qMod CAMERA

Digital dye-free camera to characterize cell Critical Quality Attributes (CQAs)

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OVIZIO IMAGING SYSTEMS

Benefits

Ovizio's qMod quantitative phase imaging camera can convert a regular brightfield microscope into a versatile 3D quantitative imaging platform for biological applications. It can be fixed onto the C-mount where a camera is usually attached to the microscope. The qMod is a convenient and fast solution to characterize the cell Critical Quality Attributes (CQAs) in transparent supports: petri dishes, flasks and multi-well plates.

Designed for high precision, the qMod generates real-time holographic fingerprints of cell culture, enabling the user to select and observe cells individually based on a pre-defined set of parameters. Using the OsOne software, scientists can count objects, distinguish between living and dead cells, track morphological changes, and monitor the aggregation rate. To offer the best possible resolution every time, images acquired with the OsOne software can be refocused post acquisition.

This unique approach opens the door to even more applications, with the possibility of confirming results in a dye-free set-up, avoiding sample preparation, reagents and cell fixation, and thereby also eliminating the need to use potentially toxic and often expensive reagents.

Measurements:

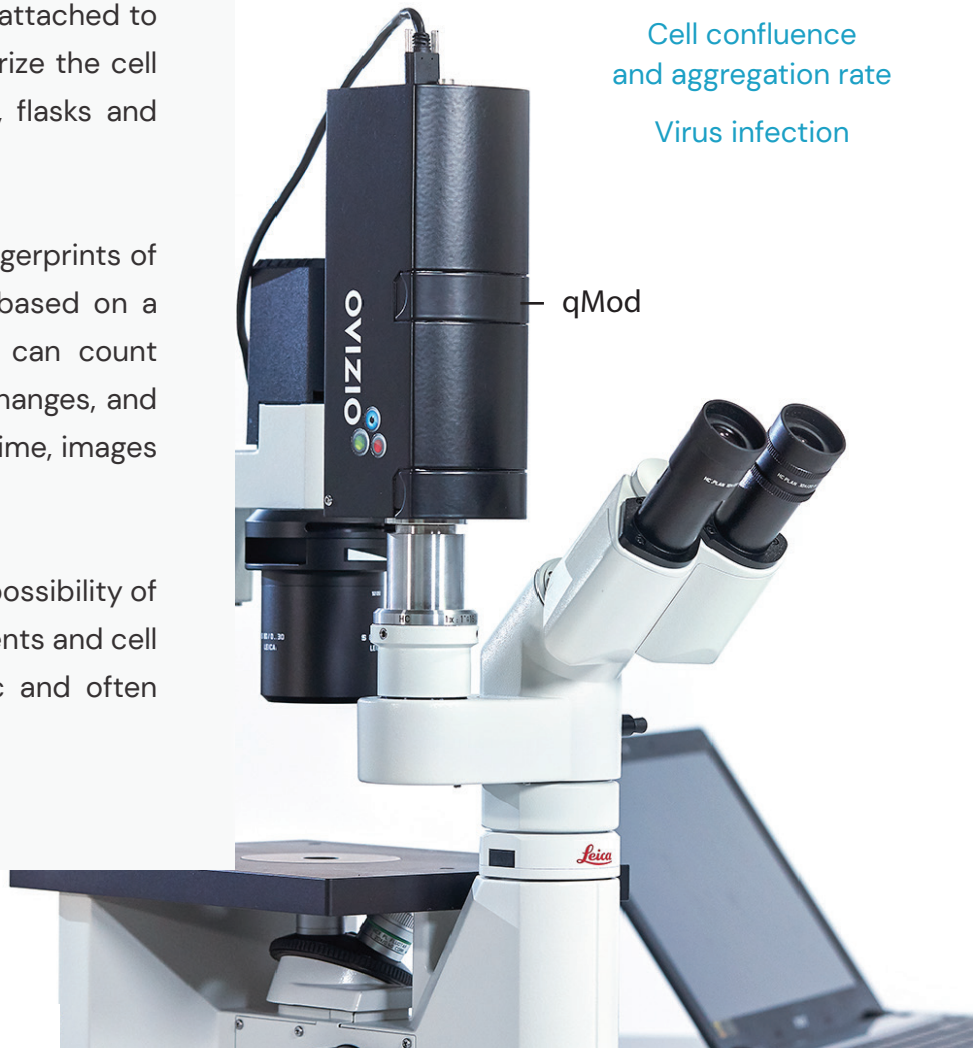
Cell viability

Cell and bead count

Cell morphology

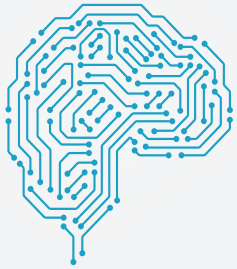
Cell confluence and aggregation rate

Virus infection



	Features	Benefits
	Fits on most brightfield microscope with a C-mount port	Flexible
	Dye-free	Non invasive and cost reduction
	Usable with most transparent recipients	Adherent and suspension cells
	Image acquisition & analysis in <3s	Quantitative information about single cells Fast results
	AI-driven	High level of accuracy

