DEFENSE VISION FUNDING

Since it was created by Congress in FY2009 in Defense appropriations through NAEVR advocacy, the DOD’s Peer Reviewed Vision Research Program (VRP) within the Congressionally-directed Medical Research Program (CDMRP) has awarded 71 grants totaling $56 million.

NAEVR Requests FY2017 VRP Funding at $15 Million

For the second year, NAEVR has been working with Capitol Hill champions to increase VRP funding to $15 million. Although funded at $10 million in each of fiscal years 2013-2016, the final amount awarded to vision researchers has been greater each year due to transfers from other CDMRP programs:

- FY2013: $10 M appropriated, $16 M awarded
- FY2014: $10 M appropriated, $18.1 M awarded
- FY2015: $10 M appropriated, Program Announcement issued/closed late 2015
- FY2016: $10 M appropriated, Awards will be made under the FY2015 Program Announcement

The FY2015 Program Announcement combines FY2015 and 2016 appropriations—which total $20 million minus administrative costs—and will make awards through two separate funding mechanisms:
- A Technology/Therapeutic Development Award (TTDA), expected to fund four awards for a total of $6 million; and
- Clinical Trial Award (CTA), expected to fund four awards for a total of $12 million.

Projects funded with FY2015 dollars must be negotiated by September 30, 2016, and those funded with FY2016 dollars by September 30, 2017.

DOD-Funded Researcher Develops Drug-Delivering Contact Lens

On March 17, AEVR hosted its seventh military eye trauma Congressional Briefing entitled Deployment-Related Vision Trauma Research: Development of a Contact Lens for Drug Delivery featuring Joseph Ciolino, M.D. (Mass Eye & Ear/ Harvard Medical School). Funded through a Translational Research Award in the VRP’s FY2013/2014 cycle, his research addresses a major DOD-identified gap: improved treatments for treating traumatic eye injuries, war-related injuries, and diseases to ocular structures and visual system by developing novel drug-delivery systems for the eye. The briefing was co-sponsored by Research to Prevent Blindness (RPB), Blinded Veterans Association (BVA), and ARVO.

Dr. Ciolino is a corneal specialist and clinician-scientist who treats patients with serious eye diseases and conducts research to develop new and better therapies for treating those conditions. He is also an Emerging Vision Scientist who has received his first investigator-initiated (RO1) grant from NIH, although he has been awarded two grants from the DOD, a K08 Career Development Award from the NIH, and a Career Development Award from RPB.

He described why a new method for delivering drugs to the eye is a critical need by citing the limitations of other means, such as oral therapeutics and topical eye drops—the latter requiring repeated applications that can be inefficient at delivering therapeutically appropriate levels of drugs, having unpleasant side effects as a result of preservatives used, and often resulting in significant waste due to difficulty in getting drops into the eye which can also negatively impact patient compliance with a therapy regimen. Although a drug-delivering contact lens could, if successful, address these challenges, its development raises its own set of challenges: the lens must deliver drugs over an extended period of time or it would not be much more successful than repeated applications of drops; it must release a controlled amount of drug throughout its application on the eye; it must be clear so as to not impede normal vision; and it must be comfortable for the patients to wear.

A DOD-identified need in treating eye trauma is the difficulty of delivering steroids to corneas that are at risk of inflammation due to trauma from combat operations, from eye diseases such as uveitis, and from post-operative complications. Using a special polymer that is infused with medication and placed within the periphery of a contact lens, Dr. Ciolino’s project has been able to test the efficacy of the lens in delivering Ciprofloxacin, an antibiotic used to reduce ocular infections, and Dexamethasone, a corticosteroid used to reduce inflammation. The results of his work so far indicate that this corticosteroid-releasing therapeutic contact lens (TCL) is more effective than conventional eye drops at delivering drugs to the eye with fewer complications and side effects, opening the door for greatly expanded treatment options, simplified treatment regimens, and better patient compliance.

The goal of this project, Dr. Ciolino added, is to develop the lens as a platform technology that can also be used in civilian applications, treating such diseases as glaucoma and diabetic retinopathy.

Dr. Ciolino concluded by discussing his other DOD-funded grant which seeks to improve the success rate of artificial corneas. Artificial corneas are composed of a tissue carrier that contains a plastic optic. These tissue carriers often ‘melt,’ resulting in a failure of the artificial cornea and can lead to blindness. Dr. Ciolino’s project uses collagen cross-linking that aims to strengthen the carrier tissue, preventing melting and thereby improving the success rate of artificial corneas, which can be necessary when troops suffer eye trauma in combat.

From left: Dr. Ciolino, Cong. Gene Green (D-TX), Mr. Jorkasky, and ARVO Board President John Clark, Ph.D. (University of Washington). Cong. Green, who is a Congressional Vision Caucus Co-Chair, serves as the Ranking Member on the Health Subcommittee of the House Energy and Commerce Committee, with oversight jurisdiction over NIH.