



02.05.2020.

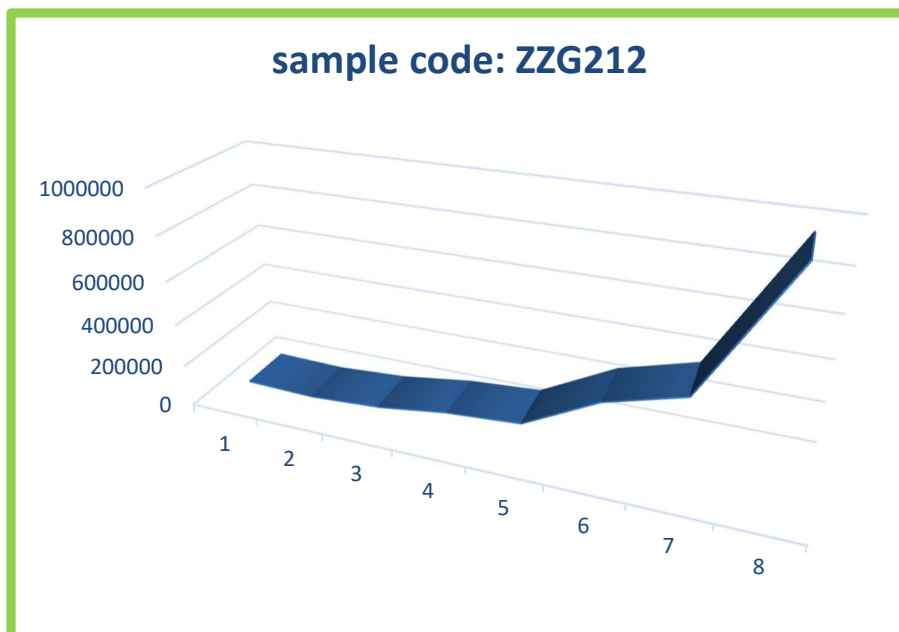
## RESULTS FOR SAMPLE:

**ZZG212**

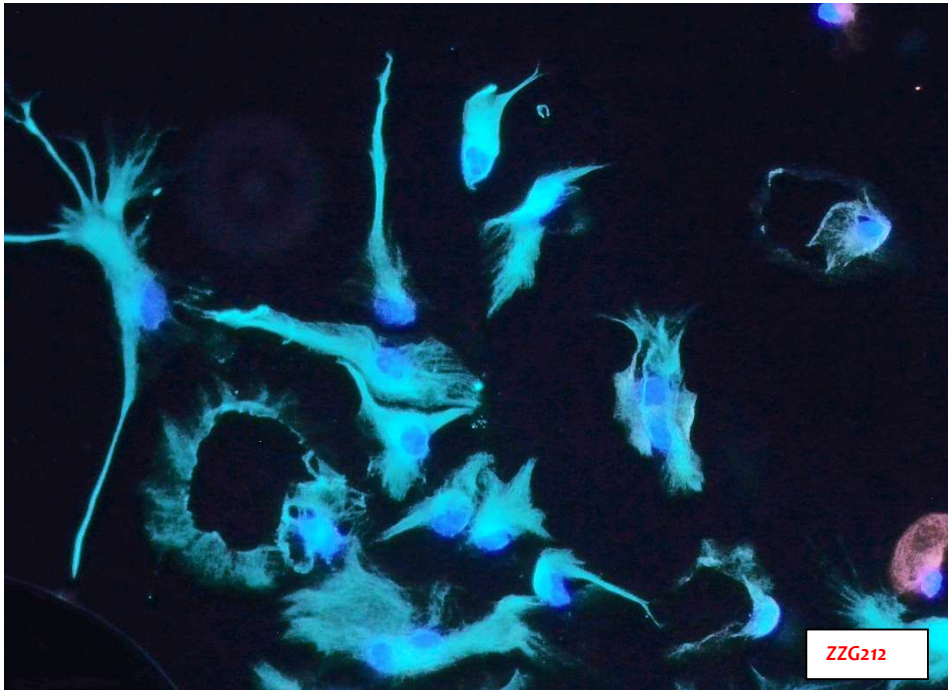
Female, 48

The patient complains of insomnia that has been causing discomfort for more than a year, a general weakness, occasional tingling in the hands and a feeling of sudden loss of balance. The neurological report (Clinical Hospital from April 2020) does not report any concrete findings.

