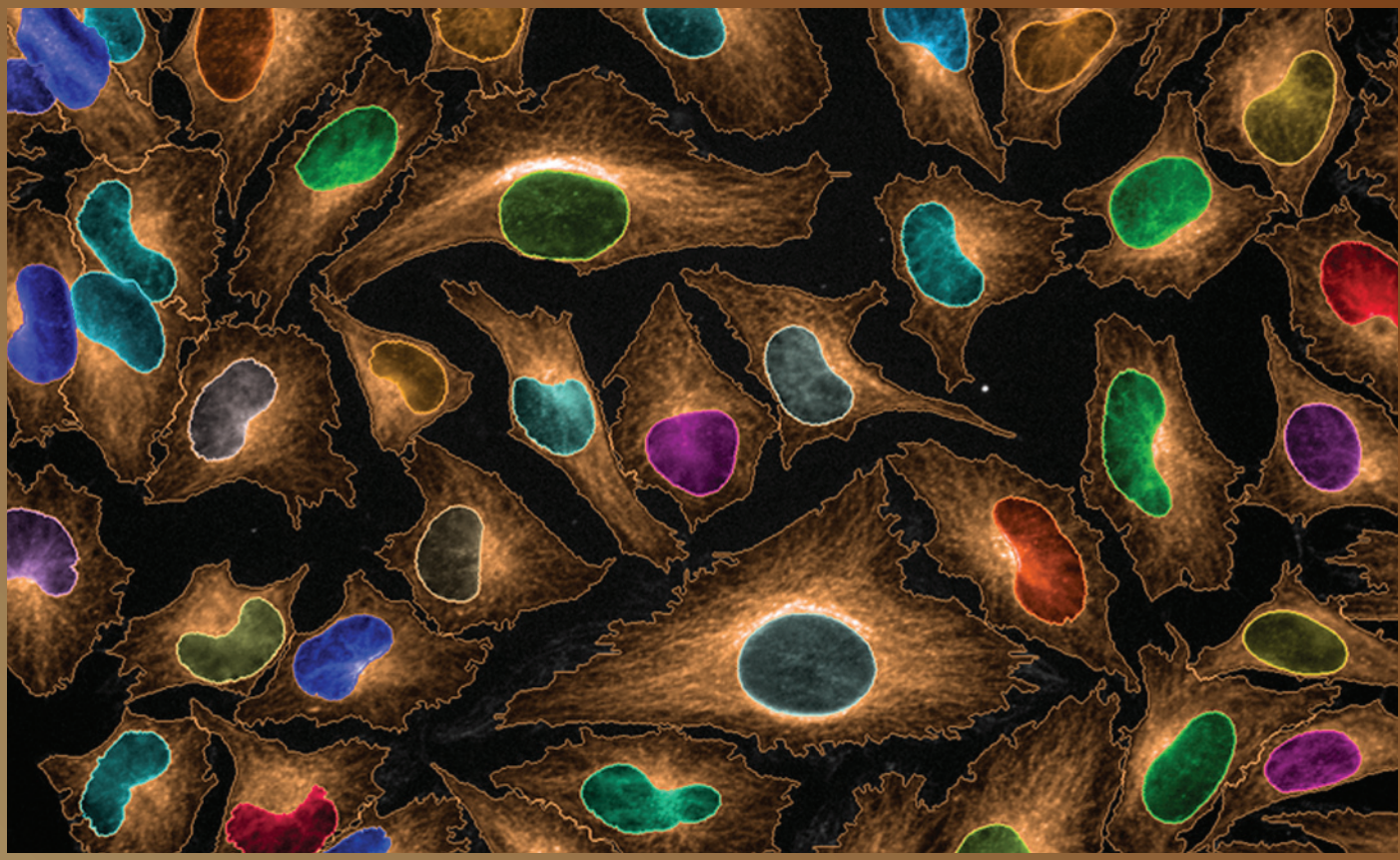
HUMAN HEALTH

ENVIRONMENTAL HEALTH



WEB-ENABLED IMAGE STORAGE. ACCESS, VIEW AND EXPLORE.

