



**Stephanie
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Microbiology**

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<https://www.youtube.com/watch?v=pIVk4NVIUh8>



**SCHERICHIA
COLI**



TAPHYLOCOCCUS

S. pseudintermedius



S. schleiferi



S. aureus



**LEBSIELLA
PNEUMONIAE**



**CINETOBACTER
BAUMANNII**



**SEUDOMONAS
AERUGINOSA**



**ENTEROCOCCUS
FAECALIS AND FAECIUM**



Nearly 2 million Americans per year develop hospital-acquired infections (HAIs), resulting in 99,000 deaths – the vast majority of which are due to antibacterial-resistant pathogens.

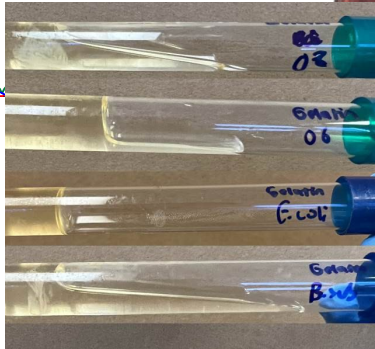
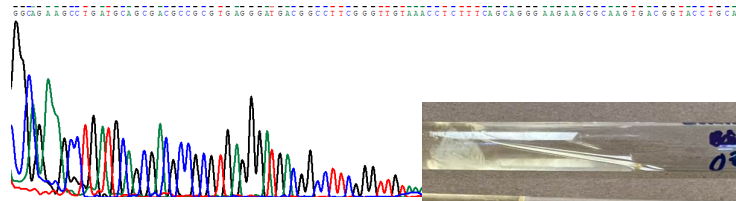
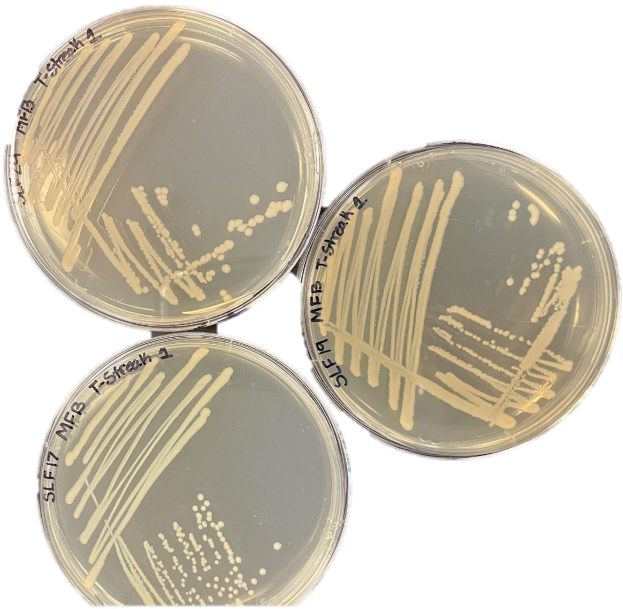
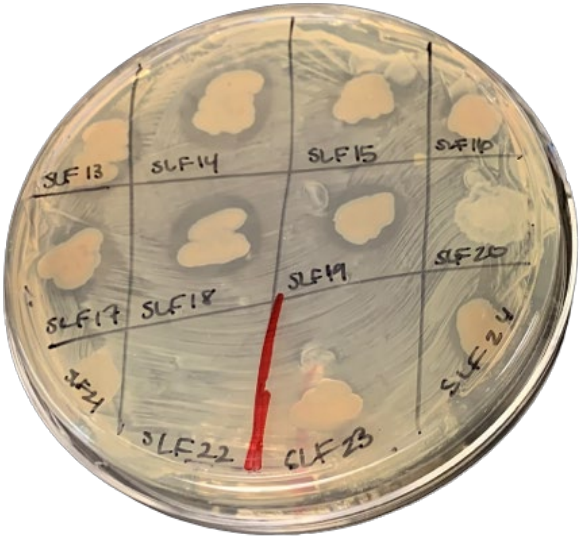
Research Questions

What environment may contain antibiotic producing bacteria?

