Cystamine and analogues for the treatment of Parkinson's disease

Markets
Neurodegenerative disorders therapeutics

Unmet need(s)
Disease-modifying drugs for halting and/or reversing neurodegenerative processes

Solutions
Analogues of cystamine

Description
Cystamine, a molecule with anti-inflammatory and anti-apoptotic properties, is a promising compound to halt or reverse the neurodegenerative processes endured by people suffering of Parkinson's disease. Cystamine has been reported to inhibit transglutaminase, an enzyme that contributes to the formation of insoluble protein aggregates observed in the brains of patients with Alzheimer's, Huntington’s and Parkinson's disease.

Cystamine (and ultimately its metabolite cysteamine), a compound that can cross the blood-brain-barrier, 1° is neuroprotective in toxin-induced animal models of the disease, 2° can prevent cell death in part by increasing levels of brain derived neurotrophic factor (BDNF), and 3° has shown disease-modifying properties in relevant models of Parkinson's disease.

Strengths
Cystamine or more potent analogues could provide a breakthrough disease-modifying therapeutic option for Parkinson's disease

Opportunity
SOVAR and Université Laval seek a partner for co-development or commercialization of this technology

Intellectual property


Gibrat C et al. (2010). Cystamine prevents MPTP-induced toxicity in young adult mice via the activation of the brain-derived neurotrophic factor. Prog Neuro-Psychopharmacol Biol Psychiatry 34: 193-203.
