

TRIBUTE TO MARY C. RUSSO

HON. THELMA D. DRAKE

OF VIRGINIA

IN THE HOUSE OF REPRESENTATIVES

Wednesday, September 24, 2008

Mrs. DRAKE. Madam Speaker, I rise to recognize the outstanding achievements of Mary C. Russo. Acknowledged by the Virginia Beach City Council, Ms. Russo's great volunteer work, dedication, and leadership proved her a strong recipient for this recognition.

Mrs. Russo is a devoted, tireless volunteer who has dedicated more than 30 years of service to the Virginia Beach area. In 1978, Mrs. Russo was appointed the first Coordinator of the Virginia Beach City Council's Volunteer Council. Serving in the capacity of Director of Volunteers, she has contributed more than 10,900 hours of service. Additionally, Mrs. Russo has been honored by numerous appointments to a variety of national, State, and local boards, commissions, and agencies.

Through Mrs. Russo's work, the Volunteer Council has grown to over 25,000 volunteers who have collectively recorded over 1.1 million hours of work, valued at nearly 15 million dollars. The program has been so successful that the city of Miyazaki, Japan has sent staff and citizen delegations to train under Mrs. Russo.

With this award, Mrs. Russo has joined an elite group of citizens who have greatly impacted the United States. I am certain that her incredible accomplishments, dedication to our country and evident leadership talents will continue to speak highly of her, as they do now.

EARMARK DECLARATION

HON. VERN BUCHANAN

OF FLORIDA

IN THE HOUSE OF REPRESENTATIVES

Wednesday, September 24, 2008

Mr. BUCHANAN. Madam Speaker, pursuant to the Republican Leadership standards on earmarks, I am submitting the following information regarding earmarks I received as part of H.R. 2638, the Consolidated Security, Disaster Assistance, and Continuing Appropriations Act, 2009:

Requesting Member: Congressman VERN BUCHANAN.

Bill Number: H.R. 2638.

Account: Emergency Operation Centers (EOC).

Legal Name of Requesting Entity: Sarasota County.

Address of Requesting Entity: 1660 Ringling Boulevard, Sarasota, FL 34236.

Description of Request: I secured \$1,000,000 to help relocate and construct a new Sarasota County Emergency Operations Center. An engineering survey conducted in May 2007 determined that the Sarasota County Administration Building was not designed to withstand the forces of a major hurricane. This building houses the County Emergency Operations Center, 911 Consolidated Communications Center, and the Enterprise Information Technology Data Center. Sarasota County is in the midst of planning and designing a new 50,000 square foot public safety center that is structurally sound and geographically located to ensure that it can provide critical services

and government continuity after the advent of a major storm event. Funding will be used to help relocate and construct a new Sarasota County Emergency Operations Center.

Requesting Member: Congressman VERN BUCHANAN.

Bill Number: H.R. 2638.

Account: (RDT&E, Army, PE 0601004A).

Legal Name of Requesting Entity: New College of Florida.

Address of Requesting Entity: 5800 Bay Shore Road, Sarasota, FL 34243.

Description of Request: I secured \$1,200,000 for the continuation of the Florida Collaborative Development of Advanced Material for Strategic Applications, which will introduce a research project with significant educational components and undergraduate student involvement that will study the physical mechanisms of laser assisted modification of two types of nanoparticles: three dimensional, almost spherical metal nanoparticles embedded in dielectric matrix and highly anisotropic one-dimensional structures confined into carbon nanotubes. The proposed study will utilize various spectroscopic and microscopic techniques to investigate in a coherent systematic manner the possibilities of modifying in a controlled and reproducible way, various structural and electronic properties of these two systems. In addition to the particle size analysis, the study will place special emphasis on the interpretation of the experimental data in terms of the particle shape, metal concentration, in the film after each consecutive step of the modification process. This study will be the first attempt to combine the data obtained from UV-VIS absorption spectroscopy and numerical Mie resonance analysis, with material characterization performed by Rutherford backscattering (RBS), X-ray Diffraction (XRD), Transmission Electron Microscopy (TEM) and Atomic Force Microscopy (AFM), and relate them to their optical non-linear properties studied by Z-scan measurements. The second part of the project will involve laser-assisted manipulation of filled double-walled carbon nanotubes and micro-Raman spectroscopy and TEM characterization of highly anisotropic 1D nanostructures confined into carbon nanotubes.

