

Challenges in the use of bio-microplastic for sub-chronic bioassays: manufacturing, characterization and biochemical effects over a South American aquatic native species.

Emerging pollutants in aquatic ecosystems

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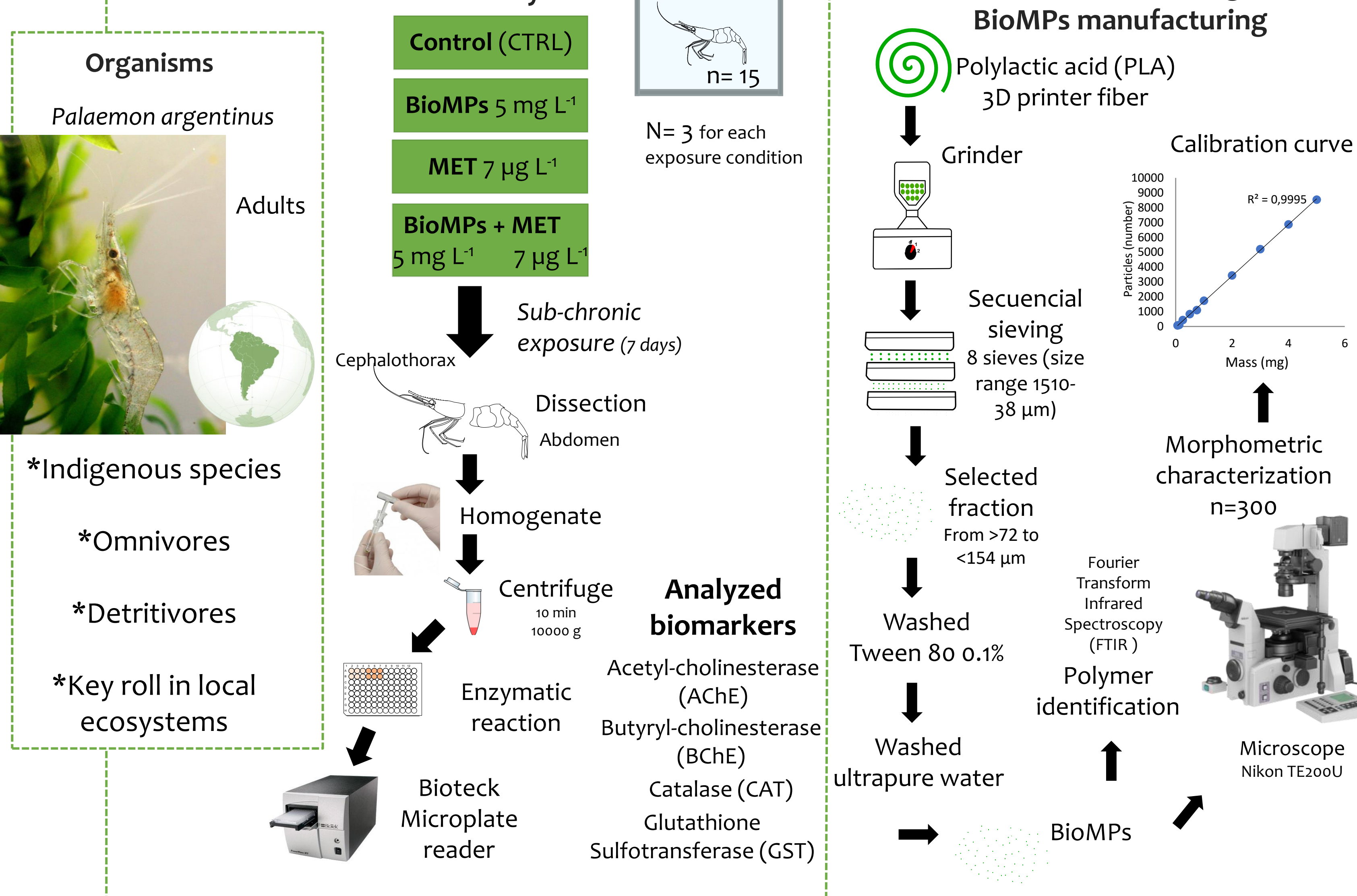
OBJECTIVE

Evaluate effects of bio-microplastics (BioMPs) and a widely used herbicide over the crustacean *Palaemon argentinus*.
a-Establish a protocol to manufacture and characterize BioMPs. b-Evaluate effects of environmentally relevant concentrations over organism exposed to BioMPs alone and combined with an herbicide (metolachlor (MET)).

