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: Roman Huber

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

This is a well written manuscript reporting interesting effects of a mistletoe preparation and oleanolic acid (OA) on factors affecting the tumor-microenvironment in vitro. There are, however, 3 major shortcomings.

1. Dose dependency of the observed effects has not been shown. This has to be done.

2. To show that triterpene content is related to the observed effects a comparison with triterpene-free viscum album extract should have been performed. Either the authors add these experiments or they cancel the paragraphs in their manuscript which suggest a causal relationship between observed effects and triterpene content.

3. To convincingly show an effect of VALE and OA on monocyte migration the experiments reported in figure 1 and figure 2 should have been performed analogous: at least VALE and OA should have been incubated without MCP-1 analogous to the experiments performed in figure 2.

Minor:
- Number of experiments should be added in figure 2
- Reference for figure 4 in Results is missing.
- TAM has not been explained when first mentioned in the Discussion
- Absence of cytotoxicity of VALE and OA to monocytes and macrophages should be shown in a separate figure.

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.