PRESIDENT’S MESSAGE
Opportunities Abound—You Have to Identify and Take Advantage of Them!

As featured inside this Report, I had the privilege of hosting AEVR’s recent Congressional Reception at which 21 Emerging Vision Scientists (EVSs) from all around the U.S. displayed posters of their breakthrough research. This first-ever event, held in conjunction with World Sight Day 2015 and supported by a grant from Research to Prevent Blindness (RPB), almost did not happen as just a week prior Congress was still wrestling with passage of a Continuing Resolution (CR) to fund the government with the start of Fiscal Year (FY) 2016 and avoid a shutdown.

Congress came through, and AEVR’s October 7 Capitol Hill educational events and NAEVR’s October 8 EVS Advocacy Day took full advantage of the fact that many advocacy groups did not schedule activities at that time to focus Hill attention on federal funding for vision research. As NAEVR/AEVR Executive Director James Jorkasky advised the EVSs, they have a “cachet” as a young investigator, and several Members of Congress met with them personally to hear about their challenges. Concurrent with their arrival on the Hill and attendance at the World Sight Day 2015 Congressional Briefing Burden of Uncorrected Refractive Errors in Vision, hosted by VISION 2020 USA and managed by AEVR, the Senate Labor, Health and Human Services, and Education (LHHS) Appropriations Subcommittee held a hearing with National Institutes of Health (NIH) Director Francis Collins, M.D., Ph.D. at which the impact of tight NIH budgets on early-stage investigators was discussed. As Dr. Collins stated, when he meets with young investigators they speak more about their funding challenges than their actual research.

AEVR’s Congressional Reception enabled the EVSs to focus on their research, and I absolutely agree with National Eye Institute (NEI) Deputy Director Belinda Seto, Ph.D., who stated in her welcome comments that the best part of her job is meeting with passionate young investigators. She related their emerging research to two important programs, NEI’s Audacious Goals Initiative (AGI)—with the goal of regenerating neurons and neural connections in the eye and visual system and which issued its first round of $5 million in awards in June—and NIH’s Brain Research through Advancing Innovative Neurotechnologies (BRAIN) Initiative, which is developing new tools and technologies to understand neural circuit function. She noted that $10.7 million of the $38 million, or 28 percent, of the FY2015 BI awards announced on October 1 had issued to a current or former NEI grantee. This builds on the $22 million of the $46 million, or 48 percent, of the initial round of FY2014 BI awards issued to NEI funded investigators or those who approached neural circuitry through the visual system.

Her emphasis on these NEI/NIH programs reinforces the theme of my Message—that opportunities abound—although with respect to funding, you may need to identify them within new initiatives (such as the AGI and BI) and non-traditional funding sources, such as the Department of Defense (DOD). On October 13, the DOD’s Vision Research Program (VRP) issued an FY2015/2016 Program Announcement seeking proposals by December 2 for research that addresses DOD-identified gaps. Since FY2009, when the VRP was created by Congress through AEVR advocacy, the DOD has awarded 71 grants totaling $56 million from the VRP and other DOD programs. As researchers have learned about and become comfortable with seeking funding through the DOD programs—primarily through NAEVR’s Defense Vision Funding Opportunities session each year at the ARVO Annual Meeting—this has become an important funding stream, especially at a time when the NEI operational budget is still down by $25 million from its pre-sequestrer FY2012 level of $702 million.

The next few months will be critical for NIH/NEI funding as Congress attempts to develop a budget deal that raises the Budget Control Act caps for both defense and nondefense discretionary spending, potentially paving the way for a robust NIH increase. As Dr. Collins noted in his Senate testimony, if Congress simply defaults to a full-year FY2016 CR that locks in sequestration, it would have “devastating” consequences for the NIH. As a result, NAEVR will maintain its vigilance on Capitol Hill to maintain bipartisan support for an NIH/NEI funding increase—and we will call upon you to raise your voices in support.

In early December, the Alliances will issue 2016 roadmaps for NAEVR dues and AEVR contributions. As always, I want to thank the vision community organizations that have committed their financial resources and time to the Alliances in 2015, and we respectfully ask for your support in 2016.

Peter J. McDonnell, M.D.
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Late on Wednesday evening, September 30—as the October 1 start of Fiscal Year (FY) 2016 loomed—the President signed the Continuing Appropriations Act, 2016 (H.R. 719) which is the Continuing Resolution (CR) that funds the government at the FY2015 level minus 0.21 percent (to meet Budget Control Act caps) through December 11. Earlier that day, the Senate passed the bill by a 78-20 vote, followed by House of Representatives passage by a vote of 277-151. House passage was facilitated when Speaker John Boehner (R-OH) announced that he would retire at the end of October and would support a “clean” CR that was free of controversial policy riders that would complicate its approval.

