WEB-ENABLED IMAGE STORAGE. ACCESS, VIEW AND EXPLORE.
THE UNIVERSAL SOLUTION TO HIGH-VOLUME IMAGE DATA STORAGE AND ANALYSIS
A powerful solution for high content analysis - access, view and explore data - whatever the source

Scientists working with images generate massive amounts of data that need to be accessed quickly, analyzed and re-analyzed, shared with colleagues and stored safely. But exploring that data has been difficult and limiting.

Columbus™ is the first universal high-volume image data storage and analysis system that brings fast, secure web enable access to images from a wide range of sources. The Columbus system lets scientists remotely access, view, annotate and measure multidimensional images from anywhere. The system can be configured to serve different numbers of users. The task of filing data is eliminated and the risk of losing data when a colleague leaves is minimized. It acts as a central location where image data is stored with associated metadata to give a complete and enduring picture of any experiment.

PerkinElmer’s cellular imaging and analysis solutions are built around scientists and the way you want to work.
VERSATILE AND EASY TO USE, THE COLUMBUS SYSTEM TAKES HIGH CONTENT IMAGING AND ANALYSIS TO A NEW LEVEL. ONCE CAPTURED, STORE, RETRIEVE, ANALYZE, SHARE – NO MATTER WHAT YOU WANT TO DO WITH YOUR IMAGES AND DATA, THE COLUMBUS SYSTEM GIVES YOU THE TOOLS. IT’S THE MOST FLEXIBLE, SCALABLE, COST-EFFECTIVE SOLUTION COMMERCIALY AVAILABLE TODAY.

WEB-ENABLED TO SET YOUR RESEARCH FREE

POWERFUL FEATURES. OUTSTANDING BENEFITS.

Universal solution
- Import images from any major high content imaging instrument for a single solution for data storage and analysis, simplifying your workflow and increasing productivity

Web-enabled multi-user access
- Allows everyone in the lab to access, visualize and analyze their image data from anywhere, regardless of the client operating system and without software installation

Intuitive image data visualization
- Get started without extensive training – browse and explore your data using the intuitive user interface

Cellular fingerprinting
- Numerically express the differences between cell intensity, morphology and even features you can’t see, such as texture

Building blocks for image analysis
- Analyze your images quickly and efficiently, even if you’re not an image analysis expert, with the powerful building blocks

PhenoLOGIC™ machine – learning technology
- Simply click on cells or regions to teach the software to recognize different populations or image regions for easy cell classification and image segmentation

Seamless Integration with TIBCO Spotfire® HCP
- Access your Columbus results directly in High Content Profiler™, powered by TIBCO Spotfire®, and perform screening data analysis and validation, QC analyses, calculate reliable normalization, perform multivariate hit stratification and drug response profiling
THE POWER TO DISCOVER IS AT YOUR FINGERTIPS

The Columbus system is the only image data storage and analysis system that supports a wide range of file formats, allowing visualization of images whatever their origin. Users can browse images by relational information. Multichannel data can be explored by individual channel or merged images. The entire history of an experiment can be reviewed.

For further analysis, results can be accessed directly from High Content Profiler™, powered by TIBCO Spotfire®, enabling you to perform the screening data analysis and validation in a single and easy to use platform, saving valuable time and reducing cost. Transform your high content screening analyses into robust biological conclusions with a wide variety of automated methods for feature selection, dimensionality reduction, and multivariate hit stratification, while gaining immediate insights with real-time visual analytics.

Discover hidden patterns or batch effects within the screen, eliminate them and go back to the images to confirm and validate the results - without needing to start the analysis all over again.

The Columbus system makes it easy to open your research to greater discovery. It’s the universal solution to your cellular imaging and analysis needs.

High-speed image analysis with ready-to-use solutions.

Jump-start your analysis. The Columbus system includes highly sophisticated yet easy-to-use image analysis that can recognize and categorize different types of cells in a variety of ways including shape, size, and texture for a more complete cellular fingerprint. Analysis workflows let you analyze new images or re-analyze images from past experiments at your desktop, including batch analysis.

- Provides a single solution for image analysis and secondary analysis that’s flexible, easy to use and generates results fast
- Analyze cells by shape, size and texture for a more complete cellular fingerprint
- Includes a comprehensive range of algorithms optimized for cell type, staining and imaging condition
- Features PhenoLOGIC machine-learning technology which makes it easy to create optimized algorithms using a point-and-click approach
- Analyze dynamic behavior and monitor cellular changes in living cells.

The seamless interface between Columbus and High Content Profiler provides downstream analysis of high content screening results.
**Results. Smarter. Faster.**

With a growing emphasis on translational insight, it is more important than ever to be able to examine the molecular mechanisms of disease and translate your in vitro models into in vivo results. PerkinElmer offers leading solutions and renowned expertise in assays, imaging and informatics that will help you bring it all together. Whether working in a well, cells or small animals, now you can focus on your science, gain insight sooner and succeed faster.

Learn more at www.perkinelmer.com/Product/columbus.

*Acknowledgement: Mouse E18 primary hippocampal neurons at 12 days in vitro acquired using the Opera® High Content Screening System. Image kindly provided by Dr. Ronald van Kesteren, Center for Neurogenomics and Cognitive Research, VU University, Amsterdam.*