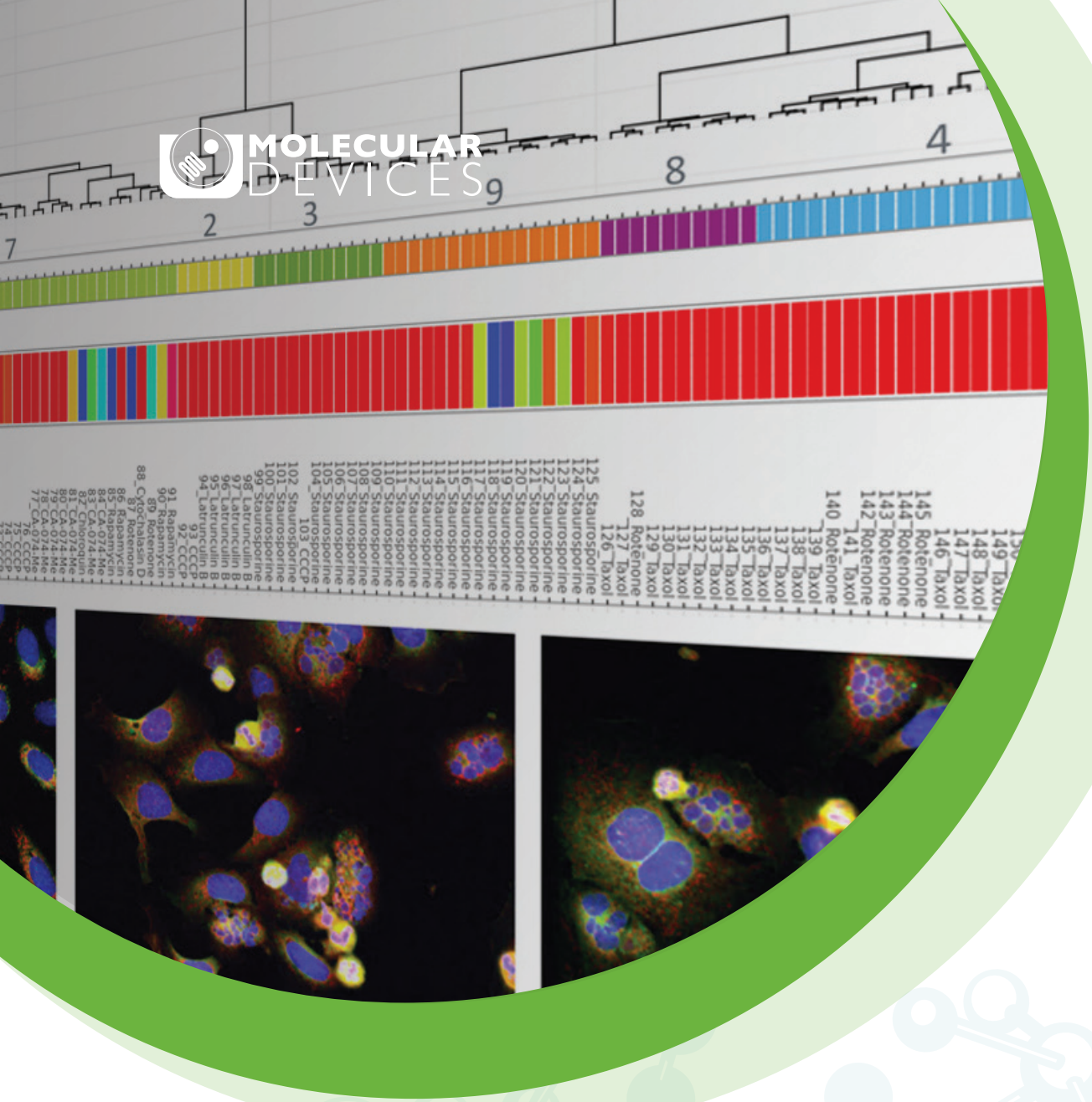
MOLECULAR DEVICES



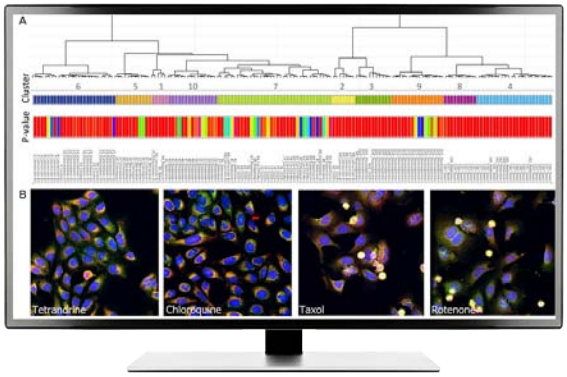
Advanced Cloud-Based Analytics with

StratoMineR

Intuitive data analytics at your fingertips

An intuitive and powerful platform for phenotypic profiling

Core Life Analytics' StratoMineR™ software helps biologists analyze the complex data derived from high-content image analysis. A powerful, intuitive workflow allows users to port data analyzed inside IN Carta® Image Analysis Software directly into StratoMineR where it can be used to generate rich, interactive visualizations using advanced data mining methods.



