

Reviewer's report

Title: Both common and specialty mushrooms inhibit adhesion molecule expression and in vitro binding of monocytes to human aortic endothelial cells in a pro-inflammatory environment

Version: 1 **Date:** 5 June 2010

Reviewer: Sandro Percario

Reviewer's report:

The question posed by the author is quite new, well defined, and very relevant, considering that atherosclerosis remains the main cause of death in western societies and the need for better prevention strategies, such as better nutrition habits.

Minor essential revisions:

The manuscript is well written. However, some corrections have to be done, such as the use of parenthesis inside parenthesis (as in page 4), the appearance of abbreviations without proper explanation (as HAEC and DMSO in page 4, and FBS in page 6), and the word "alternate" in page 11 (alternative, perhaps).

Methods are appropriate and overall adequately described. However, the standard mycology protocols for mushrooms harvesting mentioned on the first paragraph of this section needs to be refereed (i.e., lacks a citation). Besides, the steps 6-8 mentioned in subsection "Cell Culture" are not included in the text. It is necessary to describe the statistical method with further details.

Symbols and abbreviations in all figures do not match correlation in legends or tables, or are incomplete. This must be revised.

The lack of bars in both tables should be revised.

Special attention has to be paid in references, as the listed references do not correlate to cited ones. Furthermore, there are 31 references cited in the text, but there are 41 listed.

Discretionary revisions:

Indeed, as the effects presented may relay on mushroom's antioxidant properties, it would be interesting to test its antioxidant capacity.

Discussion is elegantly presented, but a reminder that the samples tested were fresh, and in mushrooms for consumption the conservation procedures may impose some diverging effects would be presented.

Another issue to be addressed is the fact that DMSO itself presents strong antioxidant properties and may overlap the effects of tested mushrooms.

Data presentation as optical density (OD) instead of concentration of adhesion molecule (AM) in figures 1 to 3 may lead to misunderstanding, since OD may vary between different batches due to intrinsic methodological conditions and do not

correlate to changes in concentrations if samples were assayed in different batches. Otherwise, if all samples were assayed in the same batch, this condition should be reported.

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