FOR IMMEDIATE RELEASE:
July 30, 2009

CONTACTS:
Barry Toiv barry_toiv@aau.edu 202/898-7847
Paul Hassen phassen@aplu.org 202/478-6073
Ashley Prime aprime@qga.com 202/429-4002

Recovery Act-Funded Research Projects Aid Communities Across the Country
Money at work funding jobs, construction, education and research

In the five months since passage of the American Recovery and Reinvestment Act of 2009 (ARRA), thousands of research-related awards have been made, supporting important scientific efforts across the country. ARRA delivered the largest increase in basic research funding in American history - $21.5 billion. The bulk of the money is for scientific research and education projects, while $3.5 billion is allocated for research facilities and capital equipment. Universities are helping researchers apply for ARRA funding and the federal science agencies tasked with distributing that money are reviewing tens of thousands of grant applications – all in a compressed timeframe and under new reporting requirements. As a result, in every state and the District of Columbia, ARRA-funded research grants are creating jobs, allowing the purchase of equipment, and supporting science-related construction projects.

An influx of ARRA funds has enabled public and private research universities from Maryland to California to post 'help wanted' ads, providing a boon to the local economies. Through the National Institutes of Health's ARRA-funded summer experience program, more than 3,000 educators and students are spending their summers in the nation's leading biomedical research laboratories. The Department of Energy's Office of Science is using ARRA funding to establish 16 Energy Frontier Research Centers on university campuses. These centers will bring together interdisciplinary teams of experts to accelerate development of new energy technologies, with each center supporting a full staff of researchers, technicians, and graduate and postdoctoral students. ARRA funding from the National Institute of Standards and Technology is supporting the construction of major new academic research facilities in Alabama, Florida, North Carolina and Texas.

To ensure that the public is aware of the economic impact that ARRA research dollars are already having in communities across the country, the Association of American Universities (AAU), Association of Public and Land-grant Universities (APLU), and The Science Coalition (TSC) are providing the attached summary. The examples are illustrative, not exhaustive. ARRA-funded research is happening in every state in the country. For more information, contact one of the people listed above or ARRAresearch@qga.com.

AAU, APLU, and TSC collectively represent more than 200 of the nation's leading academic research institutions. The associations advocated strongly for the inclusion of research funding in the ARRA because spending money on basic research produces both immediate and long-term economic impact. In many communities across the country, research universities are the largest employers and a vital component of the local economy. Basic research also is an essential piece of the nation's innovation infrastructure – providing the foundation on which the U.S. will improve its energy efficiency, reduce its dependence on foreign oil, deploy 21st century technologies and help bring down the cost of health care.

# # #

Examples of ARRA-Funded Research
Produced July 24, 2009

To date, some 3,000 students and teachers in 49 states, the District of Columbia and Puerto Rico, are participating in an ARRA-funded summer jobs program through the National Institutes of Health (NIH). The positions at the nation's leading biomedical research facilities provide participants hands-on, in-the-lab experience, which they will carry with them when they return to the classroom – as K-12 science educators and college and high school students.

- In **West Virginia**, an award of $751,506 to Marshall University, in partnership with West Virginia University, aims to increase the number of students entering the biomedical research field as a career. The grant will help support 50 undergraduate students and high school science educators over the next two years as they gain experience studying disease processes such as cancer and cardiovascular disease.

- In **Minnesota**, a grant to the University of Minnesota of $362,400 will be used to create jobs and encourage students from minority and underserved communities to pursue careers in health-related sciences. The program will provide internships in cancer research for 10 undergraduates and provide high school teacher training in cancer biology.

- In **Ohio**, federal stimulus money through NIH is fueling 15 research projects at The Ohio State University this summer and supporting the laboratory work of five central Ohio science teachers and 49 students – 23 in high school and 26 in college.

Recovery Act funding has allowed the National Science Foundation (NSF) to significantly expand its Robert Noyce Teacher Scholarship Program. To date, $59.1 million of the $60 million allocated for the program under ARRA have been obligated to more than 60 U.S. colleges and universities. The money supports scholarships, stipends, and academic programs for undergraduate STEM majors and post-baccalaureate students holding STEM degrees who commit to teaching in high-need K-12 school districts.

- In **Tennessee**, a $1.5 million ARRA grant to the University of Memphis will help fund a six-year program to recruit, train, and support secondary education math and science teachers for the Memphis City Schools.

- In **Michigan**, a $900,000 grant to Michigan Technological University will train 24 students and 12 professionals to teach STEM disciplines in high schools. The Michigan Tech program targets the Saginaw and Grand Rapids areas.

- In **California**, a grant to the University of California, Santa Barbara's Cal Teach program will provide $10,000 fellowships for 75 teacher candidates pursuing their masters degrees.

The Department of Energy Office of Science is using ARRA funds to support the creation of 16 Energy Frontier Research Centers (EFRC). The 16 ARRA-funded centers, all housed at prominent research universities, will bring together groups of scientists in an effort to accelerate the scientific breakthroughs needed to build a new 21st-century energy economy.

- In **North Carolina**, the center to be established at the University of North Carolina Chapel Hill through a $17.5 million grant will focus on developing solar fuels from next-generation photovoltaic technology. The UNC center will support a mix of about 30 postdoctoral fellows and graduate students.

- In **Massachusetts**, a $19 million ARRA grant will fund the Center for Excitonics at the Massachusetts Institute of Technology. The center aims to understand the transport of charge carriers in synthetic disordered systems, which hold promise as new materials for converting solar energy to electricity and for electrical energy storage. Numerous postdoctoral, graduate student, and technical staff positions will be created for the MIT center.
- In **Michigan**, the University of Michigan will receive $19.5 million to study solar energy research. The U-M center will support 22 researchers who will study nano-scale materials to determine their potential for converting solar energy into electricity.

On July 20, the National Institutes of Standards and Technology announced ARRA awards totaling more than $55.5 million to support the construction of new scientific research facilities at four research universities. In the near-term these awards will result in major construction projects with positive impacts on the local economies involved. Long-term, the projects will have a lasting legacy in scientific research, innovation, public safety and environmental protection.

- In **Florida**, a $15 million grant will go to the University of Miami toward a Marine Technology and Life Science Seawater Research Building.
- In **Alabama**, Auburn University will receive more than $14 million toward the development of a Center for Advanced Science, Innovation and Commerce.
- In **Texas**, Rice University will receive $11 million toward the new Brockman Hall for Physics.
- In **North Carolina**, the University of North Carolina Wilmington will receive almost $15 million toward a new facility for the Marine Biotechnology in North Carolina (MARBIONC) program.

Other ARRA research headlines from around the country include:

- **Alabama.** NSF has awarded two University of Alabama professors over $1.45 million in grants to further their research in the fields of chemistry and biological sciences. The money will support their work as well as those who work with them. "[Now] I can support graduate teaching assistants and convert them to graduate research assistants so they can work full time in the lab," said Dr. Laura Busenlehner.
- **California.** The University of California, Los Angeles has to date received approximately 50 ARRA-funded research grants totaling about $20 million. NIH funding of $1.9 million will enable the purchase of a supercomputer for the UCLA Laboratory of Neuro Imaging. Two $2.5 million NSF grants will allow the math department to jumpstart graduate students who are U.S. citizens and permanent residents into research. DOE's SLAC National Accelerator Laboratory housed and run by Stanford University will receive $68.3 million in ARRA funds, allowing the facility to accelerate the acquisition of major research equipment and perform seismic upgrades to laboratory infrastructure. In late June the laboratory announced that it had nearly 100 open positions – about 50% more than projected as a result of the ARRA funding and other factors. Additionally, 18 Stanford University School of Medicine projects that had been stalled by budget shortfalls at NIH are moving forward as the result of $6.9 million in ARRA funding. Each grant will support the salaries of several employees and contribute to improved health care.
- **Colorado.** The University of Colorado, Boulder has earned $10.44 million to date in ARRA-funded grants from NSF and NIH. System-wide, UC's campuses have earned 41 awards amounting to about

$14 million. Researchers on the Boulder campus will conduct studies ranging from the diagnosis of learning disabilities and climate change in the tropics to minimizing pain.

