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# Swiss researchers pinpoint molecule lack in depression

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A Swiss university said Monday that researchers have found that a molecule, which is linked to tissue swelling and cancer, may also be associated with depression, a condition affecting some 121 million people.

A deficiency of the molecule called macrophage migration inhibitory factor (MIF) curbs the generation of new neurons, and thereby triggers anxiety and depression, Lausanne-based technology university EPFL said in a statement.

"These findings underscore MIF as a potentially relevant molecular target for the development of treatments linked to deficits in neurogenesis, as well as to problems related to anxiety, depression, and cognition," said Carmen Sandi, who led the team of researchers.

The team had found a concentration of the molecule in stem cells of the hippocampus -- an area in the brain where memories are formed and where new neurons are produced.

As the generation of new neurons has been linked in previous studies to curbing anxiety, researchers tried manipulating the levels of the molecule to study its impact on neurogenesis.

In the research carried out on rats, they found that a deficiency of the molecule "significantly reduced the production of neurons and increased anxiety."

In addition, it decreased the ability of anti-depressants to bring about the creation of new neurons.

"These findings have led the researchers to conclude that MIF plays an important role in neurogenesis and, in turn, the condition of anxiety and depression," said the university.