



**Academic Affairs Committee**  
**September 22, 2026**

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**Discussion Item**

AAC – 3 College of Arts and Sciences – Research T at the G: Questing for the next Penicillin

**Background Information**

The CAS Radio Show, *Research T at the G: Arts and Sciences and Every Thing In Between*, is a live weekly program created by the College of Arts & Sciences Dean's Office to make CAS research and creative work accessible to the wider community. Airing Tuesdays from 11am–12pm on UNCG's student-run [WUAG 103.1 FM](#), the show spotlights a different faculty member each week, invites listeners to call in with questions, and weaves in guests' favorite music.

A recent episode featured Board of Governors teaching excellence awardee Dr. Nadja Cech and UNCG undergraduates Nigel Yeboah and Lillian "Lily" Douglass, members of the Cech research group. They discussed their search for new treatments for infectious disease through the study of plants, fungi, and bacteria—from collecting specimens in Greensboro's Guilford Woods to isolating molecules and testing them against deadly bacterial pathogens. Dean Kelly Joyce will be joined by Dr. Cech and her students today to discuss their research.

*AAC 3.1- Faculty & student biographies*

*AAC 3.2- CAS PowerPoint*

A handwritten signature in black ink, reading "J. Alan Boyette".

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J. Alan Boyette

Provost & Executive Vice Chancellor



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AAC 3.1 Faculty & Student Biographies

Dr. Nadja Cech

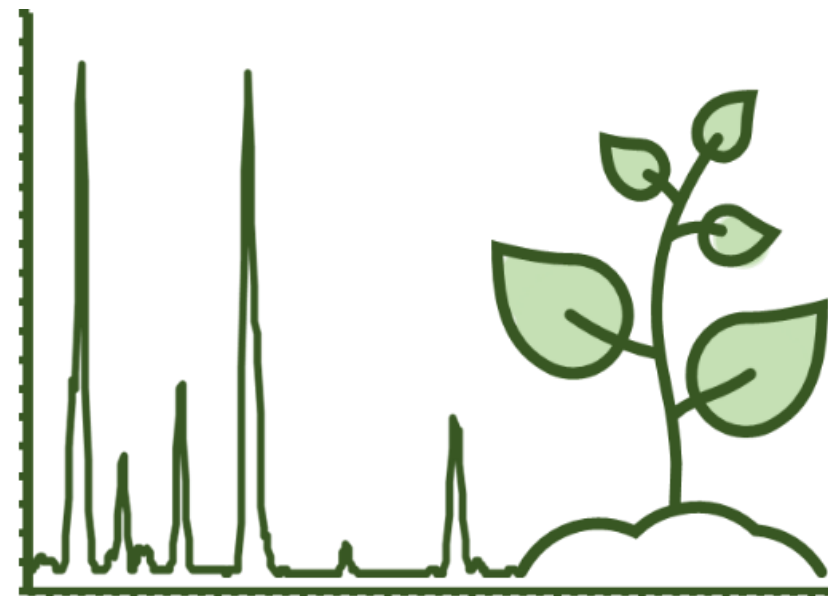
Dr. Nadja Cech is the Patricia Sullivan Professor of Chemistry. Dr. Cech maintains an innovative, active research agenda. She is currently the principal investigator (PI) on a NIH T32 Training Grant and co-principal investigator (co-PI) on a R01 NIH/NIAID Award to study how staphylococcus hominis bacteriocins protect against skin pathogens. Dr. Cech has also completed one NIH/NCCIH cooperative agreement as PI, one R01 NIH award (Quorum Sensing, Diversity and Skin Inflammation) as co-PI, and one NIH U54 cooperative agreement as co-PI. Her research is recognized as innovative by her peers. Dr. Cech won two awards related to her publications: the Arthur E. Schwarting Award for Best Journal of Natural Products Paper in 2024 and Most Innovative Paper Award from Planta Medica in 2023.

Lillian Douglass

Lillian (Lily) Douglass is a senior Chemistry major with a Biochemistry concentration and a Division I cross country and track athlete at UNCG. Growing up between Vermont and Connecticut fostered her love of the natural world, a curiosity that ultimately led her to undergraduate research in the Cech Research Group. Under the mentorship of Dr. Nadja Cech, Lily focuses on identifying antimicrobial compounds from North Carolina plant species, contributing to the Cech group's broader mission of addressing bacterial resistance through natural products chemistry. Lily's experiences as a student-athlete and researcher have shaped her commitment to discipline, teamwork, and service. After graduating in 2027, Lily plans to attend medical school and pursue a career as a physician, carrying forward the scientific training and mentorship she received at UNCG.

Nigel Yeboah

Nigel Yeboah is a junior Biochemistry and Biology major at UNCG on the pre-Med track. With a multicultural first-generation immigrant background from Ghana, Nigel brings a different perspective to most things around him. His love for science and curiosity for understanding the world around him lead him to join the Cech research group as an undergraduate researcher. Under the mentorship of Dr. Nadja Cech, Nigel works to identify and isolate antimicrobial compounds that could be useful for treating the drug -resistant bacterial pathogen MRSA. After graduating in 2028, Nigel plans to pursue an Md/PhD dual degree to further pursue a career in virology using the skills he's gained from the scientific training and mentorship from UNCG.