The results of the proposed investigation will have two-fold significance. First, they will contribute new important information in the area of nanosized particles with the key goal of tailoring their properties. Second, the study will serve as an effective educational tool for teaching undergraduate students how to do "real life" research. The proposed area of research will give students a strong understanding of the fundamentals of physics and technology as an intellectual discipline and provide them the opportunity to work successfully in a diverse group. The research will be carried out primarily at New College of Florida in close collaboration with local scientists; the French National Research Center, Orsay, France; the Max Planck Institute for Microstructure Physics, Halle, Germany; the Central Laboratory of Solar Energy, Bulgarian Academy of Sciences, Sophia, Bulgaria; and the University Paul Sabatier, Toulouse, France.

EARMARK DECLARATION

HON. JEFF FORTENBERRY

OF NEBRASKA

IN THE HOUSE OF REPRESENTATIVES

Wednesday, September 24, 2008

Mr. FORTENBERRY. Madam Speaker, pursuant to the Republican Leadership standards on member requests, I am submitting the following information regarding four (4) member requests I received as part of H.R. 2638, The Consolidated Security, Disaster Assistance, and Continuing Appropriations Act, 2009:

1. Southeast Nebraska Cancer Center Foundation/National Functional Genomics Center: \$1.2 million.

Account: 30 0603002A Medical Advanced Technology.

Address of Requesting Entity: Southeast Nebraska Cancer Center Foundation, 201 South 68th Street Place, Lincoln, NE 68510-2496.

Description: \$1.2 million which will be used to support current genomics-based clinical trials involving the development of molecular signatures at the National Functional Genomics Center (NFGC), concurrently supporting the development of a strong bioinformatics program. These two components are critical to the mission of the NFGC. Each requires large numbers of qualifying patients, and corresponding tissues procurement to advance translational research.

The Southeast Nebraska Cancer Center (SNCC) is comprised of a group of oncologists, health care professionals and informatics personnel who support the advancement of translational research, in conjunction with a desire to offer the best survival opportunities to patients now and in the future. As an affiliate member of the NFGC, SNCC provides clinical support for validation of "molecular signatures" and serves as the first clinical facility to provide patients for trials, and to establish research protocols for distance access to the NFGC.

2. Novel Coating Technologies for Military Equipment: \$4.8 million.

Account: 7 0602234N Materials, Electronics, and Computer Technology.

Address of Requesting Entity: University of Nebraska-Lincoln, 301 Canfield, P.O. Box 880433, Lincoln, NE 68588-0433.

Description: \$4.8 million for the University of Nebraska-Lincoln to further develop novel technologies that will enable high-performance surface coatings to be applied to airplanes, warships, tanks, and other large military equipment on site and in an open atmosphere, avoiding the current high costs in time and money of equipment disassembly and the use of vacuum chambers. Most military equipment, ranging from airplanes to warships and tanks, requires high-performance surface coatings for improved performance and reliability. Because military equipment is commonly used in harsh environments, the surface coatings quickly degrade and require periodic evaluation, repair, and often full replacement. Current coating technologies use chemical and physical vapor deposition, which requires high temperatures, the use of vacuum chambers, and disassembly of large equipment to fit in the vacuum chambers. This project will develop laser-based technologies that will deposit high performance surface coatings on site and in open atmosphere without requiring disassembly and

reassembly of the equipment. These surface coatings will have improved hardness, wear resistance, anti-corrosion, and thermal barrier properties.

3. Advanced Magnetic Nanosensors for Defense Applications: \$4.8 million.

Account: 5 0602105A Materials Technology.
Address of Requesting Entity: University of Nebraska-Lincoln, 301 Canfield, P.O. Box 880433, Lincoln, NE 68588-0433.