Can we isolate antibiotic producing bacteria that can inhibit growth of hard-to-treat pathogens?



Methods



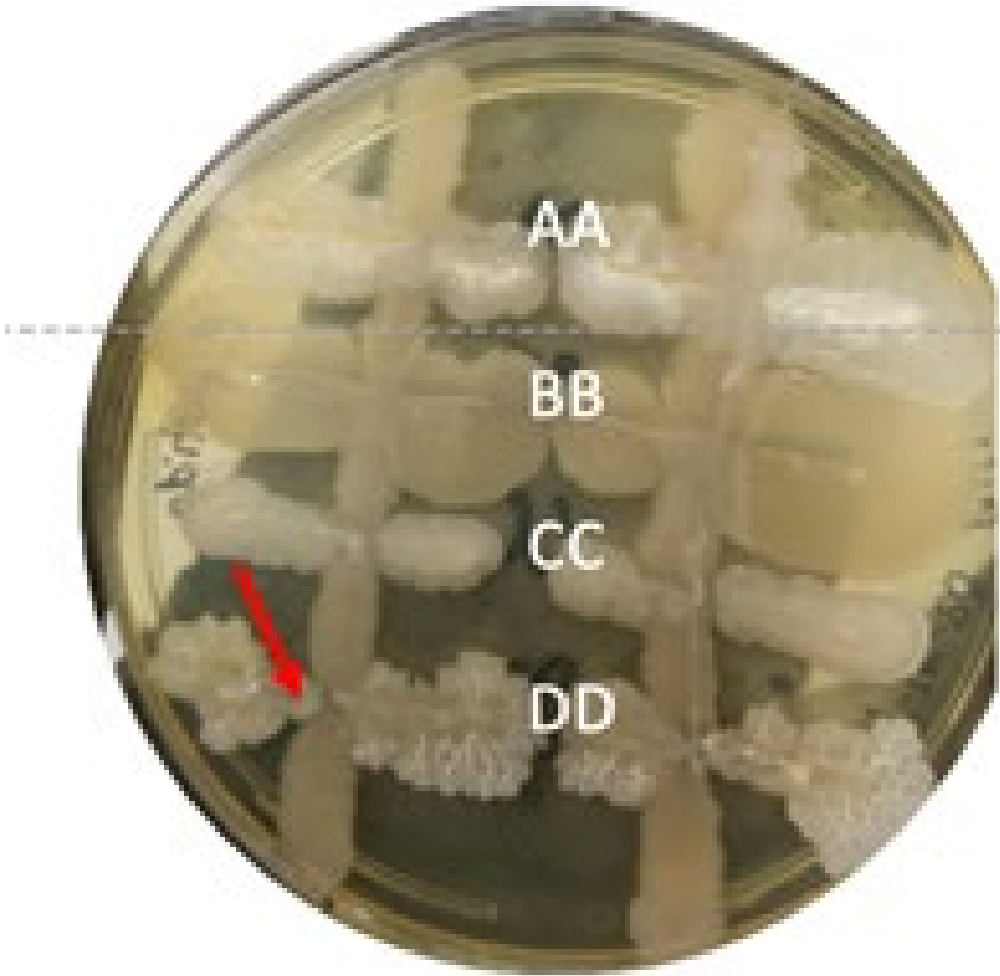
Antibiotic Producing Bacteria from Kefir

