



Treating Multiple Sclerosis with UV Light

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Inventors: Hector DeLuca, Yanping Wang, Steven Marling

The Wisconsin Alumni Research Foundation (WARF) is helping develop a method to delay or alleviate the symptoms of multiple sclerosis by irradiating patients with a narrow band of ultraviolet light.

Overview

Multiple sclerosis (MS) is a chronic autoimmune disease that afflicts more than 2.5 million people worldwide. Symptoms include weakness and numbing, pain, swallowing problems, blurred vision and difficulty moving. There is no cure for MS.

Several therapies, like anti-inflammatory steroids and immunosuppressive agents, have shown some promise for the treatment of MS symptoms. However, these treatments are associated with adverse side effects and are not effective for all patients.

While the exact cause of MS is unknown, sunlight and vitamin D production have long been thought to play a role. One piece of evidence is the fact that the disease is least prevalent at the equator and dramatically increases with latitude. Interestingly, new research suggests that light exposure – not subsequent vitamin D production – may be key to treating MS.

The Invention

UW–Madison researchers have developed a method for suppressing MS symptoms by irradiating a patient with a narrow band of ultraviolet (UV) light. The light has a wavelength between about 300-315 nm. Patients could be irradiated using commercially available lamps or blankets. A typical treatment regimen could be 10-30 minutes of exposure for several days.

Applications

- Treating or delaying the onset of multiple sclerosis symptoms

Key Benefits

- Method is simple and drug free.
- Low cost
- Could significantly improve the quality of life for patients with MS
- The wavelength of light is in the generally safe UV-B range.

Stage of Development

The researchers have extensive data showing the efficacy of UV-B wavelengths to stop the progression of experimental autoimmune encephalomyelitis (EAE), an animal model of multiple sclerosis.

Additional Information

For More Information About the Inventors

- [Hector DeLuca](#)

Publications

- Wang Y., Marling S.J., McKnight S.M., Danielson A.L., Severson K.S. and Deluca H.F. 2013. Suppression of Experimental Autoimmune Encephalomyelitis by 300-315nm Ultraviolet Light. Arch Biochem Biophys. 536, 81-86.

Tech Fields

- [Pharmaceuticals & Vitamin D : Neurological & mental health](#)

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