

2016 LC MS/MS Interest Group Workshop

**Title:** Tracking through Statistical QC Monitoring (LC/MS & Related Topics Interest Group)

**Organizers:** Michael Bereman & Brent Dixon

**Date and Time:** Monday June 6<sup>th</sup>, 2016 545-700

**Presenters:** Josh Eckels, Labkey

Will Thompson, PhD, Duke University

**Summary:** This workshop focused on the use of process control techniques to identify suboptimal performance in LC MS/MS instrumentation for both proteomics and metabolomics experiments. It was attended by over 80 scientists with an approximate equal number of individuals from academia and industry. Dr. Bereman started the conversation off with both a review of ideas discussed last year and also a case study in which he encountered in his own laboratory of a decrease in protein identifications across time. He posed 5 different questions to the audience which started in-depth conversations amongst the audience. In addition, he discussed new QC standards to monitor performance in proteomic experiments. This lasted for 30 minutes. Then Josh Eckels presented on software developed from LabKey as a tool, termed AutoQC, to longitudinally store data and view QC data across time. AutoQC is a new completely automated software that interfaces with Skyline to extract label free metrics and upload them to the Panorama Server. These metrics can then be viewed from anywhere that has internet access. There were several questions and proposed suggestions from the audience to Josh. Lastly, Will Thompson from Duke University showed the use of AutoQC to monitor performance in both proteomic and metabolomic experiments. He also discussed briefly about experimental design in -omic studies.

Overall the workshop was well received and the audience was highly interactive. Many came up after the end of the workshop to discuss further points with the speakers.