

## **Nanosilver effects in marine ectotherms: liking low and high informational levels**

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The rising use of nanomaterials in several applications - including health care products and domestic uses- is posing new ecotoxicological concerns also for the marine environment.

Here we propose a framework of analysis for the assessment of biological effects of engineered nano-objects (ENO) in the marine ectotherm micorganism *Mytilus galloprovincialis*, a filter feeding mollusk with great ability to accumulate trace contaminants. The framework included high and low order level effect determination, spanning from bioaccumulation, bio-nano imaging, molecular and biochemical responses, life trait history till to fitness and population effects.

Two different nano-silver preparations (5 nm and 50 nm) were selected and further used in acute, chronic and microcosm exposures aimed to assess either ecotoxicological endpoints and mechanistics effects of nano-silver.

Results obtained within the VII UE Project nanoFATE will be presented and discussed.