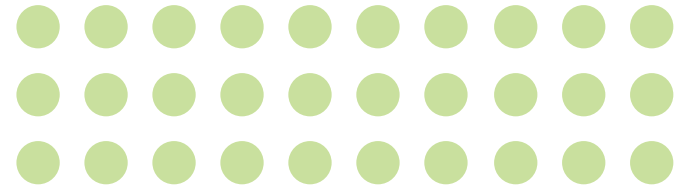




**CX-A**



## **AUTOMATED LIVE CELL IMAGING**

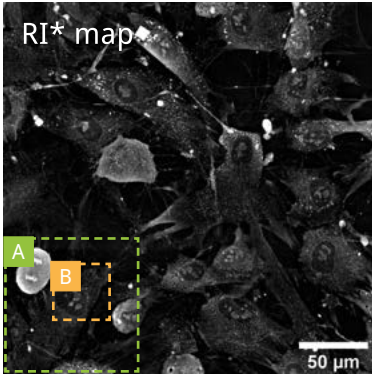
- **ORGANELLES**
- **SINGLE CELL**
- **CELL POPULATIONS**
- **LABEL-FREE & 3D**
- **UNPERTURBED IMAGING**
- **NO PHOTOTOXICITY**
- **NO PHOTBLEACHING**
- **MULTI-WELL PLATE**

