Researchers at the University of South Florida have discovered a potential new therapy for a variety of neurodegenerative diseases using the compound hexachlorophene.

Amyotrophic lateral sclerosis (ALS), a neurodegenerative disease currently affecting approximately 30,000 Americans, is a fatal progressive degeneration of motor neurons in the brain and spinal cord. Alzheimer’s disease (AD), which impacts nearly five million Americans, is a fatal disease characterized by memory loss, confusion and difficulty with basic language and thought patterns. Accumulation of the TDP-43 protein is a major causative agent for the pathogenesis of these malignant disorders. Currently, no cure or effective treatment option exists for these and other related disorders.

USF scientists have identified a novel treatment option for several neurodegenerative diseases. Hexachlorophene, when administered in a therapeutically appropriate amount, is an effective therapeutic agent against TDP-43 protein accumulation. USF researchers showed that hexachlorophene administration presented a dramatic reduction of TDP-43 protein levels in both endogenous models and in overexpressed wild-type human TDP-43 models. These promising results showcase the great potential for hexachlorophene to serve as a therapeutic agent for the treatment of several neurodegenerative disorders including ALS, AD and fronto-temporal lobar dementia (FTLD).

**ADVANTAGES:**
- Decreases expression of TDP-43
- Potential treatment for several neurodegenerative diseases

**A Novel Neurodegenerative Disease Treatment Option**

**Hexachlorophene (B10) Administration Exhibits a Significant Reduction in TDP-43 Protein Levels Compared to the Control**

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