Advocacy Day was held— — — , that would authorize and implement the Eye Act of 2018. This included a $2 billion National Institutes of Defense (DOD) and Labor, Health and Human Services, and Education (LHHS) appropriations. This included a $2 billion National Institutes of Health (NIH) increase and nearly $30 million more for vision research—a $24.2 million National Eye Institute (NEI) increase and a $5 million increase in the DOD/Vision Research Program (VRP) to a record level of $20 million! Again, vision researchers were among the first on Capitol Hill to thank Congress for this historic action, as the incoming fiscal year’s LHHS bill had not been finalized prior to the end of the current fiscal year in more than two decades.

As I hosted the September 27EVScongressional reception, I could sense the energy in the House Rayburn Building—from staff as well as from the twenty early-stage investigators. This year, a number of the EVSs presented research into therapies and technologies that are in development by a team in which they participate led by an NEI-funded Principal Investigator. As a consequence, they could demonstrate to staffs the potential return on the federal investment in vision research, especially in light of the recent increases.

I want to thank NEI Director of Extramural Science Programs Michael Steinmetz, PhD for joining me at the EVS reception and emphasizing NEI’s commitment to supporting the next generation of vision researchers, as well as event sponsor Research to Prevent Blindness and its President Brian Hofland, PhD and Board for their commitment to early-stage investigators.

As noted in the Report, we start all over again with advocacy for continued robust NIH/NEI funding increases in FY2020. NAEVR will be educating and developing champions in the new 116th Congress as that deliberative body faces several challenges— including a Trump Administration budget likely to propose spending cuts of at least five percent, as well as the resumption of Budget Control Act caps for NonDefense Discretionary spending that are well below actual FY2019 funding. As in past years NAEVR will be joining its advocacy colleagues in seeking a multi-year bipartisan budget deal that avoids potential cuts and enables increases.

On behalf of the Boards, I want to thank all of the Alliances’ members for their support during this important anniversary year. In early December, the Alliances will issue 2019 renewal invoices which are capped at the 2018 dues and contributions levels. I hope that, as you review this Report, you sense the record of work and accomplishment demonstrated through NAEVR advocacy and AEVR education. I appreciate your financial support, as well as your voice when NAEVR calls on you to contact Congress for robust NIH/NEI funding.

Peter J. McDonnell, MD
NAEVR/AEVR Boards President
pmcdonnell@jhmi.edu

We start all over again with advocacy for continued robust NIH/NEI funding increases in FY2020. — Dr. McDonnell

Peter McDonnell MD, William Holland Wilmer Professor and Director, Wilmer Eye Institute, Johns Hopkins University School of Medicine

EVS Congressional Reception attendees Basil and Karen Petrou of the Foundation Fighting Blindness (FFB) Board and Matthew Shaw speak with NEI’s Director of Extramural Research Programs Michael Steinmetz, PhD, who emphasized NEI’s support for the next generation of researchers. NAEVR has partnered with FFB to support H.R 6421, the Faster Cures and Treatments for Eye Diseases Act, that would authorize and implement the Eye Bond program of up to $1 billion in private vision funding. Initially authored by Ms. Petrou, H.R. 6421 currently has 20 bipartisan co-sponsors.
Advocates Urge Robust Funding as Congress Considers Appropriations

On September 13, NAEVR and ARVO participated in the sixth annual Rally for Medical Research Advocacy Day. The event, for which NAEVR served as a Bronze Sponsor, engaged more than 200 researchers and advocates in nearly 500 Capitol Hill meetings as Congressional leaders were finalizing the H.R. 6157 Conference Report. In a September 28 reception, Rally organizers displayed a poster quote from NAEVR President Dr. McDonnell that recognized NEI's fifty years of support for sight-saving and vision-restoring research. NAEVR has supported Rally events since the first was held in 2013.