# Voices from Cech Lab

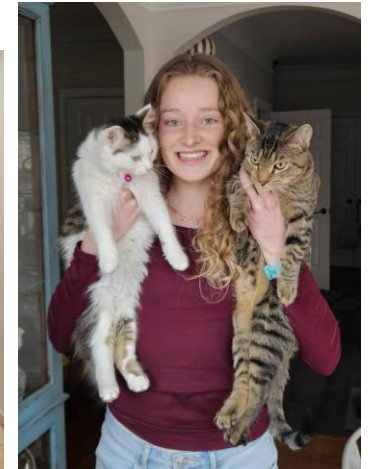
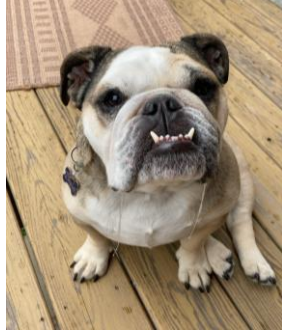
Faculty mentor: **Nadja Cech**

Undergraduates: **Lillian Douglass** and **Nigel Yeboah**

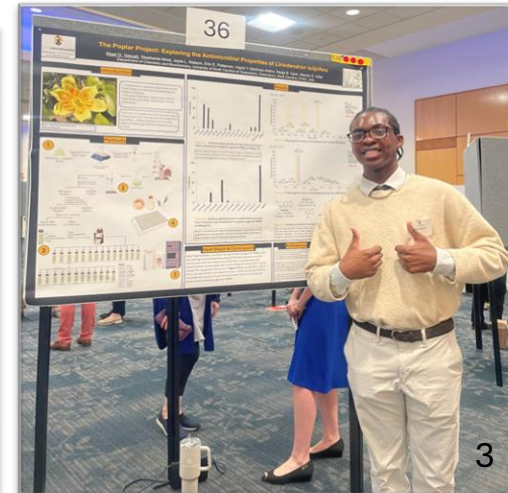
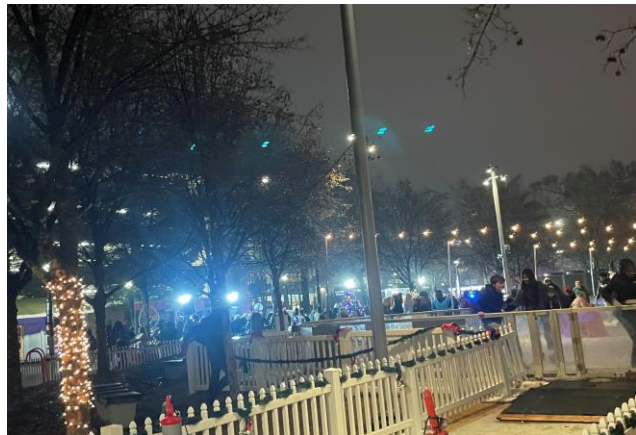
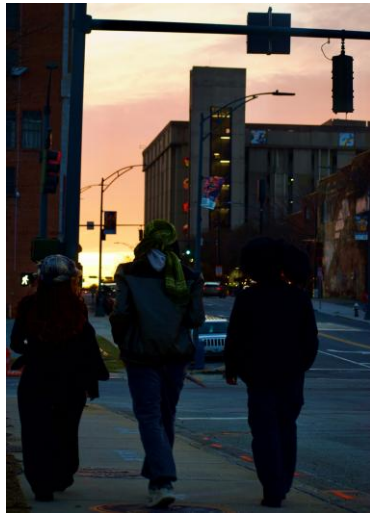


