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Chytrid Growth in Culture Across Temperature Gradient
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Funds were spent to purchase the necessary supplies for the proposed experiment and to pay for the time to perform and analyze the experiment. The necessary supplies for the experiment consisted of Petri dishes, materials for making culture plates, and disposable pipettes for collecting zoospores.

I choose to work with the fungus, *Batrachochytrium dendrobatidis* (Bd) as it is a leading cause of amphibian population declines around the world. Research has shown that temperature strongly affects the growth rate of Bd but there has been a lack of fine-scale work investigating the differences. This experiment was designed in hopes to provide data to help with standardizing BD growth methods in the lab. Bd was grown in culture at temperatures ranging from 14 to 26 °C. The graph below shows that Bd grew best at 20 °C. Three degrees higher or lower decreased growth, and six degrees above or below 20 °C severely limited growth.

I expected to have some contamination and increased my sample size to help minimize the effect. This also gave me another variable to look at and I recorded data on the contaminated plates. Data was also recorded when a plate had visible contamination with the naked eye, and when the contamination was detectable at a microscopic level only. This allowed me to see how long plates should be observed before use to help ensure they are uncontaminated. I had expected the Bd to grow best at the higher temperature but found that it actually grew best at room temperature. This is convenient, in that incubation is not required for optimal growth.
The URISC award provided me with an amazing opportunity I would otherwise not have the chance to experience. With guidance from a graduate student, I designed and performed my own experiment from start to finish. In doing so I gained insight into the scientific process that I had previously not been aware of, despite working in the Blaustein lab for more than a year. Additionally, in order to perform this experiment on my own, I learned three valuable laboratory techniques: making agar plates, culturing the fungal pathogen on agar plates, and quantifying zoospores using a hemocytometer. I was also able to lead a lab meeting to present my findings which was a great experience in how to present results and properly explain the experiment to those not involved directly. Lastly, this experiment allowed me to display my lab skills and my true interest in the subject matter to the rest of the Blaustein lab and provided me with the confidence to apply to (and subsequently be accepted into) graduate school.