



Tuyetnhu Pham

Lundeen/Bazzel Award
Ph.D. Student, Plant Biology
Second Year ARCS Scholar

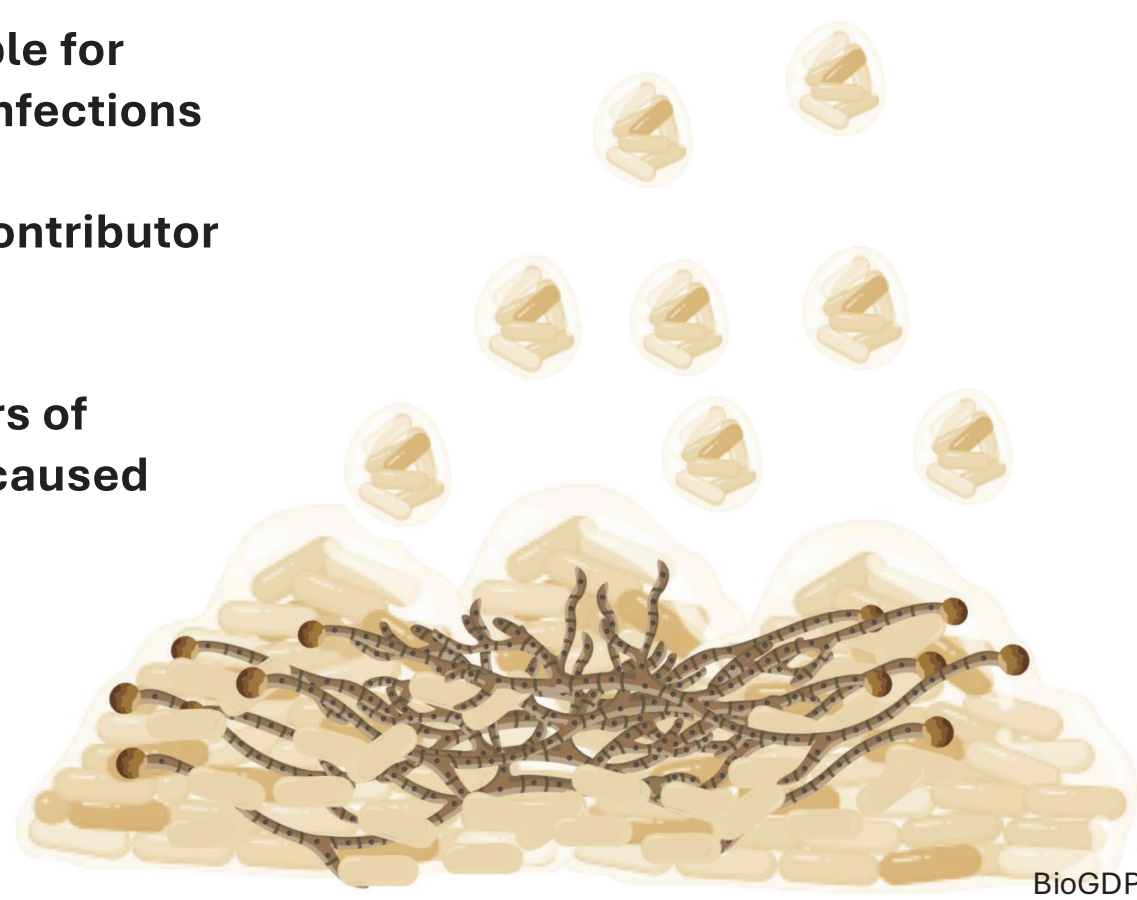


UNIVERSITY OF
GEORGIA

The Heparinase Hep2 is Critical for Biofilm Formation in *Cryptococcus neoformans*

By using a multidisciplinary approach, we can identify and characterize biofilms in the human fungal pathogen *Cryptococcus neoformans*, in hopes of developing a vaccine to combat the deadly disease.

