Cellular Mosaicism as a cause for Parkinson’s disease.

https://neurodegenerationresearch.eu/survey/cellular-mosaicism-as-a-cause-for-parkinsons-disease/

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Cellular Mosaicism as a cause for Parkinson's disease.

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Research Abstract
Mutations that occur post-zygotically are called somatic mutations. This kind of mutations leads to genetic mosaicism. Since these mutations are likely to mainly occur during embryogenesis, they would be missed in ectoderm-derived neural cells, when genotyping is conducted in mesoderm-derived lymphocytes. Actually, it is estimated that each gene is likely to mutate several times post-zygotically. Interestingly, somatic mutations already previously have been associated to neurodegenerative disorders, it was even suggested that differences in Parkinson’s Disease phenotype in monozygotic twins with LRRK2 mutations, are caused by additional somatic mutations. The process of somatic mutation might lead to the acquisition of certain disease causing mutations only in a subset of neural cells. However, if these mutations

lead to protein aggregate formation and spreading to neighbouring cells, this might be sufficient to cause PD. In this project we will use induced pluripotent stem cell based in vitro and in vivo disease modelling to address whether cellular mosaicism can be the basis for protein aggregate spreading and Parkinson?s disease phenotypes.

Further information available at:

https://www.fnr.lu/projects/cellular-mosaicism-as-a-cause-for-parkinsons-disease-2/

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