

# The Endowment for Medical Research Establishes the Parkinson Research Initiative

## Is Reversing Parkinson Possible?

by J. C. Spencer

A bold new step in addressing Parkinson disease has begun. The Endowment for Medical Research in Houston, Texas is documenting results from Pilot Surveys being conducted in the United States and Australia.

The dictionary describes the word "initiative" as: (1) the ability to act independently and with a fresh approach. (2) the power or opportunity to act before others do. (3) a new development or fresh approach to a problem.

Each year, just in the United States, some 50,000 people are diagnosed with Parkinson's disease. Over one million Americans may have this disease. Parkinson disease affects both men and women almost equally. People of every race, economic class, and ethnicity can get Parkinson disease. Age, however, is a major risk factor. People over fifty are more at risk but Parkinson disease can strike at any age. The average beginning stage is age 60; however, doctors are now finding early onset Parkinson in a growing number of people under the age of 40.

Parkinson is a disorder of the central nervous system. The central nervous system includes the brain and spinal cord. The disease is known to cause progressive debilitating movement.

It is believed that Parkinson disease occurs when brain cells containing dopamine in a specific part of the brain die or are damaged. Dopamine carries messages that tell the body how and when to move. When there is not enough dopamine to carry the messages there is a compounding communication problem that becomes progressively chronic, lasting until death.

Parkinson experts believe that the disease may be caused by free radicals that build up in the brain and damage the cells that make dopamine.

Toxins in our food, air, and water contribute to the cause.

David L. Busbee, PhD head of the genetics department at Texas A&M University in his altering gene expression research has documented how toxins cause DNA damage.

While his study was not on Parkinson, we know that DNA damage compounds the genetic factor where already 15% to 20% of the Parkinson cases have a close relative with similar symptoms.

Dr. Busbee reported at the 2005 Glycomics Medical Conference sponsored by The Endowment for Medical Research that his genetic and glycomics research documented that corrective gene expression is possible when certain carbohydrates are added to the equation.

## A New Sugar Added to the Mix

### Glycolose™

**Glycolose has a clean healthy taste and is as sweet as regular table sucrose.**

Glycolose may produce lower insulin and blood glucose responses than sucrose.

The Endowment for Medical Research has preliminary medical reports verifying that triglycerides are lowered in some people with fairly large quantities of glycolose over a few weeks time. Research is ongoing to elucidate the relationship between metabolic parameters and the potential energy and performance benefits of glycolose.

Glycolose is a disaccharide made from trehalose which is a naturally-occurring sugar energy source with about forty (40%) the sweetness of sucrose.

Trehalose is a white crystalline dihydrate powder produced from corn starch by a patented enzymatic Hayashibara process determined to be generally recognized as safe (GRAS) for use in foods in general accordance with the current good manufacturing practices. The safety determination was confirmed by an independent panel of experts and submitted to the FDA as a GRAS notification. The FDA responded with a letter of "no objection".

Charles Eschweiler, Director of Research and for The Endowment for Medical Research made an interesting discovery during our Alzheimer's Pilot Survey started in 2004 while he was conducting ongoing literature research. He discovered benefits from the disaccharide trehalose with respect to Huntington's chorea, a polyglutamine storage

disorder with a genetic basis. Among the science papers written, were: "Trehalose alleviates polyglutamine-mediated pathology in a mouse model of Huntington disease" and "Sweet Relief for Huntington Disease".

We believed that the same mechanism of action involving the disaccharide that worked in the Huntington's chorea genetic knockout mice may also be at work with other similar conditions such as Alzheimer's and Parkinson disease.

**PRELIMINARY REPORTS FROM PARKINSON PATIENTS IN A PRELIMINARY PILOT SURVEY IN THE U.S. AND AUSTRALIA SHOW SOME RESPONSE WITHIN WEEKS. MORE RESEARCH IS REQUIRED TO DETERMINE WHAT BENEFITS, IF ANY, GLYCOLOSE MAY PLAY IN PARKINSON PATIENTS.**

A clinical study with trehalose performed in the UK showed that ninety eight percent (98%) of the population had no problems. The other two percent (2%) experienced only a little gas.