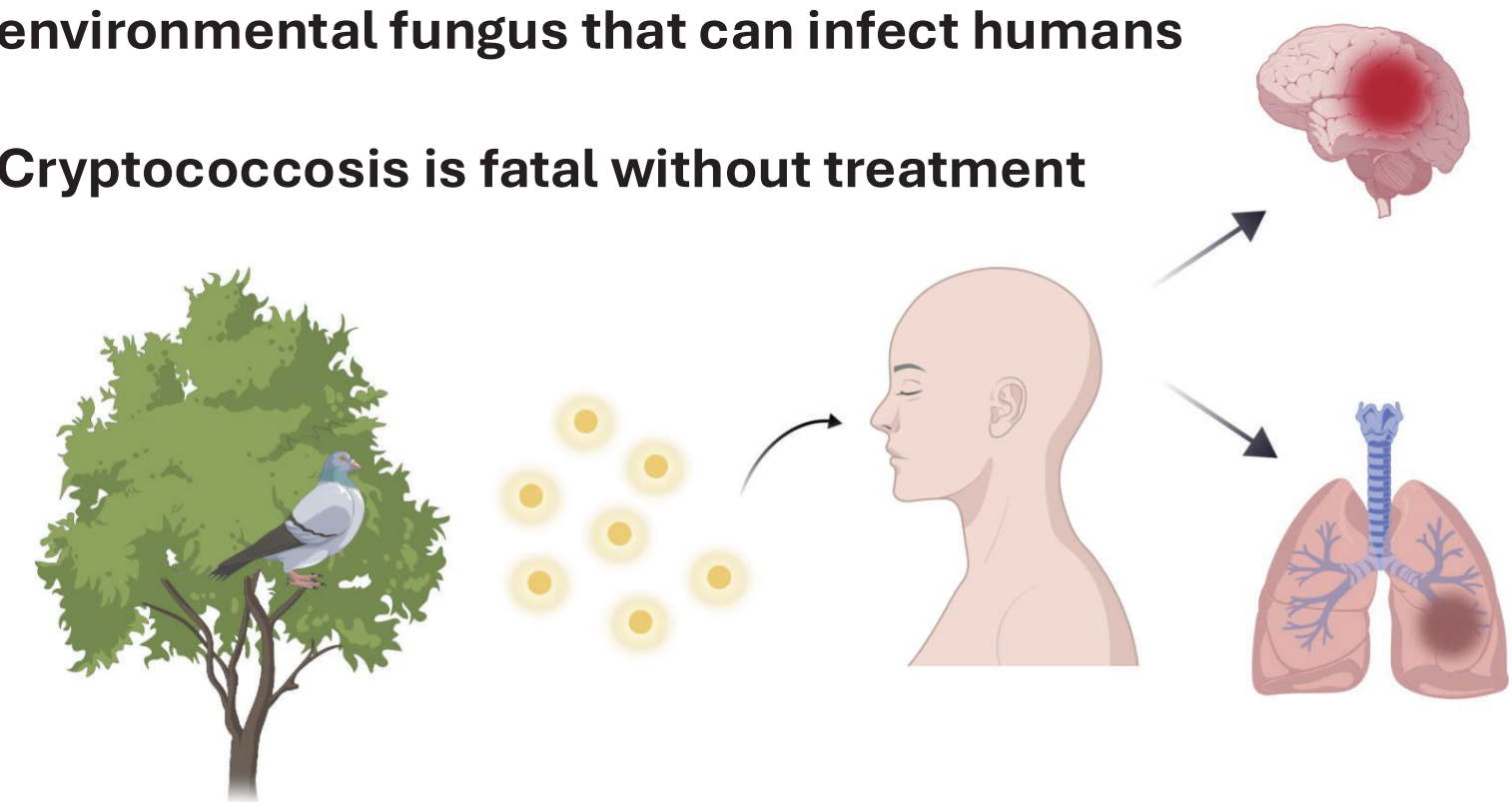
- Biofilm is responsible for 60-80% of chronic infections
- Biofilm is a major contributor to drug resistance
- Thousands of dollars of medical waste are caused by biofilm
- Studies of fungal biofilm are limited



