Self-propagating protein aggregates in Alzheimer's disease

Principal Investigators

Watts, Joel C

Institution

University of Toronto

Contact information of lead PI
Country

Canada

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Self-propagating protein aggregates in Alzheimer's disease

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Research Abstract

Alzheimer's disease is a devastating disease of the brain. Currently, there are no cures or treatments for Alzheimer's disease. With an ageing population, the costs associated with caring for Alzheimer's disease patients are predicted to skyrocket and will constitute an enormous burden to our healthcare system. A recent breakthrough has revealed that the proteins that cause Alzheimer's disease share many similarities with prions, which cause brain diseases such as "mad cow disease." Like prions, the primary protein involved in Alzheimer's disease changes its shape, clumps together, and gains the ability to spread from cell-to-cell in the brain, allowing the disease to progress and eventually resulting in death of brain cells. Using genetically engineered mice that mimic aspects of Alzheimer's disease in conjunction with powerful

biochemical tools, we will determine which specific protein species are responsible for the spread of Alzheimer's disease throughout the brain. This research represents a crucial step in the quest to develop therapies for Alzheimer's disease and related brain diseases.

Further information available at:

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