Anna Braaten



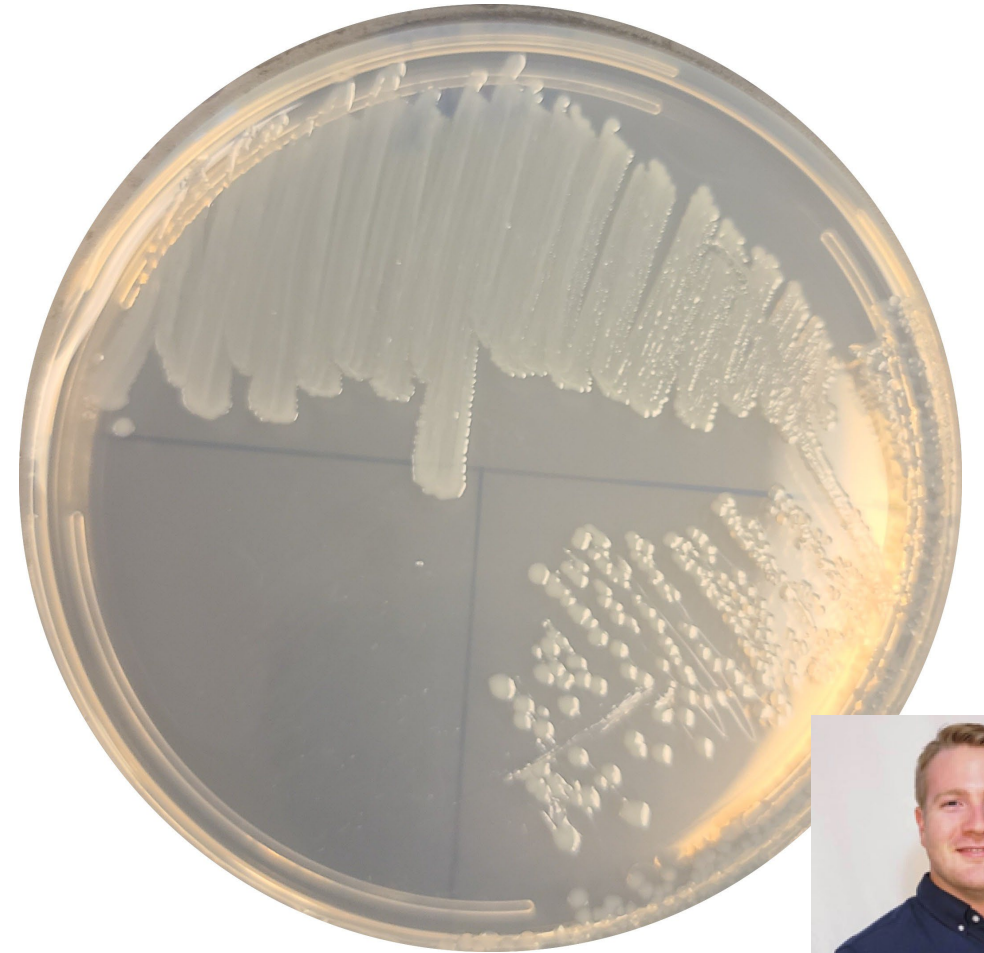
Antibiotic Producing Bacteria from Ants

Leeann Stearns



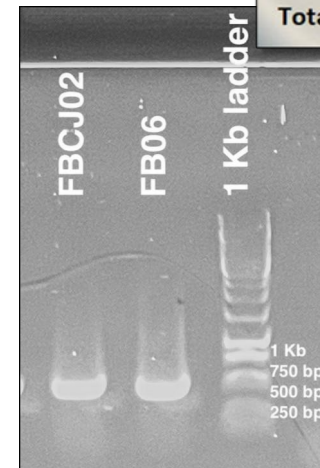
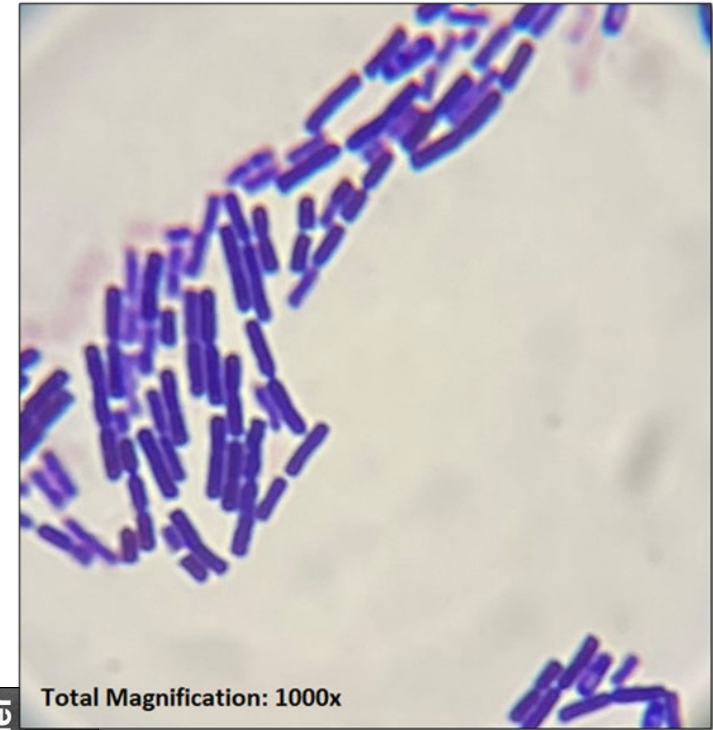
Antibiotic Producing Bacteria from Wastewater

