# Kansas Lipidomics Research Center

http://www.ksu.edu/lipid/lipidomics/

Kansas lipid researchers have established the Kansas Lipidomics Research Center with funding from Kansas NSF EPSCoR and KTEC. The Center's Analytical Laboratory, located at K-State, opened in November 2003. Lipidomics Research Center scientists include Ruth Welti, who serves as the scientific director of the Center and oversees its analytical activities, Jyoti Shah, Susan Sun, and David Rintoul of Kansas State University, Rick Dobrowsky, and Steve LeVine of the University of Kansas, and Todd Williams, Director of the University of Kansas Mass Spectrometry Laboratory.

Lipidomics is the branch of metabolomics in which non-water-soluble metabolites are studied. Metabolomics or metabolic profiling is an emerging, comprehensive research strategy to study the functions and levels of metabolites in relation to the function of genes and their proteins.

The mission of the Kansas Lipidomics Research Center is threefold:

- The Analytical Laboratory provides comprehensive, quantitative profiling of lipid molecular species with high sample throughput, using mass spectrometric technologies.
- The Technology Development Component works to expand lipid profiling and other metabolomic capabilities.
- The Scientific Research Component promotes collaborative research among lipid scientists and provides training opportunities for postdoctoral, graduate, and undergraduate students.

## KLRC Analytical Laboratory

The Kansas Lipidomics Research Center's Analytical Laboratory has an electrospray ionization tandem mass spectrometer (ESI-MS/MS), an Applied Biosystem's API 4000, with an autosampler and personnel who perform fast, comprehensive lipid profiling. We offer characterization and quantitation of phospholipid and galactoglycerolipid molecular species from crude solvent extracts of living tissues. We are currently prepared to handle plant, yeast, and animal samples.

| | |
|---|---|
| Sample preparation and solvent addition | $ 5.00 |
| Internal standard addition | $ 8.00 |
| ESI-MS/MS spectra for PC, PE, PI, PG, PA, PS, MGDG, DGDG, lysoPC, and lysoPE (as present) | $15.00 |
| Data processing | $ 7.00 |
| Total (per sample) | $35.00* |

We strongly recommend (and reserve the right to require) that 5 or more replicates of each sample be analyzed.

*There is a discount of 31.5% for researchers in the State of Kansas.

Inquiries: lipid@ksu.edu