Lighthouse Guild Honors Scientists at Bressler Vision Science Symposium and Pisart Award Lecture

Lighthouse Guild recently honored two scientists for their significant achievements in vision research at the 2017 Alfred W. Bressler Vision Science Symposium and Award Luncheon and the Pisart Award Lecture. The symposium, awards ceremony and lecture were held at The University Club of New York in October.

Russell N. Van Gelder, MD, PhD, was presented with the 2017 Bressler Prize, and Yoshikazu Imanishi, PhD, received the 2017 Pisart Award.

Dr. Van Gelder is the Boyd K. Bucey Memorial Chair, Professor and Department Chair, Department of Ophthalmology, at the University of Washington School of Medicine in Seattle, Washington. His research on non-visual photoreception, an unconventional kind of light-sensitivity sometimes described as “sensing light without sight” has been widely heralded and published.

Dr. Imanishi is an associate professor in the Department of Pharmacology at Case Western Reserve University School of Medicine in Cleveland, Ohio. He has solved several critical questions regarding the mechanisms and processes of photoreceptor development and maintenance, elevating the understanding, treatment and diagnosis of eye disorders. He and his laboratory team developed the photoconversion technique that enables fluorescent labeling of newly synthesized proteins.

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New Technologies for Patients with Vision Disorders

As part of our collaboration with Columbia University’s Department of Ophthalmology, we jointly sponsored the Pre-Conference, held before the annual Bressler Symposium. Entitled “New Technologies for Patients with Vision Disorders”, the conference was aimed at the vision care community. Speakers presented about evolving technologies that directly benefit patients, as well as new directions for expanding technology development for the growing numbers of people with vision loss.

Of the 14 presentations, subjects ranged from updates on research into the care and treatment of eye conditions such as glaucoma, age-related macular degeneration and uveitis; to telemedicine in ophthalmology; vision rehabilitation for patients with stroke; and in and on the eye telescopes. Much as-yet unpublished research was shared with those who attended the conference.

Presenters at the Pre-Conference came from Columbia University Medical Center’s Department of Ophthalmology, Oregon Health Sciences University in Portland, OR, the Scripps Research Institute in La Jolla, CA, Schepens Research Institute in Boston, MA, the University of Washington in Seattle, WA, and the University of Rochester, Rochester, NY.

Can Brighter Lighting Help with Reading Performance?

Can brighter lighting help improve reading performance? That question was asked by researchers presenting “The Effects of Lighting on Reading Speed as a Function of Letter Size” at the 12th International Conference of the International Society for Low Vision Research and Rehabilitation. The authors were William H. Seiple*, Olga Overbury, Bruce Rosenthal**, Tiffany Arango, J. Vernon Odom and Alan R. Morse***.

Increased lighting is often recommended for patients with low vision. The effects of lighting on visual acuity indicate that acuity can be improved by increasing illumination under some conditions. The goal of this study was to quantify under what lighting and text conditions increases in lighting level improved reading performance.

Thirteen normally sighted subjects and nine individuals with vision loss due to dry Age-Related Macular Degeneration participated in this study. The participants read aloud short sentences, printed at sizes ranging from very small to increasingly large (small newsprint to the type size used in children’s primers, i.e. 0.0 to 1.3 logMAR). Some of the normally sighted participants had near-perfect vision, while some of the AMD participants had very low vision, and they read under light levels from very low to very bright. Reading speeds in words per minute were calculated based on the numbers of words read correctly.

For control subjects, those with normal sight, the effects of increasing light levels on reading speed
varied with the size of the text and the relative changes in light level. At low levels of light reading speeds were slowest at the smaller letter size, but reached its peak when light was increased to well-lit levels. There was an increase in reading speed, but little change using larger letter sizes. Further increases in light level did not result in significant reading speed gains at any letter size. For AMD patients, similar relative effects of lighting were observed, although the reading data were shifted to larger text sizes and slower reading speeds.

Providing brighter lighting does not always improve reading performance. When recommending lighting intervention, it is important to assess the nature of the visual tasks that a patient wishes to engage in and the typical level of illumination used for those tasks in order to estimate potential gains from increased lighting. In some instances, performance on acuity-limited tasks may be improved by brighter lights; however, the magnitude of this effect, particularly when reading, depends on the relative changes in light level and letter size.

