



Olfactory Neuroplastic Device for Cognitive Disease Therapy

Howard University researchers has developed a device and a method of using it for improving metrics of cognitive function including verbal memory and verbal learning

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Inventors

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Benefits/Features

Device provides novel, beneficial combinations of olfactory stimulants continuously for all or part of each day

Potential Commercial Applications

Treatment of persons suffering early stage Alzheimer's or other cognitive decline

Stage of Development

Thirty day trial with two healthy volunteers demonstrated feasibility. Further human trials occurring shortly.

Status

Seeking funding for expanding human trials. Collaboration or licensing opportunity.

Background

Cognitive decline associated with Alzheimer's disease is often preceded by loss of olfactory sensation, leading to a hypothesis that response to olfactory cues can be not only diagnostic but also deterministic of Alzheimer's progression.

Description of Technology

Dr. Nwulia and Dr. Segun have developed a device which can deliver novel combinations of stimulative aromas to patients who are suspected of suffering from early cognitive decline. Termed an Olfactory Neuroplastic Device or OND, the device comprises a mechanical pump providing olfactory combinations to a cannula in the patient's nose. It is portable and can be used for part or all of the day. The device has been shown to improve verbal cognitive skills in two healthy volunteers, which is in contrast to conventional aromatherapy methods, which have not been shown to improve cognitive function. Consistent use of the method and device over multiple weeks resulted in measurable improvements of verbal memory and verbal learning. The researchers plan to study a larger sample of volunteers with early cognitive decline in the second half of 2012.

Opportunity

The device, the olfactory stimulant combinations and methods of using them are the subject of a patent application. The covered method includes multiple therapeutic and drug efflux inhibitor combinations. Howard University is seeking a development partner to further characterize compound combinations, and to partner in initial human studies. Dr. Nwulia is available to talk about the invention under a NDA.