



# Prof. Renã Robinson

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Department of Chemistry

## James Taylor Analytical Seminar

Thursday, May 7<sup>th</sup> at 12:15 p.m.

Room 1315 Chemistry

### “Increasing proteomics throughput to study aging and Alzheimer’s disease”

Proteomics research has enabled and provides better understanding of biology and disease. The Robinson research group develops and applies quantitative proteomics methodology to investigate Alzheimer’s disease. Because our study design incorporates biological replication and longitudinal timepoints, more efficient and high-throughput methods are necessary. Our strategy is to enhance sample multiplexing for mass spectrometric (MS) analysis by combining precursor isotopic labeling and isobaric tagging (a method we refer to as cPILOT). Global cPILOT takes advantage of amine or cysteine sites for incorporation of heavy isotope labeled reagents to peptides, including commercially available TMT and iTRAQ reagents. Unique combination of reagents allows us to tag and track sample origin throughout chromatographic and MS steps. This presentation will highlight our studies of aging and Alzheimer’s disease through the use of multiplexing technology.