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Inducing Sporulation in Fungal Species

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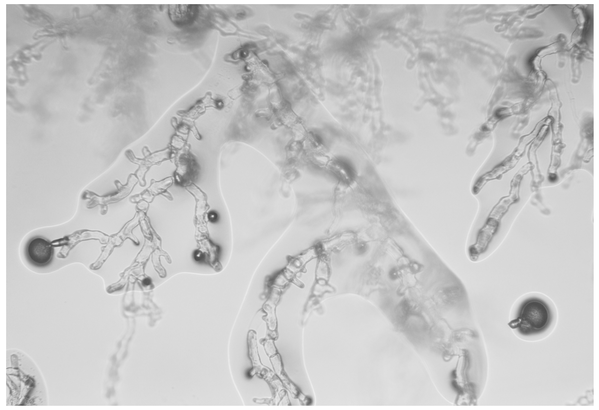
Introduction

Basidiobolus is a micro fungi that shoots its spores, which are known as ballistospores. These spores can be utilized in order to isolate pure fungal isolates from environmental samples. However, our lab has had previous difficulty in isolating spores from our environmental samples, which are from amphibian poop.

Hypothesis

Low nutrient media will result in the highest amount of sporulation.



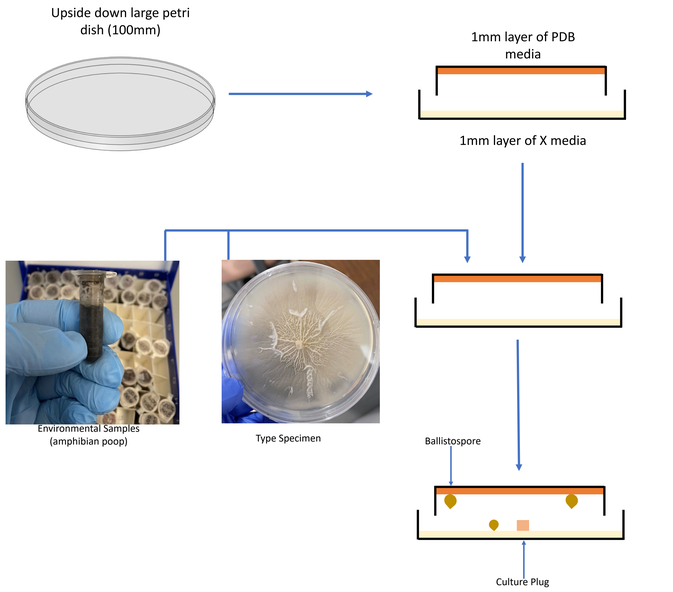
Hyphae and ballistospores from a strain of *Basidiobolus*

Discussion

Sporulation occurs in a high amount from low nutrient media, but also medium nutrient media

Low nutrient as well as medium nutrient media can both be used for consistent sporulation with applications in environmental isolation.

Methodology



PDA plates per isolate grown for 10 days → Place on plug on plate per different media used → Measure area of growth on top plate using ImageJ software → Place on metal rack with natural lighting. Take pictures of plates on days 3, 5, 7, and 10

Results

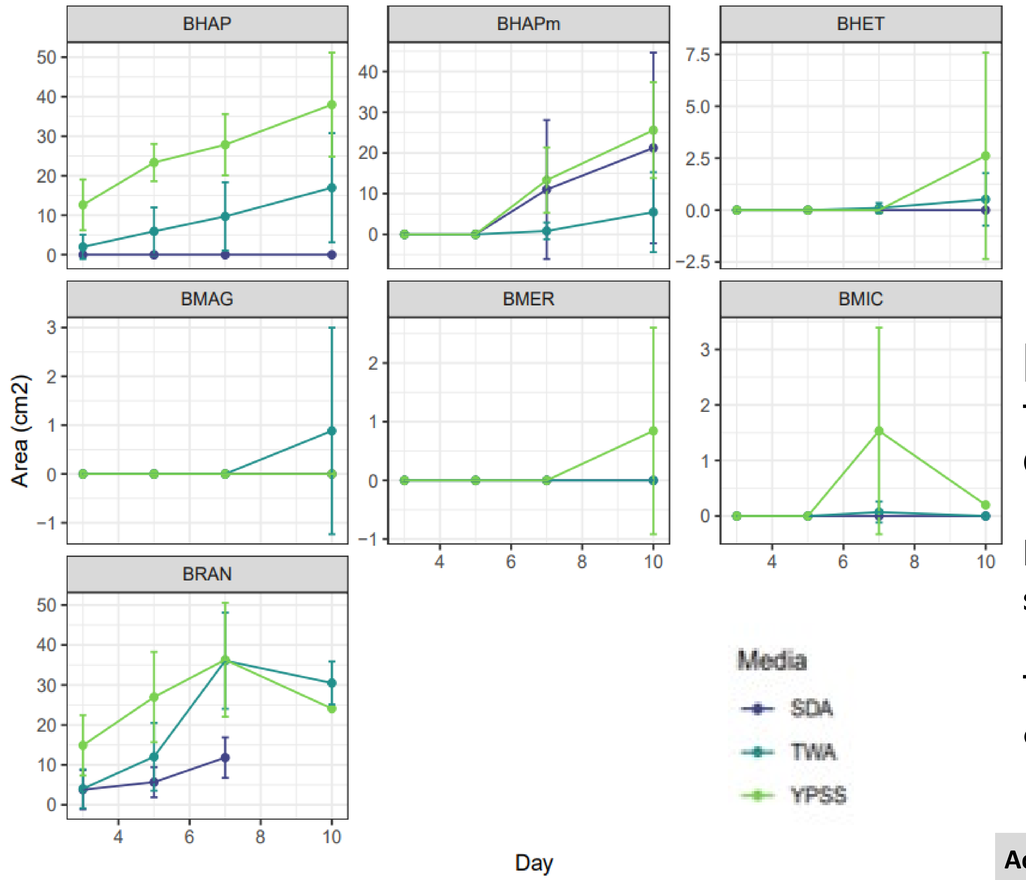
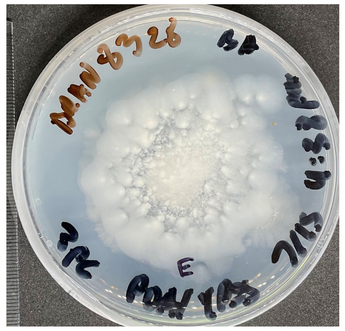


Figure 1: Dot and line plot of area of sporulation over time and different media for seven species of *Basidiobolus.* Dots represent the mean area and bars represent standard deviation. Colors represent different media.



Future Steps

Test more media, starting with Rose-Bengal Chloramphenicol Agar and Corn Meal Agar

Expand the day limit to see if BMER and BMAG will sporulate later

Testing application of medium nutrient media with environmental samples

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