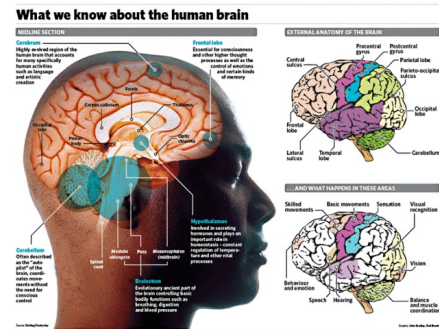


# Human Brain Mapping - Smart Sugar Lesson #2

By J. C. Spencer

One of the most important science projects ever undertaken by man was quietly launched in 2010... the Human Connectome Project, the mapping of the complex networking of the human brain. The objective of this \$30 million NIH project is to survey every connection between the neurons in the adult brain.



The Human Connectome Project will prove to be MORE complex than the Human Genome Project and the Human Glycome Projects combine. The genome complexity of the DNA and RNA sequencing is responsible for the proteome and the development of every cell of the human body. The proteome is more complex than the genome and responsible for the protein folding. The glycome exceeds the complexity of the proteome as the result of the sugars' role with proteins.

In 2002, Ajit Varki, professor of medicine and cell and molecular biology, and director of the Glycobiology Research and Training Center at the University of California, San Diego has expressed the importance of the glycome challenge by stating that the glycome is: "...probably thousands of times as complicated as the genome, in magnitude of complexity and level of diversity".

The Human Connectome Project is one of the most important science projects ever because when we improve brain function, we address over 600 diseases directly and all other diseases indirectly. After the Human Connectome Project maps the human brain, the key will be to discover what can be done to improve each and every area of the brain. With this capability, a new world of science is opened.

Here at The Endowment for Medical Research, we have learned that brain function can be improved with specific sugars. Perhaps some day soon, we can learn just how that improvement is made. It is our purpose to make available to the Healthcare Profession and General Public published papers, an extensive web presence at [www.endowmentmed.org](http://www.endowmentmed.org), plus 14 hours of CME/CEU quality training on our Glycomics DVD Series with a faculty of MDs and PhDs

As we learn the mapping of the human brain through the Human Connectome Project, we will not only have a better understanding of brain function but how specific sugars impact brain function.

My next Smart Sugar Lesson will deal with what I predict we will learn from the Human Connectome Project.

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