The structural formula is a non-reducing disaccharide of two glucose molecules bonded by an  $\alpha, \alpha - 1, 1$  glycosidic link which is stable at low pH conditions and is non-hygroscopic, which results in a free-flowing dry crystal that is stable to ninety four percent (94%) humidity. It has a clean profile which means it has no aftertaste.

Further assays, pilot surveys and comparison studies are planned with trehalose and glycolose in diabetics, Parkinson, Alzheimer's and other neurodegenerative diseases.

Glycolose will be added to the patients' regimen for the six month Pilot Surveys to determine if there are positive results.

All components in the protocols used in the Parkinson Research Initiative are required to be non-toxic, non-drug, recognized as food with generally recognized as safe (GRAS) status.

## Parkinson Research Initiative

- Page 2

# Parkinson Research INITIATIVE

The plans for the Parkinson Research Initiative are in the formulation stage. A series of Pilot Surveys and studies will be structured.

One budget required for 200 Parkinson patients to participate in the one year program is \$3 million. That is \$12,000 per patient plus 25% for administration costs.

The Endowment for Medical Research is anticipating collaborating with major universities in this initiative using the multi-disciplinary approach to bring about a synergy in determining the difference elements and phases of this broad program.

Advanced methods may be used as additional funding becomes available. The study of brain activity using mapping technology is scheduled to play a role in this research with some patients participating in those phases of the program.

The Initiative is to collaborate with leaders in studying brain activity. Two sciences in monitoring brain function is Functional Magnetic Resonance Imaging (fMRI) and Reflectance Diffuse Optical Tomography (RDOT) which uses only photons.

The Parkinson Research Initiative has already begun with participants in the United States and Australia.

The protocol of the current Pilot Survey is available at: [pri@endowmentmed.org](mailto:pri@endowmentmed.org).

Subjects will be accepted as funding is available and for those who cannot afford to enter the Parkinson Research Initiative as a self finding Pilot Survey, The Endowment will match two to one (2:1) when possible.

Foundations, organizations, corporations, family trusts, and individuals are encouraged to help fund Parkinson Research with the hope of finding a cure for Parkinson.

## Visit website

[endowmentmed.org](http://endowmentmed.org)

In addition to being a very informative website, we have posted three NEWS Bulletin Boards:

**Health NEWS**  
**Stem Cell NEWS** and  
**Kids NEWS**

# Stem Cells

## Hold the Answers: Making the Connection

Stem cells produce neurons and are known for their ability to migrate to any part of the human body that needs repair including the brain. Stem cells seem to move to the area of greatest need to do their work.

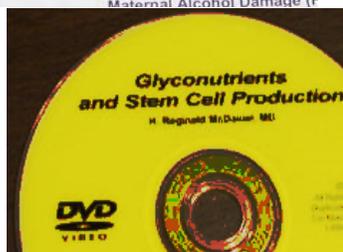
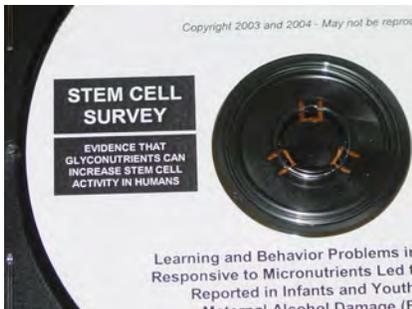
Stem cells are produced in the bone marrow. A bone marrow transplant may cost up to \$300,000. You can harvest your own

stem cells, if they are healthy, and have them frozen and later injected back into your own body after radiation or chemotherapy for about \$100,000.

Umbilical stem cells can be harvested from a newly born baby without harm to the child and later used in a compatible recipient for \$14,500 to \$21,000.

