

## Signaling pathway may explain the body clock's link to mental illness

June 16 2014

Alterations in a cellular signaling pathway called cAMP–CREB may help explain why the body clocks of people with bipolar disease are out of sync, according to a new *European Journal of Neuroscience* study.

Researchers established a novel viral method to make a surprising observation: the amplitude of cAMP–CREB signaling in cells from human skin biopsies predicted the way that the circadian hormone melatonin responds to light in healthy individuals, and it was much higher in cells from bipolar patients.

"Our study suggests that variation in the activity of a very common signaling pathway that is used for many different cellular tasks could help explain long-observed links between depression, light, the hormone melatonin, and <u>circadian rhythms</u>," said co-author Professor Steven Brown.

**More information:** Gaspar, L., van de Werken, M., Johansson, A.-S., Moriggi, E., Owe-Larsson, B., Kocks, J. W. H., Lundkvist, G. B., Gordijn, M. C. M. and Brown, S. A. (2014), Human cellular differences in cAMP - CREB signaling correlate with light-dependent melatonin suppression and bipolar disorder. *European Journal of Neuroscience*. DOI: 10.1111/ejn.12602

Provided by Wiley



Citation: Signaling pathway may explain the body clock's link to mental illness (2014, June 16) retrieved 5 May 2024 from https://medicalxpress.com/news/2014-06-pathway-body-clock-link-mental.html

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.