Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force											DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 1: *Basic Research*					R-1 ITEM NOMENCLATURE PE 0601103F: *University Research Initiatives*							
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	-	131.957	141.153	138.333	-	138.333	140.738	142.280	143.941	146.532	Continuing	Continuing
615094: *University Research Initiatives*	-	131.957	141.153	138.333	-	138.333	140.738	142.280	143.941	146.532	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

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 it funds basic scientific study and experimentation.

B. Program Change Summary ($ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	152.273	141.153	138.747	-	138.747
Current President's Budget	131.957	141.153	138.333	-	138.333
Total Adjustments	-20.316	0.000	-0.414	-	-0.414
• 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	-16.000	0.000			
• SBIR/STTR Transfer	-4.316	0.000			
• Other Adjustments	0.000	0.000	-0.414	-	-0.414

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Change Summary Explanation

Decrease in FY14 is due to higher DoD priorities.

Realigned Congressional Add to PE 0602788F Dominant Information Technology to better align efforts; Realigned funding to PE 0602203F Aerospace Propulsion for the Adaptive Versatile Engine Technology (ADVENT) project to better align efforts.

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Multidisciplinary University Research Initiative	73.237	78.341	76.776
Description: Promote fundamental, multi- and interdisciplinary science and engineering research projects. ***FY 2012 Accomplishments:*** Selected six new projects for grants under the Multidisciplinary University Research Initiative (MURI) program to fund basic research in metamaterials, photonics, and nanoenergetics. Supported and recognized superior academic researchers in the early stages of their careers through the Presidential Early Career Award for Scientists and Engineers (PECASE) program. Funded multi-disciplinary programs initially awarded in prior years. ***FY 2013 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. ***FY 2014 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	43.810	46.863	45.927
Description: Support post-graduate, graduate, and undergraduate education in science and engineering disciplines at U.S. universities. ***FY 2012 Accomplishments:*** Supported undergraduate research in science and engineering at 65 institutions through the Awards to Stimulate and Support Undergraduate Research Experiences (ASSURE) program. Supported competitive awards for graduate and undergraduate			

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C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
research experiences. Awarded highly competitive National Defense Science and Engineering Graduate (NDSEG) fellowships. Funded awards initiated under prior year Department of Defense (DoD) programs. ***FY 2013 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. ***FY 2014 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.			
Title: Research Instrumentation ***Description:*** Enhance scientific and engineering research through advanced education infrastructure and instrumentation at U.S. universities. ***FY 2012 Accomplishments:*** Selected over 30 projects at U.S. universities for grants under the Defense University Research Instrumentation Program (DURIP) to acquire state-of-the-art, high technology instrumentation and infrastructure to enhance research and educational capabilities. New projects include experimental equipment for distributed engine analysis and control, and instrumentation for space plasma simulations. ***FY 2013 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. ***FY 2014 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.	14.910	15.949	15.630
Accomplishments/Planned Programs Subtotals	131.957	141.153	138.333

D. Other Program Funding Summary ($ in Millions)

N/A

Remarks

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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.