BioGDP

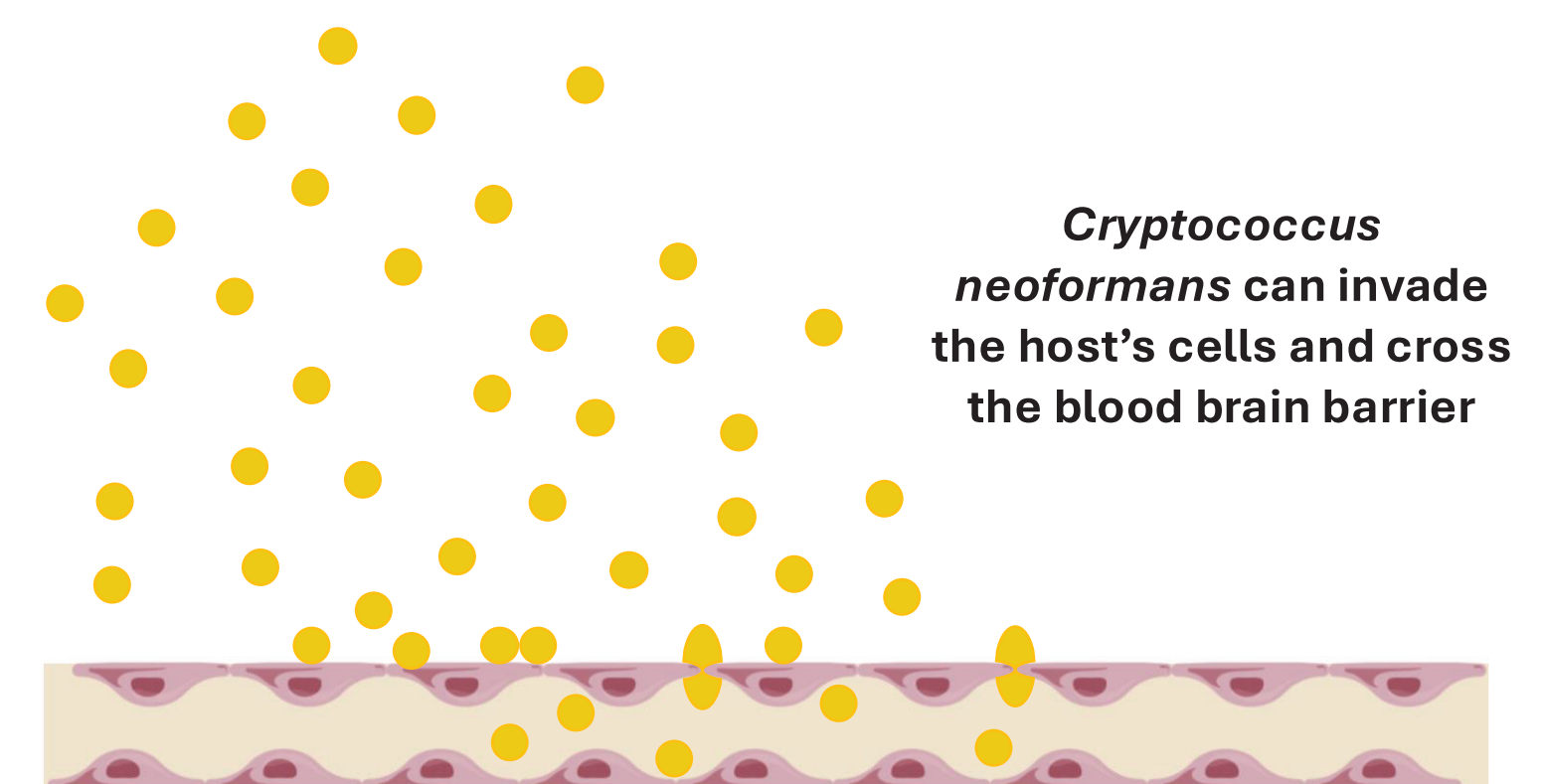
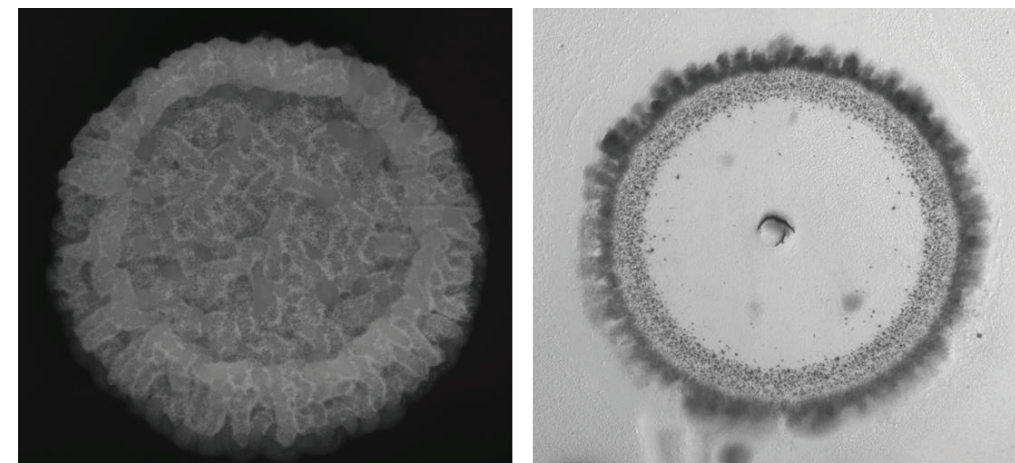
Cryptococcus neoformans is an environmental fungus that can infect humans

