



Plankton Bio-prospecting in the Ocean

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Abstract

Our planet's oceans cover most of its area and are crucial to maintaining the biosphere's balance. For instance, 50% of the oxygen we breathe comes from microscopic photosynthetic creatures, and the ocean is where we get most of our food and mineral resources. We must focus on the sea in order to identify new options for a sustainable future.

Keywords: Plankton, Bio-prospecting, Ocean, Marine Biology, Sustainable Future

Introduction

The oceans cover approximately 70% of the Earth's surface and are home to a vast array of life forms. Plankton, the organisms that drift in the water column, play a crucial role in the marine food web and the global carbon cycle. In recent years, there has been a growing interest in plankton bio-prospecting, the search for new natural products and biomolecules from marine organisms. This is driven by the potential of these organisms to produce novel drugs, enzymes, and other valuable compounds. The ocean is a rich source of biodiversity, and exploring its depths for new life forms is essential for understanding the planet's biology and for developing sustainable technologies.

The search for new natural products from marine organisms is a complex task that requires a multidisciplinary approach. It involves the collection of samples from diverse marine environments, the isolation and identification of individual organisms, and the extraction and characterization of their metabolites. Advances in molecular biology and genomics have provided new tools for studying the genetic diversity of marine organisms and for identifying potential biosynthetic pathways. This information is crucial for understanding the ecological roles of these organisms and for predicting the types of compounds they might produce.

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Conflict of Interest



References

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