**UNC GREENSBORO**  
Department of Chemistry  
and Biochemistry

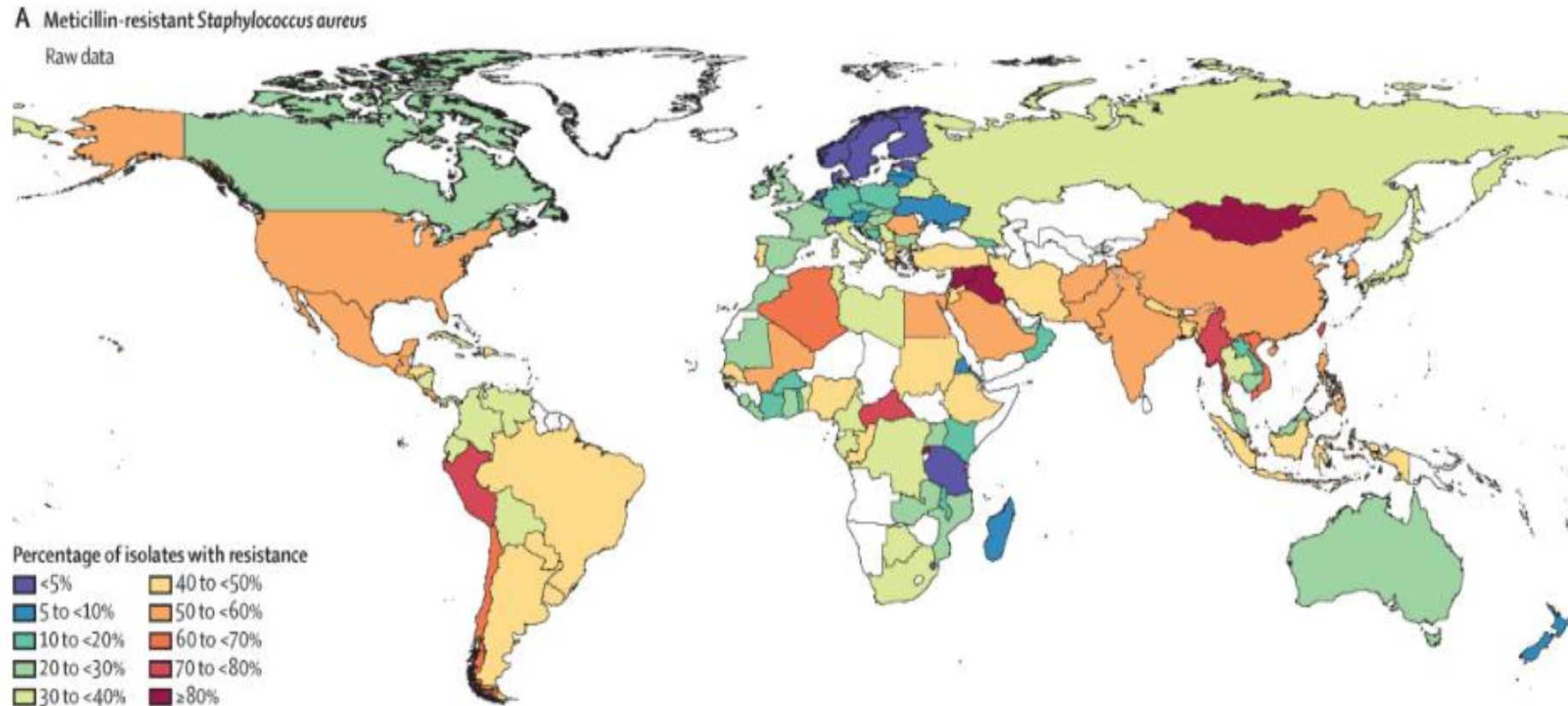
# Hello!



# Hello! I'm Nigel



# Why does this work matter?



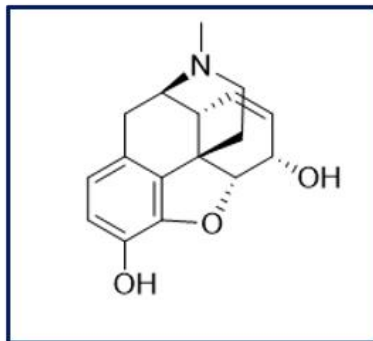
Global variation in deaths attributed to MRSA<sup>1</sup>, 2019. Figure shows the proportion of *S. aureus* isolates estimated to be resistant in each country, highlighting geographic differences in resistance levels.

# From Plants to Medicine

(Papaver somniferum)  
Opium Poppy



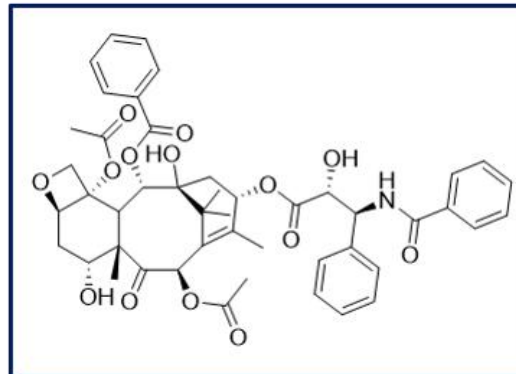
Image sourced from Britannica

Morphine<sub>1</sub>

(Taxus brevifolia)  
Pacific Yew



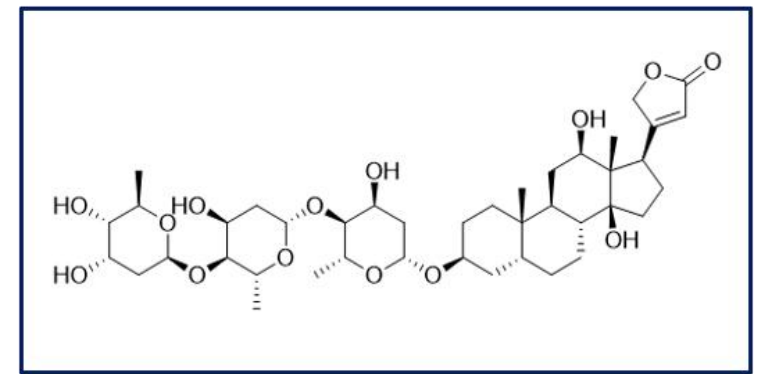
Image sourced from Wikipedia

Taxol<sub>2</sub>

(Digitalis purpurea)  
Foxglove



Image sourced from Ivy Garth Seeds inc.