OsOne software



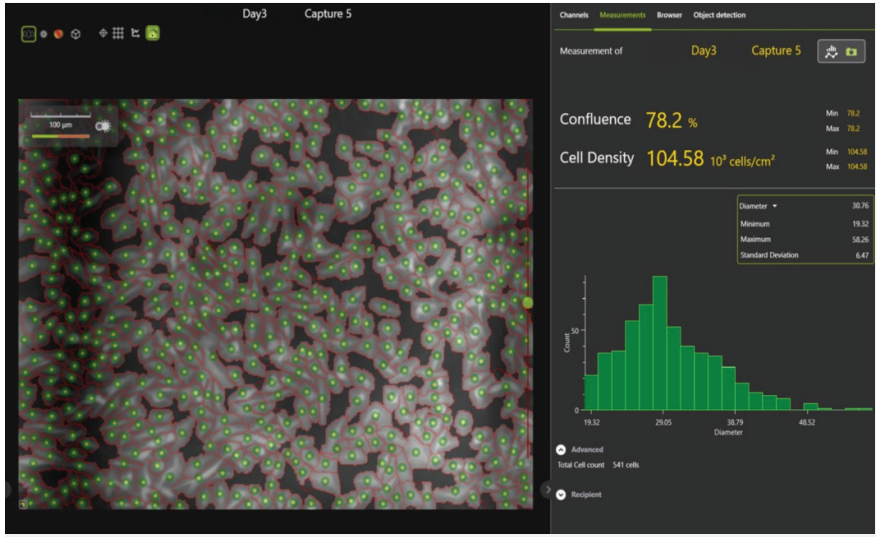
AI-DRIVEN

The OsOne software uses machine learning to display the different data captured in holograms

Cell Quality Attributes (CQAs)

- Cell viability
- Cell count
- Magnetic bead count
- Morphological changes
- Infection kinetics
- Activation-like state

The OsOne software is at the center of Ovizio's microscopes. Designed to deliver an attractive user experience, OsOne is built for easy data acquisition and thorough quantitative data analysis of suspension cell cultures. The intuitive interface and wizard enable a rapid understanding and navigation of the app, providing a solid connection between the user and the device.

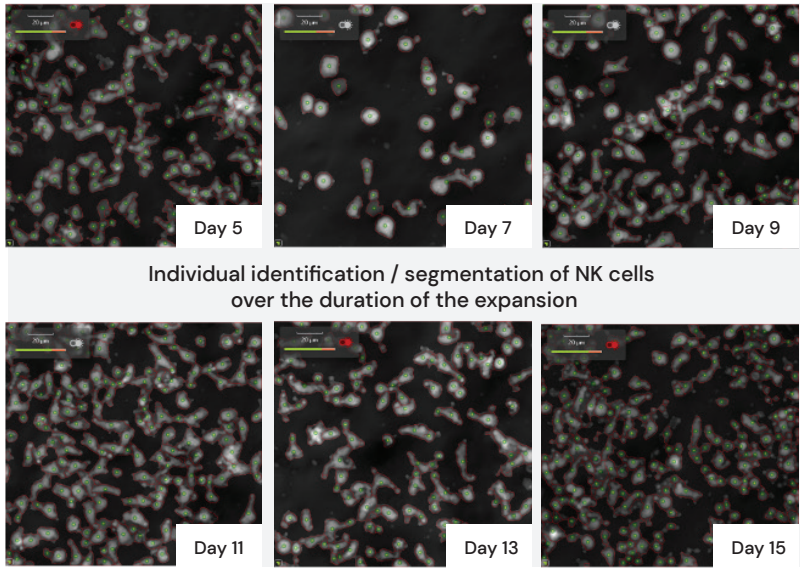


Applications

Detection of morphology change in NK cell growth

- NK cells originated from human donors
- transparent support: well plate: 6/12

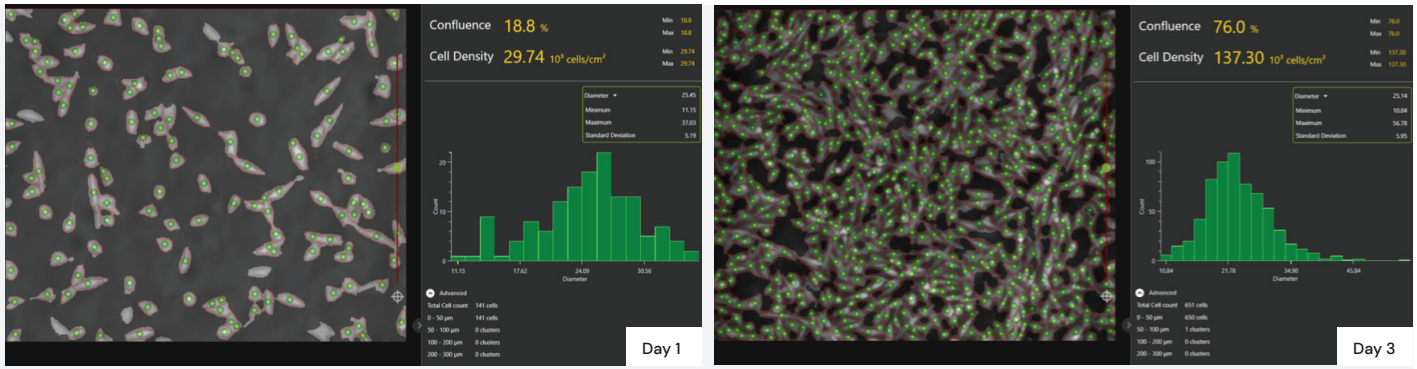
OsOne software generates a large number of attributes for each cell. These can be classified into 4 categories: morphology, optical, phase texture and intensity texture. They can then be used to detect, identify and count NK cells during expansion.



Individual identification / segmentation of NK cells over the duration of the expansion

Detection of MSCs: confluence and counting

Compatible transparent support: multiwell plates, T-flasks.



Individual identification / segmentation of MSCs over the duration of the expansion process

Specifications

Camera	4M pixels 12 bit B&W CCD camera
Field of view	570 x 427µm (10X magnification)
Pixel Size	2.2 (H) x 2.2 (V) µm
Weight	1020 grams
Dimensions	220 x 64 x 75 mm
Operating Temperature	0-40 °C
Exposure Time	32 µs to 32 s
Compatibility	
Interface	C-mount 1X
Objectives	Brightfield