Transcriptome profiling in Parkinson's leukocytes: from early diagnostics to neuroimmune therapeutic prospects

By soreq
Created 1/3/2017
By soreq January 3, 2017

Abstract:
Parkinson's disease (PD) involves motor symptoms reflecting the progressive degeneration of dopaminergic neurons in the substantia nigra. However, diagnosis is only enabled late in the disease, limiting treatment to palliative assistance. Here, we review recently generated transcriptional profiling datasets from blood and brain RNA of human PD cohorts and animal models that may offer unprecedented progress in PD research. Specifically, advanced analysis techniques demonstrated functionally interrelated underlying impairments of RNA metabolism and neuroimmune signalling processes. Identifying novel biomarkers in serum and nucleated blood cells, including protein networks and non-coding RNAs can drive discovery of the molecular mechanisms involved and reveal new targets for therapeutic intervention, posing a dual diagnosis/treatment opportunity for limiting the exacerbation of neuroinflammatory events in PD.

Journal:
Curr Opin Pharmacol

Volume:
26

Pagination:
102-9

Date Published:
Feb
It is now widely accepted that deciphering the enigma of the brain is the most challenging intellectual endeavor of the 21st century, "The Century of the Brain" - Join our quest and become a friend of ELSC.

Our Int'l Ph.D. program provides outstanding students with top-notch courses in computational neuroscience.

The Jerusalem Brain Sciences Building will provide a state-of-the-art research and teaching facility for the Edmond and Lily Safra Center for Brain Sciences.

Get into our media channel and investigate ELSC's latest videos: seminars, public lectures, courses and video articles.