



Glycomics IS the Answer to Cancer for prevention, detection, and diagnosis Smart Sugars Lesson #22

by JC Spencer

A NIH glycomics cancer study through NCI (National Cancer Institute) in cooperation with the Alliance of Glycobiologists and various universities was initiated in 2007. Funding was \$3.2 million per year for a number of years. Today we look at the conclusion of that research.

The report states: Most FDA-approved cancer biomarkers are glycoproteins, but little is known about how their glycan structures are altered in cancer where diagnostic performance could be greatly improved. This experimental data is available at MIT.

The purpose for the study was to attract special scientists to exploit fundamental aspects of cancer biology; and, to establish a core of integrated glycobiologists to facilitate the development of cancer glycobiology for presentation and diagnostic applications. You may view the power point presentation and download it to your library as a pdf file.

One point in the report said that incentives are needed to attract the leading glycobiologist experts to do cancer research with defined clinical goals. The problem, according to the report, is that traditional funding mechanisms are not suited for an emerging field.

The Mission of the NIH/NCI study was to elucidate the structure and function of glycans that contribute to oncogenesis. And, to exploit aberrant glycosylation in cancer for the development of translational applications for cancer prevention, detection, and diagnosis.

Measuring Glycoproteins is the Future of Diagnostics and Glycomics is Used to Find Biomarkers for Breast Cancer were 2 reports I made in July and August 2008. Links to both of these articles are located in the Source.

In 2007, Texas voters approved a \$3 billion cancer research program. This has further equipped Houston as the hot bed of cancer research in the United States. The Houston Chronicle's front page headline on 06/02/2011 was **CITY ATTRACTS BIG GUNS IN FIGHT AGAINST CANCER**.

This influx of talent is a game changer for fighting cancer. The best and brightest are coming to Texas and Houston. These established researchers are adding enormous talent to Baylor College of Medicine, Methodist Research Institute, Rice University, University of Texas MD Anderson Cancer Center, University of Texas - Austin, San Antonio and Southwestern Medical Center.

Houston is the Medical Capitol of the world and MD Anderson is the leading cancer treatment center. A few years ago an oncologist at MD Anderson explained to me that a doctor friend in Boston told him that glycomics was the future of medicine. MD Anderson's President Dr. Ronald DePinho calls the voter approved cancer program one of the

factors that convinced him to leave Boston and come to Houston.

Glycoproteins are now proven to be the bull's eye, the Rosetta Stone, of medicine and of all healthcare. Everything points to accelerated and expanded glycoprotein research, and rightfully so.

According to the NIH/NCI study, glycoproteins are good for diagnosing, monitoring, proving, re-proving, developing billions of dollars in drugs, testing, and researching until the cows come home. Perhaps in another, always another, ten to twenty years, we will have a cancer cure.

Measuring the quality and quantity of glycoproteins on the cell surface is an excellent diagnostic approach because the lower the glycoprotein count, the greater the cancer risk. Healthy cells are sugar coated with glycoproteins while cancer cells are bald. Misfolding of proteins with specific sugars is the cause for poor quality and quantity of glycoproteins. Learning how to help properly fold proteins is the future of medicine and healthcare.

Bald cells will kill you. Healthy cells, clothed in fur like glycoproteins, give you life.

Yes, glycoprotein technology IS the bull's eye but perhaps the target is placed over the wrong objective. The traditional medical target is still over symptoms and drug treatment. In the process many are helped but we can do so much more if we simply move the target.

Over the last couple of decades, universities around the world have generated conclusive data that consuming, as food, what I call Royal Sugars, has phenomenal health benefits with the immune system, brain function, and directly or indirectly all diseases. We can slash a trillion dollars out of healthcare cost by just eating these sugars.

For a fraction of the billions invested in cancer research, we may be able to verify through Pilot Surveys and Clinical Studies what can be accomplished in humans with Royal Sugars and balanced body pH. One sugar, mannose, ERADICATED CANCER in the American poultry industry. That story is documented in my glycomics-textbook.

The PPP link from the National Cancer Institute verifies what I have been teaching for fifteen years: THE CAUSE FOR CANCER just may be too few glycoproteins on the surface of human cells.

Source and References with many links are available on one page at <http://www.endowmentmed.org/pdf/SmartLesson22Source.pdf>

<http://www.endowmentmed.org/pdf/SmartLesson22.pdf>

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