# Glycomics

Every healthcare professional should have this Stem Cell Survey CD by H. Reg McDaniel, M.D. which documents how Dr. McDaniel discovered the glyconutrient growth factor for stem cell proliferation in the human body.



Learn how Stem Cell proliferation may benefit brain and other brain function. This CD plus a DVD of Dr. McDaniel presenting the study is available for a contribution of \$50. May be purchased online at [www.EndowmentMed.org](http://www.EndowmentMed.org) or by calling 281-587-2020.

## 2<sup>nd</sup> Annual Glycomics Medical Conference

October 6, 7, 8, 2006  
The Woodlands Waterway  
Marriott Conference Center North  
of Houston. Book your  
registration soon online at  
[www.endowmentmed.org](http://www.endowmentmed.org)

Glycomics DVD Series  
with or without CME/CEU  
Credits. After months of  
preparation, the masters are  
finally ready and the albums  
should ship before the date  
of this NEWSletter.

Doctors can earn Credit  
toward the **AMA**  
**Physician's Recognition**  
**Award** by completing our  
Glycomics DVD Series  
CME/CEU Credits 14 or 16.8 hours

### Pharmacists



14 contact hours (1.4 CEUs) of credit for pharmacists. Approval of this course for pharmacists is under a co-sponsorship agreement between The Endowment for Medical Research, Inc and Medical Education Collaborative, Inc. (MEC). MEC is accredited by the Accreditation Council for Pharmacy Education as a provider of continuing pharmacy education. ACPE # 815-999-06-010-H04. The program is designed for all pharmacists.

**Physicians** This activity has been planned and implemented in accordance with the Essential Areas and Policies of the Accreditation Council for Continuing Medical Education through the joint sponsorship of The Endowment for Medical Research, Inc and Medical Education Collaborative, Inc (MEC). MEC is accredited by the ACCME to provide continuing medical education for physicians. Medical Education Collaborative designates this educational activity for a maximum of 14 category 1 credits towards the AMA Physician's Recognition Award. Each physician should claim only those credits that he/she actually spent in the activity.

### Dentists



Dental professionals will receive 14 credit hours for this program. This activity has been planned and implemented in accordance with the standards of the Academy of General Dentistry Program Approval for Continuing Education (PACE) through the joint program provider approval of Medical Education Collaborative, Inc. (MEC) Code #209828 and The Endowment for Medical Research, Inc. The formal continuing education programs of this program provider are accepted by AGD for Fellowship / Mastership and membership maintenance credit. Approval does not imply acceptance by a state or provincial board of dentistry. The current term of approval extends from June 1, 2005 through May 31, 2009.

### Dietitians



Medical Education Collaborative, Inc. ME002, is a Continuing Professional Education (CPE) Accredited Provider with the Commission on Dietetic Registration (CDR). Registered dietitians (RDs) and dietetic technicians, registered (DTRs) will receive 14 continuing professional education units (CPEUs) for completion of this program. Continuing Professional Education Provider Accreditation does not constitute endorsement by CDR of a provider, program, or materials.

### Accreditation Information

**Sponsor Information** This activity is jointly sponsored by The Endowment for Medical Research and Medical Education Collaborative (MEC). MEC is a non-profit organization that has been certifying quality educational activities since 1988. For questions regarding the accreditation of this activity, please contact MEC at (303) 420-3252.



### Purpose Statement

To present the fundamentals of Glycobiology and its clinical applications.

### Target Audience

Members of medical community especially primary care physicians, nurses, dentists, chiropractors, and students.

### Learning Objectives

1. Identify and discuss the basic science of Glycomics at the genetic and cellular level
2. Identify and discuss the clinical applications of Glycomics
3. Identify and discuss the economic implications of Glycomics for the future

Ask for the full color brochure or view  
online at [www.endowmentmed.org](http://www.endowmentmed.org)