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Trials shine light on hopes for Alzheimer's disease cure

By Sarah Knapton, Science Editor

ALZHEIMER'S disease could be reversed by shining light directly into the brain through the nose and skull, scientists believe.

The first major trial to see if light therapy could be beneficial for dementia has begun following astonishing early results which have seen people regain their memory, reading and writing skills, and orientation.

If successful, it would be the first treatment to actually reverse the disease. So far, even the most hopeful drugs, such as Biogen's aducanumab, have only managed to slow the onset of dementia and many scientists had given up hope of reversing brain damage once it had already happened.

But a device called the Neuro RX Gamma headset, developed by Vielight, a Canada-based biotech company, may be about to succeed.

The device works through a process called "photobiomodulation" where pulses of near-infrared light are directed to parts of the brain known to be damaged in dementia.

Dr Lew Lim, the CEO of Vielight and inventor of the device, said: "Photobiomodulation introduces the therapeutic effect of light into our brain.

"It triggers the body to restore its natural balance or homeostasis. When we do that, we call upon the body's innate ability to heal.

"We have a much bigger ambition than the drug trials. Drug developers are mainly either seeking to slow the mental decline in diagnosed cases, or to prevent the onset of Alzheimer's disease by intervening at the pre-symptomatic stage.

"Based on early data, we are confident of seeing some measure of recovery in the symptoms, not just a slowdown in the rate of decline, even in moderate to severe cases."

The device works by firing 40 Hz gamma waves directly into the skull using LEDs on a headset. A separate nasal clip also channels light up the nose to the hippocampus, part of the brain connected to memory.