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Methods and Compositions for Reducing Serum Levels of Immunoglobulin E (IgE)

Researchers at the University of South Florida have developed a novel method to treat immune system-related conditions, such as an allergy or hay fever, by reducing the levels of immunoglobulin E (IgE) in animal or human subjects.

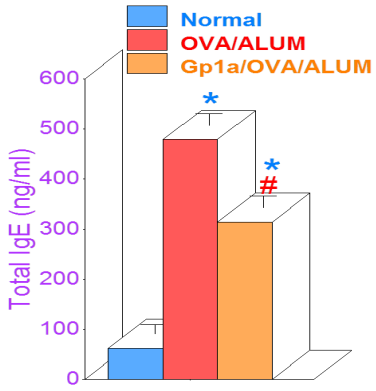
Ten to twenty percent of the world population suffers from allergy-related conditions caused by elevated serum levels of IgE. Recent evidence suggests that this type of disease is increasing in the US and therefore a major goal of current pharmaceutical research in this area is to find ways to reduce the blood level of IgE. One promising approach focuses on marijuana cannabinoids which have been shown to modulate various immune functions through mechanisms involving cannabinoid 1 (CB1) and cannabinoid 1 (CB2) receptors. Several studies have also concluded that other receptors are involved because immune modulation by THC persists in CB1 and CB2 deficient mice.

Our researchers have developed highly selective CB2 agonists and associated methods for treating allergy-related conditions by suppressing the serum levels of IgE . One such agonist (Gp1a) has been shown to significantly reduce serum levels of IgE in BALB/c mice. This technology is most useful in the treatment of allergies and is directly applicable to the field of immunological medicine.

ADVANTAGES:

- **Effective in treatment of allergies caused by high levels of IgE**
- **Uses selective cannabinoid receptor agonist to reduce the level of IgE**
- **Methods have been successfully carried out on mice**

Treatment of Allergy Using Cannabinoid Receptor Agonist



Gp1a attenuates the serum levels of total IgE in BALB/c mice. The mice were treated OVA/ALUM followed by a boost of same antigen.

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