

Genedata Screener® High Content Extension

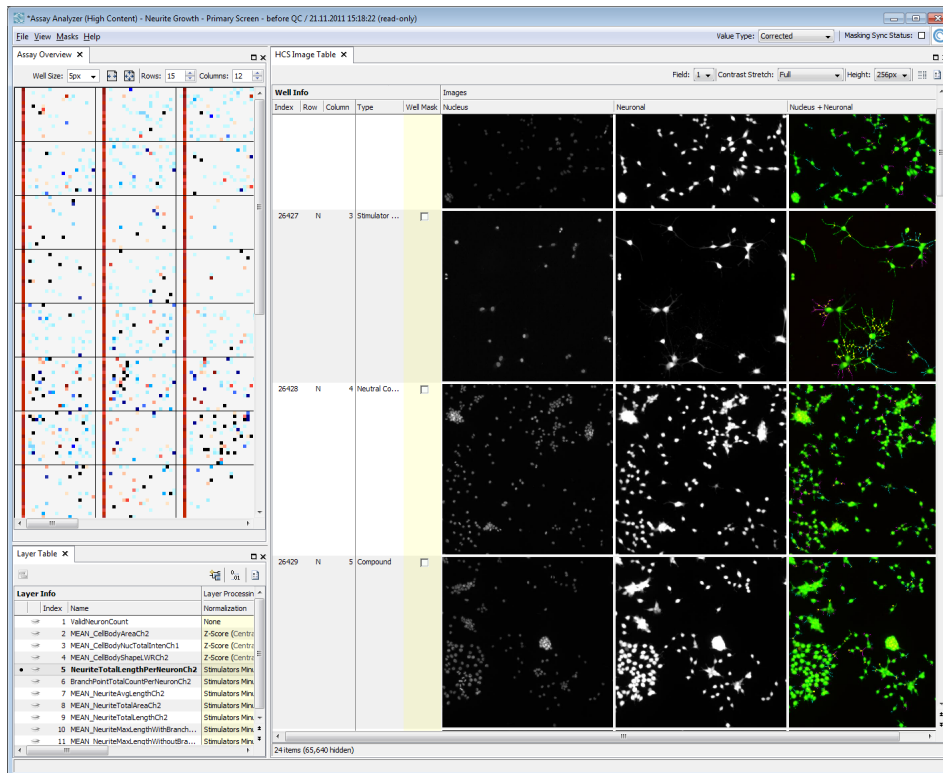
Cross-Platform Support for High Content Screening

High Content Extension integrates High Content Screening (HCS) images and adds HCS-relevant analytical methods to Genedata Screener. Anywhere in the analysis workflow, you can instantly access underlying HCS images. Advanced analytical methods and optimized navigation easily handle limitless numbers of HCS features.

HCS Bottlenecks Removed

With the High Content Extension, Genedata Screener integrates with any central or local source to automatically import HCS data and images. Typical HCS analysis bottlenecks are eliminated via parallel processing, intelligent combination, features annotation, and direct integration with images. At each step, HCS images underlying selected data points can be instantly accessed without any operational overhead for the industry's fastest data analysis workflow.

- ▶ Instant Image Access
- ▶ Images in Context
- ▶ All Plates
- ▶ All Features
- ▶ Feature Clustering
- ▶ Annotation
- ▶ Tight Integration
- ▶ Low TCO



Assay Analyzer with High Content Extension

(FIG. 1) A daily batch of plates with multiple features, images for selected wells are easily accessible.

Integrates with Major HCS Systems

With High Content Extension, data and images are read directly from leading storage systems such as:

- ▶ BD Pathway™ Software
- ▶ Thermo Fisher Scientific Cellomics Store database
- ▶ PerkinElmer Columbus™ Image Data Management and Analysis System
- ▶ openBIS for HCS

Access to other data sources is set up in very little time using versatile and well-documented APIs.

Instant Image Access

Immediate, context-sensitive access to HCS images is crucial for all stages of data processing in HCS. High Content Extension gives instant access to images during quality control, hit list generation or dose-response curve fitting. Tight integration with image storage eliminates the need for image navigation and a simple click on the data point of interest opens corresponding images.

