

First glimpse of New Livecyte 2 at ASCB 2018

Livecyte™ 2 will be available for preview at ASCB, 2018 in San Diego, USA, 8-12th December, giving event delegates the opportunity to explore the new features and additional capabilities of the live cell imaging system from Phasefocus™, prior to its launch in Q1, 2019.

Livecyte revolutionised live cell imaging, as the first commercially available instrument to exploit ptychographic phase imaging to generate quantitative, high contrast images, without the need for perturbing labels.

This latest version, Livecyte 2, delivers both hardware and software improvements, providing dynamic control over imaging parameters to deliver superior optical performance, with greater versatility to monitor and analyse cell behaviour at the individual cell level.

Users can automatically follow hundreds of cells in every well of any standard plate up to 96 well format, ensuring rare events are never missed. With real time monitoring of the cell culture conditions, changes in cell behaviour can be directly correlated to changes in the environment, thanks to the system's new Smart Incubation functionality.

The revised software also automatically identifies areas of ambiguity in cell tracking, indicating the most likely pathways, allowing users to optimise tracking performance.

Tracey Zimmermann, VP Global Sales commented. "We're really excited about the new Livecyte system. We've taken account of customer feedback during its development to ensure it addresses many of the issues associated with live cell imaging that researchers have been reporting."

Visitors to the Phasefocus booth 838 can discover the full extent of information available from a single Livecyte experiment first-hand, as members of the Phasefocus team will be available to demonstrate the live cell imaging system throughout the event.



Fig. 1. The new Liveocyte 2

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Notes for the Editor

About Phasefocus

Phasefocus provides a range of products and services based on its proprietary Ptychographic Quantitative Phase Imaging (QPI) technology, pertinent to a wide range of analytical applications requiring reliable and robust image capture and data handling.

The Phasefocus technology permits capture of information rich phase data at multiple wavelengths enabling observation and analysis of materials, processes and products at nano scale level.

With broad spectrum appeal, this innovative technology has potential for use in diverse markets ranging from life science and healthcare to engineering, metrology and more.

Liveocyte™ , the company's flagship live cell imaging system is revolutionising the study of cell behaviour, allowing researchers to measure the morphology and motion of every cell over time and without the use of labels in a controlled environment at scale (up to 96 well plates).. Liveocyte allows



thousands of individual cells to be automatically tracked, even within a heterogeneous cell population, producing more statistically valid data and increased confidence in the interpretation of results, whilst saving days of analysis time compared to manual tracking.

Whilst labelled techniques can produce high contrast images, they ultimately perturb the cells and be phototoxic, which limits the type of cell that can be used and the duration that they can be imaged before measurement-induced cell behaviour changes emerge.

Ptychographic imaging is accomplished using low laser power, 10,000-100,000 times less than that used for fluorescence microscopy, which means that cells can be imaged for long periods of time (eg greater than 1 week) without suffering photo-toxic effects. This is beneficial for all cell types but especially for sensitive cell types such as stem cells and primary cells.

