

To the editor and reviewers:

Thank you for this opportunity to receive valuable constructive criticism, and for the considerable time and effort that it takes to review a manuscript not once but also a second time. I hope that my responses and manuscript revisions have satisfactorily improved the quality of this paper. The reviewer's comments were thoughtful and insightful, and I used those comments to their utmost utility to improve the original paper and expand my breadth of knowledge.

The revised manuscript includes the majority of the suggestions made by the reviewers. I received some comments regarding the lack of control over environmental variables, in addition to recommendations for lab studies. In the attached Responses to Reviewers, I have addressed these comments thoroughly. The central theme of my response is that the goal of a mesocosm experiment is to investigate ecological/toxicological/chemical/biological endpoints in environmentally realistic conditions at relevant spatial scales that can provide valuable information about real-world exposure scenarios. The laboratory studies conducted to date have already provided an amount of data suitable to ask the next important question, which is how will titanium dioxide nanoparticles behave in a natural aquatic setting and will they affect aquatic ecosystems? The combination of mesocosm, microcosm, and laboratory experiments can surely provide scientists a more holistic dataset from which they can try to predict and model the effects of nanomaterials in the environment.

We greatly appreciate your consideration and the time that is required to read and evaluate the quality of this paper for publication.

Warm regards,

A handwritten signature in cursive script that reads "Moncie V. Wright".

Moncie V. Wright
PhD Candidate, Baylor University