**SEE WHAT YOU HAVE BEEN MISSING**

# OBSERVE LIVING CELLS

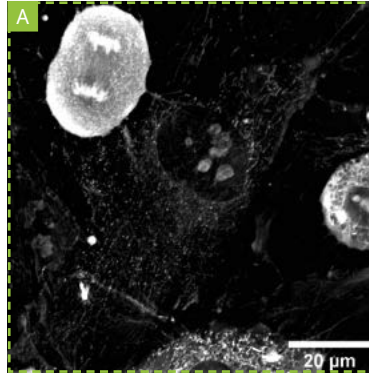
## FROM POPULATION TO ORGANELLES

Stitching of 3x3 FoV



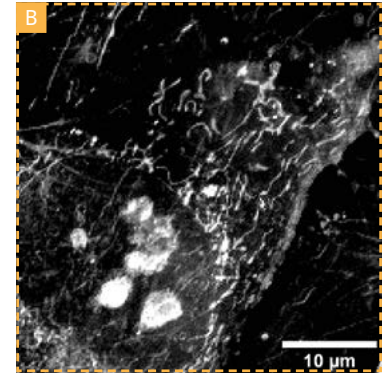
Cell population

Single FoV



Single cell

Zoom into FoV



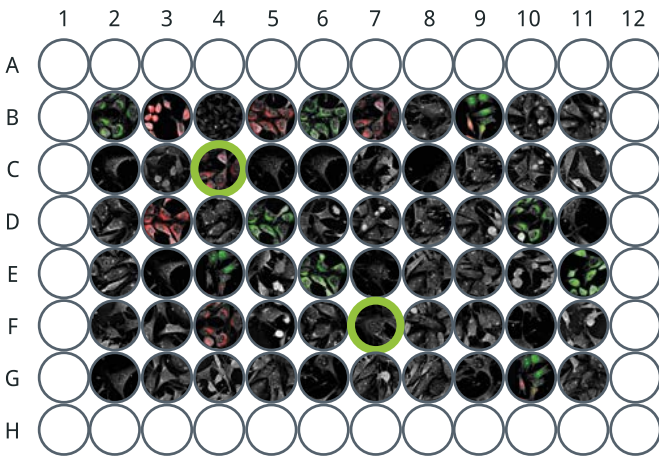
Organelle ecosystem

\*RI: label-free Refractive Index

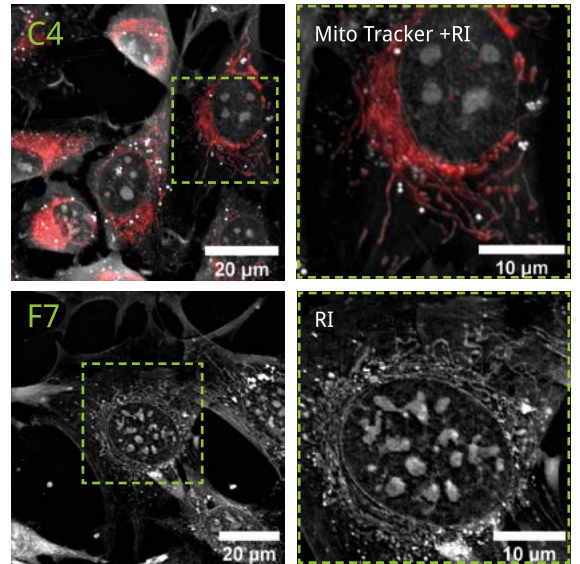
# (MULTIPLEX)<sup>3</sup>

## LIVE CELL SPECS

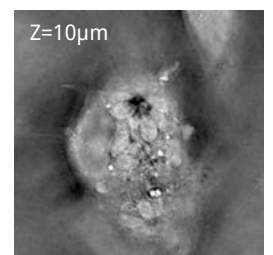
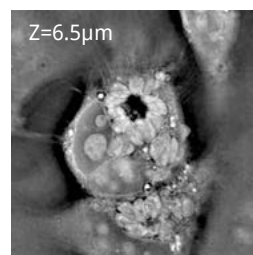
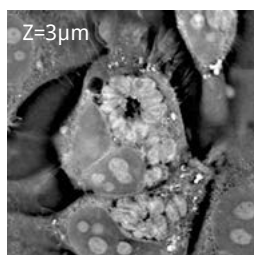
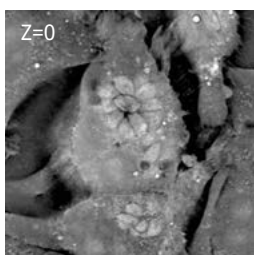
1 96 well plate



2 Multiple organelle detection at each acquisition



3 3D acquisition (depth: 30 μm)