Thomas Rush



Antibiotic Producing Bacteria from Soil

Biology 275 and 334 course labs



FB-CJ02: *Bacillus cereus*

Additional Research Questions

- Is there diversity of heterotrophic nitrifying bacteria?
- What roles does stress play in Women's Lacrosse Athlete wellness?

Isolation of Denitrifying Bacteria

Allison Cannady



POLLINATOR MEADOWS & RIVER PARK








campbellriverpark.net
260 Club Road, Lillington, NC 27546

MAP KEY:

-  HIKING TRAIL / PATH
-  WILDLIFE VIEWING / OVERLOOK
-  PRIMITIVE CAMPING PERMITTED
-  KAYAK / CANOE LANDING
-  FISHING AREA
-  MEDITATION/SITTING AREA
-  GHOSTS OF THE CAPE FEAR TRAIL



MAP KEY:

-  BIRDER'S TRAIL (FOOT TRAFFIC ONLY)
-  HIKING TRAIL (FOOT TRAFFIC ONLY)
-  HIKING TRAIL (UNDER DEVELOPMENT)
-  ASPHALT PATH (NO MOTORIZED VEHICLES)
-  GRAVEL OR PAVED ROAD (VEHICLE TRAFFIC)
-  BRIDGE
-  PARK ENTRANCE



Cortisol and CRP analysis in CU athletes

Austin Calhoun

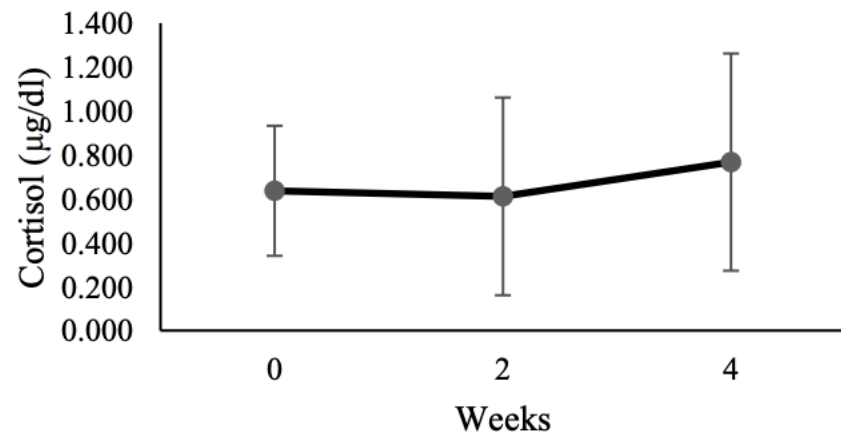


Figure 1: Mean \pm standard deviation for changes in cortisol from baseline (week 0) to week 4 of the study.