William H. Seiple*, PhD, Vice President of Research, and Director, the Arlene R. Gordon Research Institute, Lighthouse Guild; Olga Overbury, PhD, Ecole d’Optometrie, Université de Montreal; Bruce Rosenthal**, OD, Chief of Low Vision Services, Lighthouse Guild; Tiffany Arango, Northeastern University; J. Vernon Odom, West Virginia University Eye Institute; Alan R. Morse***, JD, PhD, President and CEO, Lighthouse Guild.

Newly Published Data Adopted as Official WHO-Recognized Estimates for the Prevalence of Blindness and Vision Impairment

A paper* published in the Lancet Global Health journal estimates that there were 36 million people who were blind. Further, 217 million people live with severe or moderate visual impairment (MSVI). In total, 253 million people were living with visual impairment in 2015. It also estimates that 1.1 billion people have near-vision impairment—a condition that can be corrected with spectacles.

The paper, a project of the Vision Loss Expert Group (VLEG) of the Global Vision Database (GVD), provides the latest global estimates of the prevalence of blindness and MSVI in the world. By analysing data from 1990 to 2015, the VLEG have employed a sophisticated methodology to produce these detailed estimates, which also includes projections to 2020 for the first time. (The overall goal of the GVD is to develop and deploy new and improved evidence on the prevalence of blindness and vision impairment and its causes, on intervention coverage, to inform and influence global priorities and programs.)

Working with the World Health Organization, the VLEG tracks the change in cause-specific prevalence of vision loss over time, reporting the reduction in age-standardized blindness prevalence over more than two decades.

A key finding of the Vision Loss Expert Group is that 55% of visually impaired people are women.

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Key Findings:
• 36 million people who are blind
• 217 million people with severe or moderate visual impairment (distance)
• 253 million people visually impaired (in 2015)
• 1.1 billion people with near-vision impairment
• The prevalence of visual impairment has dropped from 4.58% in 1990 to 3.38% in 2015

• 89% of visually impaired people live in low and middle-income countries
• 55% of visually impaired people are women

"Magnitude, temporal trends, and projections of the global prevalence of blindness and distance and near vision impairment: a systematic review and meta-analysis"

Lighthouse Guild President & CEO Alan R. Morse, JD, PhD, is a member of the VLEG.

After Hospital Discharge: Does a Diagnosis of Vision Loss Affect the Use of Healthcare?

Previous research using national samples found that patients with vision loss admitted to the hospital for common disorders spend more time in the hospital, are more likely to be readmitted and are more likely to use costly emergency department services after discharge than non-visually impaired patients.

The subject of post-hospitalization costs was addressed at the 2017 Annual Meeting of the Association for Research in Vision and Ophthalmology (ARVO) by Alan R. Morse*, Paul P. Lee, William H. Seiple**, Nidhi Talwar and Joshua D. Stein, in their presentation “The Impact of Vision Loss on Healthcare Use by Medicare Beneficiaries Following Hospital Discharge.”

Their study assessed whether a diagnosis of vision loss affects healthcare use following hospital discharge. Using a national claims database they compared a large group of Medicare patients who had or did not have vision loss to compare their length of stay in the hospital and need for hospital readmission following discharge as well as emergency department visits and costs after hospital discharge for common medical conditions.

As with their earlier work, they found that patients with vision loss incurred higher costs than patients without vision loss.

Understanding the Needs of Patients with Low Vision

The findings of Dr. Morse and his colleagues point to the importance of understanding the needs of patients with vision loss. “Hospitals should develop plans to assist visually impaired patients and their families and caregivers before, during and after hospitalization. The fact that cost is impacted is important, but it’s a public health issue of how do we model better care for people with vision loss,” said Dr. Morse. “At Lighthouse Guild, we have begun to develop a toolkit and other products to help hospitals better address the needs of the patients with vision loss."

