

INVESTIGATION OF THE PROTEIN EXPRESSION FOR *PSEUDOMONAS PUTIDA* KT2440 GROWN ON BENZOIC ACID UTILIZING TWO DIMENSIONAL ELECTROPHORESIS. *Nikole Greeson, L. Tubbs**, *P. Craig**, Department of Chemistry, ntg4281@rit.edu, letsch@rit.edu, pacsch@rit.edu.

As a way of developing a new method for determining the presence and toxicity of carcinogenic and mutagenic compounds through protein expression, we are investigating these effects on the KT2440 strain of the bacteria *Pseudomonas putida* (*PpKT2440*). The growth of the bacteria on benzoic acid was monitored by visible spectroscopy in order to construct a growth curve. The growth curve was utilized to determine the time at the mid-log phase of growth, which was found to be about 449 ± 29.88 minutes. *PpKT2440* was then grown and harvested at the mid-log and analyzed by sodium dodecyl sulfate polyacrylamide gel electrophoresis (SDS-PAGE) to determine protein expression which was compared to previous research involving *PpKT2440* grown on succinic acid.