

Review of: "Meta-Omics Analyses of Organic and Conventional Fermented Vegetables Reveal Differences in Health-Boosting Potential"

Madhumita Srivastava

Potential competing interests: No potential competing interests to declare.

This work shows the significance of the meta-omics approach for classifying differences in organic and conventional fermented vegetables in promoting health. The results of the proposed work are interesting, but some issues need to be revised:

First, the English language (grammar and syntax errors) should be improved throughout the whole manuscript text.

Introduction

-The sentences are too long and need to be revised, as in the introduction section: "Thus, the microbial ecosystem..... proximity to soil ecosystems."

- "No-till and other practices" - what does this mean?

Material and Methods

-In the Materials and Methods section, peppers are referred to as conventional *Capsicum* and organic *Capsicum annuum*, whereas radishes are written as *Raphanus sativus*. This needs revision, as the selected vegetables' descriptions used are confusing and not clear.

-Why were the samples for the metabolomic study taken only on day 14? Please explain.

-In the Materials and Methods section, the authentication and verification of the samples are missing; please include them.

-LC-MS method development and optimization should be written in detail in comparison to the discussion with the literature.

-Write "autosampler vials" instead of "HPLC vial."

-For "dansyl chloride" in the Materials and Methods section, the abbreviation (DC) should be mentioned in brackets; the same applies for HQ.

-The LC gradient programs mentioned in the LC-MS analysis should be presented with more clarity and in detail.

-Correct "0.2 kV" in the LC-MS analysis.

Results

-The PCA results should be presented in more detail, as well as the role of other organic acids in the untargeted analysis in the differentiation of organic and conventional-grown vegetables for metabolomic analysis.

-Figure 3A needs correction; instead of day 7, it should be day 14.