

## Release Notes

Proteograph™ Analysis Suite v1.5  
October 11, 2021

- **New analyses to visualize differences in peptide/protein group intensities between samples and groups**
  - New interactive table containing peptide/protein group intensities across samples/groups
  - New heatmap plot for visualizing peptide/protein group intensities across samples/groups
- **New analysis to identify peptide/protein groups with significantly different intensities between groups (e.g., healthy vs. disease samples)**
  - Added new “Group analysis” sections to ‘Analysis’ section
  - Guided comparison setup providing data filtering, normalization, imputation, and statistical test options
  - Toggle for viewing only ‘Significant Peptides/Proteins’ in dataset
  - Interactive plots and tables for exploratory expression analysis of significantly regulated targets with dynamic fold-change and p-value options
  - New group analysis plots to visualize peptides/protein groups with statistically different intensities
    - Volcano plot – Fold-change vs. statistical significance with coloring options to highlight proteins-of-interest
    - Coverage viewer – Amino acid sequence coverage by peptides display, including PTM detection
    - Clustered heatmap – Visualizing peptide/protein group intensities across samples/groups with rows (peptide/protein groups) and columns (samples) ordered using hierarchical clustering
    - Protein-protein interaction – Visualization of PPIs (STRING db) of significant proteins
    - Intensity box plots – Compare significant peptide/protein group intensities between groups
- **Changes to plot visualizations**
  - Added ability to export plot source data to .csv files
  - Improved plot rendering speeds
  - Added user preferences to modify plots
- **New analysis protocols**
  - Integration of DIA-NN database search engine
    - Pre-installed DIA-NN library-based protocol (*DIANN - System Provided DIA Protocol*)
    - Expanded Seer human plasma spectral library file (4,011 protein groups; 62,687 precursors)
    - Optional *in silico* predicted library-free protocol
- **Changes to results summary**
  - Simplified peptide and protein group results tables
    - Panel level summary
    - NP level summary
- **Changes to help content**
  - Updated user guide
  - Indexed online help
  - Tooltips

- **New data file management**
  - New *AutoUploader* application allows automatic data transfer from LC-MS system to PAS account
- **Added security**
  - Multi-factor authentication
  - Support for various authentication apps
- **Other general improvements**
  - Minor bug fixes