Reviewer's report

Title: Polysaccharides from Agaricus bisporus and Agaricus brasiliensis show similarities in their structures and their immunomodulatory effects on human monocytic THP-1 cells.

Version: 1 Date: 2 June 2011

Reviewer: Geir Hetland

Reviewer’s report:

The work by Smiderle et al is interesting, well-presented in good English and seems to be based on sound data. Their approach of comparing two related mushrooms, one Agaricus bisporus a.k.a. the champignon and Agaricus brasiliensis /A. blazei Murill, its medicinal cousin, is intriguing.

Minor essential revision concerns Figs 1 and 2, which are not labeled with A, B or C. There are also arrows that lack explanations. In Fig. 3 I cannot find what ABSE is an abbreviation for. The Fig. 3 legend should say. " mRNA expression levels of genes for ....". In Table 1 the last column is confusing. Given this revision, the manuscript should be acceptable for publication.

Declaration of competing interests:

- Have you in the past five years received reimbursements, fees, funding, or salary from an organisation that may in any way gain or lose financially from the publication of this paper, either now or in the future? Answer: Yes. The company Immunopharma has sponsored my research on medicinal mushrooms with gratis mushroom extracts. Generally, well-performed scientific publications on Agaricus brasiliensis' medicinal effects is good PR for this company.

- Do you hold any stocks or shares in an organisation that may in any way gain or lose financially from the publication of this paper, either now or in the future? Answer: Yes, I hold stock in Immunopharma, which finances medical research on an Agaricus brasiliensis-based extract. However, I am not sure whether the current paper will influence this organisation or not above my statement above.

- Do you hold or are you currently applying for any patents relating to the content of the manuscript? Have you received reimbursements, fees, funding, or salary from an organization that holds or has applied for patents relating to the content of the manuscript? Answer: I have one patent pending on Agaricus blazei Murill as potential anti-infection and anti-allergy remedy.

- Do you have any other financial competing interests? Answer: No.

- Do you have any non-financial competing interests in relation to this paper? answer: Yes. We have published the said Agaricus bM -based extract has antiinflammatory effects on proinflammatory cytokines such as IL-1 and TNF in IBD patients.