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GDNF UpReg

Glial Cell Line-Derived Neurotrophic Factor (GDNF) modulating schizophrenia: a promising target for innovative treatment

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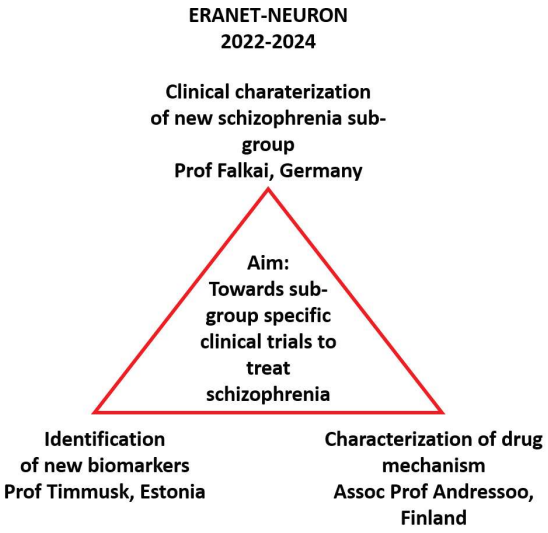

Schizophrenia affects about 1% of the population and often requires lifelong treatment. However, currently available treatments can alleviate only a fraction of the symptoms, often at the cost of severe side-effects. It is increasingly clear that "one-size matches all" treatment does not exist, as patients respond differently to existing treatments. Thus, highlighting a need for understanding the mechanisms that underlie the differences between patients groups to enable design of individual more personalized treatments.

The Andressoo team has very recently made substantial progress in that direction by studying how a protein called glial cell-line derived neurotrophic factor (GDNF) can influence the disease. By implementing the uncovered mechanism, Andressoo team was able to create an animal model of schizophrenia, which, in turn, allowed identification of a drug that can reverse the disease in an animal model. This drug is already in clinical use, but is used for different purpose. Importantly, reprofiling of an existing drug for the treatment of another disease is relatively easy, fast and cost-effective, when compared to the development of new drugs. However, to proceed to clinical trials, better patient characterization, stratification and understanding on the drug's action is required.

This project brings together clinical experts Dr Peter Falkai (GE), a biotechnology company to create better tests for analysing patient sub-groups (Protobios/ Dr T. Timmusk, EST) and pre-clinical analysis expert (Dr J.O. Andressoo, FI) to build information needed for designing clinical trials in the near future.