



**The Association for Research in Vision and Ophthalmology**

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**ARVO Testimony in Support of National Institutes of Health (NIH) and  
National Eye Institute FY2006 Funding  
Before the House Labor, Health and Human Services, and Education  
Appropriations Subcommittee  
April 14, 2005  
Rayburn 2358**

**Presented by:  
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**ARVO Testimony by Gary W. Abrams, M.D., in Support of NIH/NEI Funding  
April 14, 2005, House LHHS Appropriations Subcommittee**

Thank you, Chairman Regula and Members of the Subcommittee for inviting me to speak with you. I am Dr. Gary Abrams and I am here today in my role as president of the Board of Trustees of the Association for Research in Vision and Ophthalmology. ARVO is the world's largest association of physicians and scientists who study diseases and disorders affecting vision and the eye. ARVO has more than 11,200 members from the United States and 70 countries, and at least 80% of our U.S. members have grants from the National Institutes of Health (NIH).

As a representative of an organization devoted to research, as well as a practicing ophthalmologist and National Eye Institute (NEI)-funded researcher, I am here to support adequate funding for the NIH overall, and for eye and vision research conducted at the NEI, specifically. ARVO commends Congress for its bold, bipartisan leadership in doubling the NIH budget from fiscal 1998 to 2003. ARVO was a strong supporter of this action, which has served to strengthen our country's medical research infrastructure and accelerate the momentum of discovery, thereby benefiting the lives of all Americans. However, ARVO is concerned that what we have all gained from this expanded investment could be jeopardized at the level of funding currently proposed in the President's FY2006 budget.

If the proposed budget numbers remain, then FY2006 will be the third year in which the NIH will not have kept pace with inflation. Although NIH Director Dr. Zerhouni and his leadership team have done an outstanding job of setting priorities and promoting collaborative activities that use federal dollars efficiently and effectively, he can only do so much with an increase of less than 1 percent when the biomedical inflation rate is at 3.5 percent. I know that this Subcommittee is especially concerned about the chilling impact this will have on the grants process. ARVO shares this concern, as we must not only maintain our existing research base but grow it by reaching out to new grantees who have innovative ideas.

As a result, ARVO requests that Congress fund the NIH in FY2006 at \$30 billion, or a six percent increase over FY2005. This is not just an investment in our nation's health, as it ultimately is an investment in our nation's economic health, educational advancement and military defense, since good health drives all progress. We hope that, as Congress grapples with its many budget challenges, it considers our request for this investment in our country's future medical research infrastructure.

Our nation's vision health is equally important to our progress and, in that regard, ARVO requests that Congress fund the NEI at \$711 million in FY2006, or a 6 percent increase over FY2005. This number reflects our community's estimate of the funding necessary to advance the breakthroughs from NEI's basic and clinical research that result in treatments and therapies to prevent eye disease and restore vision.

ARVO commends the leadership of NEI Director Dr. Paul Sieving who is directing our nation's vision health efforts. NEI Intramural research, as well as Extramural research being conducted at Institutions all around this country by ARVO members, is addressing a wide array of visual disorders and diseases. This includes research on visual acuity and refractive error correction, research into traumatic eye injury and infection control and research into the genetic and cellular basis of many of the most prevalent eye diseases—such as age-related macular degeneration or AMD, glaucoma, diabetic retinopathy and cataract—as well as rare retinal diseases, such as retinitis pigmentosa.

As the entire medical research community gains a better understanding of the basis of disease, the eye emerges as a unique biological system in which to conduct genetic, neuroscience and cellular mechanism research. NEI-sponsored research is at the forefront of genetic research, as the eye offers accessibility and a system in which one can measure a potential effect from a treatment. Just last month, NEI-sponsored researchers announced the discovery of the gene strongly associated with a person's risk of developing AMD, which is the leading cause of vision loss in older Americans. This may enable researchers to develop tests for the disease before symptoms begin to appear and when drug therapies might help slow its progress. Vision researchers are also moving closer to human clinical trials of a gene therapy to treat Leber congenital amaurosis or LCA, a rapid retinal degeneration that blinds infants in their first year of life. Previous research has restored vision in dogs with LCA. This gene therapy has direct implications for the 9 million Americans affected by AMD and a range of rare retinal diseases.

Additionally, since nerve cells in the retina underlie the ability to process vision, the eye also serves as an important system in which to study neurodegenerative diseases. For example, NEI-funded researchers have recently announced the regeneration of the optic nerve in mice, which could potentially result in treatments for Americans blinded by glaucoma or other injuries that destroy the optic nerve. As a former Navy Flight Surgeon, I can tell you that 15 percent of wartime injuries involve the eye, and those with optic nerve trauma are the most grave.

NEI research, such as that into the fundamental cause of eye disease, is more critical now than ever, as vision impairment and eye disease is a major public health problem that is growing ever larger due to an aging population, minority populations that are disproportionately affected by eye disease, and co-morbidities of disease, such as diabetic retinopathy. Age-related eye diseases currently affect more than 35 million Americans age 40 and older, and this number is projected to increase to about 50 million by year 2020.

As a physician at a teaching hospital located in metropolitan Detroit, I'd like to say a few words about vision health disparities research, which is an NIH and NEI priority. Glaucoma—which results in vision loss when the optic nerve is damaged, most often from elevated pressure within the eye—affects 2.2 million Americans, and this number is expected to increase by another 3.3 million by year 2020. NEI-sponsored research has determined that glaucoma is the leading cause of irreversible blindness in African Americans, occurring at a rate almost three times as that in White Americans. NEI research into the physiological differences in the optic nerve and cornea has resulted in the development of detection techniques that are more sensitive to these physiological differences and their associated changes over time. As a result, earlier detection means earlier diagnosis and treatment, often with pressure-reducing drops that can delay or prevent the onset of this debilitating disease, as shown by other NEI research.

Vision impairment and eye disease now costs the United States \$68 billion annually in direct costs for healthcare and lost productivity. This number does not even begin to quantify the societal cost associated with lost independence and a diminished quality of life. Our success in extending the life span has presented us with a whole new series of challenges related to the aging eye, and federal funding for eye and vision research must be responsive to this challenge. Adequately funding the NEI can delay, save and prevent expenditures to the public sector, especially the Medicare and Medicaid programs, as well as to the private sector.

Mr. Chairman and Subcommittee members, thank you for this opportunity to speak and present ARVO's request for an FY2006 budget increase of 6 percent for both the NIH and NEI over that of FY2005. This will maintain the momentum of medical research discovery and help to ensure the health, and vision health, of all Americans.