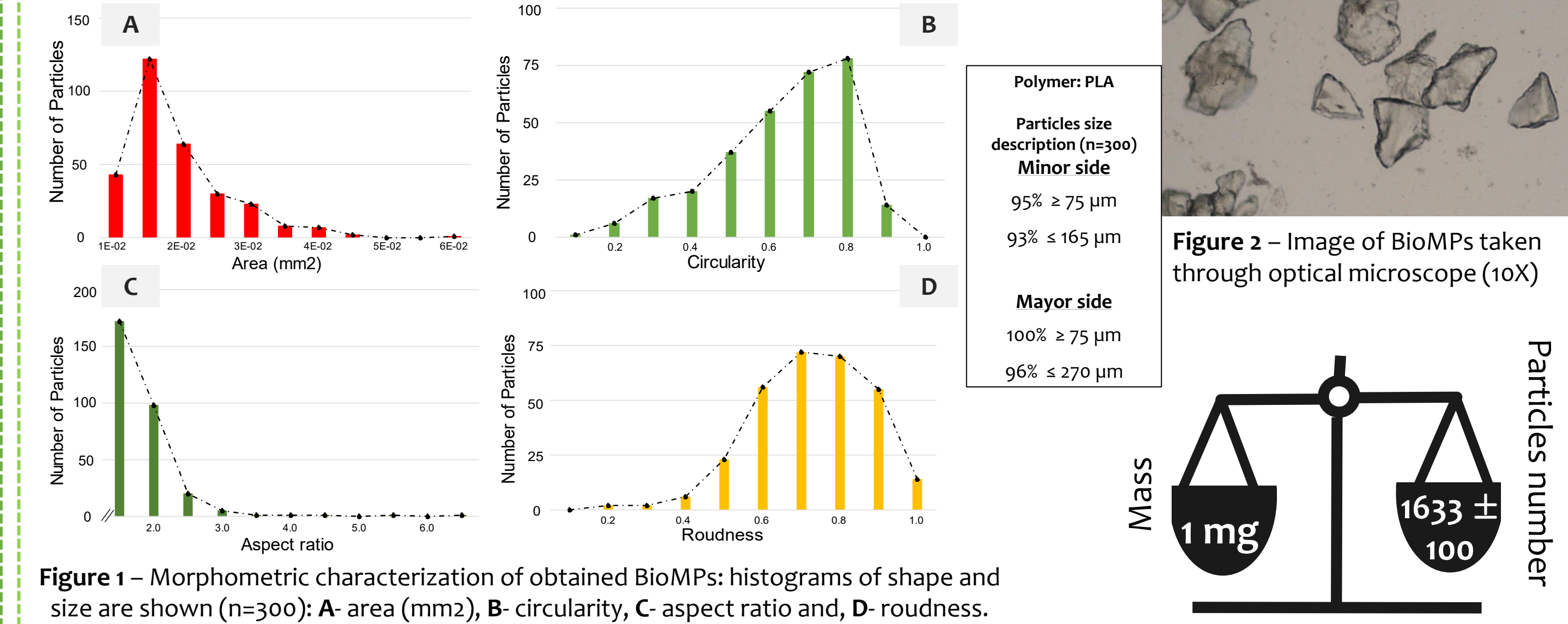
KEY ISSUE

Biodegradable polymers are seen as a potential “green” solution to the environmental problems generated by fossil-based plastic. Nevertheless, there is growing concern regarding the potential for environmental occurrence and their impacts remains unclear, especially in presence of other organic pollutants.

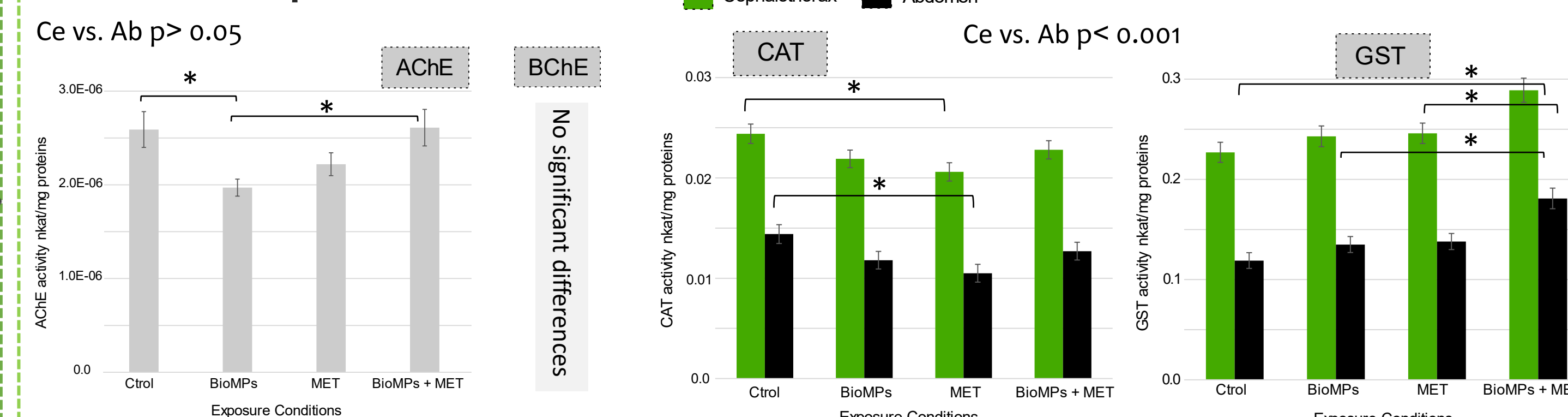
METHODOLOGY



RESULTS



Biomarkers responses



MESSAGE TO TAKE HOME
*Morphometric characterization of MPs and equivalence mass vs number of particles make available comparison among studies.
*The co-exposure to BioMPs modified the MET effects related to oxidative stress, neurotoxicity and detoxification defenses.