

Critical hypothalamic circuitries controlling depression and anxiety in Huntington disease.

<https://neurodegenerationresearch.eu/survey/critical-hypothalamic-circuitries-controlling-depression-and-anxiety-in-huntington-disease/>

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Country

Sweden

Title of project or programme

Critical hypothalamic circuitries controlling depression and anxiety in Huntington disease.

Source of funding information

Swedish Research Council

Total sum awarded (Euro)

€ 707,291

Start date of award

01-01-2014

Total duration of award in years

5

The project/programme is most relevant to:

Huntington's disease

Keywords

Research Abstract

Huntington disease (HD) is a fatal neuropsychiatric disorder without a cure. It is caused by an expanded CAG repeat in the huntingtin gene but the pathogenic mechanisms are still not known. It is clinically characterized by early psychiatric symptoms such as depression and anxiety followed by chorea and dementia. Recent studies indicate important hypothalamic changes in HD. This proposal puts forward the hypothesis that the pathological effects of mutant

huntingtin in the hypothalamus cause the combination of psychiatric symptoms and metabolic dysfunction in HD. Unraveling these early changes may open up new targets for therapeutic interventions. Hence, this translational project is focused on identifying the underlying cellular mechanisms for depression and anxiety in HD. The research program defines four project lines directed towards this goal: (1) Establishment of the cellular and molecular basis for depression and anxiety in a transgenic mouse model of HD; (2) Proof-of-principle studies using cross-breeding strategies and viral vector mediated approaches to assess the effects of mutant huntingtin in specific hypothalamic circuitries; (3) Development of mouse models with selective hypothalamic expression of mutant huntingtin for the establishment of structure to function relationships that can explain the combined psychiatric-like and metabolic profile in HD; and (4) Clinical studies using brain tissue and cerebrospinal fluid from unique cohorts of HD patients.

Lay Summary

Further information available at:

Types:

Investments > €500k

Member States:

Sweden

Diseases:

Huntington's disease

Years:

2016

Database Categories:

N/A

Database Tags:

N/A