-  **Sample received:** 14.03.2020.
-  **Cell proliferation test:** 22.03.2020., passed



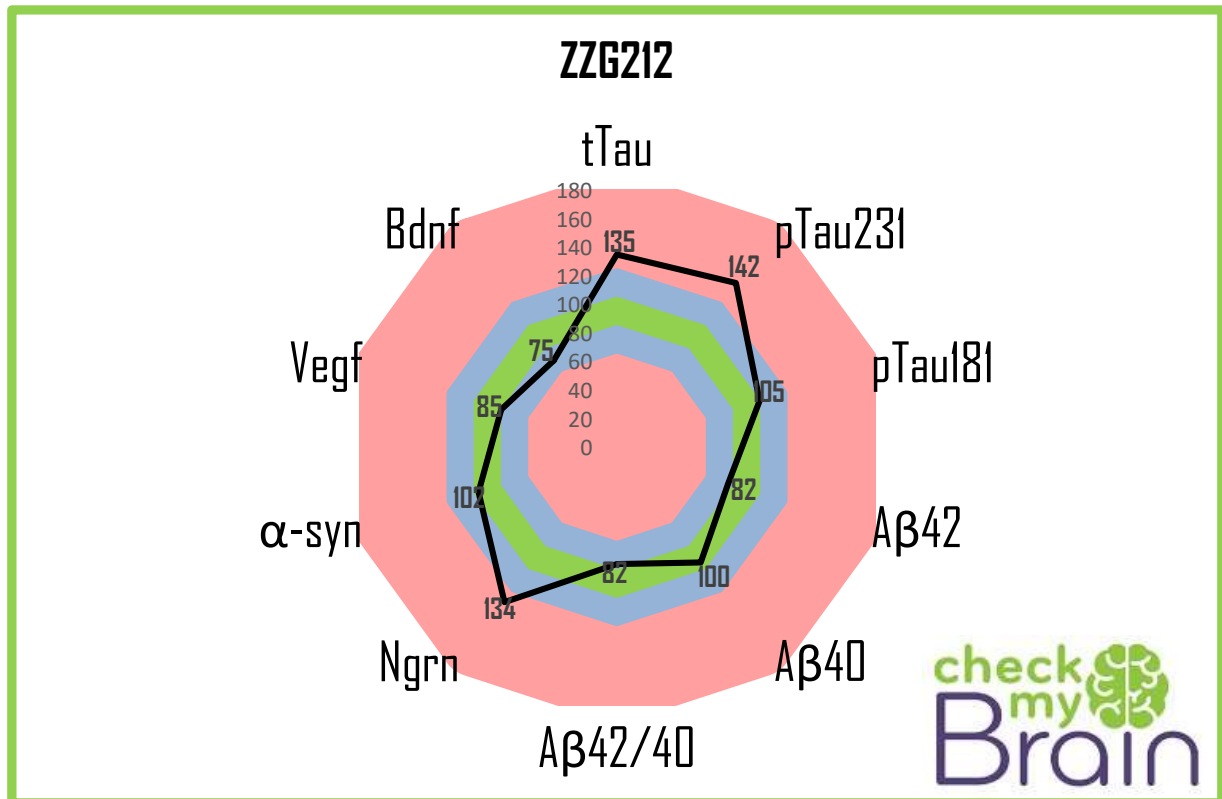
🌿 **Cellular differentiation test** 15.04.2020., passed



The initial stage of neuronal differentiation of the sample ZZG212

🌿 **Protein purity test:** 20.04.2020., doublechecked, passed

## RESULTS OF THE FIRST SET OF BIOMARKERS (CMB<sub>1</sub>)



The battery of biomarkers for neurodegenerative changes present in the most common pathological conditions of this category, such as Alzheimer's disease, frontotemporal dementia and dementia of Lewy bodies, revealed the following:

