

Statement of Work (SOW)
**Multi-omics analyses of chicken breast meats for USDA-ARS,
USNPRC, QUALITY & SAFETY ASSESSMENT RESEARCH UNIT**

GENERAL INFORMATION

Scope of Work: This contract is located at the USNPRC at 950 College Station Road Athens GA, 30605. A company/analytical service will conduct multi-omics analyses using liquid chromatography – mass spectrometry (LC-MS) analyses including proteomics, metabolomics, and lipidomics to determine differential abundances of proteins, metabolites, and lipid species in chicken breast meat samples provided by the research team. Results of proteomics, metabolomics, and lipidomics will be integrated to find associations between data sets. A company will perform all experiments at their location. The purpose of this SOW is to acquire data that will support publications in peer reviewed journal. Analyses and deliverables include:

1. Liquid chromatography – mass spectrometry (LC-MS) analyses, data processing and bioinformatic analyses will be conducted with sixteen chicken breast meat samples.
2. Produce results of differential abundances of proteins, metabolites, and lipid species
3. Omni-MS analysis outputs will include:
 - Raw LC-MS data
 - Table of LC-MS features each with:
 - Relative peak area quantification among samples
 - Putative bioinformatic identifications
 - Association statistics with provided sample variables
 - Data visualizations
 - Global data structure
 - Dimensionality reduction
 - Biological associations
 - Volcano plots
 - Individual analyte associations

Government Furnished: No Government-furnished property will be provided.

Contractor Furnished Items and Services: GENERAL. Contractor shall furnish everything required to perform this Statement of Work.