

**Utilizing 2DE gels for carcinogen screening**  
**MaryEd Pratts and P. Craig, Department of Chemistry**

The standard method used in environmental mutagen screening is the Ames Salmonella microsome mutagenicity assay. This assay uses a mutation reversion method to determine how likely a substance is to be mutagenic and possibly carcinogenic. In the past the Ames test has resulted in both false positives and negatives. The RIT Proteomics Lab has is currently using 2-Dimensional Gel Electrophoresis in an attempt to develop a new method for carcinogen screening. Using the hypothesis that an organism will express a different set of proteins (a unique proteomic signature) when grown in the presence of a mutagenic compound, our lab has been running 2DE gels of proteins expressed by the bacteria *Pseudomonas Putida* on different carbon sources. I have grown the bacteria (strain KT2440) on a 5mM Succinic acid carbon source in the presence of 0.1mM 9-Aminoacridine; a compound that tests positive in the Ames test. I will present results for growth curves and 2DE gels from *P.putida* KT2440 grown under these conditions.