Metabolic Profiling of Marine Microorganisms in Bioremediation

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Abstract. This research investigates the metabolic pathways of marine microorganisms involved in the bioremediation of oceanic pollutants. By profiling these organisms, we aim to identify key metabolic processes that facilitate pollutant degradation. The study highlights the potential of harnessing marine microbiomes for environmental cleanup, providing a sustainable approach to managing marine pollution. Our findings shed light on the complex interactions within microbial communities and their role in maintaining ocean health.

Keywords: metabolism, microorganisms, bioremediation, pollution, ocean

Introduction: Marine pollution poses a significant threat to ocean ecosystems, necessitating innovative approaches for its management. Bioremediation, utilizing marine microorganisms, offers a sustainable solution by naturally degrading pollutants. This study explores the metabolic profiles of key marine microorganisms to understand their roles in bioremediation processes. Through advanced analytical techniques, we identify crucial metabolic pathways that contribute to pollutant breakdown. The outcomes of this research emphasize the potential of marine microbiomes in environmental restoration, offering insights into their application in mitigating pollution impacts and preserving marine biodiversity.

References

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