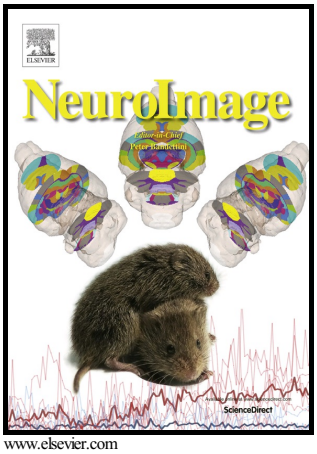

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PII: S1053-8119(17)30190-8
DOI: http://dx.doi.org/10.1016/j.neuroimage.2017.02.080
Reference: YNIMG13865

To appear in: *NeuroImage*

Received date: 22 September 2016
Revised date: 21 February 2017
Accepted date: 26 February 2017

Cite this article as: Ben J. Harrison, Miquel Angel Fullana, Esther Via, Carles Soriano-Mas, Bram Vervliet, Ignacio Martínez-Zalacaín, Jesus Pujol, Christopher G. Davey, Tilo Kircher, Benjamin Straube and Narcís Cardoner, Human ventromedial prefrontal cortex and the positive affective processing of safety signals, *NeuroImage,* http://dx.doi.org/10.1016/j.neuroimage.2017.02.080

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Abstract

Human functional magnetic resonance imaging (fMRI) studies suggest that the ventromedial prefrontal cortex (vmPFC) contributes to the learned discrimination of threat and safety signals, although its precise contribution to these processes remains unclear. One hypothesis is that the vmPFC supports the positive affective processing of safety signals linked to their implicit stress-relieving properties. We set out to test this hypothesis and to examine the specificity of vmPFC responses to safety signal processing versus its high level of 'default mode' activity. Sixty participants completed an fMRI conditioning task that involved the generation of a conditioned threat (CS+) and safety (CS-) signal following the completion of a pre-conditioning