

# MEDIA RELEASE

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For Immediate Release

## Molecular Zip Codes and a New Drug Target for Huntington Disease

(Kitchener, ON, August 21, 2007) Researchers at McMaster University have first insight into how Huntington disease is triggered, giving the Huntington disease (HD) research community a new drug target for a treatment or cure for the disease. The research was published online today in the in the British Journal *Human Molecular Genetics*.

“It represents another important research milestone and moves us closer to finding effective treatment for this disorder“ says Don Lamont, CEO & Executive Director of the Huntington Society of Canada (HSC) - Canada’s only organization focussed on research, education and support in the HD field.

“Our families live on a ‘tightrope’ waiting for an effective treatment or a cure for HD” says Lamont. “The discovery provides hope for the Huntington community - most of all, hope that their children will not have to suffer the devastation of this inherited disease.” Huntington disease (HD) is a progressive hereditary brain disorder with devastating effects on both mind and body, resulting in death.

Ray Truant, a professor in the Department of Biochemistry and Biomedical Sciences, and his PhD student, Randy Singh Atwal, have discovered a small protein sequence in the huntingtin protein that allows it to locate the part of the cell critical for quality control, and proper folding of proteins, a finding that is seen to be very important for other neurodegenerative diseases such as Parkinson’s and Alzheimer’s diseases. It appears that huntingtin is critical for a brain cell’s response to stress, and moves from the endoplasmic reticulum to the nucleus, the control centre of the cell. When mutant huntingtin is expressed however, it enters the nucleus as it should in response to stress, but it cannot exit properly, piling up in the nucleus and leading to brain cell death in HD.

Atwal additionally found that huntingtin can be sent to the nucleus by enzymes called kinases. Truant and Atwal’s work indicates that if mutant huntingtin is prevented from entering the nucleus, it cannot kill a brain cell. This means that a kinase inhibitor drug may be effective for HD. Kinase inhibitors form the largest number of successful new generation drugs that are coming to market for a plethora of diseases including stroke, arthritis and cancer.

“What is important to HD research is that in the learning of the basic cell biology of this protein, we have also uncovered a new drug target for Huntington’s disease”, says Atwal.

“This discovery reflects Dr. Truant’s growing contribution to the international campaign to create a world free from Huntington disease,” says Don Lamont. The Huntington Society of Canada (HSC) is honoured to have a long-term association with Dr. Truant. He currently serves on the HSC Research Council, and is nominated to become Chair of the council.

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We applaud Dr. Truant's relentless search for a cure, and this discovery adds another milestone of success in the history of Huntington's research in Canada. It is a testament to the value of philanthropic investments in the worldwide search for a cure for HD.

While families wait for an effective treatment or cure, philanthropic giving also enables the Huntington Society of Canada to strengthen and support generations of families as they manage the progressive losses with each stage of the disease.

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Huntington disease (HD) is a hereditary brain disorder with devastating effects on both mind and body. HD affects 1 in 10,000 Canadians but touches the life of one in every 1,000, and is a disease of families - every child of a person with HD has a 50% risk of inheriting this deadly disease. Huntington disease is fatal; as yet, there is no treatment or cure.

The Huntington Society of Canada, a registered charity, is a national network of volunteers and professionals working together to find new treatments and, ultimately, a cure for Huntington disease; and to improve the quality of life of individuals with Huntington disease and their families.

**For further information please contact:**

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