Chytrid Treatments and Their Compatibility with Amphibian Tissue

South, Lilith

Patel, Bhaskar

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The disease Chytridiomycosis (caused by the fungus Batrachochytrium dendrobatidis) has been detrimentally affecting amphibian populations for the past two decades. To make matters worse, there is no cure for the disease. This experimentation compared existing treatments for Chytridiomycosis to a novel treatment, Lactobacillus hammesii. Both the treatments' compatibility with amphibian cells and their effectiveness at controlling B. dendrobatidis were tested. To compare compatibility, amphibian cells were exposed to each treatment. The amount of lactate dehydrogenase (LDH) was then measured after exposure using a spectophotometer. To compare the treatments' effectiveness, a non-pathogenic model species for Bd was exposed to each treatment. The area of the fungal colonies remaining after exposure was measured. After data analysis, it was concluded that all treatments are compatible with amphibian cells. The most effective treatments at controlling fungal growth were Lactobacillus hammesii (the novel treatment) and Bacillus subtilis. These two treatments could lead to a cure for Chytridiomycosis.

Awards Won:

Third Award of $1,000