

The brains of people with schizophrenia may attempt to heal from the disease

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(Medical Xpress) -- New NeuRA research shows that the brains of people with schizophrenia may attempt to repair damage caused by the disease, in another example of the adult brain's capacity to change and grow.

Prof. Cyndi Shannon Weickert, Dr. Dipesh Joshi and colleagues from Neuroscience Research Australia studied the brains of people with [schizophrenia](#) and focussed on one of the hardest-hit regions, the orbitofrontal cortex, which is the part of the brain involved in regulating emotional and social behaviour.

Most neurons – brain cells that transmit information – are found in tissue near the surface of the brain. However, in the brains of people with

schizophrenia, the team found a high density of neurons in deeper areas.

“For over a decade we’ve known about the high density of neurons in deeper brain tissue in people with schizophrenia. Researchers thought these neurons were simply forgotten by the brain, and somehow didn’t die off like they do during development in healthy people,” says Prof. Shannon Weickert.

“What we now have is evidence that suggests these neurons are derived from the part of the brain that produces new neurons, and that they may be in the process of moving. We can’t be sure where they are moving to, but given their location it is likely they are on their way to the surface of the brain, the area most affected by schizophrenia,” Prof. Shannon Weickert concluded.

How was this study done?

- [Brain](#) tissue from the orbitofrontal cortex from 38 people with schizophrenia and 38 people without the disease were used in this study.
- The density of interstitial neurons in the [white matter](#), and the density of GABAergic neurons in the grey matter were measured.
- An increased density of interstitial white matter neurons in the white matter, and decreased density of GABAergic neurons in the grey matter was found.
- This pattern suggests that the migration of interstitial white matter [neurons](#) towards an area where they are lacking, because of schizophrenia, is a response to the disease.

Provided by Neuroscience Research Australia

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