Reviewer's report

Title: Anti-inflammatory activity of the ethanol extract of Dictamnus dasycarpus leaf in lipopolysaccharide-activated RAW 264.7 macrophages

Version: 2 Date: 31 May 2013

Reviewer: Patricia Fernandes

Reviewer's report:

Major Compulsory Revisions

Abstract:
-background: this item is to add information from literature and not to indicate the objective of the Ms.
-methods: it is better to explain a little bit each method.
-results: they were very condensed. Any dose/concentration used was indicated.

Keywords: anti-inflammation and RAW are not a good keywords since they are a general ones.

Introduction:
-NFkB is not only involved in chronic inflammation. It also can be found and expressed in acute inflammation.
-the participation of NO in cancer is dubious. There are several reports showing the correlation between progression of cancer and NO production. However, there also can be found several papers showing that an increase in NO can reduce tumor cells. In this respect, authors should change the text to indicate both conditions.
-authors indicate that D. dasycarpus has been used in popular medicine. There is any reference in this regard. It should be indicate.
-the popular medicine uses the root bark of the plant. In this Ms. authors tested an ethanol extract from leaf. Why? The absence of work with this part can not be the only reason. If the work was based in popular use we do not observe any correlation between the parts of the plant and the popular use.
-the RAW activated cell model is not a model that could be used to “mimic infection and inflammation”. This model is interesting to study some mechanism of action, but not mimic inflammation.

Methods:
-plant: it must be indicated the number of exsiccate.
-western blot: why did authors incubated cells with extract for 24h? it is well know that at this time point the protein (COX2, iNOS) expression has finished hours before and the amount of protein is decaying. The maximal protein concentration
is observed at 6h after LPS activation.

Results/discussion:
-correct the word arginine in pag. 8.
-the concentrations (0.5 and 1 mg/ml) from ethanol extract is too high to demonstrate any significant biological effect. These concentrations only reduced No production by 10 and 33%, a very small effect to these high concentrations.
-there is any evidence or any correlation between the concentrations used in the study and a possible amount of substances found in the extract. Also there is any discussion about the presence of substances in the extract that could be responsible for the results.
-The discussion is only a description of the results.
-there is any explanation for the high concentrations used in this Ms. why authors did not used smaller ones. And why only 2 concentrations? At least 3 are necessary to demonstrate a dose response curve? Why did authors did not calculate the IC50?

Figures:
-it is not necessary to show fig.1. it is only negative results from cell viability.

Level of interest: An article of limited interest

Quality of written English: Needs some language corrections before being published

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

Declaration of competing interests:

any conflict of interest