VielightNEWS

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"Where there is purpose, there is hope." George Washington Carver

Employing Quantum Physics in PBM Research

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Vielight to Present at a Major Alzheimer's Conference

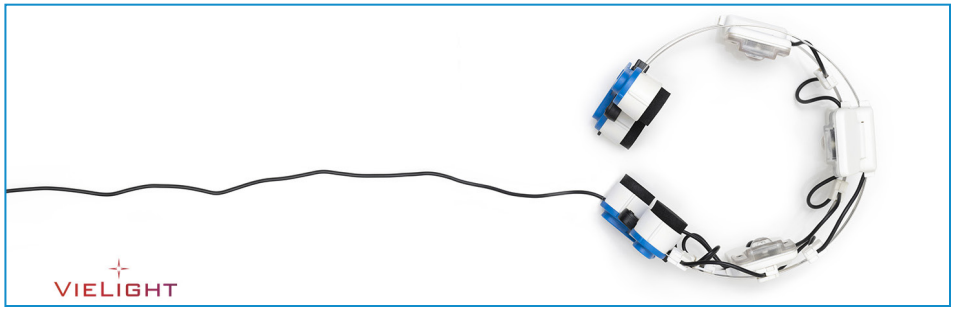
The Alzheimer's Association International Conference (AAIC) is the largest annual conference for Alzheimer's Disease. This year, it takes place in Los Angeles, California, from July 12 to 18, 2019. Vielight will have a presence in this year's conference. This year is particularly important in view of the commencement of its pivotal clinical trial in late May of 2019.

Presently there is no effective treatment for the Alzheimer's Disease (AD). All major drug trials in final phases have failed to show any modification to the disease. There is no new final-phase drug trial in prospect for the next year. Late stage trials normally take a few years to complete. There is certainly none, in the near future, with a focus on patients diagnosed to be in the moderate to severe stages of AD.

In the Vielight pivotal clinical trial, the "Vielight Neuro RX Gamma" is being investigated as a possible indication for patients with moderate to severe stages of AD. This ignored group is in a great need of help for recovery, or at least for slowing down in their decline. No other device is known to be actively investigated as a treatment for the AD at this time. These circumstances should spotlight the efforts of Vielight. The initial case studies have shown some unprecedented positive outcomes. The noteworthy published studies include Saltmarche et al, 2017 and Chao, L, 2019.

At the AAIC, Vielight will have a booth (#221) to showcase the device being used in the clinical trial. Furthermore, its lineup of other low-risk, general wellness PBM devices will be on display. Attendees will have an opportunity to have hands-on experience with the device used in the clinical trial, as well as the other Vielight devices.

Dr. Lew Lim, CEO of Vielight, will be presenting evidence of the Neuro Gamma modulating brain wave oscillations and connectivity. This presentation will be a part of the pre-conference program, Electrophysiology Professional Interest Area (PIA) Day. It will take place at 9.30 am on Saturday, July 13, at the Intercontinental Los Angeles Downtown Hotel. The presentation will include information on how these neuro-modifications can affect Alzheimer's disease.



Dr. Lim will also be presenting a poster, "Photobiomodulation Presents Early Evidence of Significant Outcomes for Alzheimer's Disease, Enhanced with Multi-Dimensional Interventions". The poster presentation will take place as # P1-067 on Sunday, July 14, 2019, between 9:30 AM and 4:15 PM at the Los Angeles Convention Center, South Hall GH. The abstract for the poster can be found by following this link.

Participation at the AAIC is the latest event in Vielight's quest for an effective treatment for Alzheimer's Disease. We will continue to keep our supporters and followers abreast of further developments.

AAIC Poster Presentation: Photobiomodulation Presents Early Evidence of Significant Outcomes for Alzheimer's Disease, Enhanced with Multi-Dimensional Interventions

Poster Abstract:

