

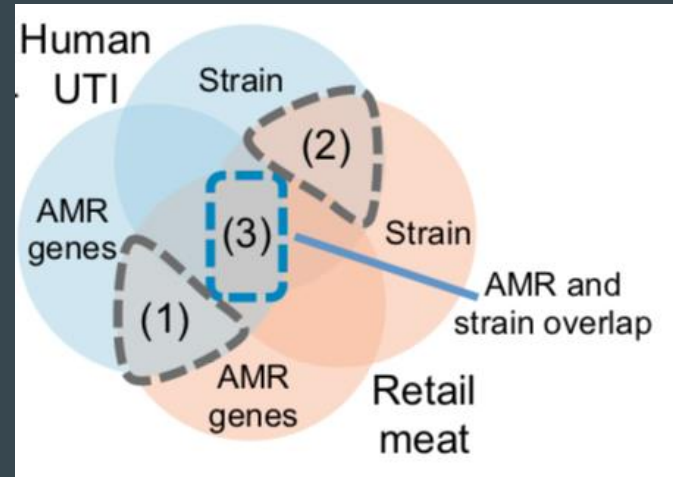
# My Science Summer Internship



Francesca Cetta

# General Overview of Internship

- George Washington University Milken School of Public Health
  - Antibiotic Resistance Action Center
- Effects of California Senate Bill 27
- Studying relationship between antibiotic use in retail meat to UTI isolates



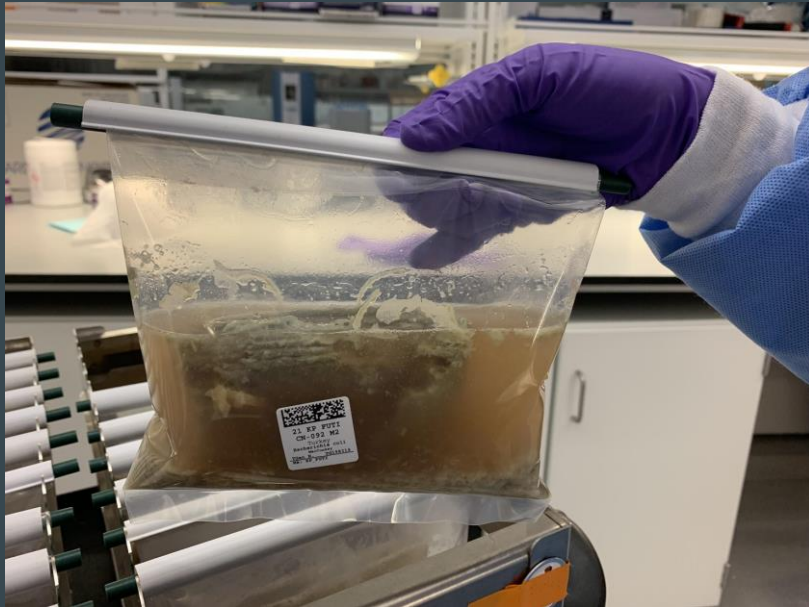
# Chronology of Internship

- Week 1: Training
- Friday morning breakfasts
- Continuous processes and data collection