Built for biologists

Intuitive analytics workflow. No coding required.

Phenotypic analysis

Use all of your high-content data to discover novel phenotypes.

Artificial Intelligence

Build your own AI models to discover the drugs of tomorrow.

Features

Flexible data upload

Upload numerical data from widely used standard formats, including measurements from IN Carta Image Analysis Software.

Artificial Intelligence

Machine learning models can be applied to leverage AI technology in data analytics.

Phenotypic characterization

Gain Insights into the mechanisms of action of novel compounds and small molecules.

Quality control

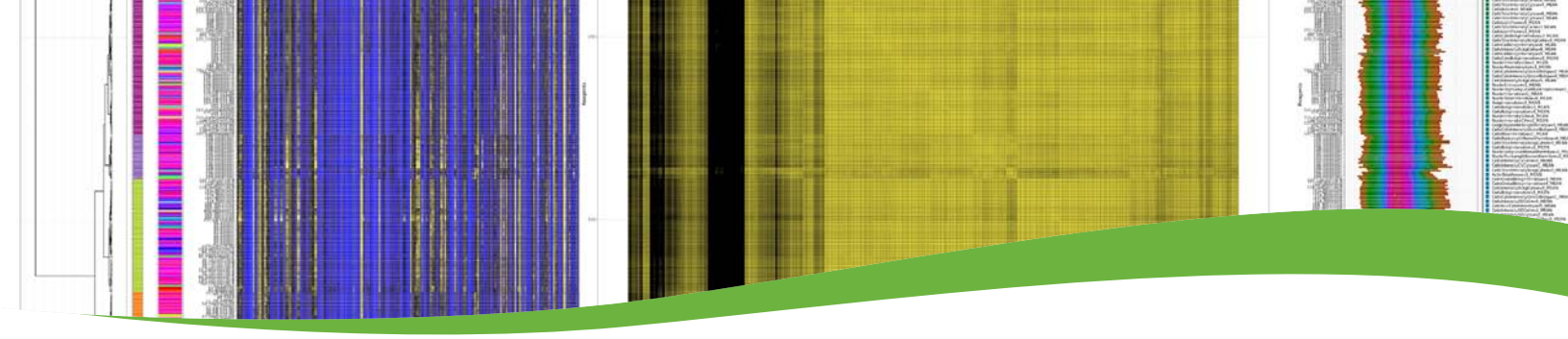
Use built-in data visualization tools for quick assessment of data quality and remove outliers.

Reduced data complexity

Data reduction decreases complexity and increases focus on key biological interactions.

Collaboration

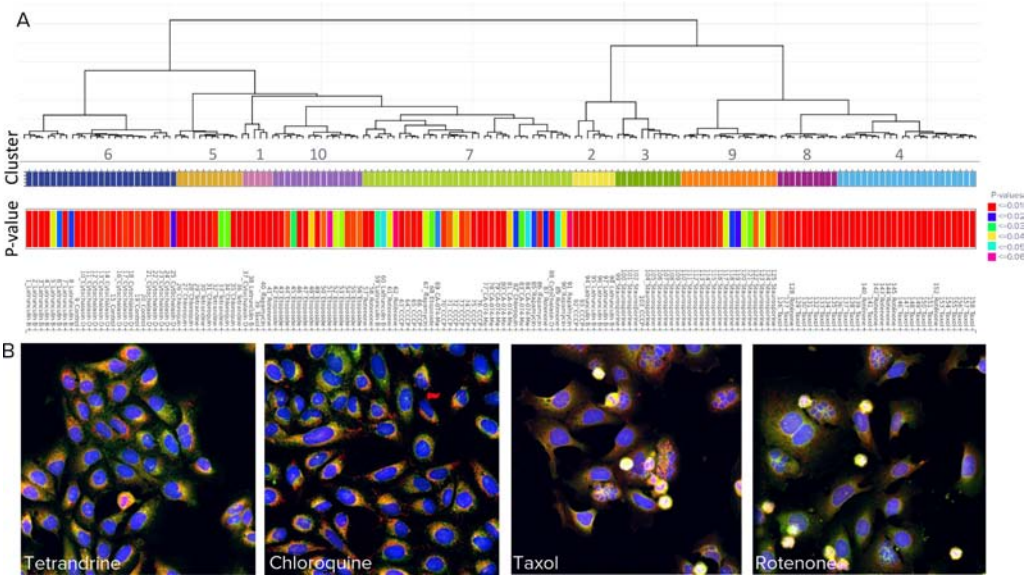
Utilize project management tools for collaboration.



