Reviewer’s report

Title: IL-10+ NK and TGF-β+ NK cells play negative regulatory roles in HIV infection

Version: 0 Date: 08 Feb 2017

Reviewer: Gabriella D'Ettorre

Reviewer's report:

The study is very interesting and focuses on a cell population not yet well explored as NK cells in HIV infection. It's well known that during HIV infection an high modulation of cytokines, such as TGF-beta and IL-10 is observed.

- A limit of this study is the lack of HIV patients on cART with suppressed viremia and could be interesting to evaluate the effect of therapy.

In fact, immune activation is one of the main factors involved in the progression of the disease during HIV infection.

cART reduce but not normalizes immune activation levels. For these reasons a group of HIV patients under cART with suppressed viremia is suggested, to better evaluate the relationship between NK IL-10+ and NK TGF-beta+ cells with parameters like the viremia, CD4+ T cells number and the rate of immune activation, to better characterize the role of these cells and these cytokines on the disease progression;

- To better characterize the functionality of the peripheral NK cells could make useful an Elispot assays after stimulation in vitro. These assays reveal the number of NK cells that are able to produce Granzyme B and/or Perforin after stimulation, indicating that NK cells really has cytolytic capacity;

- In the introduction should be improved the description of the NK cells;

- In Figure 5 the gate are not well defined.
Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

No

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

Yes

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I am able to assess the statistics

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