### Digoxin<sub>3</sub>

# *Elephantopus*, a North Carolina native plant ...



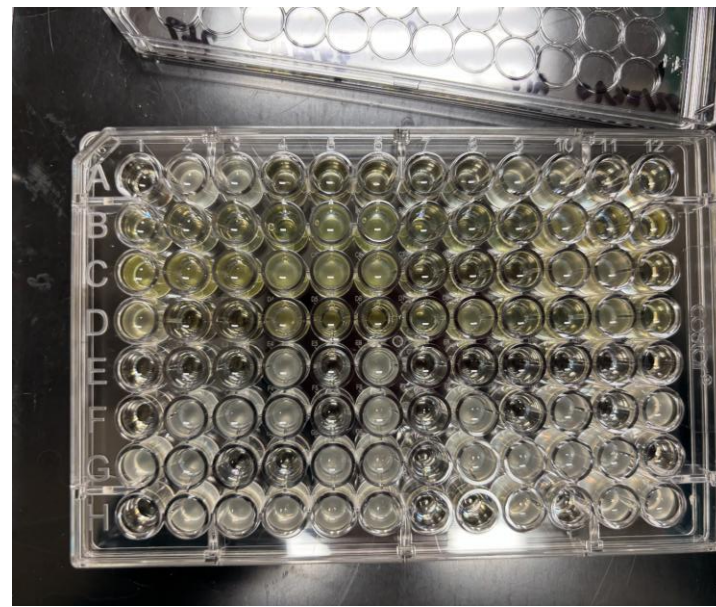
***E. carolinianus***



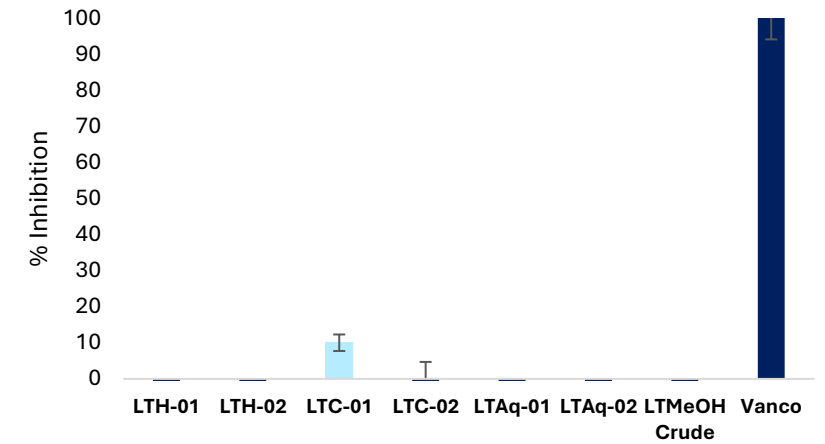
