4DPD-Omics

Spatiotemporal transcriptome and proteome analysis of α-Synuclein pathology in Parkinson's dis-ease: Identification of cell type-specific vulnerability and tolerance mechanisms

Parkinson's is a growing neurological condition which markedly impacts the quality of life of people it affects, with major societal and economic impact. Current therapies treat clinical symptoms only and have not majorly advanced in the last 50+ years.

The development of effective therapies which slow or prevent Parkinson's is therefore an unmet societal need. 4DPD-Omics is a 3-year, lab-based project that aims to address this unmet need by

(i) mapping the molecular changes that occur in different cell types in the brain as the disease develops,
(ii) unravelling these changes to identify key molecules or cell types that regulate the disease,
(iii) classifying samples according to these observed changes. This will be achieved using brain samples from animals and post mortem humans.

We envisage that profiling of Parkinson's development over time and identification of key regulators is highly attractive for the future development of targeted treatments/biomarkers and will be of great interest to people affected by Parkinson's. The classification of Parkinson's phenotypes will generate a broader awareness of the spectrum of Parkinson's, increasing societal impact. Creation of 4D representations of diseased cell profiles in the human brain will provide teaching resources for medical doctors and students of basic neuroscience, as well as the interest-ed lay audience.

Total Funding : 1.86 M€

Duration : 3 years

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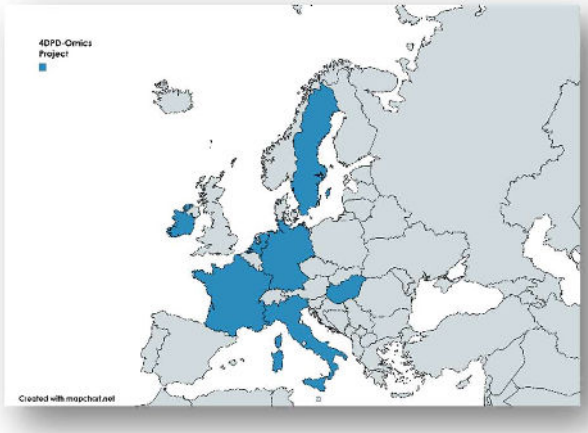

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