

# Review of: "Long Covid, the Gut, and Autoimmune Skin Diseases: A Novel Therapeutic Approach"

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The author brings an interesting relationship between long COVID-19 and autoimmune diseases such as intestinal dysbiosis, intestinal microbiome dysbiosis, and butyrate production, as well as the triad of cytokines observed in autoimmune diseases (TNF- $\alpha$ , IL-1 $\beta$ , and IL-6), but all these factors, even when present in COVID-19, do not make this viral infection an autoimmune disease. Long COVID-19 presents symptoms such as fatigue, cough, and loss of smell and taste, so other factors may be related to the duration of the disease, such as failure to activate the immune system, viral escape, obesity, age, and pre-established diseases such as diabetes and high blood pressure, so it is too early to consider long COVID as an autoimmune disease. Finally, the author makes an interesting connection between Vitamin D deficiency and long-term Covid and its prevalence in autoimmune diseases. Here it is worth remembering that other authors have shown that it is not vitamin D deficiency that is related to the severity of COVID, but rather the receptor linked to vitamin D, which plays an important role in the severity of the disease.