Reviewer’s report

Title: Mitogen-stimulated cell proliferation and cytokine production in major depressive disorder patients

Version: 2 Date: 26 Jul 2018

Reviewer: Pio Conti

Reviewer's report:

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Please In this paper, the authors report that in the depressed patients there is a lower cell proliferations and lower TNF-α produced in lipopolysaccharide (LPS)-stimulated peripheral blood mononuclear cells.

In addition they show a lower IL-2 and IL-10 produced in phytohaemagglutinin (PHA)-stimulated peripheral blood mononuclear cells in depression.

In contrast, higher IL-6, IL-10 secretions were detected in peripheral plasma in depression.

In mice, they found lower splenocyte proliferations, and lower IL-1α production, and higher IL-6 secretions in LPS-stimulated splenocytes.

Reading these results, some considerations come to me and and I ask some questions:

a) Lower TNF in depressed patients may mean that less inflammation occurs. Clarify this.

b) The authors find that IL-2 is discharged, as is IL-10. This must also be clarified since IL-2 is pro-inflammatory and IL-10 is anti-inflammatory.

c) IL-6 which is pro-inflammatory is found to be increased in plasma.

d) In the mouse splenocytes IL-1 levels, a highly inflammatory cytokine is lower.
I now ask: in depression do we have more inflammation or less inflammation? Is this an inflammatory disease or not.

The authors should answer this question.

On these topics, three interesting articles have been published and the authors should read them, incorporate the meaning, briefly report in the discussion and cite in the reference list.

1) Depression and distress in burning mouth syndrome: A case control study.

2) Low-grade chronic inflammation mediated by mast cells in fibromyalgia: role of IL-37.


-It must be considered that stimulation of cells with phytohaemagglutinin or LPS is generic and non-specific. This should be briefly commented by the authors.

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