Author's response to reviews

Title: Amelioration of lipopolysaccharide-induced liver injury by aqueous rooibos (Aspalathus linearis) extract via inhibition of pro-inflammatory cytokines and oxidative stress

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RESPONSE TO REVIEWERS COMMENTS

Reviewer: Roman Kireev

1. Why Authors started treatment with aqueous rooibos extract in dosage of 2%, w/v)

The concentration of 2% (w/v) used in our study is a concentration that is customarily used for rooibos tea making purposes. This dosage has been previously used in our laboratory (Marnewick et al 2003; 2009; Pantsi et al 2011; Ajuwon et al 2013; Canda et al 2014) and also in other laboratories (Joubert, 1998; Opuwari and Monsees 2013).

2. Comments regarding whether results obtained in the study will reflect similarly in female rats

Appropriate comments have been added to the discussion.

3. Did authors establish the degree of liver injury other than liver function tests

In the study we established liver injury only by the serum levels of liver function enzymes. The extent of hepatic damage is universally assessed by histopathological evaluation and/or the levels of cytoplasmic enzymes alanine aminotransferase (ALT), aspartate aminotransferase (AST), alkaline phosphatase (ALP) and lactate dehydrogenase (LDH) in circulation. Although we did not look at tissue histology in this study, however, we determined serum level of aminotransferases (ALT and AST) and LDH which has been used previously as a reliable marker to understand the functional status of liver and to detect liver injury in different experimental models of hepatic damage, including lipopolysaccharide (Ingawale et al., 2014). Several studies has reported an increase in serum levels of ALT, AST and LDH in lipopolysaccharide-exposed animals (Kaur et al 2006; Okoko and Ndoni 2009; Hung et al 2011) as observed in our study, therefore the lower liver function tests observed with rooibos extract supplementation is an indication of reduced liver injury in this model.

4. Title of Table 4

The tile of Table 4 has been changed to “The effect of rooibos supplementation on in vivo total antioxidant capacity and markers of lipid peroxidation in plasma and liver of all experimental rats”.

5. All minor corrections pointed out by reviewer 2 (Ademola Oyagbemi) has been effected

6. All language corrections have been effected

References for comments

Ingawale et al (2014). Environmental Toxicology and Pathology 37, 118-133
Opuwari and Monsees (2014). Andrologia 46, 867-877
Pantsi et al (2011). Phytomedicine 18, 1220-1228