

# Happy mice used in depression study

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Canadian scientists are using a breed of permanently "cheerful" mice to research a new treatment for clinical depression.

By breeding mice with an absence of TREK-1 -- a gene that can affect serotonin transmission in the brain -- researchers were able create a depression-resistant strain.

"Depression is a devastating illness, which affects around 10 percent of people at some point in their life," said Dr. Guy Debonnel, a psychiatrist and professor at McGill University in Montreal.

Debonnel, principal author of the new research, notes current medications for clinical depression are ineffective for a third of patients, which is why the development of alternate treatments is so important.

The so-called knock-out mice were created in collaboration with Michel Lazdunski, co-author of the research, in his laboratory at the University of Nice, France.

"These 'knock-out' mice were then tested using separate behavioral, electrophysiological and biochemical measures known to gauge 'depression' in animals," said Debonnel. "The results really surprised us; our 'knock-out' mice acted as if they had been treated with antidepressants for at least three weeks."

The research -- representing the first time depression has been eliminated through genetic alteration -- is detailed in the journal Nature

Neuroscience.

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