



GMO Billboard

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The Problem

Amyotrophic Lateral Sclerosis is a progressive neurodegenerative disease that affects nerve cells within the brain and the spinal cord. Motor neurons reach from the brain to the spinal cord and then from the spinal cord to the muscles in the body. The degeneration of the motor neurons in ALS eventually leads to their death, and when this happens the brain's ability to initiate and control muscle movement is lost. As of now there are products and foods that can help prevent ALS, like coconut oil and cannabis oil, but they're no official GMOs for ALS.

The Gene

The SMN1 gene provides instructions for making the motor neuron (SMN) protein. This protein is found throughout the body, but high levels in the spinal cord. It is used for the maintenance of specialized nerve cells called motor neurons, which are located in the spinal cord and apart of the brain (contains nerve cells). Research finds that indicate the SMN protein is important to help develop outgrowths from nerve cells called dendrites and axons. These are required for the transmission of nerve cells and from nerves to muscles.

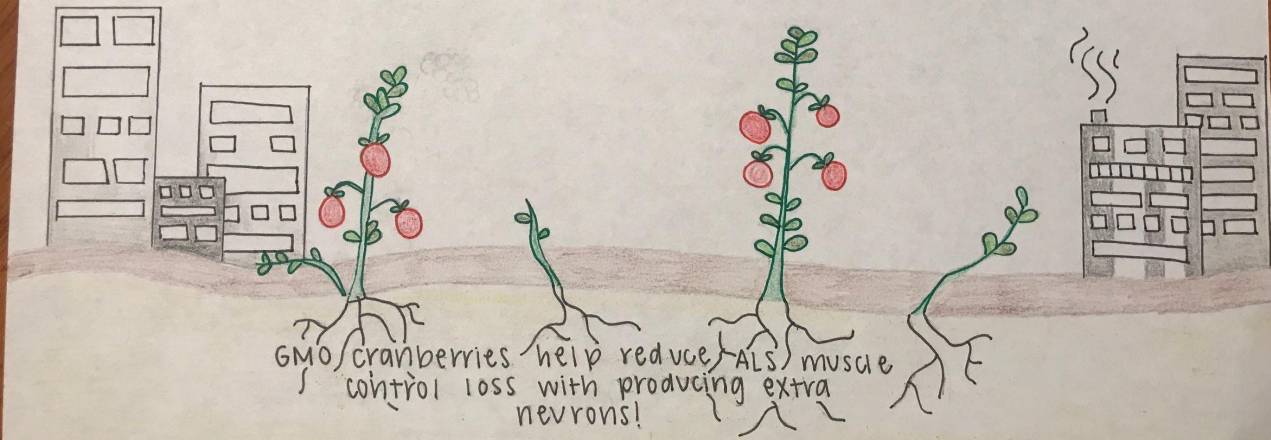
The GMO

We chose cranberries because they already help prevent ALS, and with the SMN1 gene inserted into the cranberry seed it will help fight against ALS. The SMN1 gene will provide instructions to produce motor neurons throughout your body, so that your brain won't lose its ability to control muscles. You should eat one cup of cranberries everyday until you start to see results, then eat one cup everyday every other week. The vector that would work best would be the retrovirus because the SMN protein uses mRNA to make "blueprints" for the protein. After rough drafts it gets helped by the SMN protein to spread to other cells.

The End Result

Over a period of time this GMO has allowed motor neurons to continue producing throughout bodies with ALS due to the SMN1 gene. The motor neurons producing counteracts the neurons degenerating, so that the body doesn't lose control of its ability to control muscles.

eat more CRANBERRY'S
to get your ABILITY'S.



Resources

<http://www.alsa.org/about-als/>

<https://ghr.nlm.nih.gov/gene/SMN1>