Stevioside from Stevia rebaudiana Bertoni Increases Insulin Sensitivity in 3T3-L1 Adipocytes

Joshua Schmidt

Program on Emerging Infectious Diseases, DUKE-NUS Graduate Medical School, Singapore

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1 Abstract

New research has uncovered the highest concentration in the human brain for the class of blood-borne proteins that cause non-small cell lung cancer.
To make their discovery, the investigators focused on the interleukin-1 alpha kinase, called IL-1, and its kinase, IL-2 alpha kinase.
The newly found group of proteins produced by IL-1 is part of a cascade that regulates cancer growth and proliferation. When IL-1 is mutated, the signaling cascade ramps up. For people with this disease, the dramatic response is a powerful tumor suppressor that throws a wrench into the cancer progression.
In the six years that the scientists studied the cogs of this traffic, they learned that to keep IL-1 active they should follow all the markers of high tumor pressure, such as low triglycerides and high HDL cholesterol.
A major finding is that they discovered the largest concentration of IL-1 and its kinase in the brain from a single cell.
We are very excited about our findings because we know that more and more of the DNA of non-small cell lung cancer cells is the IL-1 protein, said senior author Dr. S.L. Subramanian, a pulmonologist and bioengineer at UCSF Benioff Childrens Hospital Los Angeles.
This discovery changes the architecture of cancer development. It shows that when cancer cells have more and more IL-1 proteins, they are free to grow faster.
We can now use our microscope to manipulate the energy of the IL-1 protein and see how it allows tumors to proliferate and move into other cancers, said Subramanian.
They discovered that between 60 to 100 percent of the tumor cells are IL-1 proteins as they protect the tumor cells from some of the triggers of non-small cell lung cancer. They also found that even one cells concentration of IL-1 affects tumor growth.

The study appears in an online paper published in the January issue of Molecular Cell, a journal of the American Association for Cancer Research.

1.1 Image Analysis

Figure 1: A Man In A Suit And Tie Is Holding A Teddy Bear