Lactic acid, the cause of dental caries, is largely produced by Streptococcus mutans, a strain of lactic acid (LA) bacteria in the mouth. Using Lactococcus lactis as a model for S. mutans, we aim to remove the gene, ldh, that directs LA production from its genome, resulting in a strain of mutant bacteria with hindered lactic-acid production. We plan on utilizing molecular cloning techniques like cross recombination for gene deletion, and have found a preliminary method for testing the pH of bacteria. In the future, we plan on researching possible implementation methods of our bacterial strain.