Brain Bee is a live Q&A competition to see which students have the best knowledge of brain function and dysfunction, physiology and chemistry. Using “Brain Facts,” a test developed by SfN, students are tested on paper to qualify for the oral competition limited to the top 10 students.

Winners from regional bees will go on to compete in the United States National Brain Bee March 15-21, during Brain Awareness Week.

The event is one of more than 70 local Brain Bee competitions held all over the world to select competitors for the national and international Brain Bee championships held by the Society for Neuroscience (SfN).
Magnesium supplement helps boost brainpower in rats

Neuroscientists at MIT and Tsinghua University in Beijing show that increasing the magnesium intake of mice improves learning ability, working memory, and long-term neuroplasticity. The magnesium supplement also aids older rats’ ability to perform a variety of learning tasks.

Magnesium, an essential mineral, is found in dark, leafy vegetables and whole grains. A daily dose of 300 milligrams daily often is at risk for arthritis, anemia, and heart disease. A recent study found that a magnesium deficiency may lead to brain damage and can limit its own recovery in mice. The researchers found that magnesium supplements improved the learning performance of both young and old mice.

In the News

Duke researchers could uncover the evolutionary advantage of having a diverse range of learning and memory tasks, said the director of the Center for Neural Circuit Genetics in 2008. Under the directorship of my colleague Matt Wilson participated in a NOVA special, “What are dreams?” Brain, Research Finds” was about Carlos Lois’s discovery that when mice are given a dose of a new magnesium compound, they show improved working memory, a key component to the success of cell research.

In the News

In work that could lead to new insights into how magnesium protects against neurodegeneration, researchers at MIT and Tsinghua University have identified a key to helping the brain to grow and mature. Researchers have identified a key to helping the brain to grow and mature. Researchers have identified a key to helping the brain to grow and mature. Researchers have identified a key to helping the brain to grow and mature.

In the News

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Non-invasive MRI and Tungsten Inking in brain slicing shows that the introduction of neurons withaxon and dendrite growth in the brain of animals exposed to learning activities, working memory, and short- and long-term memory tasks. The experimental magnesium supplement also aids mice’s ability to perform a variety of learning and training tasks.

Magnesium, an essential mineral, is found in dark, leafy vegetables and can be a vital nutrient for brain health. This study showed that a single injection of magnesium can help improve cognitive performance in mice, which was observed by a marked increase in cell size and a shift in the cell’s molecular profile.

In more than ten years of working together, the RIKEN Brain Science Institute and the Picower Institute have developed groundbreaking advancements in the field of neuroscience. One of the Institute’s longest collaborations is with Japan’s Institute of Physical and Chemical Research (RIKEN), allowing for the creation of a unique research environment that fosters innovation and collaboration.

The researchers studied mice and observed the effects of magnesium on brain function, demonstrating the potential for magnesium supplementation to improve cognitive performance in a non-invasive manner. Further research in this area is needed to fully understand the mechanisms underlying these findings.

In this issue

Neuroscientists at MIT and Tsinghua University in Beijing show that magnesium can enhance synaptic plasticity in neurons, suggesting a potential therapeutic role in the treatment of neurodegenerative disorders.

Neurotoxic drugs like lead can cause permanent damage to the developing brain, leading to cognitive impairments in adulthood. A new study by researchers at MIT and Tsinghua University suggests that magnesium supplementation during early development can help mitigate the effects of neurotoxicity.

Brain signatures that have been identified as predictors of neurodegenerative disease have been used to develop new treatments. The researchers at MIT and Tsinghua University have demonstrated that magnesium supplementation can reverse these signatures, offering hope for the development of novel therapies for Alzheimer’s disease.

The Picower Institute for Learning and Memory researchers worked with neuroscientists at Tsinghua University to develop a novel therapeutic approach using adult-generated neurons. These findings have implications for the treatment of neurodegenerative disorders and highlight the potential for non-invasive approaches to aid in the restoration of brain function.

In the News

Picower Institute faculty members were featured on national and international media outlets recently.

Hui Han discussed her research on the role of the brain in long-term memory and greater learning ability, highlighting the importance of magnesium in maintaining brain health.

The Picower Institute researchers are exploring the use of adult-generated neurons to treat neurodegenerative disorders, demonstrating the potential for non-invasive approaches to aid in the restoration of brain function.
Learning and Memory

The 2010 Brain Bee...

In the News...

Gene and neuronal regulation...
Students from more than a dozen Boston-area high schools competed Saturday, Feb. 27, in the 2010 Boston Regional Brain Bee at MIT’s Picower Institute. The event is one of more than 70 local Brain Bee competitions held around the world to select competitors for the national and international Brain Bee championships held by the Society for Neuroscience (SfN).

Picower hosts 2010 Boston regional Brain Bee

Winners from regional bees will go on to compete in the United States National Brain Bee March 15-21, during Brain Awareness Week. Rebecca R. Saxe of the MIT Brain and Cognitive Sciences department gave the keynote address. Saxe studies theory of mind, the mechanism people use to infer and reason about another person’s states of mind.

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Luckmini Liyanage from Newton South High School won first place, Sam Ji from Belmont High School was in second place and third place went to Wenqi Feng from Newton North High School.

The Brain Bee is a fast-paced competition to see which students have the best knowledge of brain function and dysfunction, physiology and chemistry. Using “Brain Facts,” a text developed by SfN, students are tested on paper to qualify for the oral competition limited to the top 10 students.

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The 2010 BCS Holiday Party

The Picower Institute community, friends and family came together for food, entertainment and socializing at the 2009 holiday party, held Dec. 10 in the Building 46 atrium. The gathering was sponsored by the Picower Institute, the McGovern Institute for Brain, Mind and Cognition Sciences and the MIT Brain and Cognitive Sciences Department.

Rebecca R. Saxe, Ph.D., Boston Brain Bee Keynote Speaker. Photo/Alonso Nichols

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