



## Glycomics Open End Research Rapidly Growing

Smart Sugars Lesson #25

by JC Spencer

Here's a step toward cutting healthcare costs a trillion dollars a year. One step is to reduce wasteful spending on expensive unnecessary drugs, especially drugs that may keep you sick or kill you and simply masks symptoms.

Open end and transparent glycomics research strengthens the validity of the science. Peer reviewed studies are offering overwhelming credibility. Communication to the public is hastened by instant world wide access which makes it easier to confirm truth and reveal deception.

Rapidly expanding the glycomics database is ongoing research data. At the moment of my writing this lesson, there are **548,966 references to the word glycoprotein** and **41,942 references to glycolipid** in the National Library of Medicine at the National Institutes of Health on their website at [www.PubMed.gov](http://www.PubMed.gov)

The remarkable functional sugars, which I call Royal Sugars, include the sugars that are the building blocks for glycoproteins, glycolipids, and the double-helix backbone structure of the DNA. These sugars include but may not be limited to: mannose, trehalose, fucose, galactose, ribose, xylose, glucose, N-acetylgalactosamine, N-acetylglucosamine, N-acetylneuraminic acid, L-rhamnose, and . I will deal with other Royal Sugars later.

At the time I am preparing this lesson, **there are 492,134 combined references to published papers concerning research with these Royal Sugars:**

**Mannose = 24,020; trehalose = 4,842; fucose = 8,843; galactose = 30,183; Ribose = 23,817; xylose = 9,243; glucose, = 370,062; N-acetylgalactosamine = 3,724; L-Rhamnose = 926; N-acetylglucosamine = 10,380; and N-acetylneuraminic acid = 6,094.**

Universities and governments around the world are creating mountains of available open end data. These are exciting times where more science information is at our fingertips than ever before in history. Making billions of dollars worth of research information publically available for us and others to utilize enables us to take research to the next level. We are actually discovering causes and cures instead of just treating symptoms.

Mining the data by scanning various research projects and then connecting the dots creates the ability for us to accomplish forward motion at lightening speed compared to research progress of yesteryear.

Like all knowledge, it can be used for right or it can become corrupted. Having the availability of this vast knowledge is great but it is necessary to know how to mine it and use it. It's value will be determined by how well we know how to connect the dots.

Some time back in the 60s I wrote a science fiction screen play called **Silent Battle** which I filed with the Screen Writers Guild in Hollywood. Nothing ever became of it but I recall how I designed a computer for that movie that contained all the knowledge of the world that was accessible via wireless handheld computers with a screen that opened up and fanned out, extending to twelve inches wide. Today, that SciFi has become a near reality.

Even if the open end digital information is technically available, it is not transparent to most people. It is invisible. The majority of people may be intimidated and discouraged with the giant mountain of data. However, those who would manipulate the masses with false data will also become more intimidated with transparent truth.

An example of transparent truth is when evidence based results are placed along side deception even though that deception is widely accepted and often repeated. Stomach ulcers and acid reflux symptoms are treated each year with Billions of dollars of antihistamines that block the natural production of vital stomach acids. The truth is stomach ulcers are caused by the unique bacterium, *Helicobacter pylori*. A good immune system and digestive system will kill that bug. Furthermore, acid reflux may be caused when you are not properly digesting food. You don't solve a digestive problem by reducing stomach acids. Furthermore, genetic changes in the bacteria cause antibiotics to become less effective. Probiotics may be the answer. Studies show that antihistamines weaken the immune system. They are dream drugs that keep on taking billions of dollars. Some things are just backwards and expensive. I plan to address antihistamines in more detail in a future lesson.

Evidence based results is the marker for good health. Use whatever achieves the best results! Let us look at drugs, phytonutrients, and Royal Sugars. If  $A + B + C = \text{Best Results}$ , so be it. If  $B + C = \text{Best Results}$ , go with that. If we are to resolve the healthcare crisis, we must focus on what works best and not what markets best. The public is tired of deception. Truth with results should be our quest.