Title: SLEEP DISORDER AND ALTERED LOCOMOTOR ACTIVITY AS BIOMARKERS OF THE PARKINSON'S DISEASE CHOLINOPATHY IN RAT

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SLEEP DISORDER AND ALTERED LOCOMOTOR ACTIVITY AS BIOMARKERS OF THE PARKINSON'S DISEASE CHOLINOPATHY IN RAT

Running title: Biomarkers of Parkinson's disease cholinopathy in rat

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Highlights

- Hippocampal sleep disorder is the first and long-lasting hallmark of PD cholinopathy.
- High voltage sleep spindle dynamics during REM sleep reflects PD cholinopathy.
- Hypokinesia reflects impaired cholinergic impact in motor control regulatory network.
- Amphetamine induces hyperactivity in the hypokinetic rats with PD cholinopathy.
- Putamen c-Fos activity reflects re-organization of motor control in PD cholinopathy.

Abstract

In order to find out the possible earliest biomarkers of Parkinson's disease (PD) cholinopathy, we followed the impact of bilateral pedunculopontine tegmental nucleus (PPT)