# 1. Collection and Processing

- Chicken, Turkey, Pork, Beef
- *E. Coli*, *Salmonella*, *Campylobacter*



## 2. Bacterial Isolation



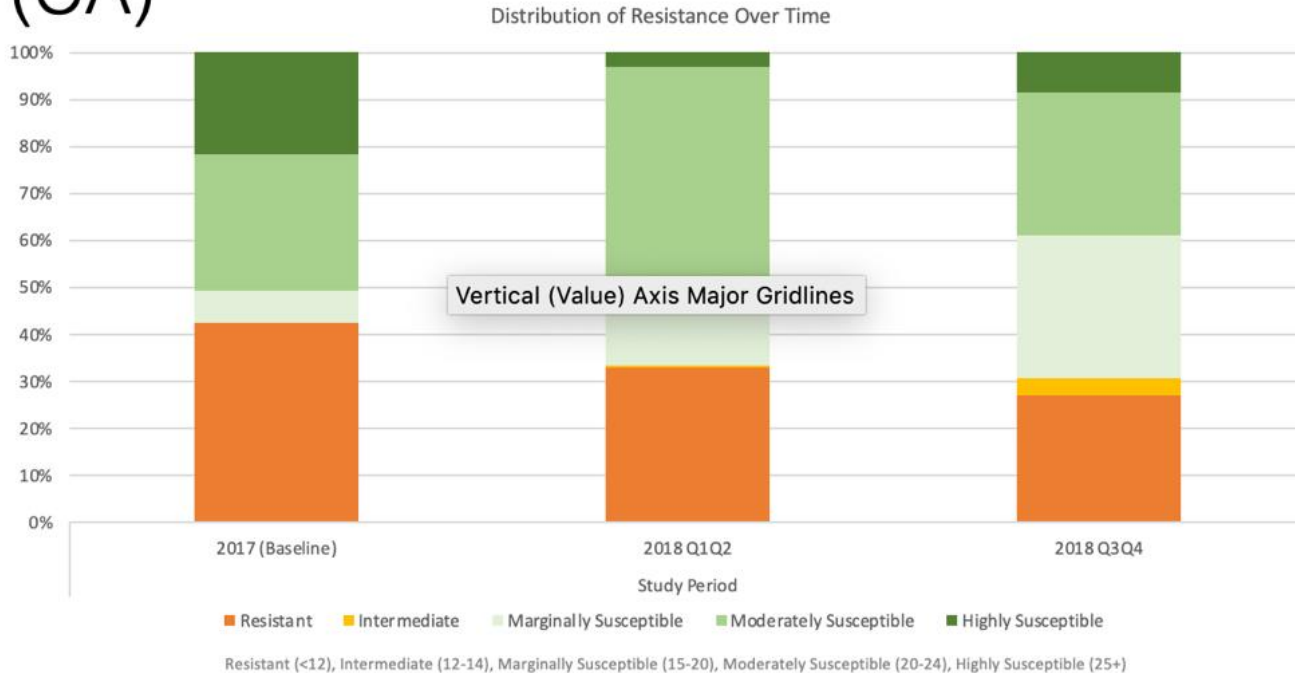
# 3. Testing for Antibiotic Resistance

- Test antibiotics on MIC plates
- Zones of resistance

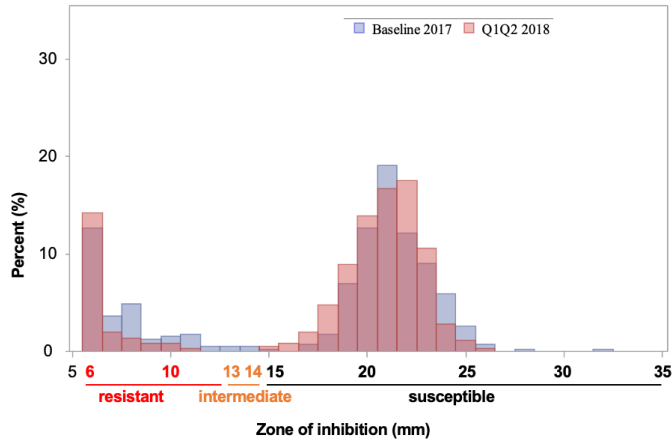


# Data from Research

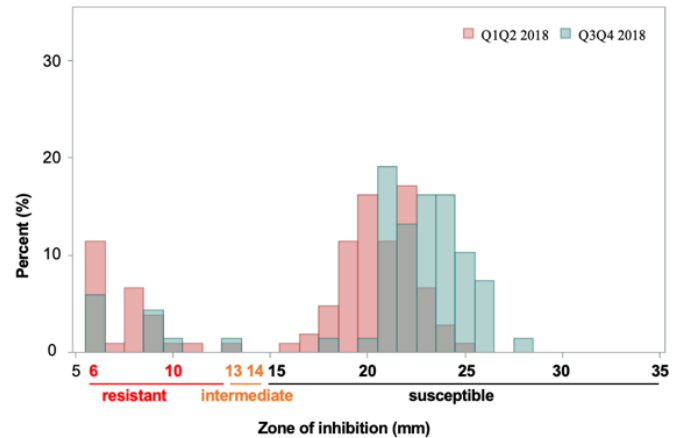
## *E. coli* tetracycline resistance in chicken (CA)



## *E. coli* gentamicin resistance in chicken (CA)



## *E. coli* gentamicin resistance in chicken (non-CA)





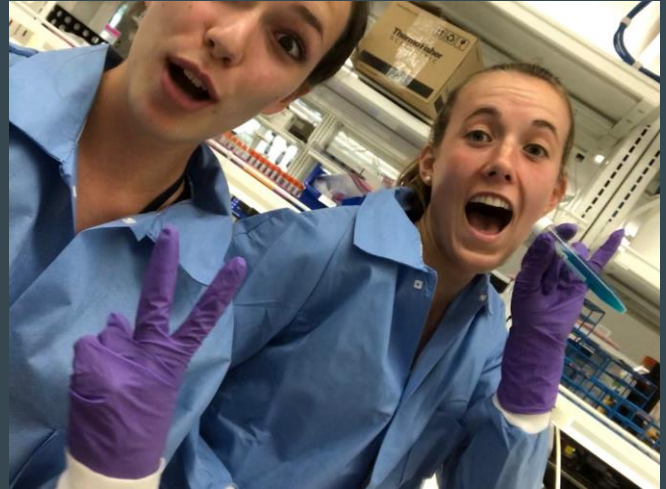
# Major Takeaways

- Global health threat of antibiotic resistance
- Continual process of perfecting processes (recovery rates)
- Lab techniques
  - Streaking
  - Pipetting
  - Single handed opening/closing
- Contamination and sterility
- Ask questions



# Thank you to....

- Dr. Cindy Liu and Dr. Lance Price (Principal Investigators)
- Hanna Rabanes (Lab Manager)
- Caitlin Flouton, Kristen B, Isabelle W, Pascale Schmidt (fellow lab workers)
- Dr. Krug and Mrs. Hansen



# Sources

<https://www.medschool.lsuhsu.edu/Microbiology/DMIP/dmex08.htm>

*NIH R01: Antimicrobial Resistant E. Coli before and after California Senate Bill 27 (ARES): A Natural Experiment*

*Maximizing the Knowledge Gained from California Senate Bill 27 Application*

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