Testimony of
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On
FY 2010 Appropriations for the National Science Foundation

Before the
House Committee on Appropriations
Subcommittee on Commerce, Justice, Science, and Related Agencies
Congressman Alan B. Mollohan, Chair
Congressman Frank R. Wolf, Ranking Member

April 2, 2009

Chairman Mollohan, Ranking Member Wolf and members of the Subcommittee, I am James Glimm, Past President of the American Mathematical Society. Also testifying before this committee today are representatives from the American Chemical Society, American Physical Society and Federation of American Societies for Experimental Biology. **These organizations together represent more than 300,000 scientists, engineers and mathematicians in a diversity of fields, and we are united in our request for an FY 2010 budget for the National Science Foundation (NSF) of $7 billion.** This investment will allow the NSF to continue innovative and transformational scientific research that fuels the American economy, upholds national security, maintains our global competitiveness and improves health and quality of life for millions of Americans.

I would like to begin by thanking you for the recent investments in NSF. These investments will increase the ability of NSF to support highly rated proposals that heretofore have gone unfunded because of inadequate budgets. Moreover, these investments allow NSF to concentrate on funding young investigators who will be key to building the research infrastructure needed for facing critical problems requiring technical expertise, problem areas such as climate change and its effects, energy conservation and alternative sources, and environmental and ecological consequences of human activity.

The Fiscal Year 2009 Omnibus provided strong increases for NSF. We are also extremely gratified about the $3 billion investment in NSF through the American Recovery and Reinvestment Act (ARRA). With funding from ARRA and the FY 2009 Omnibus Appropriations Act, the NSF FY 2009 budget has reached $9.49 billion. This budget level comes close to the $9.84 billion authorized for NSF in FY 2007 under Public Law 107-368, the 2002 NSF Authorization Act and is more than the $8.13 billion FY 2010 budget authorized in Public Law 110-69, the America COMPETES Act. In constant dollars, NSF budgets decreased from 2004 to 2008. This year's increases in the NSF budget help reverse that decline. However, given that the funding from ARRA is temporary, it is important that future NSF budgets continue to grow at rates that will sustain the research and innovation enterprise and allow the United States to maintain its scientific leadership and technological competitiveness.

We are mindful that if future NSF budgets do not grow adequately, all that will be gained through the new funding will be lost. If this were to happen, it could have a debilitating affect on our science enterprise, squashing morale and causing current and future generations of scientists to look at other career paths. I strongly emphasize the necessity of adequate yearly investments in NSF. Dependable increases allow for planning, infrastructure development, feasible expectations, a manageable pipeline of graduate and postdoctoral students, and the creation of jobs that can be sustained over time. A predictable pattern of funding will facilitate a continuous stream of high-level research and researchers.

NSF is very important to the mathematical sciences. NSF accounts for 60 percent of federally funded mathematical research in colleges and universities and is the only agency that funds mathematics research broadly across all subfields. Many NSF-supported mathematical sciences research projects have benefited society. For example, mathematical research taking place at the University of Houston led to an improved design of vascular prostheses called stents and stentgraphs used in non-surgical repair of aortic abdominal aneurysms and coronary artery disease. In another project—combining mathematical modeling with new experimental data—a University of Maryland researcher and his team are proposing a new low-risk, clinical approach to enhancing the effect of drug therapy for Chronic Myelogenous Leukemia, possibly leading to a cure for the disease. A University of Utah mathematician’s current work on polar sea ice promises to improve forecasts of how global warming will affect Earth's icepacks and how polar ecosystems may respond. These are just a few of the contributions of the mathematical sciences; with sustained NSF funding there will be many more to come.

Thank you for the opportunity to offer my support for NSF. I would be delighted to answer any questions the committee has.