# Initial Meeting Agenda

**File Number:** #24-001 | **Client Name:** Martin, Joshua

**Department & Position:** Faculty, Food Science

**Expected Completion:** 2/19/2024 | **Purpose:** Industry Partnership

**Stage of Research:** Design (no data collected yet)

## Background:

This study aims to evaluate the efficacy of an antimicrobial in inhibiting Listeria monocytogenes growth in a food product. The research is in its design stage, with no data yet collected, and is part of an industry partnership under NDA constraints.

## Major Objectives | Research Questions:

**Objective:** Determine the effectiveness of varying antimicrobial concentrations on L. monocytogenes growth within a food matrix.

* What is the effect of increasing antimicrobial levels on the growth of L. monocytogenes in the product?

## Kev Variables

1. Antimicrobial Concentration: Three levels of concentration in a food matrix.
2. Bacterial Growth Measurement: Quantified as Colony Forming Units per gram (CFU/g) of food, measured every 3-4 days over a couple of weeks.
3. Replicates: Three replicates per antimicrobial concentration level.

## Statistical Challenges

1. Data Analysis: Previous analyses utilized ANOVA and Tukey's test in JMP Pro 16. The challenge is in ensuring correct application of these methods for the current data set.
2. Client's Skill Development: Client wishes to understand and possibly perform the statistical analysis independently in the future.

## Discussion Points:

1. Project Goals Clarification: Ensuring a mutual understanding of the primary and secondary goals, including boundary decisions and expectations.
2. Statistical Approach:
   * Review suitability of ANOVA and Tukey's Test for this study.
   * Discuss alternative statistical methods if necessary.
   * Plan for assessing normal distribution fit and handling potential issues with data.
3. Skill Transfer:
   * Explore options for training or guiding the client in statistical analysis.
   * Discuss the feasibility of and resources required for the client to perform future analyses independently.
4. Data Management:
   * Discuss data collection, storage and handling protocols, especially considering the NDA constraint.
5. Future Plans: Outline potential follow-up studies or further analyses that might be relevant based on initial findings.