Clothing



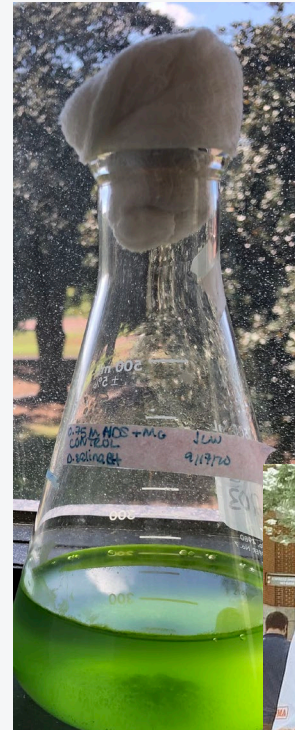
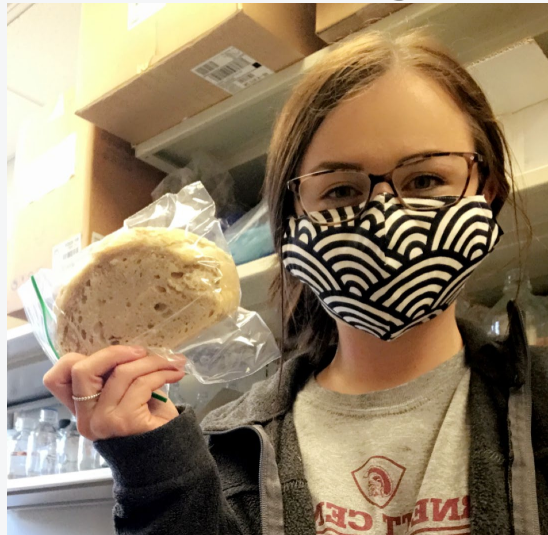
- Acinetobacter baumannii*
- Bacillus amyloliquefaciens*
- Bacillus endophyticus*
- Bacillus firmus*
- Bacillus subtilis*
- Bacillus velezensis*
- Dermabacter hominis*
- Kineococcus sp.*
- Methylobacterium aquaticum*
- Micrococcus luteus*
- Moraxella sp.*
- Mycobacterium obuense*
- Rothia sp.*
- Staphylococcus auricularis*
- Staphylococcus capitis*
- Staphylococcus caprae*
- Staphylococcus condiment*
- Staphylococcus epidermidis*
- Staphylococcus gallinarum*
- Staphylococcus haemolyticus*
- Staphylococcus hominis*
- Staphylococcus lugdunensis*
- Staphylococcus petrasii*



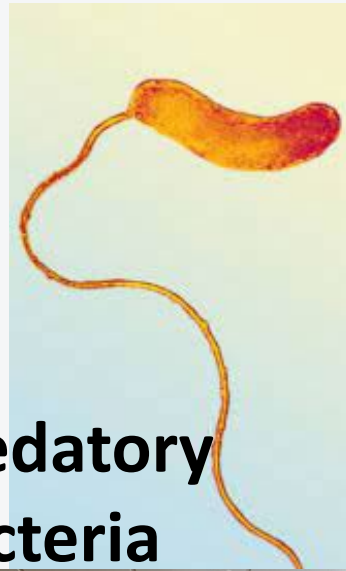
PAST PROJECTS

What role do microorganisms have on the world around us?

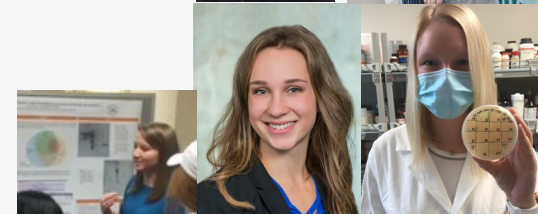
Sourdough



Food Production



Predatory Bacteria



Arthropods



Thank you

Past Student Researchers

Micaela Robson

Kaitlyn Mizelle

Dylan Rogers

Amanda Brechko

William Strader

Caitlyn Vester Coleman

Jessica Wakeman

Jenna Carter

Ashley Darroch Lawson

Taylor Braswell

Biological Sciences Faculty and Staff

Ester H. Howard Summer Research
Program

Wiggins Memorial Library Staff

Tiny Earth

