ISSUE SUMMARY
The vision community supported the $2 billion increase in funding for the National Institutes of Health (NIH) that Congress approved for both Fiscal Year (FY) 2016 and FY 2017. These increases were the first substantial funding increases since sequestration cuts in 2013 and are viewed as a pivotal shift in how the U.S. plans to provide more stability and sustainability in the medical research community.

In March 2018, Congress passed the Consolidated Appropriations Act, which increases NIH funding to $37.1 billion for FY 2018. This $3 billion increase in the NIH budget represents Congress’ continuing commitment to innovation and research. The bill also increased National Eye Institute (NEI) funding to $772 million, an increase over the FY 2017 spending level of $733 million.

For FY 2019, the vision community is requesting funding of at least $39.3 billion for NIH and at least $800 million for NEI. These recommended funding levels will ensure a pattern of sustained and predictable increases, enabling NIH/NEI to build upon past basic and clinical research to accelerate the development of life-changing cures, train the next generation of scientists, drive the nation’s economy by creating jobs and economic growth and maintain U.S. leadership in global innovations.

FEDERAL FUNDING FOR VISION RESEARCH IS VITAL
In House and Senate resolutions passed in 2009, Congress designated 2010-2020 as “The Decade of Vision” since eye disease is a major public health problem that is growing and disproportionately affects aging and minority populations. Today, more than 38 million Americans age 40 and older experience significant eye disease, with this number expected to grow to 50 million by 2020. Much of this prevalence will be driven by growth within Hispanic and African American populations, who experience a disproportionate incidence of glaucoma, cataracts and diabetic retinopathy.

The economic and societal costs of vision impairment and eye disease are significant and growing. A 2014 study released by Prevent Blindness estimates the annual U.S. cost for vision disorders at $145 billion, which will grow to $717 billion (inflation-adjusted dollars) annually by 2050. That study also concluded that direct medical costs associated with vision disorders are the fifth highest—only less than heart disease, cancer, emotional disorders and pulmonary conditions. Adequately funding NEI can delay, save and prevent expenditures associated with Medicare and Medicaid programs, private insurance programs and family care.

A 2016 JAMA Ophthalmology article reported that a majority of Americans across racial and ethnic lines describe potentially losing vision as having the greatest impact on their day-to-day life, more so than the loss of a limb, hearing, or speech.

BACKGROUND-DELIVERABLES FROM NEI RESEARCH
In 2018, the National Eye Institute (NEI) celebrates the 50th anniversary of its creation by Congress as the lead Institute for our nation’s sight-saving and vision-restoring research. Without adequate funding, NEI may not be able to pursue its primary "Audacious Goal" of regenerating neurons and neural connections in the eye and visual system within the next 10-12 years, thereby restoring vision and returning individuals to productive, independent and quality lives. The U.S. is also a leader in scientific
training, but past inadequate funding has threatened the development of the next generation of vision scientists.

NEI-funded investigator-initiated research grants and Small Business Innovation Research (SBIR) grants have resulted in several commercialized products, including:

- **Optical Coherence Tomography (OCT)**
  OCT is an imaging technology that allows eye care providers to view the back of the eye without dilation, making patient visits faster and easier. It facilitates quicker, more accurate diagnoses than previous techniques. This technology supports a private commercial market of more than $1 billion per year, more than 16,000 high-paying jobs, and has saved more than $11 billion by reducing unnecessary injections of prescription 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" age-related macular degeneration (AMD), stabilizing vision loss and, in some cases, improving lost vision. These drugs have been fast-tracked by FDA for approval to treat diabetic eye disease.

- **Over-the-Counter Nutritional Supplement to Reduce AMD Progression**
  NEI's two Age-Related Eye Disease Studies (AREDS) showed that a formulation containing vitamins C and E, minerals zinc and copper, and lutein or zeaxanthin reduced progression to advanced-stage AMD.

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

- **Visual Aid 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).

**WHAT TO TELL CONGRESS**

- Thank Congress for increasing funding for NIH and NEI for FY 2018.
- Urge Congress to support FY 2019 NIH funding at $39.3 billion.
- Urge Congress to support FY 2019 NEI funding at $800 million to restore our nation's commitment to vision research.