Hospitalization is stressful for patients and families, he continued. For patients with vision loss, measures such as making sure discharge and medication instructions are in large print or Braille and reviewing how patients will be able to identify their medications following hospitalization can make a difference. Dr. Morse noted that, “discharging a patient with an information sheet and postsurgical care instructions that the patient cannot read will hamper their recovery and may adversely affect their health.”

Considering these co-existing conditions when patients are admitted to the hospital could lead...
Psychotherapy and Terminally Ill Patients

With the demographic bulge of the baby boomers entering early old age, more psychotherapists in outpatient settings are going to find themselves working with patients who are facing end of life issues.

In a presentation made at the 2017 conference of the American Association for Psychoanalysis in Clinical Social Work, Ed Ross, LCSW, BCD, Director, Behavioral Health Services at Lighthouse Guild, drew useful guidance on the aspect of palliative care from the work of Joan Berzoff, EdD, LICSW, professor emerita, Smith College School for Social Work and Maxine Rattner, a palliative care Social Worker at Kensington Hospice in Toronto, in their essay "Rethinking Suffering: Allowing for Suffering that is Intrinsic at End of Life" (2016). He considered how it relates to psychotherapeutic work with patients who are suffering at the end of life.

Sitting with Suffering

Mr. Ross described Berzoff and Rattner’s concept of “sitting with suffering” that entails recognizing the limits of manualized interventions and not trying to offer solutions to change the subject that have the effect of denying the patient’s experience in facing dying. Accepting that suffering cannot always be relieved is also hard on the clinician, who may feel a sense of failure, helplessness, moral distress and compassion fatigue.

The orientation and training of palliative care clinicians is to alleviate suffering. Palliative care clinicians often face urgency in helping dying patients, frequently under acute stress, with limited time, which may contribute to the pressure to do something to assuage suffering. “Sitting with suffering” signals a shift, as it asks clinicians to rethink their role in being able to relieve some forms of psychosocial suffering intrinsic to dying.

From a relational point of view, the clinician should become aware of personal responses to suffering as an empathic bridge to a patient.

Psychotherapists may begin work with patients when unaware of their illness or impending death. Few psychotherapists have broad experience in helping dying patients and their training may be inadequate. That may need to change, as more social workers in settings such as Lighthouse Guild encounter increasing numbers of older patients.
Using the BrainPort® Vision Pro for the Performance of Functional Tasks


There is an immediate need for non-invasive techniques to restore functional abilities of persons blinded by traumatic injury, including veterans injured in combat. The BrainPort® Vision Pro enables perception of visual information using the tongue as a substitute for the eye. The purpose of this study was to investigate the impact of the BrainPort® Vision Pro on real-world functional task performance in persons who are profoundly blind (no better than light perception) due to traumatic injury.

Eighteen participants blinded by traumatic injury were enrolled. Participants received ten hours of device training prior to independent home use for 12 months. They were assessed on three real-world skills: object recognition, word identification and orientation and mobility skills.

The results demonstrated significant improvements in real-world functional task performance immediately following training and retained after long-term use. BrainPort® Vision Pro can offer a non-surgical method for restoring functional abilities to persons blinded by trauma and can support the successful integration of blind veterans and active duty Service members into community life. With access to the BrainPort® Vision Pro, profoundly blind persons can regain or enhance independence, directly interact with their environments and regain a sense of autonomy.

Patricia Grant, Wicab, Inc.; Meesa Maeng, Wicab, Inc.; Tiffany Arango, Northeastern University; Janet P. Szlyk, President and CEO, The Chicago Lighthouse; Rich Hogle, Wicab, Inc.; William H. Seiple*, PhD, Vice President of Research, and Director, the Arlene R. Gordon Research Institute, Lighthouse Guild.

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Lighthouse Guild and Columbia Ophthalmology: Working Together to Improve the Lives of People with Vision Loss

For almost two decades, Lighthouse Guild and Columbia University’s Department of Ophthalmology have worked together to improve the quality of vision rehabilitation, advance knowledge of the field and better train practitioners.

Columbia ophthalmology residents receive low vision rehabilitation training at Lighthouse Guild, where they participate in clinical sessions and a vision rehabilitation lecture series at Columbia provided by Lighthouse Guild staff for residents and attending physicians.

