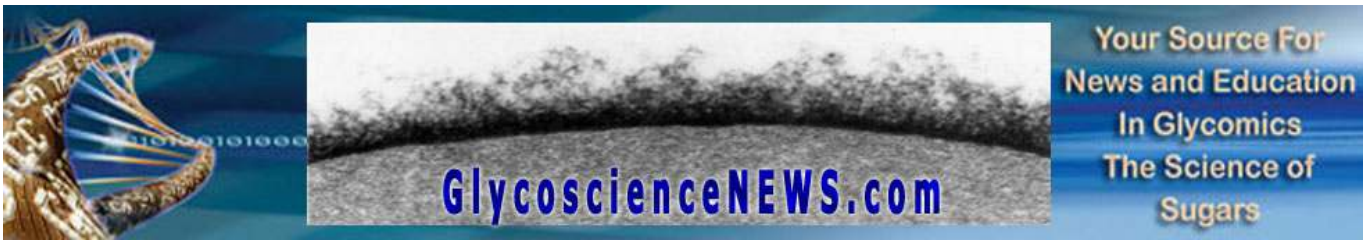

Did We Just Learn HOW to Amplify Cell Signals?

Follow-up on Glycoscience Lesson #46

by JC Spencer

Readers responded to my Lesson on Trehalose and TB with statements like, "*Huh*?". "*What did you just say*?" and "*He talks to me as if I understand what he's saying*."

Okay, okay, this is my attempt to make it so clear that my wife won't say, "*That made my brain hurt*."

Glycoscience is so much fun that I get carried away at times into the world of sugars that is located in cellular galactic inner space. This fantastic voyage took me to the red planet (red blood cell) and there I began to explore the forests of glycoforms including glycans and glycoproteins.

As a child, I read in Scripture, "LIFE IS IN THE BLOOD." As an adult, I became jubilant when I learned that these Smart Sugars actually give life to the blood. It is energizing beyond words to understood how the gift of life was offered.

The arrangement of these glycoforms make up the forest of some 800,000 "trees" on the surface of each healthy red blood cell. Precise function lies in the angle of the bond of one smart sugar to another and sugar to proteins and proteins to another sugar. Some "trees" are short, more like a shrub, and others are tall like a sequoia. Five million red blood cells are in a drop of blood. That's 7 trillion glycoforms in each drop of healthy blood.

Communication makes everything happen. These trillions of transponders, which receive and send signals, are the Operating System to read and translate your DNA and all cellular communication.

Now, let's understand the scientific evidence on Trehalose and tuberculous. I stated in Lesson #46 that "*New evidence reveals sugar signals increase cytokine production as macrophage receptor mincle* [glycoprotein] *binds to Trehalose*."

Cytokines are small secreted proteins released by cells that have specific effects on the interaction and communication between cells. Cytokines modulate most of the macrophage functions and cell surface marker expressions. The macrophage is a large white blood cell that helps fight infections.

Think of modulated cytokine production as improving the communication system to better instruct the macrophage to do its job better.

Near the end of the Abstract are the words, "*The structure of an extended portion of the extracellular domain of mincle, beyond the minimal C-type carbohydrate-recognition domain, also constrains the way that the binding domains may interact on the surface of macrophages*."

Mincle is a glycoprotein and the structure of an extended portion looks like a sequoia (taller than the others). The glycoforms coat the surface of all healthy cells including the macrophages. The study indicates that Trehalose more easily bonds to the longer glycoproteins. **The Trehalose causes an increase in signal strength** for action to be taken NOW. The action is for the macrophages to carry out the trash and produce a healthier environment.

Think of Trehalose as an extender, a booster, to the transponder antenna that provides a more clear amplified signal to convey vital data.

There is much research needed to better understand just how we can safely improve cell signals. We have only just begun.

Source and References:
Glycoscience Whitepaper - http://GlycoscienceWhitepaper.com
Abstract and Link to the Study are included in Glycoscience Lesson #46
http://GlycoscienceNEWS.com/pdf/Lesson46.pdf

Expand Your Mind - Improve Your Brain
http://endowmentmed.org/content/view/826/106/
Change Your Sugar, Change Your Life **http://DiabeticHope.com**

http://GlycoscienceNEWS.com/pdf/Lesson46FollowUp.pdf
http://EzineArticles.com/?expert=JC_Spencer