Top Research Award Goes to Winnipeg's Own Dr. Gordon Glazner

Dr. Gordon Glazner wants to find a cure for Alzheimer's disease, and he just got a big dose of encouragement to continue his quest.

A neurobiologist, Dr. Glazner is the Principal Investigator for the Division of Neurodegenerative Disorders at the St. Boniface Research Centre in Winnipeg, MB, and Assistant Professor at the University of Manitoba. His ongoing research into Alzheimer's disease has earned him the top funding award from the Alzheimer Society Research Program (ASRP) for 2014.

The ASRP funds research that offers the best hope of finding a cure for Alzheimer's disease and other dementias through its annual peer-reviewed funding competition provided through the Azheimer Society of Canada. Dr. Glazner is a fitting recipient of this award: with his exciting discoveries and theories, his research is definitely moving in the direction of finding a cure.

The current focus of Dr. Glazner's research is the recently discovered connection between Alzheimer's disease and diabetes. "People with type 2 diabetes have two to three times the risk of getting Alzheimer's disease," he explains. "In type 2 diabetes, the body's insulin receptors in all parts of the body, including in the brain, become insensitive, and therefore sugar in the blood is not dealt with. In response, the body produces more and more insulin until the system crashes and insulin production stops altogether."

In people with Alzheimer's disease, the insulin receptors in the brain, but not in other parts of the body, act as though they are diabetic. This has lead researchers to further investigate insulin in the brain to see if there is some connection to Alzheimer's disease.

In the course of this work, Dr. Glazner made an important discovery: the insulin receptors in the brain are the same receptors used by a protein called Amyloid Precursor Protein (APP). Like insulin in the brain, APP is known as a trophic protein, which is responsible for brain health, but in people with Alzheimer's disease, this protein is jeopardized because of the presence of a toxic, sticky protein called Amyloid Beta (Aβ). The presence of Aβ in the brain is associated with the production of APP, but it is also known that the more APP in the brain, the less chance there is of Aβ overproducing and causing problems.

This knowledge gave Dr. Glazner the idea for his current research: flood the brain with APP by injecting it using a person's own stem cells as the carrier; with APP circulating widely, the insulin-APP receptors may become sensitive again and reduce the amount of damaging Aβ from being produced.

The ASRP funding is a two-year grant that will help Dr. Glazner and his team to continue their ongoing research into Alzheimer's disease. If successful, this particular project will be the basis for the development of a treatment for the disease, bringing us one step closer to the goal of a cure.

About the Alzheimer Society Research Program

The ASRP is supported by Alzheimer Societies across Canada and their generous donors. It funds emerging and established investigators working in the biomedical and quality-of-life fields. The program was established in 1989 and has, to date, invested over $43 million in research. This research is needed to keep pace with the increasing prevalence and impact of dementia. Currently, 747,000 Canadians are living with Alzheimer's disease and other dementias, and by 2031, that number will reach 1.4 million.