On August 24, Congressman Mike Coffman (R-CO) visited the Department of Ophthalmology at the University of Colorado at the invitation of Natalia Vergara, PhD, who met with him in September 2017 during AERV’s Third Annual Emerging Vision Scientists Advocacy Day. His visit included touring the Ocular Stem Cell lab, where he observed human retinas growing in a petri dish. Dr. Vergara and colleagues discussed the potential therapeutic applications of the technology, as well as the critical role of federal funding for vision research.

NAEVR Commends Funding Increases, but Recognizes Future Challenges

From FY2016 through 2019, Congress increased NIH funding by $9 billion and NEI funding by $120 million. Although NAEVR will advocate for a continued pattern of robust funding in FY2020, it faces significant challenges, including:

• Securing new bipartisan champions for vision research in the 116th Congress.
• President Trump advising agencies to propose FY2020 budgets that reduce spending by at least 5 percent.
• A return to a Budget Control Act cap on NonDefense Discretionary spending which is below that of actual FY2019 funding, unless Congress reaches a bipartisan budget agreement—preferably multi-year.

Congress Finalizes FY2019 with Nearly $30M More for Vision Research

On September 28, as NAEVR’s Emerging Vision Scientists (EVS) visited Capitol Hill, President Trump signed the Conference Report for H.R. 6157, the “minibus” appropriations bill that combines the Fiscal Year (FY) 2019 Defense and Labor, Health and Human Services, and Education (LHHS) spending bills. The minibus bill, passed September 18 in the House by a vote of 93-7 and September 26 in the Senate by a vote of 361-61, includes:

• A $2 billion or 5.4 percent NIH increase to a funding level of $39.08 billion and a $24.2 million or 3.1 percent NEI increase to a funding level of $796.5 million.
• Department of Defense (DOD) Vision Research Program (VRP) funding at a record level of $20 million, or a $5 million increase from the prior funding level of $15 million in each FY2017 and FY2018.

The $24.2 million NEI increase and $5 million VRP increase mean a nearly $30 million increase in FY2019 vision research funding. H.R. 6157 also included a Continuing Resolution (CR), expiring on December 7, that funds remaining government programs for which appropriations had not been finalized prior to the start of FY2019 on October 1.
On September 27, in recognition of both Healthy Aging Month and International Age-related Macular Degeneration (AMD) Awareness Week 2018, AEVR’s Decade of Vision 2010-2020 Initiative and co-sponsors (see box below) held a Congressional Briefing entitled Understanding the “Dry” Form of AMD to Develop Effective Treatments. This event also began AEVR’s Fourth Annual EVS Day on Capitol Hill in which 20 early-stage investigators presented posters of their research at an evening reception and, under the auspices of NAEVR, made Congressional office visits the next day.

AMD is the leading cause of blindness and low vision in the United States—especially in the age 60-plus population—and is increasingly prevalent due to the aging population, with greatest growth in the age 90-plus segment. AMD affects central vision—specifically the macula, which is the central part of the light-sensitive retina in the back of the eye—and impacts an individual’s ability to read and drive, significantly affecting quality of life. Tremendous strides in the treatment of patients with “wet” or neovascular AMD have resulted from anti-Vascular Endothelial Growth Factor (VEGF) therapies—which emerged from initial NIH-funded research—that inhibit blood vessel growth in the macula and stabilize vision loss and may even improve lost vision. New therapies to treat geographic atrophy or the “dry” form of AMD—in which extracellular lipid (fat)-rich deposits called drusen occur with age—are in the early stage of development, presenting both a significant challenge to and opportunity for vision researchers.

The Briefing featured the work of Christine A. Curcio, PhD, the White-McKee Endowed Professor in Ophthalmology within the Department of Ophthalmology and Visual Sciences at the University of Alabama at Birmingham. A seasoned investigator who has who has been funded for more than 30 years by the NEI/NIH and private vision research foundations, she described findings from her four “epochs” of focus in AMD research. Recognizing that AMD is a major public health challenge—with 200 million individuals worldwide projected to have the disease by year 2020—she acknowledged that ideas for treatments come from animal models that replicate aspects of human disease; genetic variation in vulnerable or protected populations; risk factors in populations (non-modifiable factors include aging, genetics, gender, and race, while modifiable factors include smoking, diet, obesity, high blood pressure, and high plasma lipids); and detailed analysis of diseased tissue.

