

07/2019

## ★ Neurofilament light protein level (Wang, 2019)

Zuo-Teng Wang, et al.

Aging

Dementia Brain

### STUDY SUMMARY

Genetic variants in the CD1A gene are associated with an increase of the NFL protein level in the blood and a higher risk of Alzheimer's disease.

### STUDY DESCRIPTION


Alzheimer's disease causes a gradual decline in memory and thinking abilities by damaging the nerve cells in the brain. Blood level of neurofilament light protein (NFL) is often used to test for the presence or progress of Alzheimer's disease and other neurodegenerative disorders. The genetic contribution leading to increased NFL levels in the blood is not well understood. This study examined 545 non-Hispanic white participants in order to find genetic variants linked to increased blood NFL levels and therefore, to an increased risk of Alzheimer's disease. The identified genetic variants were located in the CD1A gene - a gene that plays a role in the immune system.

### DID YOU KNOW?

Controlling high blood pressure or high cholesterol levels may reduce your risk of Alzheimer's disease. In addition, being physically and socially active can help prevent this disease.

### YOUR DETAILED RESULTS

The variants highlighted in green have **positive effect sizes** and increase your genetic predisposition to higher blood NFL levels. The variants highlighted in blue have **negative effects sizes** and decrease your genetic predisposition to higher blood NFL levels. Variants that are not highlighted are not found in your genome and do not affect your genetic predisposition to higher blood NFL levels. However, please note that genetic predispositions do not account for important non-genetic factors like lifestyle. Furthermore, the genetics of most traits has not been fully understood yet and many associations between traits and genetic variants remain unknown. For additional explanations, click on the column titles in the table below and visit our [Nebula Library tutorial](#).

VARIANT <sup>ⓘ</sup>	YOUR GENOTYPE <sup>ⓘ</sup>	EFFECT SIZE <sup>ⓘ</sup>	VARIANT FREQUENCY <sup>ⓘ</sup>	SIGNIFICANCE <sup>ⓘ</sup>
rs16840041_A 	G / G	0.04 (-)	6%	$4.60 \times 10^{-8}$