

# Review of: "The Link Between Gastrointestinal Microbiome And Ocular Disorders - A Review"

Vimolmas Tansathitaya

**Potential competing interests:** The author(s) declared that no potential competing interests exist.

This paper aimed to review 1) different mechanisms believed to be responsible for gut microbiome and eye pathologies, 2) possible treatment modalities, and 3) how a holistic approach to various ophthalmic conditions could potentially alter patients' health outcomes.

I enjoyed reading the paper and did so with interest. Overall, I think there were too many objectives for this paper. It could probably have addressed just 1-2 objectives as there was limited information when the authors were addressing some points. In addition, the authors missed many references to support their statements throughout the paper. The names of bacteria should be written in italics. Adding credible references and paying careful attention to the scientific names would have strengthened the paper.

I have some specific comments on the paper as follows:

First of all, the authors should provide more details concerning the review methodologies. For instance, what were the inclusion and exclusion criteria, how was the quality of those papers examined, and from which database were the papers obtained, etc. The authors should also provide the characteristics of the paper samples included in this study, perhaps in a table to show, for example, how many papers were from which regions or in which languages, the year the study was conducted, the sample size, and the main findings. These details could have been provided as supplementary material. The authors claimed that "the complement system and genetic defects, namely HLA-B27, have been proposed to influence the inflammatory process [8]. It is essential to bear in mind that while the correlation between gut dysbiosis and eye pathologies exists, these models do not always provide definitive answers regarding their pathogenesis". I suggest the authors elaborate upon the correlation between gut dysbiosis and eye pathologies (how it is correlated, negative or positive). I also suggest that the authors provide a reference to support this statement.

The authors mentioned that "the leaky gut model suggests microbial constituents can migrate into the bloodstream, possibly through a damaged mucosal barrier". I think the author needs to provide more mechanism details about how the bacteria leak into the bloodstream. Different species or genus have different behaviors and enzyme secretion. So, leaking to the bloodstream should have a different mechanism in each of the different species.

When the authors cited the treatment of autoimmune dry eyes with the IRT-5 regimen, the conclusion of that paragraph was not sufficiently vigorous to indicate a new treatment for this disease. In addition, the authors should explain briefly what exactly the IRT-5 regimen was, in order to ease the readers' understanding.