Process Multi-Featured Data

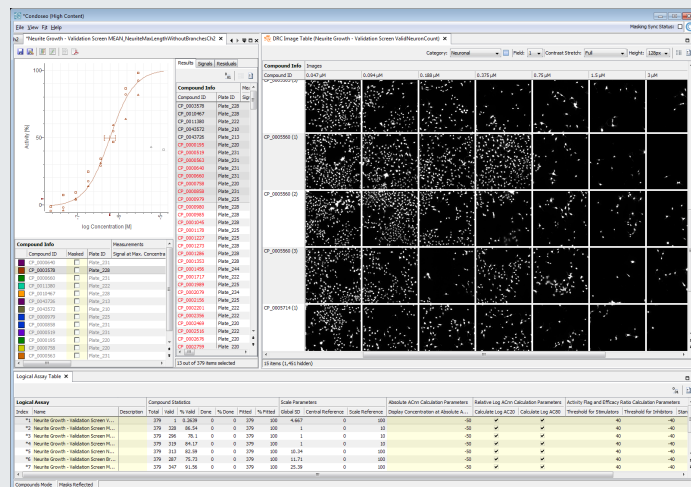
Genedata Screener allows you to load all or a sub-selection of per-well features for a given experiment, process and analyze them in parallel.

Built-in clustering of selected features provides a fast and intuitive overview on feature correspondence. While some features are used primarily for quality control, others carry the biological readout. You can group, analyze and compare features or define quality or hit criteria on any combination of features.

The Linear Discriminant Analysis (LDA) efficiently combines information from multiple features into a single value optimally discriminating e.g. two control well groups.

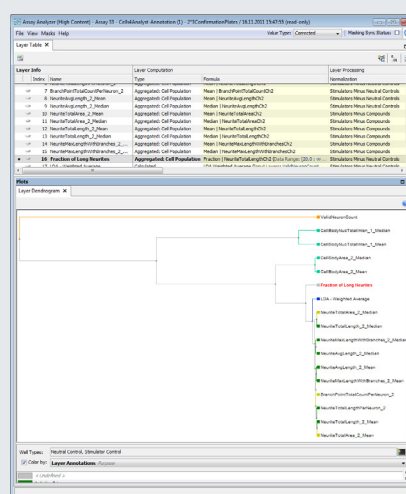
Part of a Complete Screening Solution

Genedata Screener provides a centralized backbone for data analysis from plate-based screening experiments. Specific extensions for data from High Content, Cell Population or Time-Series Experiments specifically add support for these technologies.



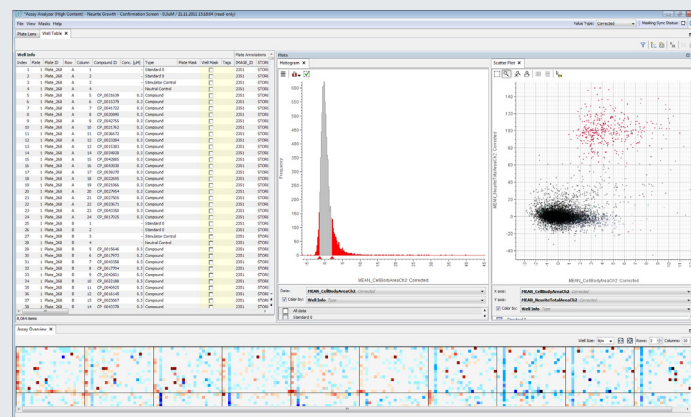
Context Specific Image Display

(FIG. 2) Display of images per compound, aligned by concentration.



Feature Support

(FIG. 3) Dendrogram to support analysis and navigation in HCS assays with many features.



Multivariate Data Visualization

(FIG. 4) Interactive scatter plot and histogram for visual comparison of data from different features and for easy identification of outlying data points.



Genedata Screener® is part of the Genedata portfolio of advanced software solutions that serve the evolving needs of drug discovery, industrial biotechnology, and other life sciences.

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