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LETTER

A Response to Article "Anti-Diarrheal Activity of Hydromethanolic Crude Extract and Solvent Fractions of Acacia Seyal (Fabaceae) Roots in Mice" [Letter]

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Dear editor

We were interested in reviewing the study performed and reported by Mengesha et al, regarding the evaluation of anti-diarrheal activity of the extract of *Acacia seyal* root tested in mice.[1] Interestingly, according to our searches, there were still very limited studies regarding *Acacia seyal* and most of those utilized its gums and bark for its antioxidant, antibacterial, cytotoxic till antimammary activities of *Acacia seyal*.[2–4] This study was likely to be the first evaluation study of the anti-diarrheal activity of the hydromethanolic extract of *Acacia seyal*, especially and specifically utilizing its root. Following the traditional method of organic solvent extraction, the hydromethanolic crude extract of *Acacia seyal* root was also separated in aqueous, n-hexane and ethyl acetate fractions.

Based on the results obtained and reported in the article, all fractions of *Acacia seyal* root hydromethanolic crude extract and the fractions separated in aqueous, n-hexane, ethyl acetate fractions, showed anti-diarrheal activity in dose-dependent manner. The single component detection in all fractions and crude extract showed the presence of similar metabolites containing steroids, phenols, anthraquinones, and glycosides. However, the specific levels or concentrations of those metabolites were not detected specifically in each fraction. Therefore, we recommend the detection of specific levels of each secondary metabolite in each fraction in future studies. It was also unclear whether those metabolites are dependent of each other or could be utilized as anti-diarrheal agent in single purified metabolite.

The study model used in this study was diarrheal model induced by oil-castor. This study model is a traditional model which had been used in studies for decades. However, under the physiological condition, diarrhea is frequently caused by the infections.[5] Therefore, the bacteria infection model could be taken as consideration for being used for the follow-up of this study in the near future.[6] Overall, this study still convey the novel idea of exploring the anti-diarrheal activity possessed by the root extract of *Acacia seyal* which hopefully could be further explored and studied for addressing the suggestions provided above.

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Author Contributions

NSDP, FF and SH read and reviewed the article. NSDP conceived the critical design of the letter. NSDP went through the cited publications and analyzed the reported data. NSDP wrote the whole letter draft. FF and SH recommended required corrections. NSDP, FF and SH revised the letter manuscript accordingly.

Disclosure

All authors clearly stated that there is no conflict of interest in this communication.

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