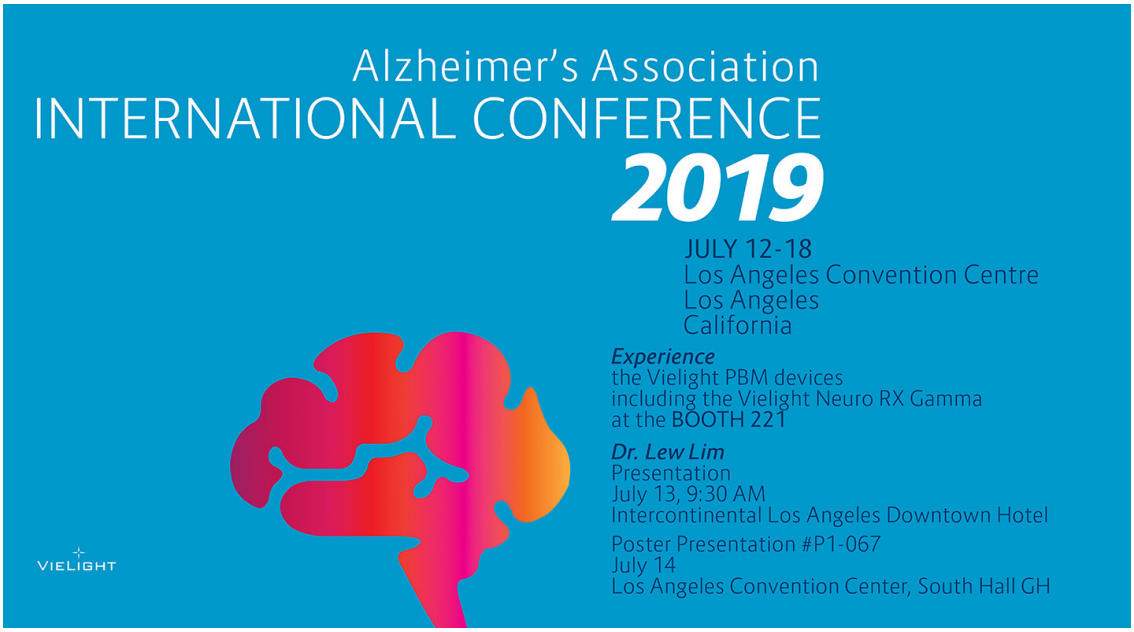
Background: Alzheimer's Disease (AD) has a complex etiology, involving the actions of genes, beta-amyloid, tau oligomers, as well as other possible causes including herpes virus, micro-biome or diabetes. Because of this, the search for a single-protein targeting drug solution could be futile. Over the years, research on Photobiomodulation (PBM) indicates that although it is a single intervention, it has multiple pathways that potentially lead to effectively address AD. This review shows evidence that adding gamma-pulsing and network targeting dimensions, the outcomes could be more significant.
Method: This is a review of relevant published as well publication-pending literature at the time of writing.

Result: Restoring optimum mitochondrial function could help to overcome the complex pathology of AD, including the elements that involve beta-amyloid and tau-related aggregations. PBM at its basic dimension activates mitochondrial functions to restore homeostasis, which process could reduce these elements. The process modifies various proteins for favorable gene transcriptions. Introducing another dimension in intervention, by delivering 40 Hz pulses (gamma oscillations), theoretically reduces beta-amyloid accumulation in the processing nuclei. Intervening in yet another dimension, targeting the default mode network could reduce lesions in critical areas and help to restore normal brain functions. These multi-dimensional mechanisms have been reflected in clinical evidence showing significant outcomes in early exploratory controlled studies. Clinical cognitive assessments from ADAS-cog and MMSE are supported by fMRI and EEG measures. Pre and post single 20-minute sessions of 40 Hz pulsing have even revealed acute changes in EEG power spectrum and connectivity with properties desirable to reverse AD pathology. Recent discoveries reveal that although PBM has shown potential as an AD intervention, enhanced outcomes are possible with attention to pulse-frequency and anatomical-targeting.

Conclusion: PBM have been under-appreciated as a promising intervention for AD. Early clinical evidence reveals its potential, and it is clear that large randomized controlled studies are warranted. This review aggregates the understanding of the fundamental mechanisms, higher-level network and brain oscillation properties. It helps to provide a better appreciation of PBM potential for AD. The multi-dimensional mechanisms explain why it could be more promising than mono-targeting, characteristic of drug development.

Vielight to Research the Mechanisms of Photobiomodulation

Vielight has always been committed to furthering the science of Photobiomodulation (PBM). This time Vielight is planning to commence research into furthering the understanding of the mechanisms of PBM. CEO, Dr. Lim states, "For many years, the explanation for the mechanisms of PBM has been centered around the actions of the respiratory chain of the mitochondria, and the follow-through actions of gene transcriptions. However, the big question of how penetration and deep-lying outcomes have been achieved with low-power/dose of red and near infrared light craves for an answer. In transcranial PBM, we have proven that certain non-invasive parameters can modify brain waves and connectivity in significant ways. Nonetheless, how cellular actions can translate into high-level brain modulations remains a major mystery. I have always believed that the photons, as quantum particles, have unique and powerful properties that could penetrate deeply and be more effective on modifying tissues. Discoveries in quantum biology relating to photosynthesis are providing many clues. I believe that we have to include quantum physics into PBM research to help us answer many questions. Quantum physics may also help in better formulating theories for us to be more efficient in developing better products. In the near future, we hope to announce collaborative research initiatives with top scientists in the field in the quest for answers."



Vielight is Growing

We welcome Haley Dwyer into our customer service team.

Interested in joining our Vielight Reseller and/or Introducer programs? Send your enquiry to info@vielight.com.