BIOL 422 Bioinformatics Project - Microorganisms in Meat

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# Overview of Proposed Project

## Questions

Investigating microbial communities developed in ground beef under different storage conditions.

## Hypothesis

More diversed microbial communities will be developed if the meat is stored at room temperature in comparison to the ones kept in a refrigerator as low temperature storage is an essentail method to prevent or slower microbial growth (Dave and Ghaly, 2011).

## Study Design

The experiment will be conducted using ground beef. Two samples will be purchased from each brand (total of six samples, three different brands) and immediately refrigerated after purchase. Once the experiment begins, the first treatment group will remain refrigerated and the second group will be stored at room temperature. Subsampling will be performed after 72 hours from the time it was stored.

### Materials needed for Subsampling

* 6 sterile tubes
* 6 disposable spatulas
* Lysis buffer
* Gloves

### Timeline for Subsampling

1. Purchase samples before 3 Sep and keep the samples in a 4 degree celcius fridge.
2. Start the experiment on
3. Collect the sample on

# Sources Cited

Dave,D. and Ghaly,A.E. (2011) Meat spoilage mechanisms and preservation techniques: A critical review. *American Journal of Agricultural and Biological Sciences*, **6**, 486–510.