

## **CANCER DRUGS FROM THE SEA: A COMPREHENSIVE VIEW**

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Our group has pioneered a novel approach to making pharmaceutical agents that come from the marine and terrestrial environments. We have focused largely on the cancer and Alzheimer's drug, bryostatin. While a well-known and effective agent, it is rarely used because of its extraordinary cost (millions/gram) and its general lack of availability. We have set out to develop a new and economical method to produce this drug as it serves as a prototype for many drugs that are difficult to synthesize in a lab setting. We dub our technique pharmaceutical aquaculture or farming the ocean. This development has evolved into three phases; sample collection from the sea; molecular synthesis using a new green approach; and an improved method of delivering medicinal agents. This talk will provide an overview of the project and provide some data and details.