Reviewer's report

Title: Anti-trichomonad activities of different compounds from foods, marine products, and medicinal plants: a review

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Reviewer's report:

Friedman and colleagues carried out a review article on the bioactive effects of foods, marine products and medicinal plants, its derived extracts and even isolated compounds with anti-trichomonad effects. Although the title is attractive and interesting upon reading for readers of the BMC Complementary Medicine and Therapies, when reading the abstract and then the whole manuscript, unfortunately the authors failed in what they want to do. The main gap in this work is related to the lack of organization and definition of the research objective. In fact, the authors have a good intention in the work to be developed, but the lack of scrutiny and definition markedly compromise this work. First of all, the focus of this work is not on prebiotics or probiotics, although the presence of disbiosis is a trigger to this disorder. If this would be the objective, with the various existing studies, it would also be possible to elaborate a literature review in this regard. On the other hand, when analyzing the effects of foods and plants, their extracts and individual compounds, we must start from macro to micro, that is, from plants and foods to their individual compounds and discuss the effects of the most promising plants for their individual constituents. In this regard in particular, the authors not only do not present all the plants studied, their extracts or individual compounds, neither selected all the published data. The organization of most of the information presented in this work in the form of tables is extremely important (since the first to the last section), so that readers can see which plants are more effective, which extraction solvent stood out in the observed bioactive effect (since the different solvents affect the extraction process and consequently the final bioactive effect), as well as at which dose was effective. Based on this premise, the authors must then organize their work starting on in vitro evidence, moving on to in vivo data and finally clinical evidence. None of this is observed in this work, and therefore it will have to be completely restructured before being considered again for review. Besides the above mentioned aspects, there are some major aspects to highlight:
- abstract should be completely rewritten and restructured
- research methodology was not provided, and all steps of research should be included in the form of a flowchart
- the authors confuse microbiota with microflora and microbiome. the terms must be properly used and revised throughout the manuscript
- once firstly used, abbreviations should be used (the same is applied to strains and species)
- verbal tenses should be revised throughout the manuscript. The authors should define to use the present or past tenses
- l. 129: flora microbiota? what this means?
- l. 142-174: tomatine and other glycoalkaloids are toxic, and no mention was made in this work
- l. 217: MLC (full definition)
- l. 239-247: manual honey is not a plant essential oil
- from this review article, it is impossible to observe what is the most effective plant, extract or even individual compounds (all data should be organized in the form of tables)
- what is known on plant extracts and herbal plants in vivo? the authors jump from in vitro to clinical studies, without addressing in vivo findings
- in clinical trials, the individuals compounds present in extracts were not determined nor quantified?
- l. 384-393: plants and probiotics effects were mixed. this not makes sense
- l. 394 up to the end of the section "Plant compounds"
- - there are no in vitro data?
- - in vitro, in vivo and clinical data are mixed and should be separately discussed
- l. 593: photodynamic therapy makes no sense in this work and no previous introduction was made
- l. 605-683: this information should be summarized in a table

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Please indicate the quality of language in the manuscript:

Not suitable for publication unless extensively edited

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