

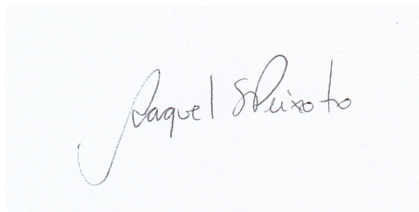
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Dear Dr. Ronald Myers,

Marine ecosystems have been affected by different impacts. Global and local impacts, including global change and seawater pollution, are pointed out as some of the causes. There are several possible solutions to remediate marine pollutants and local contamination, and bioremediation techniques present several advantages, such as sustainability, relative low cost, and the fact they can be applied in different ecosystems, causing minimal or no impacts to the environment. As an extra advantage, the manipulation of endogenous microbiomes, including putative beneficial microorganisms for corals (pBMCs) – may have probiotic effects for marine animals. In this context, we suggest the use of the two approaches – bioremediation and pBMC inoculation – combined. This strategy would promote the degradation of specific pollutants, that can be harmful to corals and other marine organisms, while it may increase host resistance and resilience to deal with pollution and other threats. But a few groups have manipulated bacteria and managed to properly use conventional microbiology methods for the selection of marine probiotics. Hereby we submit the manuscript entitled “Prospecting Contaminant-degrading Microbial Strains Presenting Putative Beneficial Characteristics for Corals” where we focus on the selection of pBMCs to degrade two contaminants: the synthetic estrogen 17 α -ethinylestradiol (EE2) and crude oil. Both have been reported to cause negative impacts on marine animals (including corals), and humans. First, we show how to isolate and test bacteria capable of degrading the specific contaminants. Additionally, we describe how to detect some putative beneficial characteristics of these associated microbes to their coral host. The methodologies described here are relatively cheap, easy to perform, and highly adaptable – almost any kind of soluble target compound can be used instead of EE2 and oil.

We believe the protocols will be very useful for people from diverse fields such as petroleum science, organic pollutants, environmental remediation, coral reefs’ ecotoxicology, marine microbial ecology, technological mapping, etc. The authors also declare no conflict of interests.

Sincerely,



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