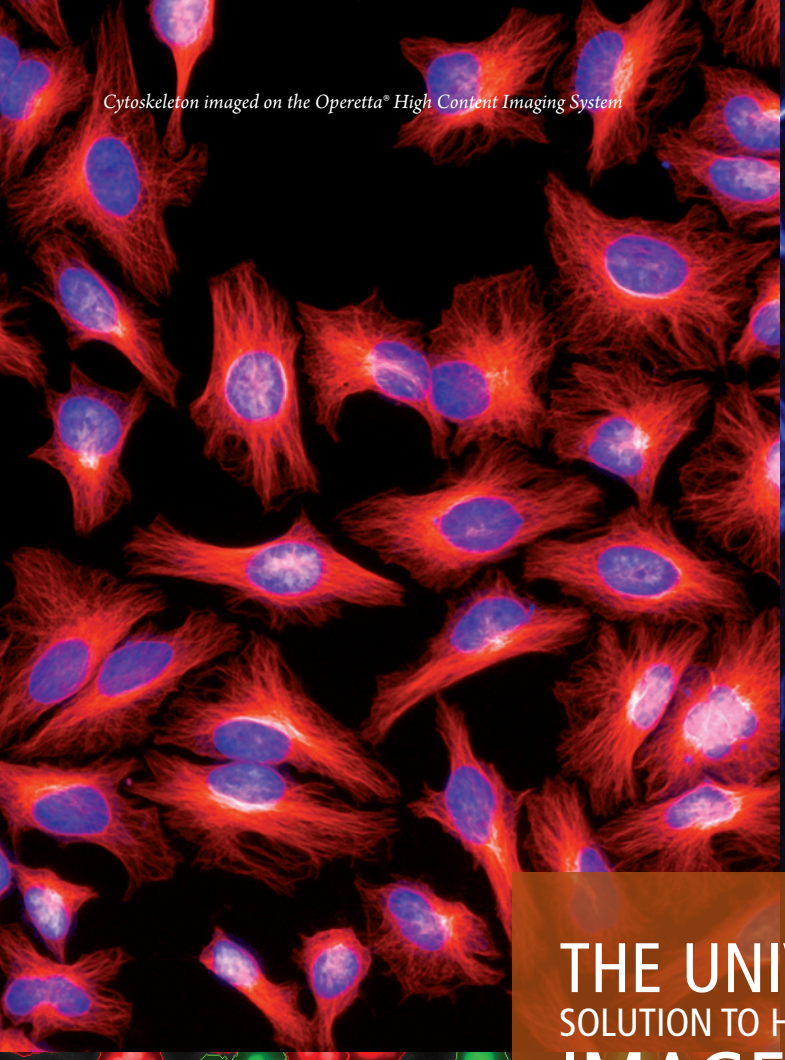
Columbus

COLUMBUS SYSTEM

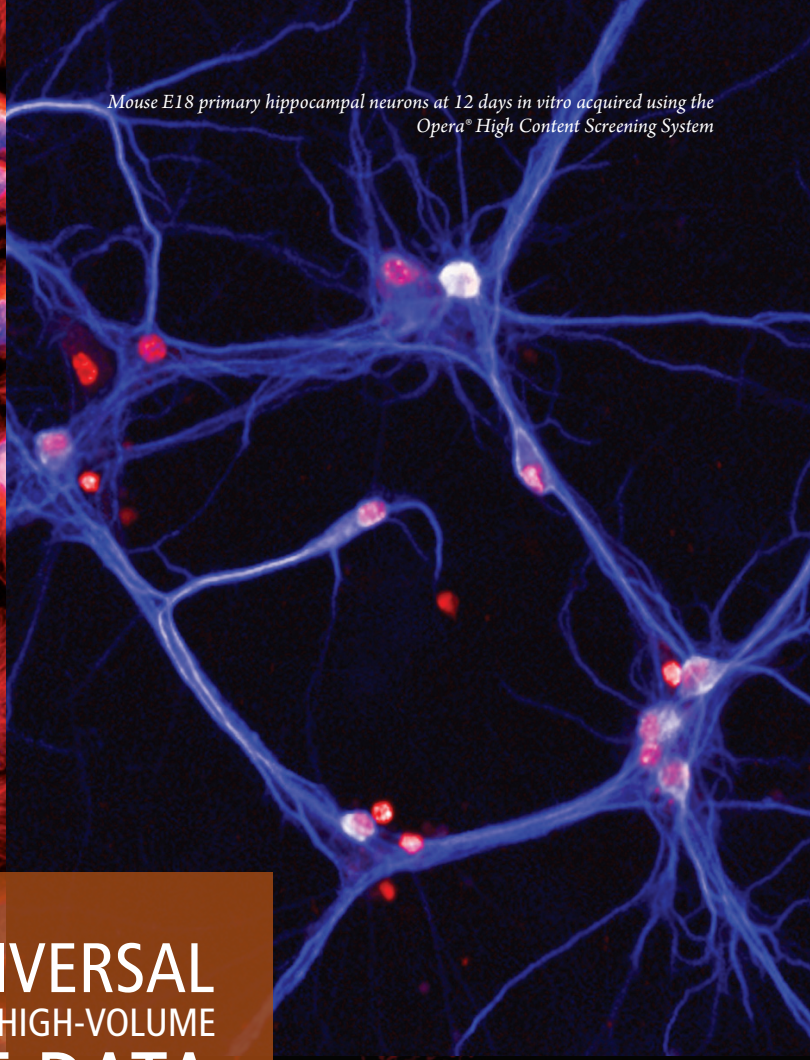
Image Data Storage and Analysis System

PerkinElmer®

For the Better

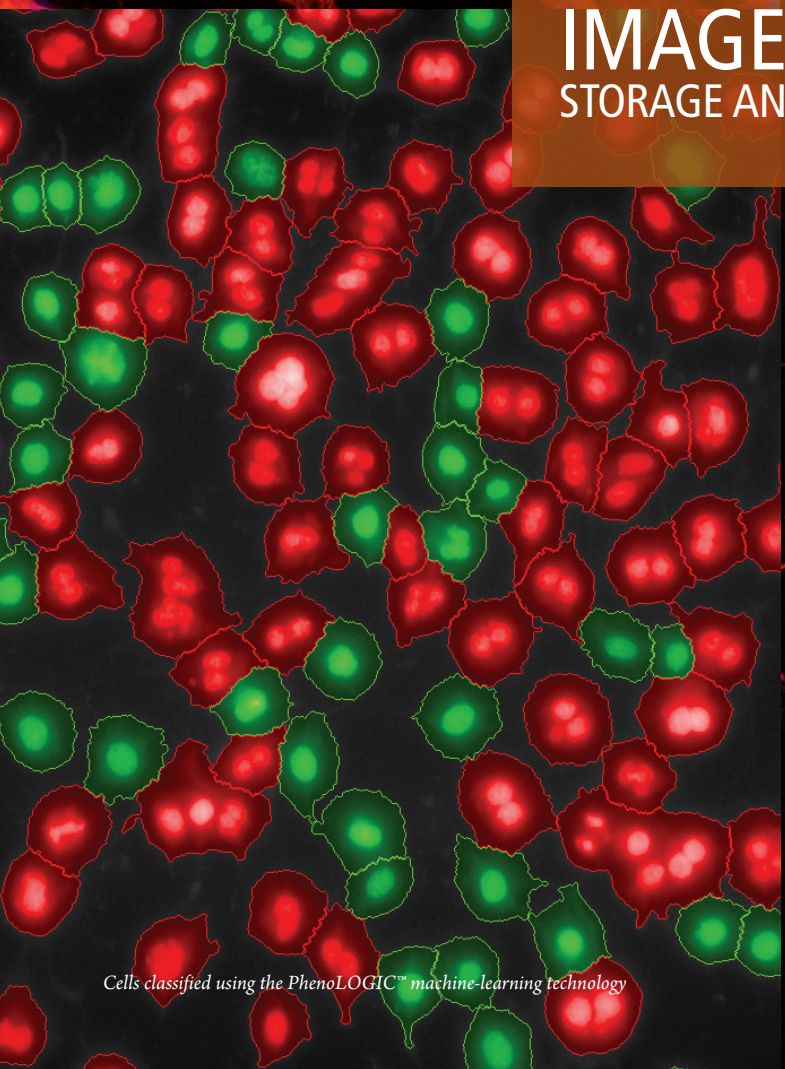


Cytoskeleton imaged on the Operetta® High Content Imaging System

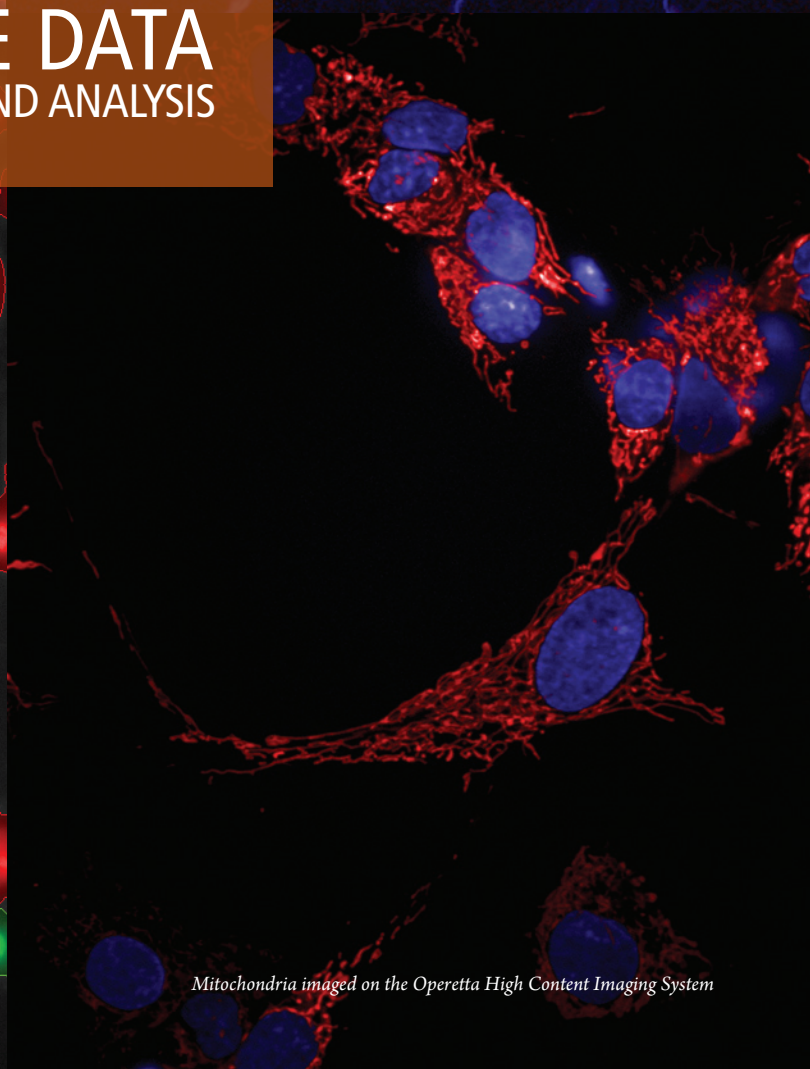


Mouse E18 primary hippocampal neurons at 12 days in vitro acquired using the Opera® High Content Screening System

THE UNIVERSAL SOLUTION TO HIGH-VOLUME IMAGE DATA STORAGE AND ANALYSIS



Cells classified using the PhenoLOGIC™ machine-learning technology



Mitochondria imaged on the Operetta High Content Imaging System

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. Until now.

Columbus™ is the first universal high-volume image data storage and analysis system that brings fast, secure access to images from a wide range of sources via the Internet. The Columbus system lets scientists remotely access, view, annotate and measure multidimensional