

A Stewardship report prepared for Pedaling for Parkinson's

Unblocking dopamine in the brain

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Pedaling for Parkinson's New Investigator Award -
\$89,340 (2 years)
Area of Research: Causes



Scientific Title: Identification and in vivo characterization of trace amine receptor antagonists for treatment of PD

Summary of findings

Dr. Salahpour and his team were able to identify and characterize novel drugs affecting TAAR1 protein. TAAR1 protein is an important regulator of dopamine action in the brain and some of the compounds that they have identified could lead to identification of novel drugs that could enhance the effects of L-dopa, which is the pharmacotherapy of choice for PD treatment. Enhancement of L-dopa effects could result in reduced dosage of this drug. This can be very beneficial since long term treatment with L-dopa results in undesired dyskinesias. Therefore reducing the dose might delay the onset of such adverse reactions.

Impact

The single most important observation is that one of the compounds identified increases dopamine transmission and action in animals. Dr. Salahpour and team are now investigating how exactly this is happening and whether they can further improve the compound. And to have a compound that increases dopamine activity in animals is, from their point of view, an important discovery.

Future direction

As a result of these findings, Dr. Salahpour has been successful in securing a three year (2014-2017) research grant from the Canadian Institutes for Health Research (CIHR) in the amount of \$426,151 to continue this work.

Parkinson Canada's Research Program funds research into the cure, cause, improved treatment and/or understanding of Parkinson's disease and related disorders including: Multiple System Atrophy (MSA), Progressive Supranuclear Palsy (PSP), other Parkinson's conditions and the impact these diseases have on society.