HIGH RESOLUTION MULTILEVEL SCREENING

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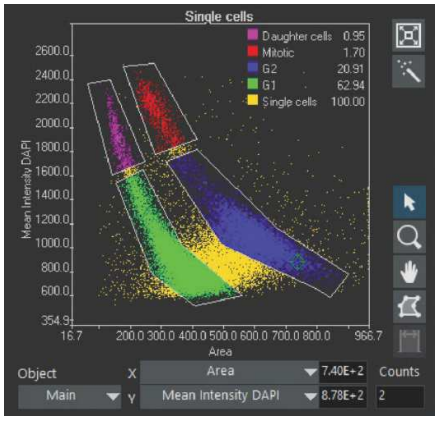
Recently upgraded with the Yokogawa CSU-W1 confocal spinning disc, the Olympus scanR High Content Screening platform will additionally benefit from powerful deep learning algorithms for image analysis.

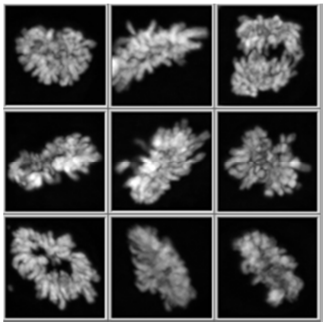
Assay Builder Concept

Parameters of detected objects are displayed in scatter plots or histograms, where clouds of populations emerge, revealing phenotypes that can be gated for statistical quantification. Analysis parameters can be easily tuned to cover an unlimited range of applications, including kinetic assays.



Wide Field vs Confocal Screening

Wide field illumination excels for assays in which intensity quantification across the whole cell is required, e.g. DNA content in a cell cycle assay. With high Z-resolution demand, e.g. vesicle counting, fast confocal screening with Z-stack imaging is used to probe a whole cell, by nature increasing the amount of data acquired per scan. The advanced scanR system offers both imaging modes for screening.



Multilevel Scan

Manually finding structures of interest, which are sparsely scattered across a large area, can be very tedious and time consuming. In a multilevel scan i) samples are quickly scanned in wide field, ii) objects of interest are efficiently detected using powerful detection algorithms (e.g. deep learning) and iii) a confocal multidimensional acquisition is automatically executed only in those identified targets of interest and monitored over time.

Two better than One: scanR & IXplore Spin

scanR and cellSens software can be operated in the same system. scanR is designed for screening and interactively handling huge amount of data, whereas the IXplore Spin system with cellSens software is designed to enable advanced live cell imaging experiments, including e.g. photo-manipulation and multi-ROI time-lapses at irregular time intervals.