Import datasets from IN Carta for deeper insights into your data

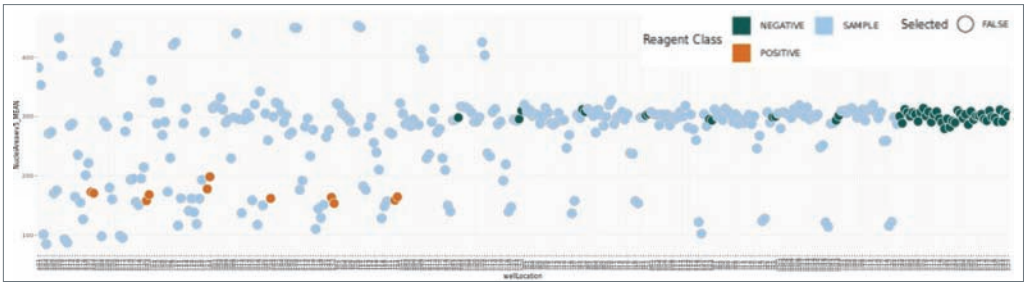
IN Carta Image Analysis Software provides robust, quantitative results from complex biological images and datasets utilizing advanced AI technology. Directly import this data into StratoMineR, an intuitive web-based platform which utilizes guided workflows for analysis of high-content multi-dimensional data.

Cluster analysis



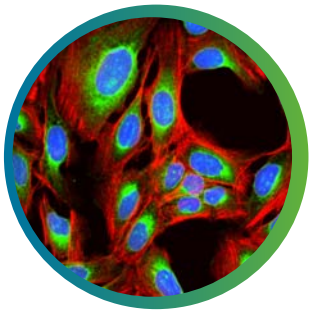
Cluster analysis. A) A dendrogram representing hierarchical relationships is shown. B) Compounds with similar mechanism of actions are found in the same cluster. for example, tetrandrine and chloroquine, both of which are involved in autophagy, are in cluster 5. Cells treated with high levels of taxol and rotenone show cytotoxicity and are found together in cluster 4.

Scatter plot



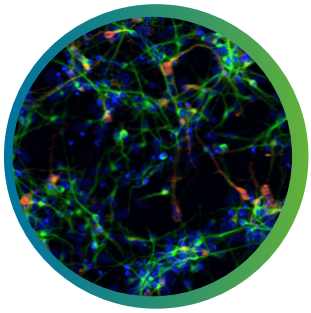
Example of a scatter plot using HC StratoMineR for visualization and exploration.

Applications of StratoMineR



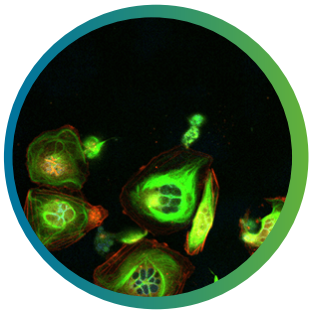
Cell Painting

The cell painting assay uses up to six fluorescent dyes to label and visualize different components of the cell. All the features extracted from the assay give unique cellular “signatures” that characterize any given cell. In addition, insights into the mechanism of action may be gained by comparing the phenotypic profiles of novel compounds with those reference compounds. In a standard cell painting assay, cells are perturbed using chemical or genetic approaches. The cells are then fixed, stained, and imaged on a high-content microscope. Numeric features are extracted using automated image analysis. These features can then be mined to generate biological knowledge.



Stem Cell Research

Pluripotent stem cells can be used for studies in developmental biology or differentiated as a source for organ-specific cells and used for live or fixed cell-based assays on slides or in multi-well plates. The ImageXpress system has utility in all parts of the stem cell researcher’s workflow, from tracking differentiation, to quality control, to measuring functionality of specific cell types.



Toxicity Screening

Screening for off-target or toxic effects is very important during the development of new drugs and for the extension of the therapeutic potential of existing molecules. ImageXpress systems are fully integrated hardware and software platforms for automated acquisition and analysis of images for high-throughput cell-based cytotoxicity testing. Configured with optional environmental control, living cell responses or kinetic reactions can be monitored in real time for several days.

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4/22 2476A
Printed in USA