

Bioactives generated by Patented Boron-Doped Diamond Electrolysis technology demonstrates positive effects on eczema in a mouse model

Dr. Kelly Halderman

Weo, the global leader in water science research and its application to living systems, has demonstrated that their patented boron-doped diamond electrolysis technology induces positive effects on eczema (atopic dermatitis) in a mouse model. These findings add to a robust repertoire of positive findings in various areas of research that Weo has conducted in its 20 year history.

Eczema, also referred to as atopic dermatitis (AD), is a condition that affects both humans and our pets (animals). Upwards of 30 million people (10% of the US population) have some form of eczema. It is estimated that 1 in 10 individuals will develop eczema during their lifetime, with prevalence peaking in early childhood. The most burdensome symptom of AD is itching, followed by pain, skin redness and sleep loss. More than 55% of adults with moderate to severe AD report inadequate disease control. Even when treatments are available, over 50% of adults with AD still face concerns about long-term use, and over 50% have found a treatment to be ineffective. Forty-four percent have discontinued prescribed medications for eczema.

Studies also demonstrate that our pets experience high rates of this painful condition - especially dogs. Prevalence is 10-15% but can be as high as 50% in some breeds. The treatment for animals is quite

similar to humans, as is the frustration with its sub-satisfactory results. This data suggests that a better strategy for addressing eczema is urgently needed, as the standard of care's ability to provide adequate relief to those who suffer with this chronic condition is very low.

In this study conducted in collaboration with Charles River, researchers demonstrated that Weo water, produced from their patented boron-doped diamond electrolysis technology, had a positive effect on atopic dermatitis in mice. Histopathological evaluation of the skin was performed by a veterinary pathologist using a modified scoring system to individually score parakeratosis, epidermal thickening (acanthosis) and inflammatory infiltrate on a validated graded scale. It was found that **areas of skin that were affected by eczema were decreased in quantity and also in size**. Interestingly, these effects were seen after only 15 days of mice consuming Weo water. This suggests Weo water is best consumed consistently (daily). It is common for full positive benefits to ensue after approximately two weeks.

The current strategy for managing and treating eczema in both humans and pets (animals) is subpar, as the data suggests dissatisfaction in both groups. Water is already part of a healthy lifestyle and has multiple positive health benefits. Weo water provides bioactives beyond regular water that as this study elucidated, are highly beneficial compared to simple hydration. Weo water should be considered as a therapeutic complement for eczema in both groups.

- 1) <https://nationaleczema.org/research/eczema-facts/>
- 2) <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5644664/>