Description: \$4.8 million for the University of Nebraska-Lincoln to develop and demonstrate nanosensors with unprecedented sensitivity, reduced noise, optimal capability with electronic systems, and the capability to detect explosives, chemicals, and motion. The project addresses the Department of Defense (DoD) priority research area of nanotechnology-based warfighting with an emphasis on new devices for defense and security. These highly sensitive, miniaturized devices would be extremely useful in the creation of the distributed sensor networks that DoD sees as next generation sensor technology. Research will focus on the development of two types of sensors: magnetic tunnel junctions (MTJs) to sense extremely small magnetic fields, enabling detection of explosive devices (such as IEDs) and motion; and micro-cantilever detectors (MCDs), highly sensitive devices to detect molecules attached to magnetic nanoparticles, creating an advanced biological sensor capable of detecting a single virus or bacterium. This research will provide clear pathways for applications developers to improve signal and reduce noise, two of the critical challenges to effective nanosensors. This research will continue to build the strong infrastructure of basic trained scientists with the expertise required for Nebraska's economic development in the area of sensors and electronic devices.

4. Novel Systems for Developing Therapeutics Against Botulism: \$4 million.

Account: 28 0602787A Medical Technology.
Address of Requesting Entity: University of Nebraska-Lincoln, 301 Canfield, P.O. Box 880433, Lincoln, NE 68588-0433.

Description: \$4 million for the University of Nebraska-Lincoln (UNL) to develop novel processes to produce therapeutic molecules against all seven serotypes of the botulinum neurotoxin and make these processes ready for Phase I clinical studies. Botulinum neurotoxin is a biowarfare agent, a Category A CDC select agent and the most potent known toxin to humans. No FDA licensed vaccines against botulinum neurotoxin exists and there are no therapeutic molecules that can counteract its deadly effects once it enters the nerve cell. Development of such a therapeutic is the U.S. Army's highest priority for botulism research. Scientists at UNL and USAMRIID have collaborated 12 years on the first generation botulism vaccine, which has been effective against some of the original toxin, but challenges in vaccine development may render the vaccine ineffective. USAMRIID has developed and demonstrated a proof-of-concept of a new molecule that will specifically target the nerve cell. This funding will enable UNL's Biological Process Development Facility to develop novel recombinant protein expression technology to produce therapeutic molecules and make these processes ready for Phase I clinical studies. The processes also will enable the development of other therapeutics of interest to the Department of Defense.

EARMARK DECLARATION

HON. JOHN T. DOOLITTLE

OF CALIFORNIA

IN THE HOUSE OF REPRESENTATIVES

Wednesday, September 24, 2008

Mr. DOOLITTLE. Madam Speaker, pursuant to the Republican Leadership standards on earmarks, I am submitting the folio information regarding earmarks I received as part of H.R. 2638, the Consolidated Security, Disaster Assistance, and Continuing Appropriations Act, 2009, Section 2, Division C:

Project Name: Transportable Cryofracture/Plasma Arc.

Account: RDT&E, A.

Amount: \$1,600,000.

Requesting Entity: General Atomics, 3550 General Atomics Ct., San Diego, CA 92816.

Description: The Transportable Cryofracture/Plasma Arc project is developing a system for the demilitarization of obsolete conventional munitions that combines two existing fixed-site technologies, cryofracture and plasma arc, into a tractor trailer mounted system that meets all National Highway Transportation and Safety Administration, NHTSA, and Federal Highway Administration, FHA, guidelines for size, weight, and safety. Using this technology to demilitarize munitions at their storage areas will be safer, more secure, much cheaper, and meet environmental emission standards.

Spending Plan: Of the \$1,600,000 appropriated, \$1,500,000 will be spent in the second quarter of Fiscal Year, FY09, 2009 to complete procurement of the demonstration system, \$1,000,000 for materials and \$500,000 for labor. \$100,000 will be spent in the third quarter of FY09 for the same purpose, labor.

