Reviewer's report

Title: Effects of Viscum album lipophilic extract and oleanolic acid on monocyte migration and macrophage polarization in vitro

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Reviewer: Reinhild Klein

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In this manuscript authors analysed the effect of Viscum album lipophilic extract (VALE) and its predominant triterpene oleanolic acid (OA) on monocyte migration and also the effect of both substances as well as of different tumour cell lines on macrophage polarization. They showed that VALE and OA decreased MCP-1 induced migration of monocytes and only marginally affected the phenotypic patterns of in vitro polarized M1 and M2 macrophages.

This is certainly an interesting observation, but I have some objections:
1. do authors have any informations on the purity of VALE and OA? Is a contamination with lectins or viscotoxins excluded with certainty and is there anything known in the literature about the effect of mistletoe lectins or viscotoxins on monocyte migration and macrophage differentiation? This should be at least mentioned in the discussion
2. Samples from how many blood donors were analysed?
3. p7 line 175 ff: how were the amounts of IFN-gamma, LPS, IL-4 and IL-13 used for macrophage polarization determined?
4. did authors use other non-tumour cells as controls for analysis of monocyte migration?
5. in legend of figure 2 the cell lines should be explained once more
6. The legend of figure 3 is not quite clear; what does A, B, C exactly mean?
7. the discussion is quite long and should be sharpened.

Level of interest: An article of importance in its field

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