- **Georgia.** The University of Georgia has to date received 16 ARRA-funded grants totaling about $3.7 million. They include grants for the purchase of laboratory instruments and for research projects ranging from studying the immune response to AIDS vaccines to developing materials for renewable energy.
- **Hawaii.** The Hawaii Natural Energy Institute at the University of Hawaii-Manoa was selected July 21 to receive more than $5.5 million in ARRA funds from the Department of Energy for a Smart Grid demonstration project. Smart grids allow for the more efficient delivery of electric power to consumers through the use of computers and other technology to manage electrical loads. The University of Hawaii project will explore the management of distribution system resources for improved service quality and reliability, transmission congestion relief, and grid support functions.
- **Louisiana.** An associate professor at Louisiana State University Health Sciences Center New Orleans' School of Medicine has been awarded a $1.3 million National Cancer Institute grant to develop new immunotherapies, including a vaccine, for cancer. The first two years of the five-year grant will be supported with ARRA funds and will provide for the retention of a research technician and a postdoctoral fellow, as well as the creation of a new position.
- **Maryland.** The Johns Hopkins University has so far received 100 ARRA-funded grants through NIH totaling more than $21 million. The University, which traditionally receives the most federal R&D money of all universities, estimates that 10,000 to 15,000 of its current jobs are research-related. JHU held a job fair in May that was attended by 1,200 people in anticipation of additional jobs to be created as a result of ARRA-funded research grants.
- **New Hampshire.** More than $3 million in ARRA funds will support a variety of research at the University of New Hampshire ranging from climate change impacts on shell fish and oyster habitats, and creating low cost sensors that will increase the productivity of the milling process, to studies that contribute to the ability to make future climate change predictions.
- **New Jersey.** An interdisciplinary team of scientists led by Princeton University engineers has been awarded a $3 million ARRA grant from the U.S. Air Force to study how fuel additives made of tiny particles known as nanocatalysts can help supersonic jets fly faster and make diesel engines cleaner and more efficient.
- **New York.** Rensselaer Polytechnic Institute has to date received five ARRA-funded grants from NIH. This includes research to aid in the control, understanding and tracking of infectious diseases and to look at cancer risk and the impact of circadian disruption of biological systems. System-wide, the State University of New York (SUNY) has received dozens of ARRA-funded grants, supporting summer lab experiences for educators and students and supporting research in fields from biomedicine and public health to energy.
- **Pennsylvania.** The University of Pennsylvania has received more than $30 million in research funding from the ARRA, awards that fund more than 100 studies in gene therapy, robotics, public education, neurological disorders, tobacco's effect on health, and more. One such award is a

$500,000 NSF grant to Katherine Kuchenbecher to continue her research into haptography, the science of capturing and recreating the feel of real surfaces. Not only does the field appeal to young scientists and encourage engineering careers, but the applications are widespread and include robot-assisted surgery, medical training and simulation, interactive museum exhibits, online

shopping, and stroke rehabilitation.

- **Rhode Island**. Brown University assistant professor Robert Miranda Jr., has initiated a two-year study that aims to help reduce marijuana addiction among teens by testing a novel medication. The ARRA funding from the National Institute on Drug Abuse will create or help create three full-time positions. It will also help save five full-time jobs. Approximately 60 adolescents will be recruited for the study at the Brown Center for Alcohol and Addiction Studies.
- **Virginia**. Researchers at the University of Virginia were awarded $199,951 in ARRA funds by the NSF to study the impact of stimulus funding on employment in science and engineering fields. In a complementary award of approximately the same amount, the University of Michigan will develop a database of the investments in and outcomes of social science projects funded by the ARRA.
- **West Virginia.** Eight West Virginia University faculty members will share in more than $3 million in economic stimulus support over the next two years. Among the grants is $862,444 from NIH to study the biological effects of exposure to nanoparticles of tungsten carbide-cobalt. Nanoparticles – manufactured substances of extremely small size – are finding wide use in industry. The research is aimed at learning how the nanoparticles interact with lung cells, and if they can activate cell responses that can contribute to cancer. About six researchers' jobs will be supported by the grant.
- **Wisconsin.** Projects totaling $35 million have so far been awarded to universities in Wisconsin, including to University of Wisconsin-Madison, Medical College of Wisconsin, and Marquette University. A $639,000 ARRA grant from NIH, along with matching money from the National Cancer Institute, to UW-Madison professor Michael Gould is helping him avoid lay-offs in his lab and delays in his work on breast cancer risks.

*** Please note this release was updated July 31. An earlier version incorrectly stated that the Energy Frontier Research Center to be established at Washington University in St. Louis was funded through ARRA. That is not the case.*