Regarding the latter, Dr. Curcio has been a major contributor to the pathology of human AMD through studying eye tissues provided primarily by the Alabama Eye Bank. She has focused on the prevalent “dry” form of AMD, contributing the first comprehensive histological description of subretinal “soft” drusenoid deposit—a previously unrecognized layer of AMD pathology—and has worked with collaborators to validate imaging technologies that are needed to read out the results of clinical trials. These include Optical Coherence Tomography (OCT), an NIH-supported technology that provides three-dimensional images in the eye down to the cellular level, and Fundus Autofluorescence. Together, these show microscopic changes in the retina and its supporting tissues and clarify a timeline of how geographic atrophy develops. Since the formation of lipid-rich soft drusen can lead to both neovascularization and atrophy, she has been involved in commercializing a drug that would act as a “lipid scavenger” to reduce and detoxify these drusenoid deposits.

Dr. Curcio with Hillary Beard in the office of Cong. Terri Sewell (D-AL)

**Dr. Curcio has been involved in commercializing a drug that would act as a “lipid scavenger” to reduce and detoxify these drusenoid deposits.**

AEVR wishes to thank its co-sponsors for this event:

- Research to Prevent Blindness
- Alliance for Aging Research
- American Macular Degeneration Foundation
- Association for Research in Vision and Ophthalmology
- European Vision Institute
- Lighthouse Guild
- Macular Degeneration Partnership

AEVR also thanks Regeneron for a grant to support the event
**AEVR’s Fourth Annual Emerging Vision Scientists Day on Capitol Hill**

The class of the *Fourth Annual Emerging Vision Scientists Day* (see names in box below) who participated in the AEVR and NAEVR events reflecting the breadth of breakthrough vision research who were nominated by their Departments of Ophthalmology or Schools/Colleges of Optometry from across the nation.

**AEVR EVS Poster Reception**

Although focused on the descriptive posters presented by the EVSs, the 2018 Reception also recognized anniversaries—NEI’s 50th as the NIH Institute leading the nation’s sight-saving and vision-preserving mission, and AEVR’s 25th as “The Friends of the NEI.”

A number of the EVSs presented research into therapies and technologies that are in development by a team in which they participate at their academic institution led by an NEI-funded Principal Investigator. The posters not only described the research, but also presented “public health” data about the incidence/impact of the disease and its cost as a means to fully explain the potential benefit of the investment in the research.

AEVR President Peter McDonnell, MD hosted a brief program that featured Michael Steinmetz, PhD, NEI’s Director of Extramural Science Programs, who emphasized the Institute’s commitment to the next generation of vision scientists throughout its 50-year history. Dr. Steinmetz was joined by NEI’s Shefa Gordon, PhD (Acting Director of the Office of Program Planning and Analysis) and Maria Zacharias (Director of Communications) in visiting posters and speaking with the EVSs.

Since 2015, AEVR has hosted more than 100 early-stage investigators on Capitol Hill. Summaries of the 2015, 2016, and 2017 events—including brief documentary videos—are posted at [www.eyeresearch.org](http://www.eyeresearch.org).

**EVSs Among First to Thank Congress for Final FY2019 NIH/NEI Appropriations**

On September 27, AEVR hosted its *Fourth Annual EVS Day on Capitol Hill*, which was supported by a grant from Research to Prevent Blindness (RPB). The event occurred as Congress passed—and the President signed—H.R. 6157, the minibus FY2019 spending bill that finalized both Defense and LHHS appropriations with nearly $30 million more for vision research.

