

Título	Bioactive agents for water bio-decontamination
Resumo	<p>Water bio-contamination (biofouling) causes serious environmental and economic penalties and health risks on several applications (e.g. freshwater circuits). Conventional foul-preventing treatments are based on the release of toxic chemicals into the water, which imply limited life-cycle and significant ecotoxicity.</p> <p>In this work, a new eco-friendly water bio-decontamination alternative will be developed, by using the nano/microparticles ability to be selectively modified with bioactive compounds (e.g. biocides). Bioactivity efficacy of the new bioactive particles will be assessed through antibacterial bioassays against several bacteria (e.g. <i>Staphylococcus aureus</i>).</p> <p>As an ultimate goal, the best bioactive particles will be immobilised on filters surfaces for further antifouling performances evaluation at simulated conditions (freshwater aquarium).</p> <p>This novel approach can provide new eco-friendly bioactive materials suitable for water bio-decontamination, as well as for many other antimicrobial/antifouling protective systems.</p> <p>Main expected results: Domain of nanoparticles modification techniques, immobilization in polymeric coatings and leaching assessment Validation of the concept, publication of results obtained.</p>
Local de trabalho	Mostly at Laboratories 8.4.41/8.6.40, DQB, FCUL.
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