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Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Air Force										Date: February 2015			
Appropriation/Budget Activity 3600: Research, Development, Test & Evaluation, Air Force I BA 1: Basic Research					R-1 Program Element (Number/Name) PE 0601103F I University Research Initiatives								
COST (\$ in Millions)	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost	
Total Program Element	-	133.798	147.079	141.754	-	141.754	145.044	147.923	150.158	154.054	Continuing	Continuing	
615094: University Research Initiatives	-	133.798	147.079	141.754	-	141.754	145.044	147.923	150.158	154.054	Continuing	Continuing	

Note

FY16 decrease due to higher DoD priorities.

A. Mission Description and Budget Item Justification

This program supports defense-related basic research in a wide range of scientific and engineering disciplines relevant to maintaining U.S. military technology superiority. Research topics include, but are not limited to, transformational and high priority technologies such as nanotechnology, sensor networks, intelligence information fusion, smart materials and structures, efficient energy and power conversion, and high-energy materials for propulsion and control. The program also enhances and promotes the education of U.S. scientists and engineers in disciplines critical to maintaining, advancing, and enabling future U.S. defense technologies. For example, the National Defense Science and Engineering Graduate (NDSEG) program awards fellowships to train U.S citizens in science and engineering disciplines of military importance under a joint tri-Service and Office of the Assistant Secretary of Defense for Research and Engineering competition. Finally, this program assists universities in establishing superior instrumentation capabilities needed to improve the quality of defense-related research and education. A fundamental component of this program is the recognition that future technologies and technology exploitations require highly coordinated and concerted multi- and inter-disciplinary efforts. Efforts in this program have been coordinated through the Department of Defense (DoD) Science and Technology (S&T) Executive Committee process to harmonize efforts and eliminate duplication.

This program is in Budget Activity 1, Basic Research because this budget activity includes scientific study and experimentation directed toward increasing fundamental knowledge and understanding in those fields of the physical, engineering, environmental, and life sciences related to long-term national security needs.

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B. Program Change Summary (\$ in Millions)		FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Previous President's Budget		138.333	127.079	145.695	-	145.695
Current President's Budget		133.798	147.079	141.754	-	141.754
Total Adjustments		-4.535	20.000	-3.941	-	-3.941
• Congressional General Reductions		-	-			
• Congressional Directed Reductions		-	-			
• Congressional Rescissions		-	-			
• Congressional Adds		-	20.000			
• Congressional Directed Transfers		-	-			
• Reprogrammings		-	-			
• SBIR/STTR Transfer		-4.535	-			
• Other Adjustments		-	-	-3.941	-	-3.941
Congressional Add Details (\$ in Millions, and Includes General Reductions)						
Project: 615094: University Research Initiatives						
Congressional Add: Program Increase						
Congressional Add Subtotals for Project: 615094						
Congressional Add Totals for all Projects						
C. Accomplishments/Planned Programs (\$ in Millions)				FY 2014	FY 2015	FY 2016
Title: Multidisciplinary University Research Initiative				74.259	70.530	78.676
Description: Promote fundamental, multi- and interdisciplinary science and engineering research projects involving multiple principle investigators.						
FY 2014 Accomplishments: Awarded 10 new grants under the Multidisciplinary University Research Initiative (MURI) program to fund competitive research grants at U.S. universities that focus on significantly expanding the basic knowledge of Air Force-relevant science and technology areas, not normally achievable in smaller funded, single investigator awards. Awarded 4 new grants under the Presidential Early Career Award for Scientists and Engineers (PECASE) program to support and recognize superior academic researchers in the early stages of their careers. Continued funding of multi-disciplinary programs initially awarded in prior years.						
FY 2015 Plans: Fund competitive research grants at U.S. universities that focus on significantly expanding the basic knowledge of Air Force-relevant science and technology areas, not normally achievable in smaller funded, single investigator awards. Support and						

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C. Accomplishments/Planned Programs (\$ in Millions)		FY 2014	FY 2015	FY 2016
recognize superior academic researchers in the early stages of their careers through the PECASE program. Continue funding of multi-disciplinary programs initially awarded in prior years. FY 2016 Plans: Continue funding competitive research grants at U.S. universities that focus on significantly expanding the basic knowledge of Air Force-relevant science and technology areas, not normally achievable in smaller funded, single investigator awards. Support and recognize superior academic researchers in the early stages of their careers through the PECASE program. Continue funding of multi-disciplinary programs initially awarded in prior years.				
Title: Science and Engineering Education Description: Support post-graduate, graduate, and undergraduate education in science and engineering disciplines at U.S. universities. FY 2014 Accomplishments: Awarded 189 highly competitive National Defense Science and Engineering Graduate (NDSEG) fellowships. Continued to support competitive awards for graduate and undergraduate research experiences, including those established under the Awards to Stimulate and Support Undergraduate Research Experiences (ASSURE) program. Continued funding for awards initiated under prior year DoD programs. FY 2015 Plans: Award highly competitive NDSEG fellowships. Continue to support competitive awards for graduate and undergraduate research experiences, including those established under the ASSURE program. Continue funding for awards initiated under prior year DoD programs. FY 2016 Plans: Continue to award highly competitive NDSEG fellowships. Continue to support competitive awards for graduate and undergraduate research experiences, including those established under the ASSURE program. Continue funding for awards initiated under prior year DoD programs.		44.421	42.190	47.062
Title: Research Instrumentation Description: Enhance scientific and engineering research through advanced education infrastructure and instrumentation at U.S. universities. FY 2014 Accomplishments:		15.118	14.359	16.016

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C. Accomplishments/Planned Programs (\$ in Millions)		FY 2014	FY 2015	FY 2016
<p>Awarded 30 grants on a competitive basis under the Defense University Research Instrumentation Program (DURIP) to U.S. universities to acquire state-of-the-art, high technology instrumentation and infrastructure to enhance research and educational capabilities.</p> <p>FY 2015 Plans: Award grants on a competitive basis under the DURIP to U.S. universities to acquire state-of-the-art, high technology instrumentation and infrastructure to enhance research and educational capabilities.</p> <p>FY 2016 Plans: Continue to award grants on a competitive basis under the DURIP to U.S. universities to acquire state-of-the-art, high technology instrumentation and infrastructure to enhance research and educational capabilities.</p>				
Accomplishments/Planned Programs Subtotals		133.798	127.079	141.754
		FY 2014	FY 2015	
Congressional Add: Program Increase		-	20.000	
FY 2014 Accomplishments: NA				
FY 2015 Plans: Conduct congressionally directed effort				
Congressional Adds Subtotals		-	20.000	
D. Other Program Funding Summary (\$ in Millions)				
N/A				
Remarks				
E. Acquisition Strategy				
N/A				
F. Performance Metrics				
Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.				