



Herbert L Gould

RetinalGeniX Technologies, Inc, USA

Photo Bio Modulation (PBM) for Dry Age-Related Macular Degeneration (AMD) and Electro Retino Graphy (ERG)

Photo Bio Modulation (PBM) also known as low level light therapy is used to stimulate retinal cell function to reverse the progress of dry Age Related Macular Degeneration (AMD). Clinical trials in Europe have succeeded in EU approval and current retinal trials in the US are concluding with promising results. AMD is caused by mitochondrial dysfunction and oxidative stress. PBM works by the absorption of photons by photoreceptors in the targeted tissue. Once absorbed, the secondary cellular effects include increases in energy production and changes in signaling modalities such as Reactive Oxygen Species (ROS), Nitric Oxide (NO) and cellular Calcium. Heretofore there has been no treatment for dry AMD except the AREDS nutritional NIH approved. Wet AMD has been successfully managed with anti-vegf therapy with moderate success but only represents 10% of AMD. Currently studies are underway with PBM to treat wet AMD and diabetic retinopathy (DR). With our rapidly ageing population AMD is the major cause of worldwide blindness. PMB provides hope. Lumithera has designed a modest treatment device (Valeda) that delivers the precise low light in the range of low red to almost infrared. Repeated office visits are required as the effect slowly fades and must be restored periodically. Current studies in the USA have been using the Diopsys Electroretinogram system as the sole objective evidence of the results in addition to the subjective ones, i.e contrast sensitivity and BCVA. The value of ERG allows us to objectively appreciate the restoration of the health of the neural cells in response to PBM.

Biography

Herbert Gould graduated from Bowdoin College and received an MD from Columbia's College of Physicians and Surgeons. He continued his medical studies at the Institute of Ophthalmology (London), Harvard Medical School, and the Downstate Medical Center, NY, where he received a corneal fellowship which included Moorfields Eye Hospital, London. He was a co-founder of the Contact Lens Society of Ophthalmologists and the New York Intraocular Lens Implant Society. He was a founding member of the American Intraocular Lens Implant Society,

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now ASCRS, was elected to the International Intraocular Lens Implant Club (IIIC), and later was a founding member of the International Society of Refractive Surgery. Dr. Gould was the founder and first president of the New York Keratorefractive Society. He has been a Teaching Fellow at the State University of New York, was Assistant Clinical Professor in Ophthalmology at State University of New York (Downstate), Associate Clinical Professor at New York Medical College, and served as an Instructor at the American Academy of Ophthalmology. He implanted the first intraocular lens in China with the IIIC. He trained in Russia and introduced radial keratotomy to the US and later helped develop the Lasik technique. He had one of the first lasers in NYC after FDA approval, and later helped set up the laser center at the New York Eye and Ear Infirmary. He served as a Major in the U.S. Air Force, where he served as a Flight Surgeon, for five years. Now he is the Chief Science Officer at RetinalGeniX Technologies, Inc, USA.