NAEVR URGES FY2016 NIH FUNDING OF AT LEAST $32 BILLION AND NEI FUNDING OF $730 MILLION TO MAINTAIN THE RESEARCH MOMENTUM

National Institutes of Health (NIH) Funding:

- The vision community requests a Fiscal Year (FY) 2016 NIH funding level of at least $32 billion, waiving it from sequester cuts and Budget Control Act caps. This builds upon Congressional actions in FY2014 and 2015 appropriations cycles to restore $1.7 billion of FY2013 sequester cuts by enabling at least a 5 percent increase in the NIH budget, reflecting both modest growth and an inflationary increase. The latter is crucial, as NIH has lost 22 percent of its purchasing power since FY2003, in terms of constant dollars.

- Cuts and a lack of inflationary increases have significantly limited NIH’s ability to sustain current research capacity and encourage promising new areas of science. This comes at a time when past investment in basic and clinical research is resulting in new diagnostics, treatments, and prevention strategies that are saving and improving lives.

- NIH is also an economic driver. In FY2011, NIH-funded research supported 432,000 jobs across the U.S. and generated more than $62 billion in new economic activity. Every $1 of NIH funding generated about $2.21 in local economic growth.

- The United States must capitalize on previous NIH investment to drive research progress, train the next generation of scientists, create new jobs, promote economic growth, and maintain leadership in the global innovation economy.

National Eye Institute (NEI) Funding:

- NIH funding of $32 billion results in NEI funding of $730 million, which would fully restore the $36 million in FY2013 sequester cuts and enable both modest growth and an inflationary increase, the latter being crucial as NEI has lost 25 percent of its purchasing power since FY2003.

- Despite Congressional actions in FY2014 and 2015 to restore sequester cuts, NEI’s FY2015 appropriation is still down $18 million from the FY2012 level. Since the average investigator-initiated grant is funded at $400,000, NEI is unable to fund 45 awards—any one of which may hold the promise to save sight and restore vision.

- NEI’s FY2015 appropriation of $684 million is still less than 0.5 percent of the $145 billion annual cost of vision disorders, which have the fifth highest direct medical costs—only less than heart disease, cancers, emotional disorders, and pulmonary conditions. The U.S. is spending only $2.10 per-person, per-year for vision research, while the cost of treating low vision and blindness is $6,680 per-person, per-year.

- The U.S. is the world leader in vision research. Without adequate funding, the NEI may not be able to pursue its primary “audacious goal” of regenerating neurons and neural connections in the eye and visual system, thereby restoring vision and returning individuals to productive, independent, and quality lives.
NEI-FUNDING HAS RESULTED IN THE SUCCESSFUL COMMERCIALIZATION OF PRODUCTS TO SAVE AND RESTORE VISION

NEI funding of investigator-initiated research grants and Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) grants has resulted in several commercialized products:

**Optical Coherence Tomography (OCT)**
OCT is a non-invasive, high-speed, high-resolution imaging technology that displays a three dimensional, cross-sectional view of the layers of the retina. Additional research has added Adaptive Optics (AO) to OCT to “supercharge” the detail in imaging retinal diseases such as Age-Related Macular Degeneration (AMD)—the leading cause of vision loss—Diabetic Eye Disease, and Retinitis Pigmentosa (RP), a retinal degenerative disease. OCT can assist in diagnosing and monitoring disease progression, as well as monitoring the effect of a therapy.

**Drug Therapies for AMD and Diabetic Eye Disease**
Development of the first generation of Food and Drug Administration (FDA)-approved anti-angiogenic ophthalmic drugs to inhibit abnormal blood vessel growth in “wet” AMD, stabilizing vision loss and, in some cases, improving lost vision. These drugs are currently being fast-tracked for approval by FDA for diabetic eye disease, including Diabetic Retinopathy and Diabetic Edema.

**Over-the-Counter Nutritional Supplement to Reduce AMD Progression**
NEI’s *Age-Related Eye Disease Study (AREDS)* showed that a formulation containing vitamins C and E, beta-carotene, and minerals zinc and copper, reduced progression to advanced-stage AMD. New data from a follow-up study, *AREDS2*, suggest that replacing beta-carotene with lutein and zeaxanthin may produce a safer, more effective formulation.

**Pressure-reducing Glaucoma Drugs**
NEI-funded research has resulted in drug therapies that reduce intraocular pressure, a significant risk factor in the development of glaucoma—the second leading cause of vision loss in the U.S.

**Sutureless Amniotic Membrane Graft**
The graft is essentially a “biological bandage” that sits on the surface of the eye— the cornea—reducing scarring, prevention of blood vessel formation, and promoting healing, while reducing pain.

**Robotic Device to Facilitate Corneal Transplantation**
The developer is using this device to transplant an artificial cornea, which is currently under FDA regulatory review, and which may obviate the need for donor corneal tissue.

**Visual Aide Services Using Camera-Enabled Mobile Phones**
This Smartphone application enables users to identify everyday objects, such as packaged goods, compact discs, and money, with text-reader capabilities using Optical Character Recognition (OCR).

**Virtual Phaco Trainer for Cataract Surgery**
This simulator enables ophthalmology residents to practice the difficult steps of standard cataract surgery without risk to patients.

**Field Expansion Prism Glasses for Hemianopia**
High power prisms incorporated into prescription eyeglasses increase the visual field by creating artificial peripheral vision in these patients who experience loss of peripheral vision on the same side of both eyes, a common side effect of stroke or Traumatic Brain Injury (TBI).