

Joint event on  
8<sup>th</sup> International Conference on  
**NEUROLOGICAL DISORDERS,  
CENTRAL NERVOUS SYSTEM AND STROKE**  
&  
International Conference on  
**NEUROLOGY AND NEUROSURGERY**

December 04-05, Dubai, UAE

**The role of malfunctional mitochondria in the development of Parkinson's disease****Hari Pai**

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**Statement of the Problem:** Parkinson's' Disease is the second most common neurodegenerative disorder in the world. It is thought to occur due to degradation of dopaminergic neurons within the substantia nigra pars compacta of the basal ganglia. This paper elucidates on a theory that one potential reason for Parkinson's developing is due to problems with mitochondria.

**Methodology & Theoretical Orientation:** A literature review of 2 web databases (PubMed, Web of Science) yielded the papers which were used in this review.


**Findings:** The problems with mitochondria are thought to come by a variety of factors. Factors offered in this paper include the mutation or absence of parkin or PINK1 genes. This alteration in parkin and PINK1 leads to changes in the mitochondria which are present in the human body. These

can lead to compromised complex activity and increased oxidative stress. Increased oxidative stress (via free radicals or reactive oxygen species) can lead to deletion of mtDNA (with mitochondria having its own genome). The deletion of mtDNA is a problem as it is known to be one of the factors leading to Parkinson's.

**Biography**

Hari Pai has completed his MSc in Clinical Neuroscience from King's College London and is currently under taking an MBBS in Medicine at that same university. He has 2 publications and has presented multiple posters at international conferences. He is the LSNeuron Rep for his universities Neuroscience society and also the Vice-President of the Clinical Academic Research Society at King's.

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