

Move over Prozac: New drug offers hope for depression

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The brain chemistry that underlies depression is incompletely understood, but research suggests that aberrant signaling by a chemical called Brain-Derived Neurotrophic Factor through its receptor TrkB, may contribute to anxiety and depression. Here, researchers describe a screen for stable small molecules that could specifically inhibit TrkB action. They identified one they dubbed ANA-12, which had potent behavioral effects when administered to mice that suggest it will have antidepressant and anti-anxiety activity in humans.

An estimated 19 million Americans suffer from depression, and though the symptoms might be recognizable, the [brain chemistry](#) that underlies them is incompletely understood. Research suggests that aberrant signaling by a chemical called [Brain-Derived Neurotrophic Factor](#) (BDNF) through its receptor TrkB, may contribute to [anxiety](#) and [depression](#), and inhibiting this pathway in mice can reduce anxiety and depression-related behaviors. However, translating these findings to clinical studies will require the development of small molecule inhibitors of the BDNF/TrkB pathway that could be used pharmacologically.

In this paper, researchers led by Maxime Cazorla, of Columbia University in New York, and Didier Rognan, of the Université de Strasbourg in France, describe a screen for stable small molecules that could specifically inhibit TrkB action. They identified one they dubbed ANA-12, which had potent behavioral effects when administered to mice that suggest it will have antidepressant and anti-anxiety activity in humans. The researchers are hopeful that this new compound could be

used to develop a new class of psychiatric drugs.

More information: The Lancet study abstract is available at [www.cfenet.ubc.ca/publications ... n-overdose-mortality](http://www.cfenet.ubc.ca/publications...n-overdose-mortality) ,
[www.jci.org/articles/view/4399 ... 6049b2ddb574b08e78c4](http://www.jci.org/articles/view/4399...6049b2ddb574b08e78c4)

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