Prior to Congress taking action by December 11 to finalize FY2016 appropriations—with options ranging from another short-term or full-year CR that locks in sequencer to a series of minibuses or an omnibus bill—it must pass legislation to raise the debt limit by early November. That action, as well as discussions on a budget deal to raise the Budget Control Act caps for both defense and non-defense discretionary funding, was delayed into mid-October as House Republicans dealt with leadership issues, specifically Majority Leader Kevin McCarthy (R-CA) withdrawing his name from the Speaker election.

Senate Focuses on Research Opportunities, Young Investigators

On October 7, while AERV was hosting Emerging Vision Scientists on Capitol Hill (see inside), the Senate Labor, Health and Human Services, and Education (LHHS) Appropriations Subcommittee held a hearing with NIH Director Francis Collins, M.D., Ph.D. and several Institute Directors. Dr. Collins last appeared before the Subcommittee on April 30, prior to its development of an FY2016 LHHS bill which was approved on June 25 by the Senate Appropriations Committee and funds NIH at $32 billion, a $2 billion or 5.6 percent increase over the FY2015 level—the largest NIH increase since the doubling ended in FY2003, and $1 billion greater than each of the President’s budget and House bill.

Chair Roy Blunt (R-MO) acknowledged the Subcommittee’s bipartisan support for the NIH and announced that witnesses chosen reflected key programs that would be started or expanded by the Senate’s proposed funding increase, including the Precision Medicine Initiative (PMI), the BRAIN Initiative, and research into cancer, Alzheimer’s, and diabetes. He also expressed his concern for young investigators and the challenges they face in the current funding environment.

Ranking Member Senator Patty Murray (D-WA) emphasized the importance of NIH-funded research in their job creation in her state, specifically “research that uses precision medicine to tackle vision disorders and Alzheimer’s”—similar to comments that she made about vision research at the September 16 Rally for Medical Research Advocacy Day Congressional reception. She asked about the impact of a full-year CR that locks in sequestration if Congress does not finalize FY2016 appropriations, to which Dr. Collins replied, “It would be devastating to the NIH, putting the PMI into mothballs when it is on the verge of enrolling the million-person cohort, as well as requiring the BI to take a pause.” (see box above)

Subcommittee member and Senate Appropriations Committee Vice Chair Barbara Mikulski (D-MD) commented that the NIH should be seen as “an economic generator and not an economic cost.”

On October 1, NIH announced $38 million in the second round of awards associated with FY2015 BRAIN Initiative funding. With $46 million awarded in FY2014, the to-date total of NIH investment is $85 million. The $38 million reflects 67 new awards which will go to 131 investigators working at 122 institutions across the U.S. and in eight other countries.

The NEI has received several letters and reports post-hearing that related to mandatory funding, which is included in the House bill and funds a new NIH innovation fund at $1.75 billion per year for the next five fiscal years (2016-2020) with mandatory funding. His questions included those that asked how NIH would mix discretionary and mandatory funding, whether mandatory funding should be targeted to special programs (e.g., PMI, young investigators), and whether NIH would experience a budgetary “cliff” at the end of the five years of mandatory funding.

Visit the NIH/NEI funding section of NAERV’s Web site at www.eyeresearch.org for full details

NIH Announces Second Round of BI Funding

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The NEI has reviewed the grant history for all key personnel from each of the 67 new BRAIN awards, with 14 of the 67 including a current or former NEI grantee and reflecting $10.7 million, or 28 percent, of the total new $38 million in funding. In the first round of BI funding, the NEI reported that, of the 58 total BI awards, 18 went to teams with NEI-supported Principal Investigators (PIs), while another six were vision-centered proposals, and out of the $46 million awarded, $16 million went to the teams with NEI-supported PIs, while another $6 million went to the vision-centered proposals, with vision accounting for 48 percent of the awards.
Recognizing World Sight Day 2015, on October 7 AEVR’s Decade of Vision 2010-2020 Initiative hosted its first-ever Emerging Vision Scientists Day on Capitol Hill, which was funded by a grant from Research to Prevent Blindness (RPB). These 21 young investigators from across the United States who have not yet received their first investigator-initiated (RO1) grant, attended the VISION 2020 USA Congressional Briefing (see story, far right), observed a rally to “Raise the Caps” hosted by the Nondefense Discretionary (NDD) United coalition to which NAEVR belongs, and displayed posters of their research in an evening reception in the Rayburn House Office Building foyer.

Both the educational and advocacy activities were built around one question: “How will the breakthrough research being conducted by these Emerging Vision Scientists prevent, delay, and treat vision disorders, which will grow to an annual U.S. cost burden of $717 billion in inflation-adjusted dollars by year 2050,” as projected in a 2014 Prevent Blindness study. Researchers also cited results from AEVR’s 2014 attitudinal survey—commissioned by Research!America from Zogby Analytics and sponsored by a grant from RPB—which found that a majority of Americans believe that “vision scientists are doing the most fun research” and that “the greatest impact on their day-to-day life."