***E. tomentosus***

# *Liriodendron tulipifera*, Tulip Poplar

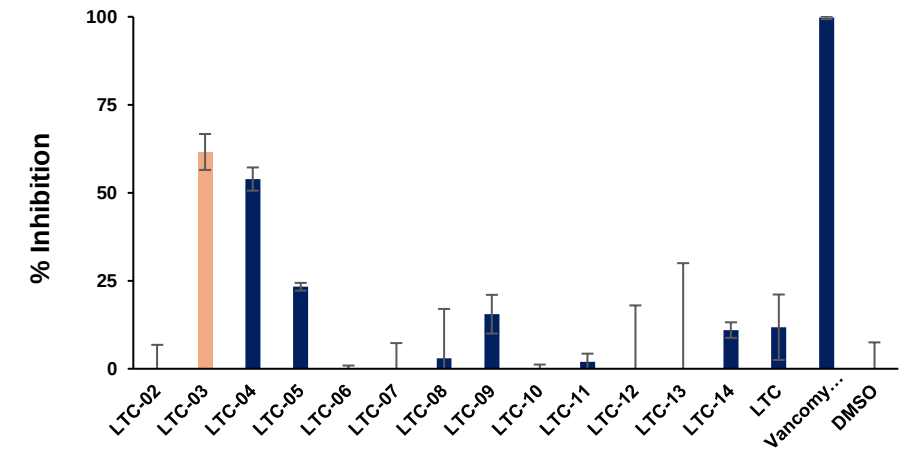




# Data Driven

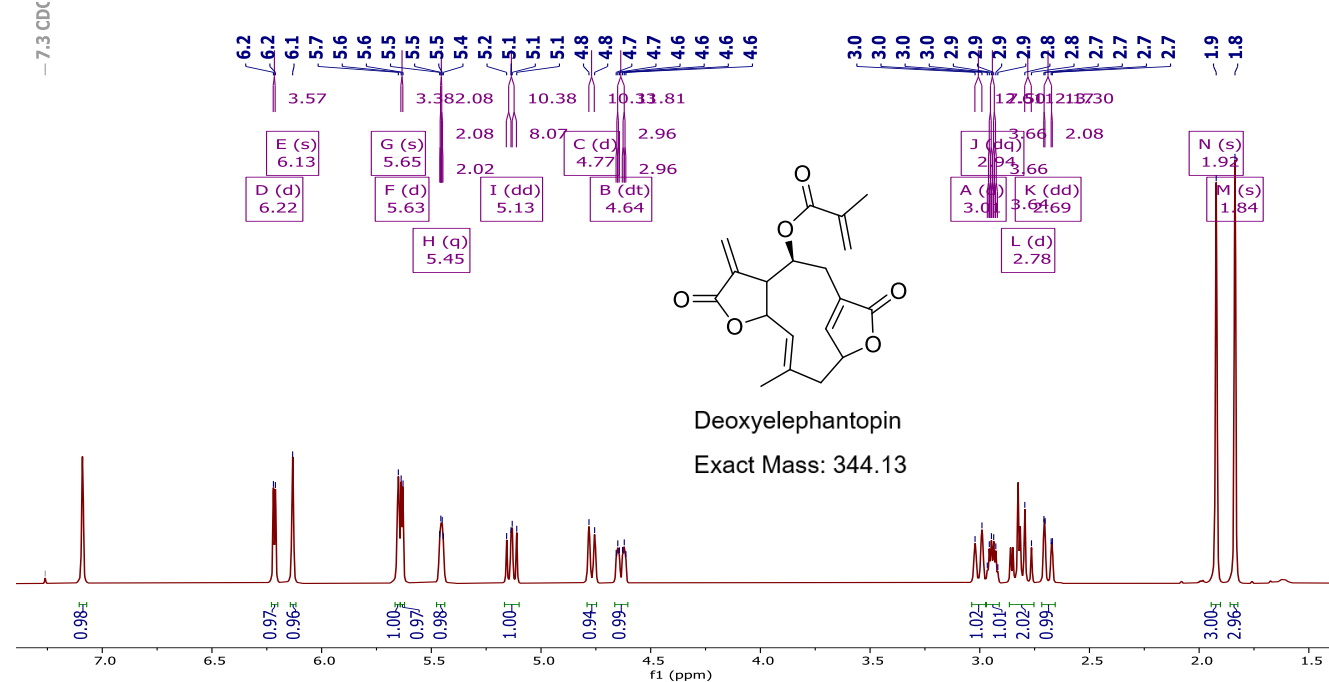
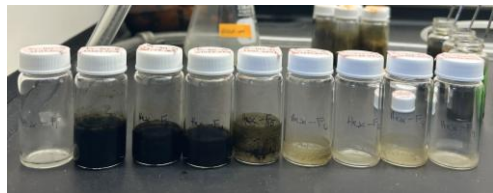
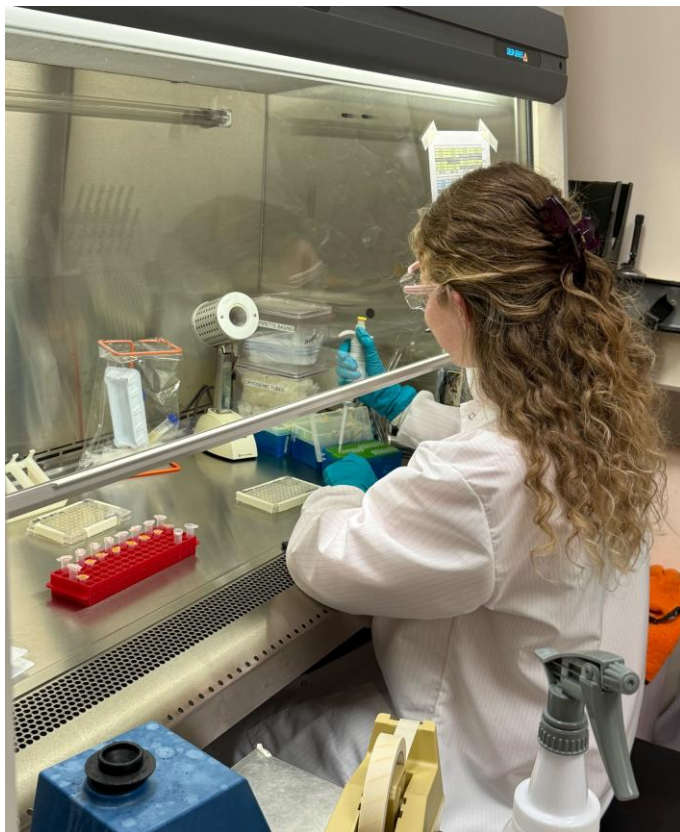


