

Issue XXX

# STEMBoost Newsletter



Brought to you by the STEMBoost Editorial Team

## February Updates!

**Joseph Lee, Chief Editor**

This February, STEMBoost helped host the 5th Annual Kennedy Middle School Invitational. A total of 48 teams attended the event, the first in-person invitational held at Kennedy since before the COVID-19 pandemic.

The first place trophy went to the Kennedy Middle School Gold Team, which achieved an outstanding victory after scoring 90 points and medaling in 18 events.

We thank all STEMBoost parents and volunteers for their valuable time in helping serve as event supervisors and coordinators for the events, and congratulate Kennedy on their outstanding performance at the invitational.

# Taurine as an Anti-Aging Supplement

Joseph Lee, Chief Editor

## What is taurine?

Taurine is a type of amino acid, which is a broad category of common biomolecules found in the human body. There are countless types of amino acids, all of which share certain similarities in structure and chemical composition. Some amino acids serve as the building blocks for proteins, while others, including taurine, fulfill diverse roles across various organ systems in our body.

## Recent Findings on Taurine

According to a study published on June 8 in the journal *Science* led by Dr. Vijay Yadav at Columbia University, Taurine deficiency in the body may be a “driver of aging,” and restoring levels of taurine in the body could help slow down the process of aging.

In the study, scientists found that giving taurine to worms and mice increased their lifespans by up to 12%. In order to investigate the reason for these observations, scientists made measurements to compare the health of the treated mice with that of the untreated mice.

They found that the mice treated with taurine gained less weight, had less anxious behavior, and had greater bone mass and muscle mass than the control group. A closer look found that mice treated with taurine were also healthier at the cellular level, with a greater number of stem cells, improved mitochondrial efficiency, and less DNA damage than the control group. Similar results were found in rhesus monkeys that were given daily taurine supplements for a period of 6 months.

The study demonstrates the effectiveness of taurine in various species with divergent evolutionary paths and differences in their major biochemical pathways. According to Dr. Yadav, taurine also has no known toxic effects in humans. These observations give a promising outlook for taurine’s effectiveness in humans, although we still do not possess the data to draw any conclusions about the effectiveness of taurine supplements in humans.

IAs of now, scientists recommend against people buying taurine supplements before human trials are completed. The fact that nutritional supplements are not regulated by the FDA could also pose a potential risk.

Overall, we should approach this new scientific discovery with both open-mindedness and some healthy skepticism. Taurine holds a lot of promise, but drugs or supplements that seem to have a benefit for animal models in the lab may sometimes lose their effectiveness in humans. Aging is also complex, and there is one solution we can look towards widely acknowledged methods of slowing down aging, like exercise and proper nutrition.

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