

# Review of: "The anti-staphylococcal activity of probiotic- contain gelatin and whey coatings on processed chicken breast"

Douglas J. H. Shyu<sup>1</sup>

<sup>1</sup> National Pingtung University of Science and Technology

Potential competing interests: No potential competing interests to declare.

The manuscript described the study of using edible whey protein concentrate or gelatin as food coatings, mixing with either *Lactiplantibacillus plantarum* ATCC 8014 and *Bifidobacterium bifidum* DSM20456, to study their anti-*Staphylococcus aureus* ATCC 6538 effects on the processed-cooked chicken breast stored at 4°C for 1, 15, 30, and 45 days. It seemed like a preliminary study according to the presented data. Below are the suggestions for the improvement of the study.

1. Table and Figure 1 were redundant. In addition, some of the labels were incorrect. For example, whey but not why; *Bifidobacterium bifidum* but not *Bifidobact bifidum*; *Lactiplantibacillus plantarum* but not *Lactobacillus plantarum*.
2. *Lactobacillus plantarum* was renamed as *Lactiplantibacillus plantarum*. They should be corrected.
3. Though it was claimed that the anti-staphylococcal effect of the samples coated with whey protein on days 1 and 15 in the samples containing *L. plantarum* was significant compared to the control ( $p < 0.05$ ), it seemed insignificant. In a similar situation, the inhibitory effect of the gelatin coating in the presence of *B. bifidum* was insignificant on the 15th day, though  $p < 0.05$ .
4. The formulation for preparing the whey protein concentrate or gelatin coatings was different. Why was a different formulation used? Is there a citation or experiment for the formulation to prove its suitability and applicability?
5. After coating chicken breast samples with the coating solution, excess liquid was washed for 30 sec from the sample surface. Which solution was used as the washing solution?
6. The survival rates of *L. plantarum* and *B. bifidum* on days 1, 15, 30, and 45 could be provided to show their anti-staphylococcal effects. In addition, the meat quality could also be studied and compared.