**Figure A1.** Antimicrobial activity *L. tulipifera* against MRSA at 256ug/mL

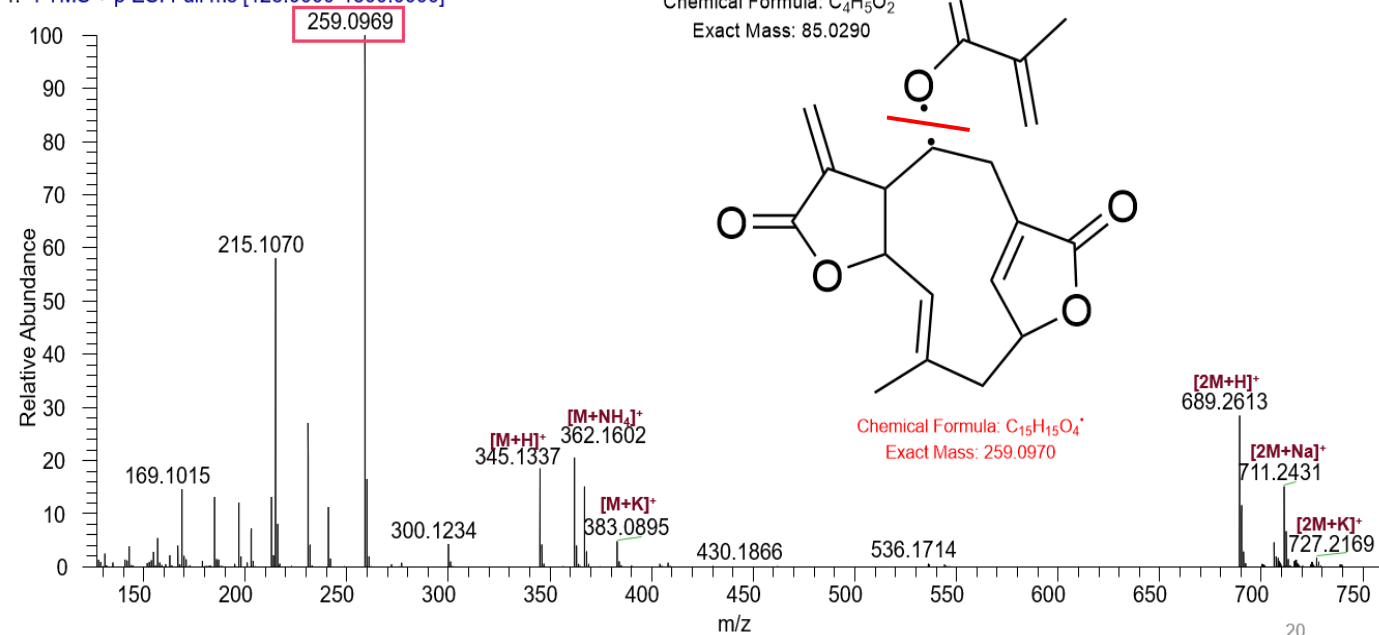


**Figure A2.** Antimicrobial activity of chloroform fractions from *Liriodendron tulipifera* against MRSA at 256ug/mL

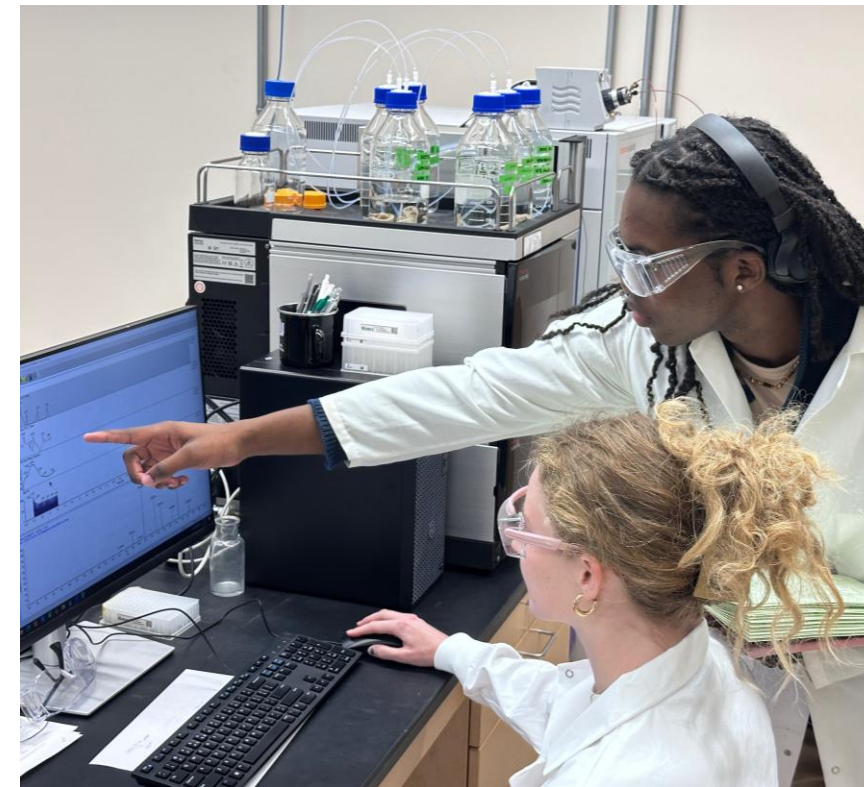
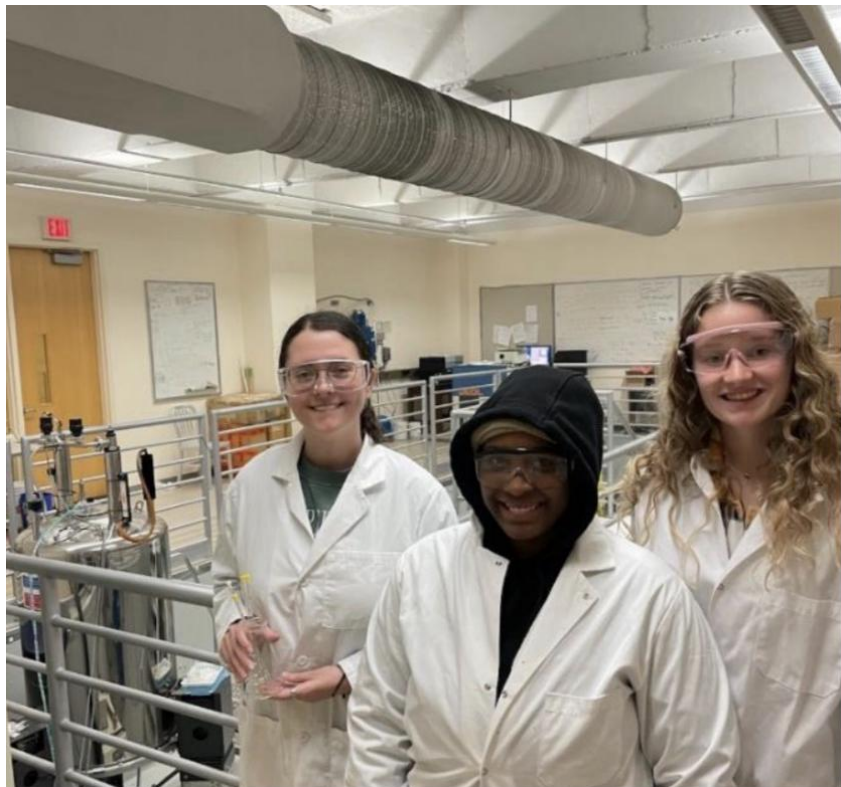
# Data Driven



