On September 27, in recognition of both Healthy Aging Month and International Age-related Macular Degeneration (AMD) Awareness Week, 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

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 Education
International Age-Related Macular Degeneration (AMD) Awareness Week
Congressional Briefing: Understanding “Dry” AMD to Develop Treatments

Dr. Curcio, Co-sponsor AMDF Make Congressional Delegation Visits

Representatives from AEVR member organization and event co-sponsor American Macular Degeneration Foundation (AMDF) participated in the Congressional Briefing and made visits to the offices of key Congressional leaders. Left to right: Neena Haider, PhD (Mass Eye & Ear/Harvard), Chip Goehring, Paul Gariepy, Jennifer Williams, and Matt Levine

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

AEVR also thanks Regeneron for a grant to support the event

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Research to Prevent Blindness
Alliance for Aging Research
American Macular Degeneration Foundation
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European Vision Institute
Lighthouse Guild
Macular Degeneration Partnership

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Congressional Briefing: Understanding “Dry” AMD to Develop Treatments

Featured speaker Christine A. Curcio, PhD (University of Alabama at Birmingham)