



**NAEVR**  
National Alliance For  
Eye And Vision Research

*Serving as Friends of the National Eye Institute*

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## **THE VISION COMMUNITY URGES CONGRESS TO PASS A BIPARTISAN BUDGET DEAL ENABLING FY2020 NATIONAL INSTITUTES OF HEALTH FUNDING OF AT LEAST \$41.6 BILLION, NATIONAL EYE INSTITUTE FUNDING OF \$850 MILLION**

### **FY2020 National Institutes of Health (NIH) Funding:**

- The vision community thanks Congress for the \$9 billion in NIH funding increases from FY2016-2019 that has helped the agency to regain lost ground after years of effectively flat budgets. This renewed investment has enabled NIH to build upon basic and clinical research that accelerates the development of life-changing cures and treatments.
- To continue this pattern of sustained increases, the vision community urges Congress to pass a bipartisan budget deal to raise FY2020 and 2021 *Budget Control Act* caps for critical non-defense discretionary (NDD) programs, such as medical research.
- In FY2020, the vision community urges Congress to appropriate at least \$41.6 billion for NIH, a \$2.5 billion or 6.4 percent increase over program level funding in FY2019. This increase would allow for meaningful growth above inflation in the base budget to support promising science across all Institutes and Centers, as well as to ensure that funding from the Innovation Account established by *21<sup>st</sup> Century Cures Act* would supplement NIH's base budget, as intended, through dedicated funding for specific programs.

### **FY2020 National Eye Institute (NEI) Funding:**

- In FY2020, the vision community urges Congress to appropriate at least \$850 million for NEI, a \$53 million or 6.4 percent increase over FY2019. The NEI, which just concluded the 50<sup>th</sup> anniversary of its creation by Congress, is the world leader in sight-saving and vision-restoring research. Without adequate funding, it may not be able to train the next generation of vision scientists.
- Despite recent increases, NEI's FY2019 enacted funding of \$797 million is just 14 percent greater than the pre-sequester FY2012 funding of \$702 million. Averaged over the seven fiscal years, the 2 percent annual growth rate is less than the average annual biomedical inflation rate of 2.8 percent, thereby eroding purchasing power.
- NEI's \$797 million funding is just a little more than 0.5 percent of the \$145 billion annual cost of vision disorders, which is projected to grow to \$717 billion in inflation-adjusted dollars by year 2050—primarily driven by an aging population.
- Vision disorders have the fifth highest direct medical costs—only less than heart disease, cancers, emotional disorders, and pulmonary conditions. The U.S. spends only \$2.40 per-person, per-year for vision research, while the cost of treating low vision and blindness is \$6,680 per-person, per-year.
- Based on 2010 U.S. Census data, NEI has estimated that of the 143 million Americans age 40-plus, four million were blind or had significant vision impairment and 37 million had an age-related eye disease.

## **NEI FUNDING HAS RESULTED IN THE SUCCESSFUL COMMERCIALIZATION OF PRODUCTS TO SAVE SIGHT 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 an imaging technology that allows eye care providers to see the back of a patient's eye via a quick, non-invasive and inexpensive exam. This technology supports a private commercial market of \$1 billion per year and more than 16,000 high-paying jobs. A peer-reviewed publication has shown that OCT saved Medicare \$9 billion and patients \$2.2 billion in co-pays by reducing unnecessary injections of drug therapies.

### **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).