Eye Study doctors honored

Drs. Ronald and Barbara Klein hailed as visionary

FORT LAUDERDALE, Fla. — Drs. Ronald and Barbara E. K. Klein were recently honored with the...
The Klein's research was recognized by the Association for Research in Vision and Ophthalmology at its annual meeting in Fort Lauderdale, Fla., held May 1 through 5.

Dr. Alfred Sommer, dean of the Johns Hopkins Bloomberg School of Public Health and professor of epidemiology, international health, and ophthalmology, introduced the Kleins during the May 3 ceremony.

The Friedenwald Award is presented for outstanding research in the basic or clinical sciences as applied to ophthalmology, which is the branch of medicine concerned with the eye and its diseases.

Sommel noted in his speech, "That vision fits today's recipients, the dynamic Kleins, to a tee. More than anything else, their work moved clinical research out of the hospital, where it was confined to those already ill and motivated to attend, into the community, where one could study a representative cross-section of ocular disorders and establish their natural frequency, harbingers, and causes."

According to the ARVO, the Kleins, both of the University of Wisconsin Medical School, were "selected as joint recipients to receive this honor for initiating and conducting some of the most significant ophthalmic epidemiological research in studies of diabetes, glaucoma, age-related eye diseases and eye diseases in systemic disorders."

Barbara and Ronald Klein conducted the Wisconsin Epidemiologic Study of Diabetic Retinopathy (WESDR), starting in 1979. The WESDR, first published in 1984, is widely recognized as having contributed considerably to the understanding of diabetes and of diabetic eye disease.

Taking a broader approach to studying eye diseases, the Kleins looked to the community of Beaver Dam. Through the Beaver Dam Eye Study, the Kleins learned about the epidemiology of age-related eye diseases, such as macular degeneration and cataracts.

The Beaver Dam Eye Study started in 1987 with approximately 6,000 people, then aged 43 through 84 years, identified. Of those people, approximately 5,000 had their eyes examined between 1988 and 1990. People were examined again five, 10, and 15 years after the initial exams to study the factors leading to the development of eye diseases.

Photographs of study participants' eyes, specifically the lens and retina, were taken to check for cataract and age-related macular degeneration. The Kleins helped develop new methods to grade the photographs to identify these conditions and their severity, and these methods have been used worldwide in other scientific studies and clinical trials.

The Beaver Dam Eye Study has reached people around the world.

Beyond recording how often age-related eye diseases have affected people in the United States, the Beaver Dam Eye Study has served as a model for population-based studies in Australia, Holland and in U.S. Latino populations. The Kleins have served as consultants for many of these projects.

In addition, thanks to the participation of the community, the Kleins and many others have written more than 200 publications, describing the prevalence and incidence of macular degeneration, leading to prevention of loss of vision and improvement in healthcare for people around the world.

The Friedenwald Award was established in 1986 to further recognize the accomplishments of eye and vision researchers. A plaque is given to the recipient of the Friedenwald Award, and the recipient presents a lecture at ARVO's annual meeting.

The Kleins' lecture was titled "The Epidemiology of Eye Disease: Glycemia to Genetics."

Ronald and Barbara Klein are the first epidemiologists, medical scientists who study the patterns of diseases in populations, to receive the Friedenwald Award. They are both professors at the University of Wisconsin-Madison Medical School, in the Department of Ophthalmology and Visual Sciences.