

# Studies on the senescent human noradrenergic system with the novel iDISCO 3D immuno-imaging method with special attention on Alzheimer's disease

<https://neurodegenerationresearch.eu/survey/studies-on-the-senescent-human-noradrenergic-system-with-the-novel-idisco-3d-immuno-imaging-method-with-special-attention-on-alzheimer%c2%92s-disease/>

## Principal Investigators

Csaba Adori

## Institution

Karolinska Institute

## Contact information of lead PI

### Country

Sweden

## Title of project or programme

Studies on the senescent human noradrenergic system with the novel iDISCO 3D immuno-imaging method with special attention on Alzheimer's disease

## Source of funding information

The Swedish Brain Foundation

## Total sum awarded (Euro)

€ 108,814

## Start date of award

01/07/2015

## Total duration of award in years

2.5

## Keywords

### Research Abstract

The aim of this application is to (i) explore the neurochemical features and innervation of subdivisions of the human LC; (ii) examine the morphology of human noradrenergic axon arborization with special attention to the temporal and spatial distribution of the aberrant

noradrenergic structures we described recently; (iii) explore the microenvironment of these fiber aberrations in the neocortex; (iv) 4 explore the genome-wide mRNA expression-profile of Sstr2-/- mice in the neocortex or LC neurons to determine genotype-specific expression patterns that could explain the selective noradrenergic axonal degeneration.

The main goal of these planned studies is (i) to adjust a high power immune-imaging technique for the human brain that could be useful to obtain significant new information applicable in further therapeutical interventions based on neuromodulation; (ii) to determine neurochemical targets that could explain the intrinsic selectivity of degeneration among human LC neurons during normal senescence and pathological conditions of early and advanced stages of Alzheimer's disease and (iii) to determine (local) factors in the human neocortex that facilitate/inhibit the degeneration or potential sprouting of noradrenergic fibers.

**Further information available at:**

**Types:**

Investments < €500k

**Member States:**

Sweden

**Diseases:**

N/A

**Years:**

2016

**Database Categories:**

N/A

**Database Tags:**

N/A