Cryptococcosis is fatal without treatment

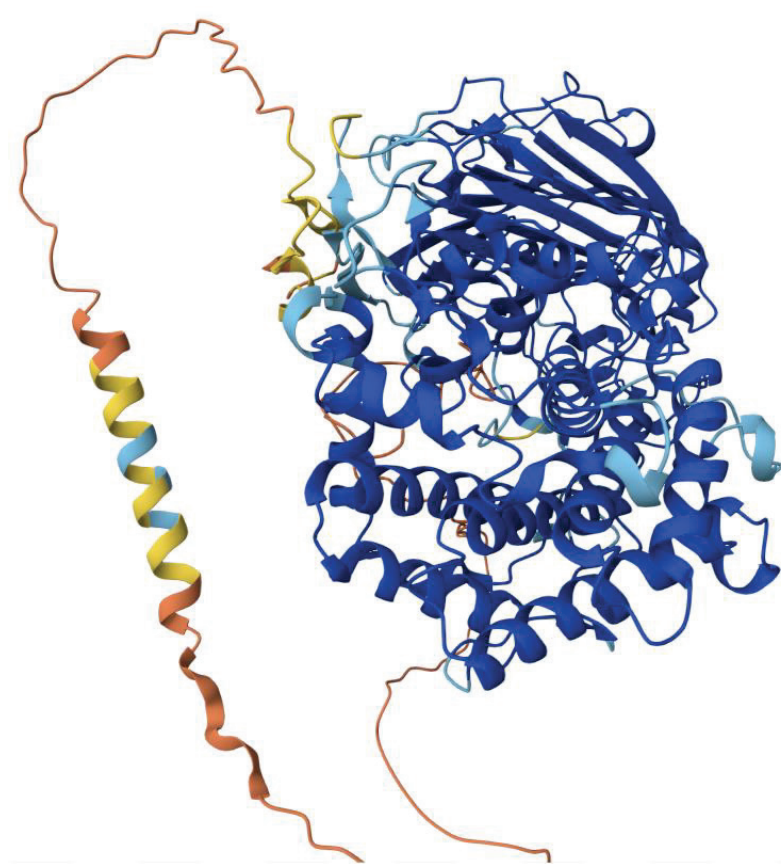


BioGDP

Cryptococcus neoformans can form robust biofilm that displays an invasive phenotype



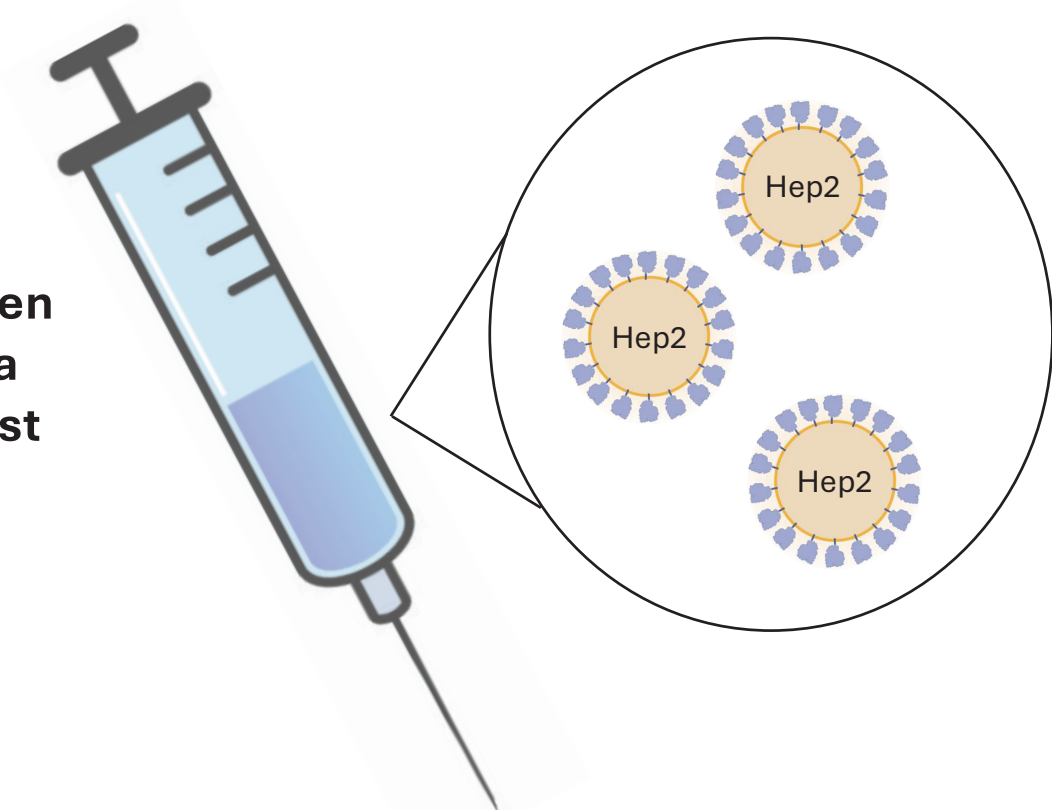
BioGDP



AlphaFold

An uncharacterized heparinase could be responsible for the invasiveness and adherence of fungal cells to host's tissue

Aim: Develop an antigen that can be used as a vaccine to fight against cryptococcosis



Scholar Awards Celebration
November 12, 2025



Igniting
Innovation
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