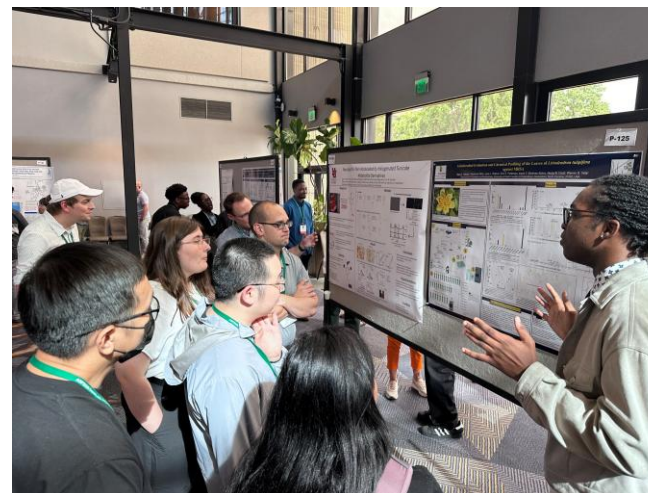
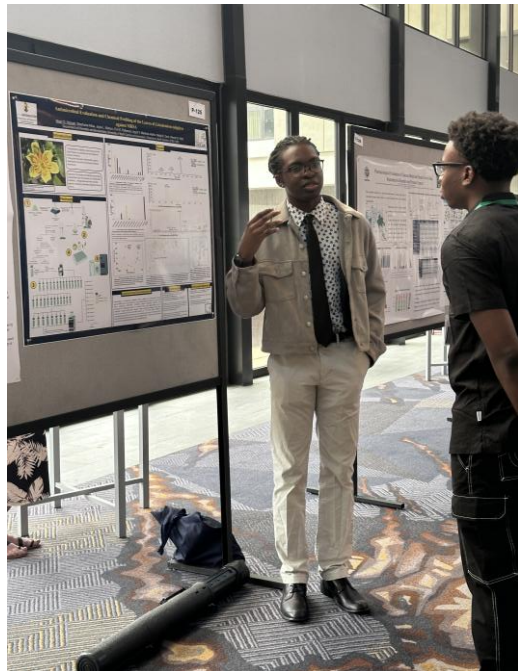
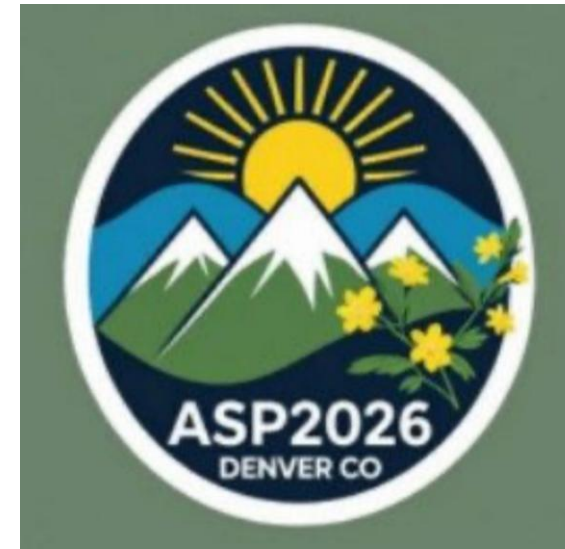
36\_EC-CH-F4\_R2 #1223 RT: 4.30 AV: 1 NL: 1.73E9  
T: FTMS + p ESI Full ms [125.0000-1500.0000]