Columbia Ophthalmology’s clinic at Lighthouse Guild’s 250 West 64th Street facility offers general ophthalmology and sub-specialty care, including adult and pediatric ophthalmology as well as the diagnosis and treatment of glaucoma, corneal and retinal disease.

“By joining Lighthouse Guild’s continuum of services with Columbia Ophthalmology’s clinical excellence, together we have a terrific opportunity to significantly impact the vision health of New Yorkers,” said Lighthouse Guild’s President & CEO Alan R. Morse, JD, PhD. “We look forward to continuing to work together to find new and effective ways to deliver the highest quality vision care and services.”

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Helping Students
This collaboration is appreciated by Linda Gerra, EdD, Director of Children’s Vision Programs at Lighthouse Guild. “All of the students in our Heilbrunn School have vision loss diagnoses, as well as other medical problems. Having the experience of the Columbia Ophthalmology specialists will greatly benefit our students and their families.”

Supporting Families
The parents of the children attending Columbia Ophthalmology’s pediatric services will be encouraged to take advantage of Lighthouse Guild’s clinical offerings, such as the family support offered by Lighthouse Guild’s Behavioral Health Services.

“Losing vision or having a child with vision loss is a significant life stressor,” says Goldie Dersh, PhD, Vice President, Behavioral Health Services.

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“Talking about these issues to another person, or with another family facing the same challenges may be very helpful. We hope that Columbia Ophthalmology will let their patients know that we can help, through individual, family or group therapy.”

Benefitting Patients
Cecil Lowden, Director of the Lighthouse Guild Health Center, said “Columbia Ophthalmology and our vision and health clinics are collocated on the same floor of our new facility. This benefits patients referred to the clinics from Columbia Ophthalmology, allowing them to have all their needs attended to on the same day. In addition, Columbia Ophthalmology patients with prescriptions for an optician can walk across the hall and have them filled immediately at our dispensary. It’s all a part of the continuum of services that will make life easier for all of our patients.”

Lighthouse Guild Highlights
In June, Lighthouse Guild awarded 12 scholarships, 10 of $10,000 each to 10 high school seniors headed to college this fall and two of $5,000 each to two graduate students to further their studies. The 10 high school students came from the states of California, Florida, North Carolina, New York, Rhode Island and Texas. Two teachers were awarded $5,000 each based on essays by two of the scholarship recipients.

President and CEO Alan R. Morse, JD, PhD, and William H. Seiple, PhD, Vice President of Research, and Director, the Arlene R. Gordon Research Institute, presented at ARVO May 2017: “The Impact of Vision Loss on Healthcare Use by Medicare Beneficiaries Following Hospital Discharge”. Paul P. Lee, Nidhi Talwar, Joshua D. Stein. Dr. Seiple also presented “Performance of Real-World Functional Tasks Using the BrainPort® Vision Pro in Persons Blinded by Traumatic Injury.” Patricia Grant, Meesa Maeng, Tiffany Arango, Janet P. Szylk, Rich Hogle.

Dr. Morse, Dr. Seiple and Bruce Rosenthal, OD, Chief of Low Vision Services, presented “The Effects of Lighting on Reading Speed as a Function of Letter Size” at the 12th International Congress of the International Society for Low Vision Research and Rehabilitation, June 2017. Olga Overbury, Tiffany Arango, J Vernon Odom. Dr. Seiple and Mary Lou Jackson also presented “Do Individuals with Stargardt macular dystrophy fixate eccentrically when asked to look straight ahead?”


Occupational Therapist Yu-Pin Hsu conducted a webinar for the Canadian Association of Occupational Therapists entitled “The Impact of Vision Loss on Development and Learning in Young Children.”

Yu-Pin Hsu and Annemarie O’Hearn, Vice President, Education and Training, presented “The Impact of Vision Loss on Development and Learning” at the 2017 Envision Conference.


• “Suicide and HIV” C.A. Alfonso, E. Stern-Rodriguez, M.A. Cohen
• “Psychotherapeutic Interventions” J. Soffer, C.A. Alfonso, J. Grimaldi, J.M. Gorman