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Photo Bio Modulation (PBM) Therapy for Age Related (Dry) Macular Degeneration (AMD)

The most common cause of blindness globally in the aging population is age-related dry macular degeneration (AMD). Currently the only AMD treatment has been dietary, (AREDS formula). However using light in the infrared range has been shown to rehabilitate the mitochondria of the neural cells resulting in a dramatic improvement in BCVA in Dry AMD. This method of treatment has EU approval and is currently in the late clinical trial stage in the US. The mechanism of photo bio modulation (PBM) at the cellular level has been ascribed to the activation of mitochondrial chain components resulting in stabilization of metabolic function and initiation of a signaling cascade, which promotes cellular proliferation and cyto protection. PBM works through the absorption of photons by photo acceptors in the targeted tissue. Once absorbed, secondary cellular effects include increases in energy production and changes in signaling modalities such as reactive oxygen species, nitric oxide and cellular calcium. Cellular changes occur through activation of transcription factors leading to modulation in protein synthesis, proliferation and ultimately improved cell survival. Eighty-five to ninety percent of AMD is dry. PBM is the only treatment for dry AMD.

Biography

Herbert Gould graduated from Bowdoin College and received an MD from Columbia's College of Physicians and Surgeons. He served his internship at the 1st Medical Division, Bellevue Hospital and was a resident at the Manhattan Eye, Ear & Throat Hospital, where, as senior resident, he initiated the Contact Lens Clinic. 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. Gould was the founder and first president of the New York Kerato refractive Society. He has been a Teaching Fellow at 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.