images from anywhere in the world. The system can serve multiple users simultaneously, making it perfect for any size user base from an individual lab to an entire organization. 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.

UNLIMITED ACCESS TO SET YOUR RESEARCH FREE

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. Web-enabled, it can serve an entire lab or facility with a single installation. It's the most flexible, scalable, cost-effective solution commercially available today.

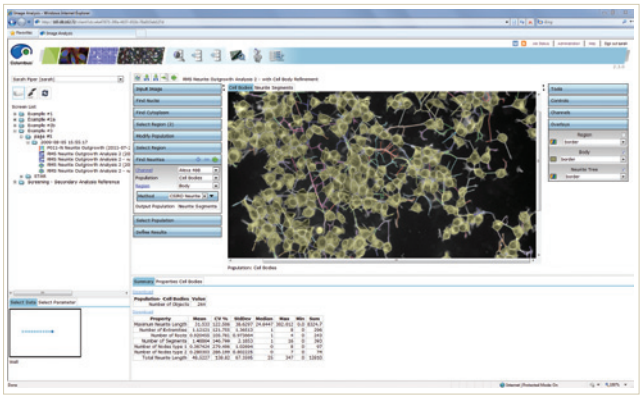
Powerful features. Outstanding benefits.

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
Secondary analysis	Extract summary statistics for multiple wells or entire screens, and ensure highest quality results through determination of z' and reliable agonist/antagonist potency through generation of IC_{50} curves

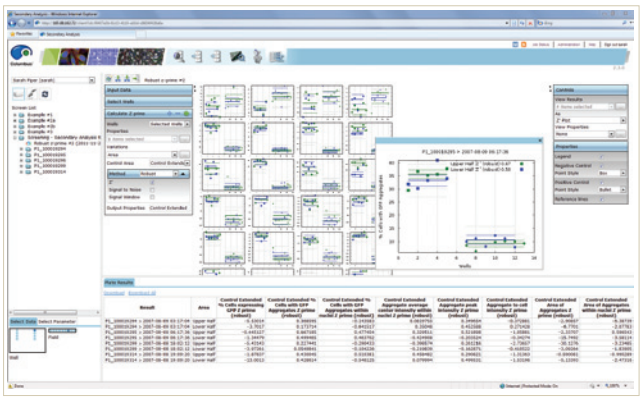
THE POWER TO DISCOVER IS AT YOUR FINGERTIPS

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. Data can be exported in standard file formats for use in other media such as Microsoft® Office and Open Office applications.

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.



The Columbus system has powerful image analysis capabilities with highly flexible and easy to use building blocks to analyze simple and complex phenotypes of cells.



The Columbus system includes secondary analysis capabilities that allows you to score cellular properties by z'.

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 sequences let you analyze new images or re-analyze images from past experiments at your desktop.

- Provides a single solution for image analysis and secondary analysis that's flexible, easy to use and generates results fast
- Available to all Columbus users; no additional licenses needed
- 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

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/columbus

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