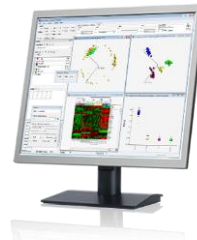


Training Qlucore Omics Explorer

Hands on courses offered via web or inhouse

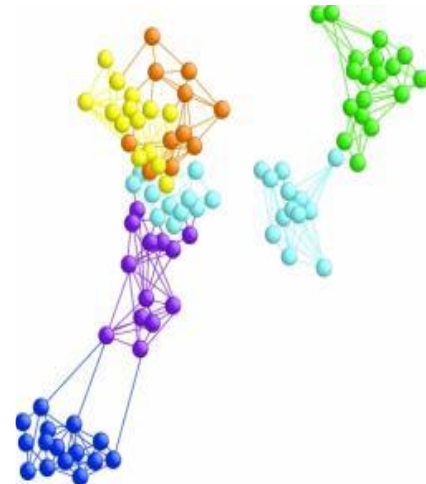


Visualize and Explore

Statistical Analysis

Achieve Biological Insights

Machine Learning




Data types

Examples

- Gene Expression (RNA-seq & array)
- Single cell RNA-seq
- DNA Methylation
- Proteomics
- Metabolomics
- Protein array data
- miRNA data
- qPCR data
- Flow cytometry data
- NGS module: RNA-seq, DNA-seq, ChIP-seq and ATAC-seq data

Supported File formats

- RNA-seq (aligned BAM files & gtf file, quant.sf files)
- Thermo Fisher/Affymetrix GeneChip compatible (.cel files)
- Agilent txt files
- GEO soft files 
- TCGA Data
- 10X Genomics data
- Wizard (*.txt, *.csv)
- NGS module: fasta, vcf, gtf, bed and cytoband files

Any multivariate data



Hands-on exercises

Run a statistical test using a Colon cancer miRNA data set

1. Import data with Wizard
2. Get familiar with the user interface
3. Remove effect of covariates
4. Find discriminating variables using a statistical test
5. Heatmap, test and export
6. Violin Plot and Bar Plot
7. Log point
8. Exploratory Data Analysis – PCA, UMAP and t-SNE plots
 - Find clusters using a Leukemia transcriptomics data set

If time allows demonstration of:

1. Biomarker workbench
2. Pathway analysis, Gene Set Enrichment Analysis GSEA

Extra Exercises

1. *Download GEO data*
2. *Volcano plot*
3. *Linear Regression and Scatter plot*
4. *Rank Regression*
5. *Bar Plot*
6. *Venn diagram*