Partek Data Analysis Workshop
featuring Partek® Genomics Suite™ software

Day One – RNA Expression

Time	Topic
09:00 – 10:00	**Introduction Lecture**: Do shoes affect height? Using the wrong statistical test and a discussion of the results. **Brief discussion on Experimental Design**: How you'll benefit from using ANOVA for your expression studies
10:00 – 10:15	**Break**
10:15 – 12:00	**Hands-on Expression Analysis** • Import from Affymetrix CEL files • Review on import from Illumina, Agilent, or NimbleGen • Analysis of a Two-Factor Design – Disease State across Tissue • Interpreting an ANOVA table • Gene Ontology to aid biological interpretation • GO ANOVA – Finding differentially affected categories
12:00 – 13:00	**Lunch**
13:00 – 14:00	**Additional Topics on Gene Expression** • Finish unaddressed topics from the morning session • Brief overview on Affymetrix Exon Analysis
14:00 – 14:45	**Global DNA-protein Interaction and Integrating w/Expression** • Workflows for either ChIP-chip or ChIP-seq analysis • Merging ChIP data with Gene Expression
14:45 – 15:00	**Break**
15:00 – 17:00	**Hands on Data Analysis with Your Data** Bring your own data and sample attributes. Import them into Partek and we'll be available to help and consult with you on the best analysis path.

Day Two – DNA Copy Number / CGH

Time	Topic
09:00 – 10:00	**Introduction Lecture**: Copy Number Basics
09:30 – 10:30	**Hands on Copy Number Analysis** • Importing Affymetrix , Illumina, NimbleGen, or Agilent data • Creating a table of copy number intensities relative to a baseline • Creating a table of copy number segments
10:30 – 10:45	**Break**
10:45 – 12:00	**Hands on Copy Number Analysis** • Creating a table of shared segments by number of samples • Creating a table of shared segments by categorical variables • Visualizing Copy Number by Karyoview • Visualizing Copy Number by Genomic Browser • Clustering Copy Number
12:00 – 13:00	**Lunch**
13:00 – 14:45	**Additional Copy Number Topics** • Incorporating Allele Ratio into Copy Number • Allele Specific Copy Number • Loss of Heterozygosity (LOH) coupled with Copy Number
14:45 – 15:00	**Break**
15:00 – 15:45	**Integrating Gene Expression & Copy Number** • Creating Gene-based merged CN & GX table • Creating a Segment-based merged CN & GX table • Creating a Gene-based correlation table of CN & GX
15:45 – 17:00	**Hands on Data Analysis with Your Data** Bring your own data and sample attributes. Import them into Partek and we'll be available to help and consult with you on the best analysis path.