INTRODUCTION
In recent years, Mesenchymal Stem Cells (MSCs) have aroused the attention from scientific community for their capacity of suppress the T-cell proliferation. These immunological properties of MSC attracted the interest of basic and clinical investigators, in light of its potential therapeutic use in different immunological diseases.

AIMS
Uncover new immunomodulatory mechanisms on lymphocytes, mediated by MSC

METHODS
Lymphocytes from 3 individuals were activated and cultured either in the absence or in the presence of MSC. Following a 5 day period, CD4+ lymphocytes were purified and profiled by whole genome microarrays. Those two independents results were separately explored.

RESULTS
Micromass analysis revealed many differentially expressed genes involved in immune response, among these, CD69 and adenosine receptor (ADORA2A) were at higher levels on co-cultured lymphocytes. These two independent results were separately explored.

In co-cultures, the percentage of MSCs expressing CD39, and of T-cells expressing CD73, increased significantly (Fig 2).

CONCLUSION
1. Our results suggest that some of the immunomodulatory properties of MSCs may, in part, be mediated through the modulation of components related to adenosine signaling.
2. Our results indicate that the canonical NF-κB pathway controls the early expression of CD69 after activation; however, in an immunoregulatory context, late and sustained CD69 expression is promoted by the non-canonical pathway and is inhibited by canonical NF-κB signaling.

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