

If you have 300 friends on facebook, statistically 3 of them suffer or will suffer from schizophrenia. It is a serious psychiatric disorder which disturbs mental, behavioral and emotional processes. In spite of such occurrence, scientists still struggle to define what causes schizophrenia. One of the most popular views lately is that schizophrenia results from errors in many various genes.

Recently, more and more attention is paid to the fact that mutations which cause a particular disease occur not in a whole body, but for example only in a certain tissue. Such a state, when cells both with and without mutation are present in an organism, is called mosaicism, and there are strong rationales that this might be also a case in some people with schizophrenia.

Thus, in a search for new mutations underlying schizophrenia we plan to investigate all coding fragments (so called exome) in DNA from prefrontal cortex, a part of brain highly involved in the disorder, and compare it with DNA from blood. According to our hypothesis, we expect to find deleterious mutations in brain DNA which are not present in blood DNA.

Each discovered mutation will help to get to know this disease better. It is very important, because understanding the mechanism of schizophrenia is the key to develop accurate test as well as new drugs in the future.