**Clinical/Epidemiologic Research**

A0035. Spectrum of Eye disorders in type 2 Diabetes (SPEED) in India. An eye care facility-based study. 3:00 - 4:45pm

The SPEED (Spectrum of Eye disorders in type 2 Diabetes) study was spread over 13 centers across India-2 Government facilities, 1 tertiary- diabetes care facility with integrated eye care, and 10 not-for-profit eye care facilities. The spread of the centers were 3 in North India, 2 in South Central India, 4 in South India, 2 in West India and 2 in East India. In all 11 182 people recruited into the study were known type 2 diabetes. Using the standard examination procedures, the spectrum of eye disorders and systemic comorbidities were determined. The study showed that 4.5% people were blind and 10% people were visually impaired. One in 3 had retinopathy and one in 5 had sight- threatening retinopathy. Hypertension was the commonest systemic comorbidity. This calls for advocacy, infrastructure strengthening and human resource development to address these growing threats in India.

**Immunology/Microbiology**

989. Systemic injection of low dose LPS transiently improves the retina function and structure of a mouse model of geographic atrophy. 3:45 – 4:00pm

Age-related macular degeneration is a major cause of visual impairment in developed countries. The lack of an approved therapy for the geographic atrophy form is due in part to a lack of an animal model that can manifest all the clinical features of the human disease. With the goal of improving a mouse model of this disease form, we studied the effects of inducing a systemic immune response with a low dose of a bacterial component. We use test currently employed by ophthalmologist to evaluate the retina structure and its response to light stimulation in our model. Surprisingly, activating the systemic immune response with a low dose of bacterial components caused a short-lived protection of the retina structure and response to light in our mouse model. Understanding how this activation of the systemic immune response protects the retina could lead to the identification of therapies that can help slow the retinal degeneration that afflicts this patient population.
Retina

A0226. Efficacy and safety of faricimab every 16 or 12 weeks for neovascular age-related macular degeneration: STAIRWAY phase 2 results. 3:00 - 4:45pm

STAIRWAY was a phase 2 clinical trial that tested faricimab, a potential new medicine for neovascular (or “wet”) age-related macular degeneration (AMD). Neovascular AMD, a leading cause of vision loss in individuals aged over 50 years, is a multifactorial disease occurring when abnormal blood vessels grow under the center of the retina, causing blurred vision and blind spots. Neovascular AMD is typically treated with frequent (monthly/bimonthly) injections of anti-vascular endothelial growth factor (anti-VEGF) drugs into the eye. Faricimab neutralizes both VEGF and angiopoietin-2, a substance that disrupts stability of existing blood vessels and promotes growth of new, abnormal vessels. STAIRWAY compared faricimab, given every 16 or 12 weeks, with the anti-VEGF drug Lucentis® (ranibizumab), given every 4 weeks, in 76 participants with neovascular AMD. At the end of the 52-week trial, participants treated with faricimab every 16 or 12 weeks had improvements in vision comparable to those achieved with Lucentis every 4 weeks. These results suggest that faricimab may have increased durability compared with existing anti-VEGF drugs, and could reduce the treatment frequency needed for neovascular AMD. Phase 3 clinical trials, starting in 2019, will test the effectiveness and safety of faricimab in larger groups of people with neovascular AMD.

Visual Psychophysics/Physiological Optics

1033. Integrating AOSLO hardware and analysis using a database driven design. 3:45 - 4:00pm

AOSLO imaging provides cellular level imaging in human eyes. We have streamlined acquisition and processing and demonstrate this can be used in most human eyes of interest.