

# Review of: "Biological Components in Cucumbers (*Cucumis Sativus* L.): Implications for Pickle Manufacturing and Health Benefits in Fresh and Processed Varieties"

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Potential competing interests: No potential competing interests to declare.

The manuscript entitled "Biological Components in Cucumbers (*Cucumis Sativus* L.): Implications for Pickle Manufacturing and Health Benefits in Fresh and Processed Varieties," by Saira Sattar, et. al., explained the botanical intricacies of *Cucumis sativus* L., commonly known as cucumbers, and their pivotal role in pickle production within the realm of food science, as well as the health benefits associated with both unprocessed and processed cucumber varieties, shedding light on the intrinsic bioactive elements present in cucumbers and their potential contributions to human well-being. The aim of the manuscript is to reveal the nutritional and highly effective biological combination view, along with the healthcare and working characteristics of both fresh and prepared cucumbers. The manuscript has been written regularly with a good discussion. There are some revisions for better understanding as below:

1. Cucumbers include antioxidant compounds that have low solubility and are not suitable for the body. How can the authors propose enhancing the high solubility of antioxidant compounds in cucumbers for increasing cellular uptake? Please explain in the text of the manuscript. Two relevant references to this research should be cited for literature survey review as follows: a) *Journal of Molecular Structure*, 2022, 1269, 133803. b) *Luminescence*, 2022, 37 (11), 1836-1845.
2. The authors should compare the nano-formulation of low-solubility compounds in cucumbers with different methods and explain the advantages of each method.
3. It is better if the authors explain the stages of digestion of compounds in cucumbers from the viewpoint of main compounds or nano-formulations of them. A relevant reference to this research should be cited for literature survey review as follows: *Ceramics International*, 2020, 46 (3), 3051-3058.
4. Is it good to use cucumber for the skin or to put the cucumber skin on the skin? What is the difference between these two functions? Are there nano compounds in the skin of cucumbers that can be absorbed by cells? Please discuss in



the text of the manuscript.

After the revision, the manuscript can be considered in Qeios.