



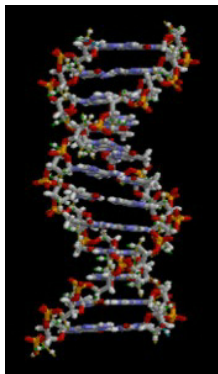
PARKINSON'S DISEASE NEWS

<http://www.viartis.net/parkinsons.disease/news.htm>

26th September 2016 - New research

NEWLY DISCOVERED GENETIC CAUSE OF PARKINSON'S DISEASE

A new genetic cause of Parkinson's Disease has been discovered called TMEM230. A small proportion of cases of Parkinson's Disease have a genetic cause. Most genetic causes make Parkinson's Disease more likely rather than inevitable. Having relatives with Parkinson's Disease does not mean that it has been inherited. People can have the same medical disorder due to similar environmental factors that have led to them having Parkinson's Disease.



The newly discovered genetic disorder, TMEM230, is located on the short arm of chromosome 20 (20pter-p12). Genetic disorders normally occur due to inheritance, either from both parents (autosomal recessive), or from one parent (autosomal dominant). TMEM230 is autosomal dominant (from one parent). The function of TMEM230 is to produce vesicles involved in packaging the neurotransmitter dopamine in the dopaminergic neurons and then secreting it. It is insufficient dopamine that causes Parkinson's Disease. The clinical features of TMEM230 are typical of Parkinson's Disease. TMEM230 was found in people with Parkinson's Disease from both North America and Asia, including China.

There are now 39 known genetic causes of Parkinson's Disease. The most prominent of these are given a PARK number (from PARK 1 to PARK 23), with some of the well known being : PARK 1 (Alpha-Synuclein), PARK 2 (Parkin), PARK 3 (Lewy body), PARK 5 (UCHL1), PARK 6 (Pink 1), PARK 7 (DJ-1), and PARK 8 (LRRK2). Of the more than a dozen genetic causes without a PARK number include Tyrosine Hydroxylase, and Dopa decarboxylase, which can cause Parkinson's Disease from birth.

Reference : Nature Genetics [2016] 48 (7) : 733-739 (H.X.Deng, Y.Shi, Y.Yang, K.B. Ahmeti, N.Miller, C.Huang, L.Cheng, H.Zhai, S.Deng, K.Nuytemans, N.J.Corbett, M.J.Kim, H.Deng, B.Tang, Z.Yang, Y.Xu, P.Chan, B.Huang, X.P.Gao, Z.Song, et al)

Complete abstract : <http://www.ncbi.nlm.nih.gov/pubmed/27270108>

<http://www.viartis.net/parkinsons.disease/news/160926.pdf>

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