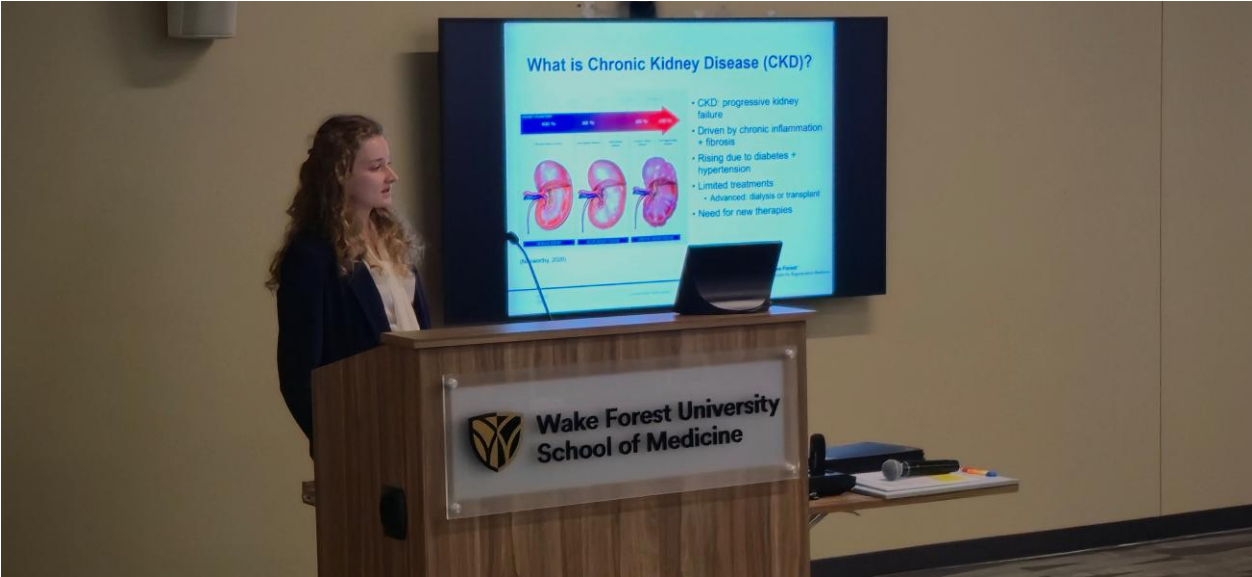
# Our Facilities



# More Opportunities ...

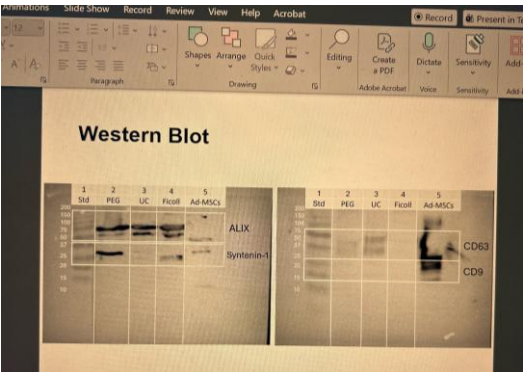


# More Opportunities ...



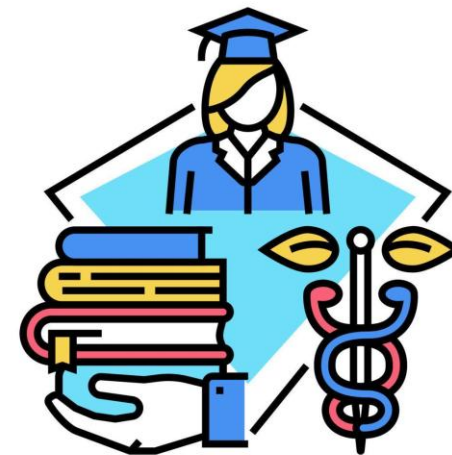
**WFIRM**

Wake Forest Institute for  
Regenerative Medicine

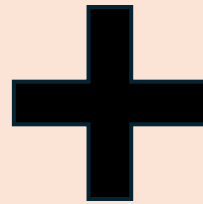


# Lily's Next Steps...

**MEDICAL  
SCHOOL**



# Nigel's Next Steps...



# Thank You!



**UNC GREENSBORO**

Undergraduate  
Research, Scholarship  
*and Creativity Office*



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and Sciences*