The 20 early-stage investigators—reflecting the breadth of basic and clinical vision research and who have not yet received their first investigator-initiated (R01) grant from the NIH/NEI—attended AEVR’s AMD Congressional Briefing (story left), provided on-camera interviews about their research for a documentary video, and displayed posters of their research in an evening Congressional Reception. On September 28 and under the auspices of NAEVR, they visited their Congressional delegation offices. (story right)

From left: NEI Director of Extramural Science Programs Michael Steinmetz, PhD with David Wu, MD, PhD (Harvard University/Mass Eye & Ear) and Shefa Gordon, PhD, NEI’s Acting Director of the Office of Program Planning and Analysis

Congressman Randy Hultgren (R-IL), center, speaks with Dimitra Skondra, MD, PhD (University of Chicago), right, as Dr. Steinmetz listens

From left: Research to Prevent Blindness President Brian Hofland, PhD, AEVR’s Director of Education David Epstein, and Thanasis Panorgias, PhD (New England College of Optometry)

Justis Ehlers, MD (Cleveland Clinic/Cole Eye Institute)
Josh Ehrlich, MD, MPH (University of Michigan/Kellogg Eye Center)
Andrew Garrett, PhD (Wayne St. University)
Giles Hamilton-Fletcher, PhD (NYU Medical Center)
Kristina Haworth, OD, PhD (Southern College of Optometry)
Kevin Houston, OD (Harvard University/Mass Eye & Ear)
Jenny Huang, OD, PhD (Ohio State College of Optometry)
Cristhian Ildefonso, PhD (University of Florida)
Cristina Law OD, PhD, (Nova Southeastern U. College of Optometry)
Gregory Moore, OD (Kentucky College of Optometry/University of Pikeville)
Thanasis Panorgias, PhD (New England College of Optometry)
Jillian Pearring, PhD (University of Michigan/Kellogg Eye Center)
Tawna Roberts, OD, PhD (American Academy of Optometry)
Alfonso Sabater, MD, PhD (University of Miami/Bascom Palmer)
Onkar Sawant, PhD (Cleveland Clinic/Cole Eye Institute)
Dimitra Skondra, MD, PhD (University of Chicago)
Matthew Van Hook, PhD (University of Nebraska)
Mia Woodward, MD (University of Michigan/Kellogg Eye Center)
Rachel Wozniak, MD, PhD (University of Rochester)
David Wu, MD, PhD (Harvard University/Mass Eye & Ear)
NAEVR’s EVS Advocacy Day

On a very busy and historic day on Capitol Hill that included a Senate Judiciary Committee Meeting about Supreme Court Nominee Brett Kavanaugh, the 20 EVSs conducted 36 Congressional office visits, including three with Members of Congress who wanted to hear directly about their concerns as early-stage investigators.

In their meetings, the advocates thanked Congress for the final FY2019 NIH/NEI appropriations and emphasized the need for continued robust increases as they proceed with their vision science careers. In House visits, the EVSs requested that the Member become a co-sponsor of H.R. 6421, the Faster Cures and Treatments for Eye Diseases Act, that would authorize and implement the Eye Bond program of up to $1 billion in private vision research funding.

Many of the EVSs shared a one-page graphic of their research and emerging therapies/technologies, emphasizing the potential benefit and return on the federal investment. Per NAEVR’s training, the EVSs also offered to serve as a reference on vision issues and invited the Member and staff to visit their Department or School/College.

EVS Impressions/Development

The Alliances designed this program to be an important component of an EVS’s professional development, as well as to populate the next generation of vision research advocates. Comments from this year’s participants include:

“I appreciate having been included in the 2018 EVS events. I learned much more about the political system and now understand how significant it is to participate in the process.”

Dr. Haworth

“I want to thank AERV/NAEVR for organizing this event and giving a unique opportunity. Our Ohio Senate delegation visits went very well, with staff asking many questions and willing to look into the numbers that we presented. Of course, Dr. Ehlers and I offered to host the Member/staffer in a tour of the Cole Eye Institute at Cleveland Clinic.”

