Author's response to reviews

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

Authors:

Fheranda R Smiderle (fhernandas@gmail.com)
Andrea C Ruthes (andrearuthes@gmail.com)
Jeroen van Arkel (jeroen.vanarkel@wur.nl)
Wasaporn Chanput (wasaporn.chanput@wur.nl)
Marcello Iacomini (iacomini@ufpr.br)
Harry J Wichers (harry.wichers@wur.nl)
Leo J.L.D. Van Griensven (leo.vangriensven@wur.nl)

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Author's response to reviews:

Dear Sir, Madam,

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

Why do we think that the manuscript we submit here merits to be published in BMC Complementary and Alternative Medicine?

We have studied structural properties and some biological effects of polysaccharides that we have extracted from two well known «medicinal» mushrooms. This type of extract is commonly sold as a food supplement to be used for medicinal purposes.

A major problem with mushroom polysaccharides and extracts is that most if not all have not been well characterized resp. described in their chemical composition and/or in their biological effects. As a result they are not taken seriously. They are however strongly commercialized and hundreds of thousands or even millions of people take a daily oral dosage of ganoderan, lentinan, grifolan, krestin and/or of various others.

The presumed modes of activity are all centered around activation of the immune system, either after passage through the gastro-intestinal system and breakdown by the intestinal microflora or directly via the blood. Whether the effects are induced by # or # glucans, 1-3, 1-4, 1-6 glucans, small or large molecules, or by the specific conformation of the molecules is vague. We know that polysaccharides can be bound by specific receptors on the cell membrane of dendritic cells, but the actual cause of subsequent signaling events is not known.
It is for all these uncertainties that careful studies should be devoted to the chemical characterization and to the bioactivity of polysaccharides that are commercialized as food supplements or even as «medicines». And once carried out, these studies should be published and read and discussed by knowledgeable readers, such as those of this Journal.

That's why we think that our manuscript should be published in a dedicated journal like BMC Complementary and Alternative Medicine.

I hereby underline that the present manuscript or parts of it have not been published or submitted for publication elsewhere.

Prof. Leo van Griensven

Wageningen, 21.06.2011