PHARMA HIGHLIGHTS

Can Olive Oil Protect The Brain From Cancer?

Oleic acid, the primary ingredient in olive oil, has been shown in recent research from the University of Edinburgh, to play a role in stimulating miR-7, within cells. MiR-7 has been shown in many molecular and cancer research studies to help with tumor suppression.

From glioblastoma to highly invasive breast cancer, the introduction of mature miR-7 has shown good results in shutting down tumor growth. Not only does the oleic acid help in producing the molecules of miR-7, but it also seems to go up against a cell protein known as MSI2. MSI2 is problematic in brain cancers because it effectively shuts down the production of miR-7. The work was done on human cell extracts and living cells in the lab and the results are promising for developing preventative therapies that could either keep brain cancers from forming, or shut down the growth of those that do. The results, while hopeful, did not address dietary intake specifically. There's no way to tell, just from this research, if increasing the amount of olive oil in the diet can set in motion the molecular activity shown in the lab.

Source: https://www.labroots.com/trending/neuroscience/6147/common-item-fight-brain-cancer

Cracking the Facial Recognition Code

Recognizing faces isn't the same as learning where things are and how to get to places we visit often. The brain's way of recognizing who is who is both simple and incredibly detailed. New research from CalTech has revealed the mechanism behind how the brain works to accomplish this particular task. With this information, the hope is that someday by monitoring brain activity, it might even be possible to reconstruct what they are thinking about as they look at their surroundings. The main take away from the research was that while there are millions of combinations of noses, eyes, ears, chin, cheeks and lips that make up a face, the brain uses about 200 specific neurons to encode any face, with each neuron looking at a certain axis or dimension of a face. The researchers likened it to basic colors, colors in a prism of light (red, green and blue) that when combined, can create any one of thousands of custom colors. They dubbed this spectrum of faces "the face space." This new study represents the culmination of almost two decades of research trying to crack the code of facial identity. The results were tested using the same theories used in linear algebra, with multi-dimensional vectors being projected onto a single dimension subspace. By calculating the null space, the difference between each quantity, the team

Was able to develop algorithms that, when combined with monitoring of the brain activity of lab macaque monkeys, could recreate what the monkey was seeing with a high degree of accuracy.

Source: https://www.labroots.com/trending/neuroscience/6164/cracking-facial-recognition-code

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Even Just a Few Drinks Can Damage the Brain

The new research at the University of Oxford and University College London looked closely at moderate amounts of drinking and showed that there is a relationship between amounts previously believed to be low risk and the incidence of mental decline. The study included 550 healthy men and women. Measures of cognitive ability were conducted regularly along with data about how much alcohol was consumed on a weekly basis. During the last few years of the study, MRI scans were also added to the research. After adjusting for confounding facts like age, sex and socioeconomic status, the results revealed that those who had higher levels of alcohol consumption were at an increased risk for a form of brain damage known as hippocampal atrophy. When this part of the brain is damaged, a person can experience memory loss and difficulty with spatial navigation. Naturally, the more a person drank, the higher


the risks were, but the study revealed that even those in what is considered a moderate range of drinking (14 to 21 units a week) were three times more likely to have hippocampal atrophy when compared to those who did not drink.

Source: https://www.labroots.com/trending/neuroscience/6192/drinks-damage-brain

Vitamin A and Alzheimer's: Is There a Link?

Research from the University of British Columbia has found that Alzheimer's disease can start in the womb.
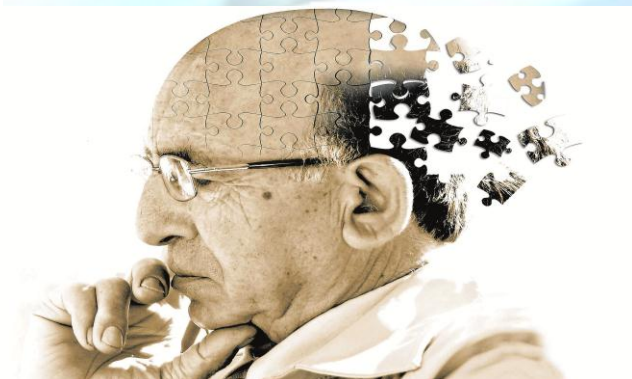
According to UPI the study was based on experiments with genetically engineered mice. Researchers found that because of a vitamin A deficiency a fetus or a newborn could start the biochemical reactions. Conversely, vitamin A supplements given to newborns could slow the progression of the disease. Dr Weihong Song is a professor of Psychiatry and Canada Research Chair in Alzheimer's disease as well as author of the study. He said in a press release "Our study clearly shows that marginal deficiency of vitamin A even as early as in pregnancy as a detrimental effect on brain development and has long lasting effect that may facilitate Alzheimer's disease later in life.

Source: https://www.labroots.com/trending/neuroscience/5175/vitamin-alzheimer-s-link

Genetic roots of sleepless night

Previous research has suggested that genetic factors are involved in insomnia, but little was known about the specific risk genes for the sleep disorder. Researchers compared the genomes of people who reported that they struggle to fall asleep or stay asleep at night with those of people who never or only sometimes experience such problems. The team found five genes and one section of the genome that were associated with insomnia. The gene with the strongest association, MEIS1, has previously been linked to restless legs syndrome.

The analysis also revealed strong genetic correlations between insomnia and anxiety, neuroticism and depression. The findings could help researchers to uncover the molecular mechanisms behind insomnia.

Source: https://www.nature.com/articles/n-12343820