Research</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	4.254	4.761	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
P111: <i>Government/Industry Co-sponsorship of University Research</i>	4.254	4.761	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

**Note**

This program consists of congressional adds.

The Department of Defense requested no funds for GICUR in fiscal year 2010 and in future budget requests.

**A. Mission Description and Budget Item Justification**

(U) The FY 2009 Government/Industry Co-sponsorship of University Research (GICUR) program reflects three Congressional adds, they are:

1. Research of Chemical and Biological Warfare Agents \$0.800 - Sponsor Rep Rangel (NY)
2. Shock Trauma Research Center \$2.000 - Sponsor Rep Cleaver (MO)
3. Integrated Cryo-cooled High Power Density Systems \$1.600 - Sponsor Sen Martinez (FL)

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**B. Program Change Summary (\$ in Millions)**

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	0.000	0.000	0.000	0.000	0.000
Current President's Budget	4.254	4.761	0.000	0.000	0.000
Total Adjustments	4.254	4.761	0.000	0.000	0.000
• Congressional General Reductions		0.000			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	-0.122	0.000			
• Other	-0.024	0.000	0.000	0.000	0.000
• R&D FY09: Congressional Distributed	4.400	0.000	0.000	0.000	0.000
Actions					
• FY10 Congressional Adjustment	0.000	4.761	0.000	0.000	0.000

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Office of Secretary Of Defense								<b>DATE:</b> February 2010			
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 1: <i>Basic Research</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0601111D8Z: <i>Government/Industry Co-sponsorship of University Research</i>				<b>PROJECT</b> P111: <i>Government/Industry Co-sponsorship of University Research</i>			
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
P111: <i>Government/Industry Co-sponsorship of University Research</i>	4.254	4.761	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

**Note**

This program consists of congressional adds.

The Department of Defense requested no funds for GICUR in fiscal year 2010 and in future budget requests.

**A. Mission Description and Budget Item Justification**

(U) The FY 2009 Government/Industry Co-sponsorship of University Research (GICUR) program reflects three Congressional adds, they are:

1. Research of Chemical and Biological Warfare Agents \$0.800 - Sponsor Rep Rangel (NY)
2. Shock Trauma Research Center \$2.000 - Sponsor Rep Cleaver (MO)
3. Integrated Cryo-cooled High Power Density Systems \$1.600 - Sponsor Sen Martinez (FL)

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

	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
Research of Chemical and Biological Warfare Agents - Sponsor Rep Rangel (NY)  Chemical and biological research to characterize the molecular structures of chemical and biological warfare agents and develop effective countermeasures for military and civilian use.  <i>FY 2009 Accomplishments:</i> Executed the congressional add as directed by Congress. Recipient New York Structural Biology Center	0.773	0.000	0.000	0.000	0.000

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<b>B. Accomplishments/Planned Program (\$ in Millions)</b>						
		<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
<i>FY 2010 Plans:</i> None						
<i>FY 2011 Base Plans:</i> None						
Integrated Cryo-cooled High Power Density Systems - Sponsor Sen Martinez (FL)  Funds are provided for the achieving cryo-cooled high power densities through systems management of heat generation and removal in the electrical system.  <i>FY 2009 Accomplishments:</i> Recipient Florida State University. The systems approach begins with identifying the enabling technologies needed and then pursuing research programs to advance the enabling technologies. To accomplish research activities in several areas: 1) Systems Analysis - Extensive system modeling and simulation of the integrated electrical and thermal systems to understand dynamic performance under normal and adverse conditions to achieve a useful system; 2) Materials - Semi-conductors for use in power electronic components and Insulation materials at cryogenic temperatures to obtain the data needed to predict system performance and design components; and 3) Optimize thermal system options such as conductive heat transfer systems, fluid heat transfer systems, insulation, packaging and cooling equipment for performance, reliability, and failure modes.  <i>FY 2010 Plans:</i> Funds are provided for the achieving cryo-cooled high power densities through systems management of heat generation and removal in the electrical system.  <i>FY 2011 Base Plans:</i> None		1.543	3.187	0.000	0.000	0.000
High Efficiency Solar Energy Generation and Storage		0.000	0.787	0.000	0.000	0.000

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<b>B. Accomplishments/Planned Program (\$ in Millions)</b>								
				<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
Funds are provided for the High Efficiency Solar Energy Generation and Storage Project. <i>FY 2010 Plans:</i> Funds are provided for the High Efficiency Solar Energy Generation and Storage Project.								
Center for Research on Minority Health Prostate Cancer Outreach Project Funds are provided for the Center for Research on Minority Health Prostate Cancer Outreach Project <i>FY 2010 Plans:</i> Funds are provided for the Center for Research on Minority Health Prostate Cancer Outreach Project				0.000	0.787	0.000	0.000	0.000
Accomplishments/Planned Programs Subtotals				4.254	4.761	0.000	0.000	0.000
<b>C. Other Program Funding Summary (\$ in Millions)</b> N/A								
<b>D. Acquisition Strategy</b> N/A								
<b>E. Performance Metrics</b> None								

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