Project Name: Hydrocarbon Boost Technology Demonstrator.

Account: RDT&E, AF.

Amount: \$1,400,000.

Requesting Entity: Aerojet-General Corporation, P.O. Box 13222, Sacramento, CA 95813.

Description: This program was initiated by the United States Air Force to meet its projected launch needs for the future. Upon completion, the demonstrator will provide technologies that will lead to a liquid engine that is inherently higher performing, more operable, and more affordable than any other U.S. engine. The use of lower-toxic hydrocarbon fuel also promises long-term savings for the Air Force in operation and maintenance costs. Since the Federal Government is the primary end-user, it is logical that Federal funding support the initiative.

Spending Plan: The FY09 \$1,400,000 increase is to return the FY09 funding closer to the planned level at contract initiation. The total project is a \$109 million/9 year program, and the 2009 funds are intended for Ox rich preburner and turbopump concept designs.

Project Name: Strike Weapon Propulsion (SWEAP).

Account: RDT&E, N.

Amount: \$2,400,000.

Requesting Entity: Aerojet-General Corporation, P.O. Box 13222, Sacramento, CA 95813.

Description: The Nation is investing in the development of high-speed weapons that can engage time critical targets at ranges up to 600 nautical miles within 5 to 10 minutes. The required propulsion system operates at temperatures typically exceeding 3,000 to 4,000 degrees Fahrenheit, hotter than conventional

rockets and ramjets, requiring advancement in the development of ceramic composite materials. Solutions to this challenge have been demonstrated; however, affordability is the remaining issue. The Strike Weapon Propulsion program's objective is to lower the cost of producing the structure for a High-Speed Strike Weapon Propulsion system by 80 percent. If the effort is not funded, the high speed strike capability will not be of benefit to the future war fighter because it will not be affordable. Other, less effective systems would then prevail based on their lower unit costs.

Spending Plan: The total project will be financed as follows: \$1.7 million for the design of ceramic matrix engine structures; \$1.8 million for subscale hardware fabrication; \$0.5 million for subscale hardware testing; \$2.2 million for full-scale combustor fabrication; and \$0.8 million for combustor assembly and testing.

Project Name: Validation of Lift Fan Engine Systems.

Account: RDT&E, N.

Amount: \$2,000,000.

Requesting Entity: Rotordynamics-Seal Research, 3302 Swetzer Rd., Loomis, CA 95650.

Description: This technology demonstration program will provide benefits to all citizens of the U.S. through the reduction in tax revenues necessary to maintain the fleet of engines for the Joint Strike Fighter aircraft. In addition, a new virtual testing capability will be created that has applicability to a wide range of commercial and aerospace systems leading to significant development cost reductions. The near-term specific task to be executed under this effort is development and experimental validation of Rotordynamics-Seal Research's RAPPID™ virtual testing modeling and simulation software for analysis of lift fan engines with clutches, gears, and splines. RAPPID™ is a flexible software package for the simulation of propulsion, power, and vehicle systems that enables faster and more accurate evaluation of new systems. For large projects, RAPPID™ helps program managers plan their resources more wisely and efficiently to enable more cost certainty. The focus of the task is to complete development of software modules necessary for full lift fan engine simulations, to generate test data testing critical components that affect engine vibration characteristics, clutches, gears, and splines, and to use the generated data to validate the resulting software. This is proposed as a 2 year effort. The first year, needed software modules will be developed and validated against existing data and required design modifications will be completed to an existing test facility. In the second year, new validation data will be obtained for the dynamic characteristics of critical components and the validation of the software will be completed. Advanced modeling and simulation software has been developed for determining the remaining life of critical Joint Strike Fighter lift fan engine clutch, gear, and drive train components. This program will extensively validate the key models used in the software through experimentation. The existing test facility developed for this purpose has "best in the world" capabilities for measurement of difficult to obtain data sets. This validation will enable engine life assessment modeling tools to be verified for release for fleet management purposes.

Spending Plan: The total project cost is \$5 million, of which \$4.5 million will be used for