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Precision drugs sought for anxiety disorders

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Researchers in the University of Helsinki, Finland, are striving to find out how cell communication regulating kainate receptors contribute to the susceptibility towards anxiety disorders. The intention is to also develop drugs that would be effective against prolonged anxiety.

Up to 5% of the Finnish population suffers from anxiety disorders, but little is known about the cellular, molecular and neural mechanisms that cause and maintain them.

A newly-launched multidisciplinary project at the University of Helsinki studies the role kainate receptors play in susceptibility to anxiety. Located on the surface of certain nerve cells, kainate receptors regulate cell-to-cell communication and the brain's processing power.

Genetic factors revealed

The researchers want to determine whether certain hereditary forms of kainate receptors increase susceptibility to anxiety disorders. Another goal is to investigate whether anxiety could be treated by regulating the function of the kainate system.

"A long-term goal is to develop sorely-needed precision drugs for anxiety disorders," explains Project Coordinator Iiris Hovatta from the Department of Biosciences at the University of Helsinki.

Cooperation across disciplines

The research uses methods from genetics, electrophysiology and brain imaging. This enables researchers to combine molecular-level information from the brain with imaging data on the interaction between different brain areas.

Provided by University of Helsinki