NEURONODE

JPND research
EU Joint Programme – Neurodegenerative Disease Research

Systems Analysis of Key Nodes in Neurodegenerative Diseases

Neurodegenerative diseases (ND) are characterised by the loss of precise neuronal populations, which at the molecular level can be triggered by alterations in protein homeostasis, defined as changes in protein synthesis, folding and trafficking. Our hypothesis is that although each ND involves distinct culprit proteins and manifests itself in different ways in different brain cells, there exist key common regulatory nodes driving changes in protein homeostasis. Our project brings together a multi-disciplinary team, including collaborative partners at Montreal Neurological Institute and Hospital who will provide us with unique access to neurodegenerative disease patients' stem cells. Our aim is to achieve a systems-level understanding of protein homeostasis regulation across several neurological diseases where altered protein homeostasis is implicated to understand where the similarities and differences occur. Such a global comparison of these diseases will identify common regulatory points for future therapeutic intervention as well as provide novel biomarkers for early-onset detection.

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Duration: 3 years

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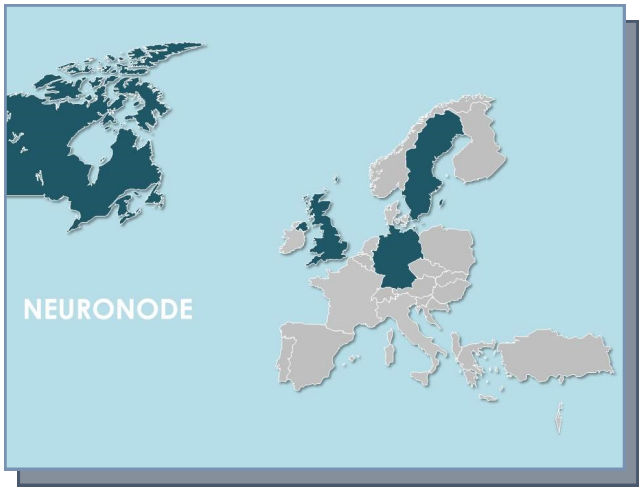

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