The Edward N. & Della L. Thome Memorial Foundation Awards Program in Age-Related Macular Degeneration Research

2023 Grant Cycle

John Hulleman, Ph.D.
Associate Professor, Larson Endowed Chair for Macular Degeneration
University of Minnesota Medical School

"Restoring RPE Basal Lamina Homeostasis for AMD Treatment"

Scientific Abstract

The canonical hallmark of dry age-related macular degeneration (AMD) is the formation of protein and lipid deposits (drusen) within Bruch's membrane. Additional sub-retinal pigment epithelium (RPE) accumulations located in the RPE basal lamina (RPE-BL), such basal laminar deposits (BLamDs), are early heralds of RPE stress and prognosticate impending pathogenic soft drusen

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Konstantin Petrukhin, Ph.D.
Professor of Ophthalmic Science (in Ophthalmology)
Columbia University

"Pharmacological activation of lysosome-associated BK channels as a therapy for dry AMD"

Scientific Abstract

Despite high unmet medical need, there is no FDA-approved pharmacological therapy for dry AMD. Photoreceptor loss in dry AMD is secondary to RPE abnormalities. A crucial function of the RPE is the ability for degradation and processing of photoreceptor outer segments (POS). Efficient degradation of POS in the RPE depends on optimal lysosomal function. This function depends on effective fusion of lysosomes with phagosomes. In addition to suboptimal POS degradation, thereectiition foptimaoptimp52 j( )4d.eco (e)-2 (s)-2 onoptimny( )4d. (h)1 (o (MD)-2 ((n)

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Dimitra Skondra, M.D., Ph.D.
Associate Professor of Ophthalmology, Director of J. Terry Ernest Ocular Imaging Center
University of Chicago

"Harnessing the effects of diet-