



NAEVR

National Alliance For
Eye And Vision Research

Serving as Friends of the National Eye Institute

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NAEVR URGES FY2012 NIH FUNDING AT \$35 BILLION TO FULLY LEVERAGE AND MAINTAIN THE MOMENTUM OF RESEARCH

National Institutes of Health (NIH) Funding:

- The vision community commends Congress for \$10.4 billion in NIH funding in the American Recovery and Reinvestment Act (ARRA), as well as FY2009 and FY2010 funding increases that enabled NIH to keep pace with biomedical inflation after six previous years of flat funding that resulted in a 14 percent loss of purchasing power.
- In FY2009 and FY2010, NIH has essentially funded biomedical research at a level of \$35 billion. NAEVR urges Congress to maintain the momentum of research by funding NIH at \$35 billion in FY2012 due to:
 - The expanded capacity for research, as demonstrated by the significant number of high-quality grant applications submitted in response to ARRA opportunities.
 - Unmet need, especially for programs of special promise that could reap substantial downstream benefits, as identified by new NIH Director Dr. Francis Collins.
 - The potential of research to reduce healthcare costs, increase productivity, and ensure the continued global competitiveness of the United States.

National Eye Institute (NEI) Funding:

- In FY2009 and 2010, with increased “regular” and ARRA funding, the National Eye Institute (NEI) supported grants that ranged from determining the genetic basis of eye disease to developing treatments that restore sight, as well as funded key investigator networks studying new diagnostics and treatments. This infusion of increased funding was important, as NEI had lost 18 percent of its purchasing power over the six previous funding cycles.
- NEI’s FY2010 funding level of \$707 million reflects little more than one percent of the \$68 billion annual cost of eye disease and vision impairment in the United States. NEI estimates that 38 million Americans age 40 and older experience blindness, low vision, or age-related eye disease, such as age-related macular degeneration, glaucoma, diabetic retinopathy, or cataracts. This number will grow to 50 million by year 2020.
- In 2009, Congress commended NEI’s leadership in basic and translational research through H. Res. 366 and S. Res. 209, which recognized NEI’s 40 years as the NIH Institute that leads the nation’s commitment to save and restore vision. The resolutions also designated 2010-2020 as the *Decade of Vision* in recognition of the increasing health and economic burden of eye disease, mainly as a result of an aging population.

Examples of NEI-Funded Vision Research in FY2009/2010

- **Biomarker for Neovascular Age-related Macular Degeneration (AMD):**
Researchers will use a recently discovered biomarker for choroidal neovascularization (CNV)—the growth of abnormal blood vessels into the retina and responsible for 90 percent of vision loss associated with AMD—to develop an early detection method to minimize vision loss. Why important? *AMD is the leading cause of vision loss in the U.S., especially among the elderly.*
- **Cellular Approach to Treating Diabetic Retinopathy (DR):**
Researchers propose to develop a clinical treatment for diabetic retinopathy—in which diabetes damages small blood vessels in the retina, causing them to leak—that uses stem cells from the patient’s own blood that have been activated outside of the body and then returned to repair damaged vessels in the eye. Why important? *DR is the leading cause of vision loss in younger Americans and has a disproportionately higher incidence in African Americans, Latinos, and Native Americans.*
- **Small Heat Shock Proteins as Therapeutic Agents in the Eye:**
Researchers propose to develop new drugs to prevent or reverse blinding eye diseases, such as cataract (clouding of the lens), that are associated with the aggregation of proteins. Research will focus on the use of small “heat shock” proteins that facilitate the slow release and prolonged delivery of targeted macromolecules to degenerating cells of the eye. Why important? *Delivering effective, long-lasting therapies in a minimally invasive fashion to the eye is a major challenge.*
- **Identification of Genes and Proteins that Control Myopia Development:**
Researchers propose to identify targets that will facilitate development of interventions to slow or prevent myopia (nearsightedness) development in children. Identifying an appropriate myopia prevention target can reduce the risk of blindness and reduce annual life-long eye care costs. Why important? *More than 25 percent of the U.S. population has myopia, costing \$14 billion annually, from adolescence to adulthood.*
- **Comparative Effectiveness of Medical Interventions for Primary Open Angle Glaucoma:**
Researchers will evaluate existing data on the effectiveness of various treatment options for primary open angle glaucoma—many emerging from past NEI research. Why important? *Glaucoma is the second leading cause of preventable blindness in the U.S., disproportionately affecting African Americans and Latinos.*
- **Comparative Effectiveness of Novel Intervention for Retinopathy of Prematurity (ROP):**
In animal studies, researchers will simulate Retinopathy of Prematurity—a blinding eye disease that affects premature infants—and then study novel treatments that involve modulating the metabolism of the retina’s rod photoreceptors. Why important? *ROP affects 15,000 children a year, about 400-600 of whom progress to blindness despite treatments that have emerged from past NEI-funded research.*