

# Tau in Central Nervous System: neurotoxic and autoimmune component

<https://neurodegenerationresearch.eu/survey/tau-in-central-nervous-system-neurotoxic-and-autoimmune-component/>

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Czech Republic

## Title of project or programme

Tau in Central Nervous System: neurotoxic and autoimmune component

## Source of funding information

Czech Science Foundation

## Total sum awarded (Euro)

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01/02/2013

## Total duration of award in years

4

## Keywords

### Research Abstract

Tau, natively soluble protein with minimal secondary structure can undergo pathological alteration, leading to tauopathies. The most prominent secondary tauopathy is Alzheimer disease (AD). It is assumed now that altered soluble tau species are the main vehicles of tau pathology. We will inject rats intracerebrally with various tau variants (full-length, truncated, phosphorylated, oligomerized) and examine their effects on spatial learning and memory and on biochemical characteristics of cholinergic and glutamatergic neurotransmitter systems and identify forms critical for pathogenic influence. We will measure and compare the content of various forms of tau in cerebrospinal fluid of demented subjects and matched healthy controls to

identify forms present specifically in diseased subjects. As altered tau forms could elicit antigenic response, which can further complicate pathology, we will measure and compare presence of antibodies against specific tau variants in bodily fluids of subjects with AD and matched healthy controls, with possible outcome of improved diagnosis of AD.

**Further information available at:**

**Types:**

Investments < €500k

**Member States:**

Czech Republic

**Diseases:**

N/A

**Years:**

2016

**Database Categories:**

N/A

**Database Tags:**

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