

Speakers Urge More Research as Vision Community Recognizes Dry Eye Awareness Month 2019 with Capitol Hill Briefing and Screening



Left to right: Bridgitte Shen Lee, OD (Vision Optique), James Jorkasky, Tear Film & Ocular Surface Society Executive Director Amy Gallant Sullivan, Deborah S. Jacobs, MD (Mass Eye & Ear/Harvard Medical School), David A. Sullivan, MS, PhD (Schepens Eye Research Institute/Harvard Medical School and TFOS Founder) and Victor Perez Quinones, MD (Duke University)

About Dry Eye and Areas of TFOS DEWSII™ Focus

Dry Eye Disease (DED) is the most frequent cause of patient visits to eye care providers and has a significant impact on healthcare policy as it affects more than 30 million Americans and costs the United States healthcare system \$3.8 billion annually, with a \$55.4 billion annual cost to society from diminished productivity. Dry eye occurs when the eye does not produce tears properly or when the tears are not of the correct consistency and evaporate too quickly. For some people, dry eye feels like a speck of sand in the eye, or a stinging or burning that does not go away. For others, it can become a painful chronic and progressive condition that leads to blurred vision or even vision loss if it goes untreated.

TFOS Executive Director Amy Gallant Sullivan moderated a panel of four speakers, which included eyecare professionals who were among the 150 experts from 23 countries who participated in the TFOS DEWS II™ initiative.

Iatrogenic Dry Eye:

Clinician-scientist Victor Perez Quinones, MD (Duke University), who announced to the audience that he owes his career to NIH funding, addressed “iatrogenic” dry eye, disease which is induced unintentionally by the medical treatment by a physician. He noted that contact lens wear, topical and systemic drugs, and certain ophthalmic procedures (refractive surgery, keratoplasty, cataract removal, and lid surgery) can all result in dry eye. While emphasizing the importance of patients speaking with their eyecare professionals about the potential impact of any of these interventions, he also stated that eyecare professionals need to increasingly look at ways to reduce potential iatrogenic events.

Ocular Pain:

Clinician-scientist Deborah S. Jacobs, MD (Mass Eye and Ear/Harvard Medical School) spoke about the basis of ocular pain, stating that nerves—besides the ones that transmit light signals—are an important part of the eye and that they participate in the homeostasis or stability of the ocular surface. Noting that diseases of the back-of-the-eye (glaucoma, macular degeneration, and diabetic eye disease) generally do not result in

pain, diseases of the front-of-the eye often result in pain or discomfort. Ocular pain can result from dry eye, as well as corneal injury, headache, and Traumatic Brain Injury. Nerves are the basis for dry eye symptoms, often manifested as foreign body sensation, grittiness, “ice pick” (sharp) pain, and photophobia or light sensitivity. She reported that, although the NIH/NEI are supporting several grants related to the causes of and treatments for pain, further research is needed.

Dry Eye in Children:

Clinician Bridgitte Shen Lee, OD (Vision Optique) spoke about the growing public ocular health problem of dry eye in children and teens, since earlier or younger onset can lead to more severe presentations of the disease. It can result from a variety of sources, including meibomian gland dysfunction (MGD)—or changes to or degradation of the meibomian glands, which produce the lipid necessary for healthy tear film—due to poor lids and lashes hygiene, cosmetic ingredients and application, and digital screen usage and habits that can result in insufficient blinking and lead to unstable tear film. Citing limited research data, she urged more research into dry eye in the pediatric population, as there has been just one US-based study on prevalence of in children and teens.

Innovation in Research:

David A. Sullivan, MS, PhD (Schepens Eye Research Institute/Harvard Medical School and TFOS Founder) spoke about the impact of innovation coupled with NEI funding. He stated that NEI support permitted him and colleagues to begin testing their innovative hypothesis that topical lubricin would serve as a safe and effective therapy for the treatment of dry eye disease. Lubricin is the body’s unique anti-friction, anti-adhesive, anti-fibrotic, and anti-inflammatory glycoprotein. Their findings supported their hypothesis and prompted a multi-year effort to make recombinant human lubricin and to translate their basic research discovery into a clinical treatment for dry eye. Their efforts have led to a recent and successful clinical trial in Europe, as well as to discoveries by multiple researchers that this recombinant human lubricin may be a possible therapy for many other conditions, including dry mouth, osteoarthritis, gout and post-surgical adhesions.

On June 27, Alliances member The Vision Council hosted a Capitol Hill briefing recognizing National Sunglasses Day 2019. The briefing highlighted the importance of wearing sunglasses to protect the eyes from the sun’s harsh ultraviolet (UV) rays. Dr. Shen Lee spoke about how UV radiation impacts the eyes, the risk factors of not wearing UV-protective eyewear, and what solutions are available for protection.

TearLab Conducts “Test Your Tears” Dry Eye Screening



Prior to and after the Briefing, Benjamin D. Sullivan, PhD, Founder and Chief Scientific Officer of TearLab, conducted the “Test Your Tears” screening using the TearLab Osmolarity System, which measures osmolarity of human tears to aid in the diagnosis of dry eye disease, in conjunction with other methods of clinical evaluation. Osmolarity is an important biomarker of ocular surface health.

Among the many attendees tested was Phyllis Greenberger of Healthy Women.

**AEVR and TFOS thank the vision
community organizations that
supported the educational
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From left: Tracy Hammond (Polsinelli), The Vision Council Executive Director Ashley Mills, Dr. Shen Lee, and AEVR’s James Jorkasky