Reviewer's report

Title: Multiple myeloma cells alter the senescence phenotype of bone marrow mesenchymal stromal cells under participation of the DLK1-DIO3 genomic region

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Reviewer: Sandra Muñoz-Galván

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In this manuscript, Berenstein and colleagues analysed the senescence phenotype of MM-BMMSCs, which also show increased number of cells in S phase. In addition, several miRNAs are up-regulated in these cells, correlating with decreased DNA methylation in two genomic clusters associated with two of them. Co-cultured and transwell cultured of myeloma cells with MM-BMMSCs reduces the senescence and cell cycle characteristics of MM-BMMSCs, also changing miRNA expression and increasing methylation. Finally, they show that overexpression and inhibition of miRNA485-5p modifies the senescence and cell cycle phenotypes of MM-BMMSCs.

The manuscript is potentially interesting for the field, but the authors must address the following issue before publication:

a) Major compulsory revisions:

- The levels of cyclin E1, cyclin D1, p16 and p21 (figs 1 and 3) have to be showed by western blot. Measuring just the mRNA levels does not account for post-transcriptional regulation that potentially could lead to different protein levels.

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests