

Review of: "Saponins and their synergistic antibacterial activity with traditional antibiotics against *Staphylococcus aureus* and *Escherichia coli*: Review"

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Potential competing interests: No potential competing interests to declare.

Manuscript title and Table 1 are not superimposed in information: table 1 representing a main part of the article gives information much than that given in title because table 1 is extended to several microbes whereas the title is restricted to Sa and Ec. The authors are invited to proceed to one among the two suggestions: 1) restrict Tab1 content to Sa and Ec vs 2)title should not be limited to Sa and Ec.

Page 2: "Because secondary metabolites are produced only by certain plant groups, ...". No! All the high plants (Angiosperme and Gymnosperme) produce secondary metabolites. Algae, however, could ne be concerned. Also, although secondary metabolites are not constitutive (by opposition to primary metabolites), they play key role in survival because they are used in defense, protection, essential inter-specific communications, etc. Therefore, the sentence of page 2 should be removed or substituted by a correct one.

Page 6, "Figure 1 shows...": Does the term "saponin extracts" mean ? ... (a) Crude preliminary extracts (rich mixtures in saponins with other metabolites), (b) mixtures of saponins after chromatography (saponin fractions) or (c) isolated-purified saponins (single molecules) ? It is important to check and precise this detail, because results are more or less interpretable with strong or weak meaning according to the type of extract. Meaning and interpretability decrease significantly from (c)- to (a)-cases. **In the case where only aqueous and alcoholic mediums are concerned (as typed in the 5th column of Table 1), the work remains of weak aspect and the manuscript can't be considered as specific to saponins.**

In the case where synergies' tests concerned well defined saponins (single molecules), a second figure should be added to show the published chemical structures of such saponins. In this case, the saponins should be numbered in both Table 1 and figure 2 (with respective numbers); the chemical structures of Fig. 2 can be presented by decreasing FICI level. Moreover, in their conclusion, the authors talk about isolated saponins but no chemical structures were presented, and Table 1 were exempt from such a structural precision.

Conclusion of Reviewing. The importance of this work remains depending on the degree of purities of concerned plant extracts: if single molecules were concerned with synergy tests, the work is acceptable after adding the chemical structures; if crude (preliminary: acqueous vs alcoholic) extracts are concerned, the work can't be considered as specific to saponins, and major revisions and modifications are required.