Dr. Sawant

Sponsor RBP Comments

For the fourth year, RPB provided a grant to support the EVS events. This year, RPB President Dr. Brian Hofland accompanied Drs. Giles-Hamilton Fletcher and Rachel Wozniak in New York delegation visits, commenting:

“This was the fourth year that RPB sponsored the EVS Day. It was wonderful that FY2019 NIH and NEI appropriations already were finalized, enabling participants to present their breakthrough research and describe plans to submit their first Investigator-Initiated (ROI) grant within that positive context. This year, instead of focusing on how delayed appropriations would have negative impacts on their career plans, the EVSs emphasized how their research has the potential both to improve quality of life and reduce healthcare costs. Congressional staff were especially receptive to this messaging about the value of the nation’s investment in vision research.”
Since 2001, the Department of Defense’s (DOD) Congressionally Directed Medical Research Programs (CDMRP) has funded $230 million in 189 awards, including Small Business Innovation Research (SBIR) awards. Within that total, and since it was created by Congress in FY2009 Defense appropriations by NAEVR advocacy and through FY2017, the Vision Research Program (VRP) has been funded by Congress at $70.2 million and has made 83 awards for a total of $82 million.

FY2019: VRP Funded at $20 Million
The Defense/LHHS minibus spending bill H.R. 6157 (see NIH/NEI funding section) funded the VRP at a record level of $20 million, an increase of $5 million over the $15 million funding level in each FY2017 and FY2018. NAEVR advocacy efforts with Hill champions, in partnership with groups such as Blinded Veterans Association (BVA), were instrumental in Congress acting to increase the VRP funding.

FY2018: VRP Releases Program Announcement
On July 26, the VRP Program Committee issued its FY2018 Program Announcement. As announced at NAEVR’s Defense-Related Vision Research Opportunities session at the 2018 ARVO Annual Meeting, the VRP funds two types of awards: Investigator Initiated Research Awards (IIRA) with maximum funding of $500,000 over three years, and a new Focused Translational Team Science Award (FTTSA) mechanism, which seeks to support projects that are “highly collaborative” and would “fundamentally advance the understanding and treatment of military-relevant vision trauma.” This award will be funded over a period of four years for a maximum of $5 million and must have three-to-five distinct research teams addressing a specific trauma. Pre-proposals were due September 4, and researchers who are invited to submit full proposals must do so by December 4.


AEVR Cost of Military Eye Injury Study Submitted for Publication
On October 10, authors Eric Singman, MD, PhD (Wilmer Eye Institute/Johns Hopkins University School of Medicine) and AEVR consultant Kevin Frick, PhD (Johns Hopkins Carey School of Business) submitted the manuscript for AEVR’s 2017/2018 update of NAEVR’s 2012 Cost of Military Eye Injury study for publication in Military Medicine. The updated report estimates the total cost of deployment-related eye injuries and blindness in the 2000-2017 timeframe at $45.5 billion.

AEVR SUPPORTS WSD CONGRESSIONAL BRIEFING
World Sight Day 2018 Focuses on Cost-Effective Treatments
The October 11 Briefing, held by VISION 2020 USA and supported by 15 vision organizations, focused on cost-effective treatments for Uncorrected Refractive Errors (URE) and other vision impairments and diseases.

Right: VISION 2020 USA Chair Mitchell Brinks, MD, MPH moderated and spoke briefly about the range of vision impairments and diseases. Left: Kevin Frick, PhD (John Hopkins Carey School of Business) spoke about his research into the return on the federal investment in Optical Coherence Tomography (OCT), conducted for ARVO’s “Telling the Story of OCT,” which was published in the January 2018 edition of American Journal of Ophthalmology. Middle: Terri Gossard, OD, MS (The Vision Center at Oyler School) spoke about a federally and privately funded program in Cincinnati’s public schools to screen children and correct refractive errors.

AEVR Executive Director James Jorkasky with Joe Bogart, Executive Director of Blinded Veterans Association