Magtein™ (magnesium L-threonate) is a breakthrough super-mineral with strong evidence supporting cognitive functions and brain health. Magtein, a unique patented compound discovered by MIT scientists, contains magnesium as its key ingredient, and has been shown in animal studies to restore the aging neurons to their youthful conditions.

The brain naturally undergoes gradual structural and functional changes as we age. The good news is that the adult brain is capable of a greater degree of plasticity than scientists had previously believed. Old neurons, even in the brain regions involved in learning and memory, can restore synaptic density, leading to improvement of attention, working memory, short- and long-term memory, reduction of anxiety, and improved sleeping quality. Magtein has achieved remarkable results in aiding the process of fighting against brain deterioration due to aging and environmental conditions.

**MARKET SEGMENTS**

**COGNITIVE & BRAIN HEALTH.** In the last century, life expectancy has grown from an average of 47 years to 77 years. With this dramatic increase, there are more people dealing with the cognitive deterioration of aging than ever before. There are varying degrees of cognitive and brain dysfunction, ranging from memory loss to Mild Cognitive Impairment (MCI) and, at its most severe, Alzheimer’s Disease. Memory loss affects all ages but is most predominant in the elderly. MCI is a condition involving the onset and evolution of cognitive impairments beyond the normal affects of aging, often found to occur during the transitional stage between normal aging and dementia. Deaths from Alzheimer’s Disease have increased 65 percent between 2000 and 2008, while deaths from other major diseases such as heart disease, stroke and certain cancers, have decreased. Alzheimer’s is the world’s most costly disease per patient and among the most feared, with major social costs.

**ANXIETY AND STRESS.** Stress-related illnesses such as anxiety disorder are a major contributor to poor cognitive health. According to the National Institute of Mental Health, 18.1% of US Adults have an anxiety disorder, and of these, 22.8% are classified as severe. The increasing demands of daily life will continue to cause a dramatic growth in anxiety and stress-related ailments.

**RELAXATION AND SLEEP.** According to the National Institute of Health, more than 70 million people in the U.S. are affected by sleep troubles. The prescription sleep aid market is now over $2.0 billion and is expected to grow as baby boomers advance in age, obesity rates and obesity-related illnesses rise, and stresses from living in a demanding, over-stimulated modern society grow.

An estimated 6,900,243 people in the U.S. suffer from cognitive and brain health dysfunction. Issues include memory loss, anxiety and stress, mild cognitive impairment and relaxation and sleep. Alzheimer’s disease alone is resulting in alarmingly more deaths compared to other illnesses such as heart disease, stroke and certain cancers. Billions of dollars are spent annually on prescription and over the counter remedies, yet the number of people of all ages suffering from brain health dysfunction is increasing.
MAGTEIN RESEARCH REVIEW

The role of magnesium in memory and cognitive function has long been suggested, but not proven. Previous studies have shown that brain synaptic density correlated to age dependent memory loss.

PRE-CLINICAL RESEARCH RESULTS

The study showed that by increasing the brain’s magnesium level, Magtein could increase the learning ability, working memory, and short- and long-term memory in young and aged rates. It also showed that common magnesium compounds do not effectively improve brain magnesium levels, which is required to improve memory and cognitive functions. Four Magnesium forms were evaluated for short term memory in young and aged animals. Only Magtein was shown to have a significant effect.

BRAIN SYNAPSE EVALUATION

Brain synapses were evaluated before Magtein was administered, during the use of Magtein and after Magtein was no longer administered. The snaptic density of the brain cells were significantly improved when Magtein was administered. Ceasing use of Magtein decreased brain synapse density.

ANXIETY COPING ABILITY RESULTS

Using fear conditioning paradigm, chronic Magtein intake was found to enhance prefrontal cortex/hippocampus-dependent but not amygdala-dependent fear-memory in rats. Interestingly, Magtein treatment enhanced retention of the extinction of fear memory, without enhancing, impairing, or erasing the original fear memory.

RESEARCH NEXT STEPS: Human study has begun with results due in 2013. Additional animal and human studies are in various stages of development. Contact AIDP for the most current status.

PUBLICATIONS:

  - One of the three most downloaded Neuron articles in 2010

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Magtein is protected under US patents 8,178,118; 8,142,803; 8,163,301; 8,178,132 and other pending US and International patents

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*These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat cure or prevent any disease.

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