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September 9, 2008

The Honorable John McCain
John McCain 2008
P.O. Box 16118
Arlington, VA 22215

Dear Senator McCain:

The next President must solve tough problems for all Americans – among them, how to pay for health care, how to keep energy costs manageable, how to educate young people for work in an increasingly competitive global economy. But we must invest in the research that will lead to discoveries and innovations if we are to tackle these challenges and remain the world's science and technology leader.

We believe that a strong commitment to basic scientific research is one key to a strong economy and to solving the tough issues we face as a nation. MIT economist and Nobel Laureate Robert Solow estimates that more than half of U.S. economic growth in the past 60 years can be traced to science-driven technological innovation. And the source of much of that innovation has been university-based scientific research supported by funding from the federal government.

The Science Coalition is a non-profit, nonpartisan organization of 47 of the nation's leading public and private research universities. We are dedicated to maintaining the leadership of the United States in basic science through a strong and sustained federal commitment to research funding. Where the Presidential candidates stand on the issue of federal support for research funding has implications that extend far beyond the laboratory or the campus and reach into the pocketbook of every American.

We understand you have received other questions related to science and research. We urge you to also consider the attached questions, which delve into additional important issues related to basic research and research funding that have not been previously addressed. We know that as President you will have many difficult issues to address and that in tough economic times there are competing priorities for financial resources, but

we believe basic research is integral to solving these issues and to preparing America for a successful future.

Thank you for your consideration.

Sincerely,



Steven B. Sample
President, University of Southern California



France A. Córdoba
President, Purdue University



Shirley Ann Jackson
President, Rensselaer Polytechnic Institute



Lee T. Todd Jr.
President, University of Kentucky

10 Questions for Candidates

1. **Economic Competitiveness/America COMPETES.** The National Academies report, “Rising Above the Gathering Storm,” recommended several actions to ensure the future economic competitiveness of the U.S., including greater federal support for university-based scientific research. Many of the report’s recommendations have yet to be implemented and the America COMPETES Act, which Congress passed and the President signed to respond to this crisis, remains largely unfunded. What steps do you believe the federal government must take to ensure that America remains the world leader in innovation? Do you agree with the report on the need for greater support for scientific research? Will you support full funding of America COMPETES?
2. **Research.** There is great concern within the academic and business communities about stagnating federal support for basic research in both the physical and biomedical life sciences. What priority would you give to investment in basic research – across the sciences and the agencies supporting this research including NSF, DOE, NIH, NIST, DOD, NASA, and USDA – in upcoming budgets? How would you protect long-term investments in research against short-term spending constraints?
3. **Energy.** There is clear consensus among both Democrats and Republicans that our country needs new energy sources and there is support for applied research to bring known potential sources of energy to market. What priority would you give to funding basic research in this area, which can provide the foundation for important new discoveries, but may not lead to energy breakthroughs for a number of years?
4. **Climate Change.** Science and research are obviously critical to helping understand and address the effects of climate change. Do you believe the U.S. is adequately funding this research?
5. **NIH/Health Research.** Since 2003, funding for the National Institutes of Health, the government’s primary agency for funding medical research, has been outpaced by inflation, constricting important work supported by NIH. How would you prioritize NIH funding? And what role do you think NIH research can play in addressing issues related to the cost, quality and availability of health care?
6. **National Security.** Past federal investments in defense basic research have led to technologies with major payoffs for both national security and the economy. Radar, lasers, the Internet, stealth technology, fiber-optic-based communications, and satellite and GPS technology are all examples. While funding for defense research in recent years has been flat, funding for developing and testing new weapons systems has significantly increased. Do you believe the U.S. can and should invest more in defense basic research?
7. **Space.** The study of earth from space can yield important information about climate change; focus on the cosmos can advance our understanding of the universe; and human space travel can help us inspire new generations of youth to go into science. How would you prioritize funding for space and its various areas of research?
8. **Science and Engineering Workforce.** Leaders in the business and scientific communities, as well as the Defense Department and other national security agencies, are worried that America is not producing enough scientists, engineers and technicians to compete in the future innovation economy and help secure our nation. How would you inspire students and recruit them into these fields of study?

9. **Education.** Students in the U.S. are losing ground to their peers in other countries in the key areas of science and math. What is the role of the government in reversing this trend and supporting K-12 STEM (science, technology, engineering and math) education?
10. **Government-University Research Partnership.** Since World War II, there has been a unique partnership between the U.S. government and universities whereby U.S. universities conduct important scientific research on behalf of the American people. The research enterprise borne of this partnership has become the envy of the world, produced tremendous advances in health, technology, innovation and national security, and fueled economic growth while training new generations of scientists, engineers, teachers and leaders in government and industry. Today, however, this partnership suffers from decreased federal funding and because some have lost sight of its value and uniqueness in the world. What steps would you take to strengthen this uniquely American research partnership?

The Science Coalition, a non-profit organization representing 47 of the nation's leading public and private research universities. The Science Coalition is dedicated to sustaining the federal government's commitment to U.S. leadership in basic science. For more information visit: www.sciencecoalition.org