AEVR’s Emerging Vision Scientists: 
Martin-Paul Agbaga, Ph.D. (University of Oklahoma Health Sciences Center)
Sumit Bhattacharya, Ph.D. (University of Toledo Medical Center)
Kevin Chan, Ph.D. (University of Pittsburgh)
Heather Chandler, Ph.D. (Ohio State University College of Optometry)
Jason Comander, M.D., Ph.D. (Massachusetts Eye & Ear Infirmary/ Harvard School of Medicine)
Pinakin Davey, O.D., Ph.D. (Western University of Health Sciences College of Optometry)
Amir Kashani, M.D., Ph.D. (USC Eye Institute/Kedk School of Medicine, University of Southern California)
Leo Kim, M.D., Ph.D. (Massachusetts Eye & Ear Infirmary/
Harvard School of Medicine)
Marc Levin, M.D., Ph.D. (University of California/San Francisco)
Reyna Martinez-De Luna, Ph.D. (SUNY Upstate Medical University)
Jason Miller, M.D., Ph.D. (Kellogg Eye Center/University of Michigan)
Eric Nudleman, M.D., Ph.D. (University of California/San Diego)
Daniel Pelaez, Ph.D. (University of Miami/ Bascom Palmer Eye Institute)
Stacy Pineles, M.D. (Jules Stein Eye Institute/UCLA)
Nicholas Port, Ph.D. (Indiana University School of Optometry)
Rajesh Rao, M.D. (Kellogg Eye Center/University of Michigan)
Shandiz Tehrani, M.D., Ph.D. (Oregon Health & Science University)
William Tuten, O.D., Ph.D. (University of California/Berkeley)
Kia Washington, M.D. (University of Pittsburgh)
Jack Whalen, III, Ph.D. (USC Eye Institute/Keck School of Medicine, University of Southern California)
Robert Wojciechowski, O.D., Ph.D. (Johns Hopkins University School of Medicine)
Emerging Vision Scientists Request Robust NIH/NEI Funding

On October 8 and under the auspices of NAEVR, the young investigators visited their Congressional delegation offices to request robust, sustained, and predictable NIH funding for FY2016 and beyond—adding their unique perspective from vision research. Due to bipartisan Congressional concern about the future of young investigators, several Members arranged their schedules to speak with the EVSs.

Commenting on the two days of events, RPB President Dr. Hofland said:

“RPB cares deeply about robust, sustained, and predictable funding for NIH and NEI, and we have a long history of supporting emerging vision scientists who go on to contribute strongly to the fight against blinding disorders. I was heartened to have so many join us in expressing these concerns to our nation’s policy makers. AEVR’s and NAEVR’s effective coordination of Capitol Hill education and Congressional delegation visits, respectively, is another example of the productive partnership that RPB has with the Alliances to encourage national leaders to address the needs of those facing vision loss.”

Brian Hofland, Ph.D.
To describe NEI’s research and educational efforts, the Briefing featured Emily Chew, M.D., NEI Deputy Clinical Director, a medical retina specialist with clinical and research interest in AMD and diabetic eye disease who has extensive experience in designing and implementing clinical trials at the NIH Clinical Center, and Wai Wong, M.D., Ph.D., Chief of NEI’s Laboratory on Neuron-Glia Interactions in Retinal Disease, a clinician-scientist who researches the neuro-inflammatory mechanisms underlying diseases such as AMD and diabetic retinopathy.

Dr. Chew described numerous risk factors associated with AMD, including: aging, genetics, obesity, smoking, and nutritional factors. NEI-funded research has identified more than 30 genes already associated with AMD, and genetics may account for 60 percent of the cause of the disease. Smoking is a consistent risk factor, with greater risk in those with increasing number of cigarettes smoked. The NEI-funded Age Related Eye Disease Study (AREDS) demonstrated that daily high doses of vitamins C and E, beta-carotene, and minerals zinc and copper reduced the risk of progression to advanced AMD by 25 percent in five years. Data from a follow-up study, AREDS2, suggest that replacing beta-carotene with lutein and zeaxanthin may produce a safer, more effective formula. Dr. Chew was engaged in both of these trials, serving as the Principal Investigator for AREDS2.

Dr. Wong addressed NEI’s efforts to investigate and find treatments for both “wet” or neovascular AMD, where new blood vessels disrupt the retina, as well as for “dry” or atrophic AMD, where the photoreceptors—the light-sensitive cells in the retina—gradually die away. He acknowledged the dramatic improvements in wet AMD treatment from “anti-VEGF” therapy. These therapies, which are ophthalmic agents developed, in part, through NIH-funded research, inhibit abnormal blood vessel growth due to Vascular Endothelial Growth Factor (VEGF), stabilizing vision loss and, in some cases, improving lost vision. He did caution, however, that there are limitations to these therapies, including that they currently are administered through an injection to the eye. Regarding dry AMD, currently no treatments exist, and investigators are keen to understand and find ways to halt its progression.