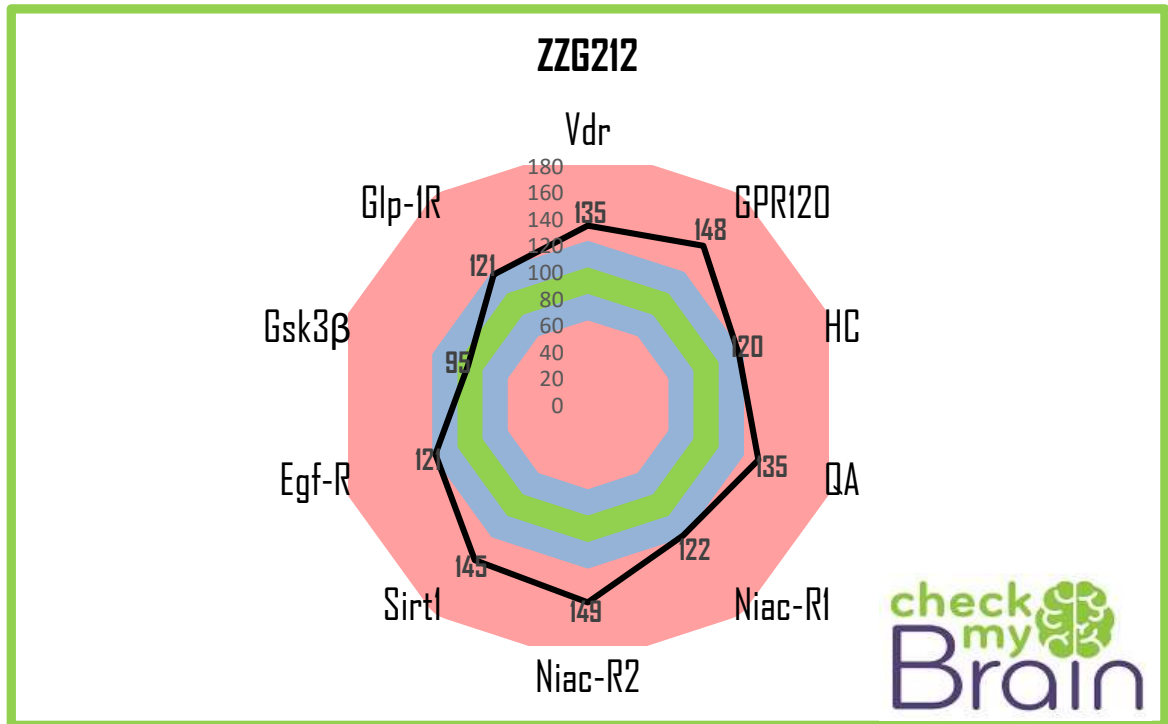
Elevated values of total Tau proteins and variants of Tau 231 were found. At the same time, the value of Tau 181 is normal, while the ratio of amyloid 42 and 40 is at the lower limit of normal values. This combination of findings, and especially taking into account the age of the person, indicates a prolonged period in which the damaged function of the nervous tissue occurred. High values typical of acute or subacute damage are accompanied by high total values of Tau protein, which indicates the presence of a pathological event. Variant 181, which is more typical of Alzheimer's and similar dementias, is of normal values, suggesting another mechanism that led to such an unfavorable finding.

Elevated values of Neurogranin confirm the above and, with a reduced value of Bdnf, it is concluded that a person suffers from a subacute / chronic accumulation of pathological proteins that negatively affect function of nerve cells.

Decreased α-syn values exclude the presence of pathological accumulations associated with neurodegenerations by type of Parkinson's disease or frontotemporal dementia.

**In conclusion**, this finding indicates a pathological accumulation of proteins that has already entered the sub-chronic phase, which causes to minor to medium dysfunction of cells of the nervous system.

## RESULTS OF THE PERSONALIZED THERAPY TEST (CMB<sub>2</sub>)



Analysis of the constitutive values of the receptors and the levels of molecules that allow precise dosing adapted to the needs of the cells of your body revealed the following:

Significantly elevated levels of vitamin D receptor (Vdr), omega fatty acid (GPR120), niacin receptor type 2 (Niac-R<sub>2</sub>) and sirtulin receptors were found. Altogether, this suggests a combination of constitutively increased needs, larger than those that the patient receives through diet. Such finding is most commonly seen in acutely increased needs due to some external cause (eg acute illness, stress).

Elevated quinoline acid (QA) value suggests pathological protein accumulations in nervous system cells that have been going on for some time.

All other values are within physiological, and do not require special intervention.

**In conclusion**, in accordance with the measured status of the receptors suggesting an increased need for B complex vitamins and vitamin D, and an increased need for fatty acids, and in accordance with the results of CMB1, where significant subacute / chronic changes typical for neurodegeneration were found, we advise:

- 🌿 Vitamin D, 2000 IU daily
- 🌿 Omega-3 fatty acids, EPA and DHA balanced, 2500 mg daily
- 🌿 B vitamins, with niacin - 100 mg daily
- 🌿 CoenzimQ10, 200 mg daily
- 🌿 Alpha-lipoic acid, 250 mg daily
- 🌿 Acetyl L-Carnitine 250 mg daily
- 🌿 Resveratrol, 400 mg daily

Control for 6 months.

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