Author's response to reviews

Title: Hepatoprotective effects of Spirulina maxima in subjects with Non-alcoholic Fatty Liver Disease (NAFLD): report of three cases

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Author's response to reviews: see over
Dear Dr. Kidd,

Please find attached the manuscript entitled “Hepatoprotective effects of *Spirulina maxima* in subjects with Non-alcoholic Fatty Liver Disease (NAFLD): report of three cases” by A. Ferreira-Hermosillo, P.V. Torres-Durán, M.A. Juárez-Oropeza. This manuscript is submitted for possible publication in the Journal of Medical Case Reports.

In Mexico, coronary heart disease, hypertension, diabetes mellitus, obesity, and cirrhosis are leading causes of death among the general population according to National Institute of Statistics. These pathologies are associated with the metabolic syndrome, sharing insulin resistance as a common pathogenic mechanism. Currently, the pathologies related with this physiopathological mechanism known as Non-alcoholic Liver Diseases (NAFLD), ranging from simple steatosis to Non-alcoholic Steato Hepatitis (NASH). Most patients are asymptomatic and diagnosis is done on aminotransferase elevation and unspecific changes seen on ultrasonography (“brilliant liver”) and magnetic resonance imaging. Several therapy strategies have been investigated: pharmacological, non-pharmacological, and
alternative. *Spirulina maxima* is a cyanobacterium that has been used as a food supplement because of its high content of proteins with essential aminoacids, carotenoids, B vitamin complex, minerals, and γ-linolenic and ω-3 and ω-6 fatty acids. Our previous experimental results have demonstrated that *Spirulina* has hepatoprotective properties by decreasing changes on liver lipid profile. At this point, only a few studies have evaluated these effects among the human population.

In this study, the *Spirulina maxima* showed a therapeutic effect in patients with NAFLD as evidenced by ultrasonography and aminotransferase data. We believe this is the first report of its kind in the literature. Also, it showed hypolipidemic effects in these volunteers. In our perspective, *Spirulina maxima* could be considered as an alternative in the treatment of patients with NAFLD and dyslipidemic disorders. For the above reasons, we believe this manuscript will have a broader clinical impact.

Thanking for your kind attention,

Dr. Patricia Victoria Torres-Durán