Dr. Wong concluded by summarizing where more AMD research is needed: understanding what gives rise to early AMD, how it progresses, and identifying/testing molecules that stop progression; developing new and better clinical trials to confirm effective treatments in patients; comparing and potentially personalizing patient treatment options; and potentially restoring vision to blind patients.
Since FY2001, the Department of Defense (DOD) has funded more than $100 million in vision research. Since it was created by Congress in FY2009 appropriations through NAEVR advocacy, the Vision Research Program (VRP) within the Congressionally Directed Medical Research Program (CDMRP) has awarded 71 grants totaling $56 million. The DOD reports that research projects it has funded in the first two VRP funding cycles (2009-2010 and 2011-2012) have resulted in 80 published papers that are advancing knowledge about the diagnosis and treatment of eye trauma injuries.

Since NEI's FY2013 and FY2014 operational net funding levels were down $45 million and $27 million, respectively, from the pre-sequester FY2012 level of $702 million, the $34 million funding stream in the FY2013/2014 CDMRP/VRP funding cycle has been instrumental in balancing those NEI budget decreases.

**FY2015/2016: VRP Program Announcement Released**

On October 13, the FY2015/2016 VRP Program Announcement was released after originally being expected in the late Spring/early Summer timeframe. This year’s program cycle combines Congressional appropriations from FY2015 and 2016 (when those are finalized)—which are expected to total $20 million—and as in previous years is likely to be supplemented by funding from the DOD’s Psychological Health/Traumatic Brain Injury (PH/TBI) program to support projects that focus on visual dysfunction related to TBI. This year’s program offers two separate funding mechanisms:

- **A Technology/Therapeutic Development Award (TTDA), which is expected to fund four awards for a total of $6 million**, and
- **Clinical Trial Award (CTA), which is expected to fund four awards for a total of $12 million**.

To apply for funding for the current program, a Letter of Intent must be submitted by December 2, and a full application is due December 16. Projects funded with FY2015 dollars must be negotiated by September 30, 2016, and projects funded with FY2016 dollars must be negotiated by September 30, 2017.

**FY2013/2014: DOD’s CDMRP Announces $34.1 Million in Awards**

For FY2014, the CDMRP awarded a total of $18.1 million in eye and vision research awards through four different research programs, including the VRP. This comes on top of the $16 million that eye and vision researchers received in FY2013 through three DOD research programs.

**Planning for 2017 VRP Funding**

Although Congress has not yet finalized FY2016 defense appropriations, NAEVR has begun planning for its FY2017 VRP funding request, and will join with advocacy partners Blinded Veterans Association (BVA), ARVO, the American Academy of Ophthalmology, American Optometric Association, and Foundation Fighting Blindness in developing a strategy that requests $15 million, based on the advice of House Appropriations Committee Chair Hal Rogers (R-KY), who informed BVA of his support for that level. NAEVR will again approach the office of Cong. Tim Walz (D-MN), the highest ranking enlisted man to serve in Congress, to submit the formal request letter to the House Appropriations Defense Subcommittee for VRP funding.

NAEVR to Sponsor Veterans Groups’ FY2017 Request to Congress

As it has in previous years, NAEVR will be a sponsor of the Independent Budget, an annual set of recommendations to Congress regarding Department of Veterans Affairs (VA) and DOD funding, which is developed by AMVETS, Disabled American Veterans, Paralyzed Veterans of America, and the Veterans of Foreign Wars and supported by 50-plus Veterans Service Organizations (VSOs) and Military Service Organizations (MSOs), including NAEVR. The Independent Budget will include the vision community’s FY2017 VRP funding request, as well as that for increased funding for services for blinded and visually-disabled veterans. NAEVR’s engagement in this process, coupled with its being invited to “sit at the table” with VSOs and MSOs in meetings with the House Democratic leadership, reflects an awareness of the importance of military eye trauma.

Visit the Defense-related Vision Research section of NAEVR’s Web site for more details

If you are interested in DOD-funded research, ensure to email NAEVR’s David Epstein at depstein@eyeresearch.org to be added to NAEVR’s “DOD Interest List” to receive notices of:

- Program Announcements for various DOD-funded programs
- CDMRP/VRP awards and links to accompanying abstracts that could be helpful in preparing your own grant submission
- NAEVR’s Defense Vision Funding Opportunities Session at ARVO’s annual meeting (to be held Monday, May 2, at ARVO 2016 in Seattle, Washington)

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