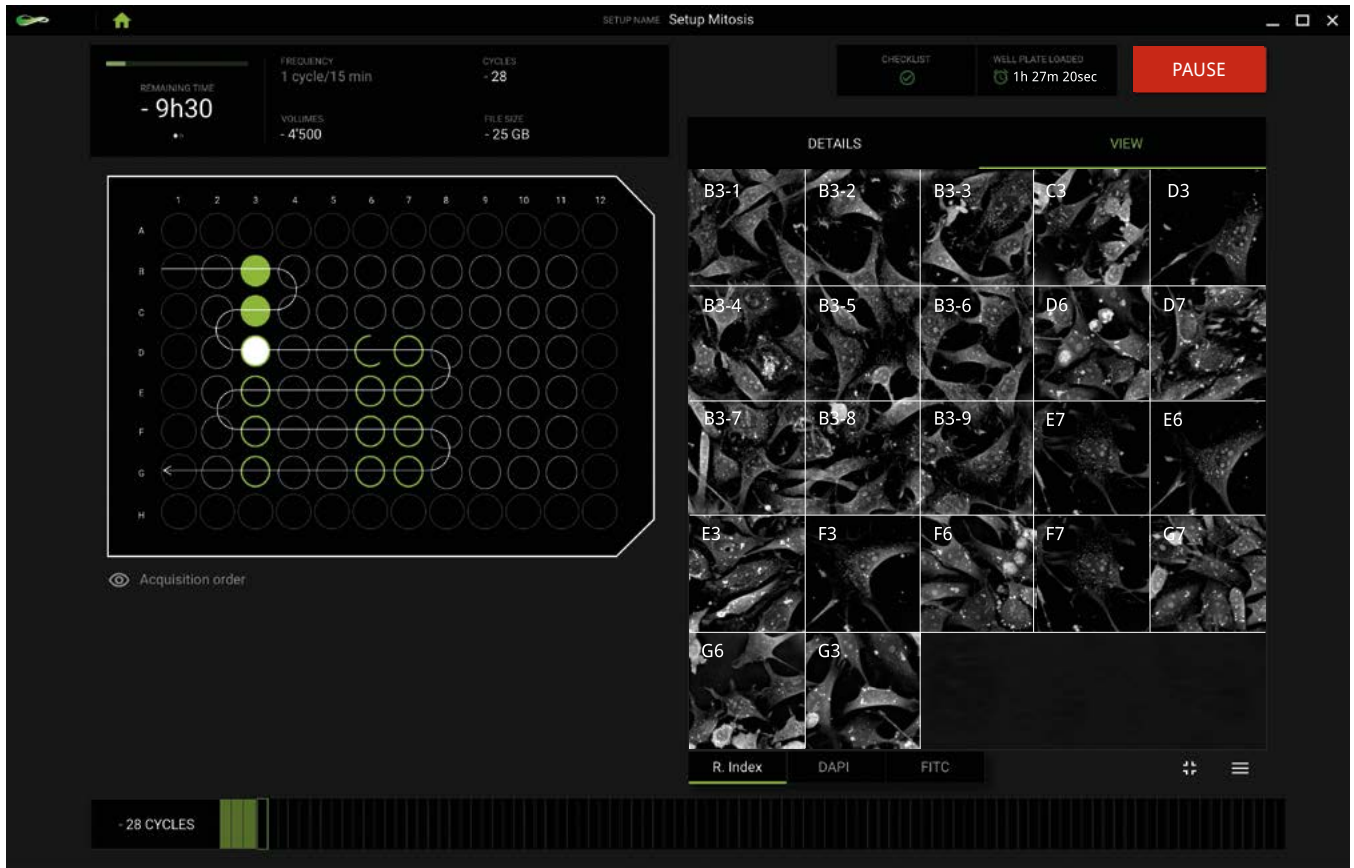




# LONG-TERM LIVE CELL INCUBATION

## WALK-AWAY WITH AUTOMATION

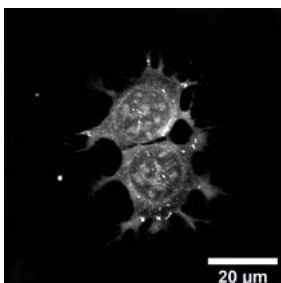
Intuitive user-interface for automated long-term experiments on 96 well plate at physiological conditions



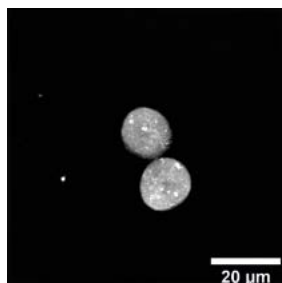
# UNIQUE IMAGING TECHNIQUE

## IMAGE CELLS FROM SECONDS TO WEEKS

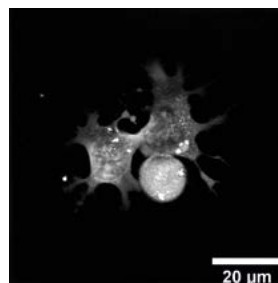
Time 0



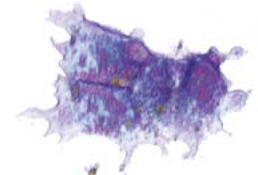
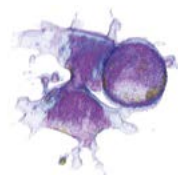
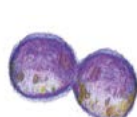
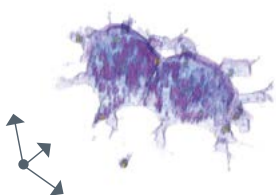
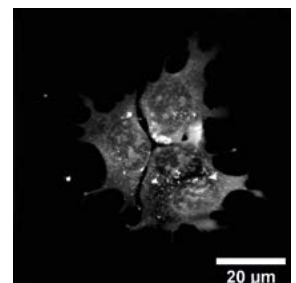
Time 5h 30



Time 6h 32



Time 10h



# SEE WHAT YOU HAVE BEEN MISSING

## TOP-STAGE INCUBATOR<sup>5</sup>

Non-invasive continuous live cell acquisition for days (CO<sub>2</sub> / Temperature / Humidity)

## FULLY INTEGRATED SOLUTION<sup>4</sup>

- Automated XYZ stage
- Visualize & export multiplexed images in multiple formats



## 3D CELL EXPLORER<sup>1</sup>

- Nanolive imaging
- Set-up & Walk away

## 96 WELL PLATE<sup>2</sup>

- Designed for high resolution imaging
- Suitable for long term live cell imaging

## FLUORESCENCE<sup>3</sup>

- 3 channels
- Correlative imaging

<b><sup>1,3</sup> Illumination source</b>	Class 1 laser low power ( $\lambda=520$ nm, sample exposure 0.2 mW/mm <sup>2</sup> ) Epifluorescence: High speed switchable <100 $\mu$ s, Lifetime >20'000 hours
<b><sup>1,3</sup> Resolution</b>	3D Holotomography (HT): x,y: 200 nm; z: 400 nm Epifluorescence: x,y: ~ 400 nm (depending on channel)
<b><sup>1,3</sup> Field-of-view (FoV)</b>	Single FoV* / 2x2 FoV / 3x3 FoV *Single FoV: RI: 90x90x30 $\mu$ m; Fluorescence: 90x90 $\mu$ m
<b><sup>1,3</sup> Channels</b>	HT: Up to 8 organelles simultaneously Epifluorescence: DAPI + FitC + TritC   FitC + TritC + Cy5   DAPI + FitC + TritC/Cy5
<b><sup>1,3</sup> Imaging modalities</b>	Automated: 3D HT   3D HT + Epifluorescence   4D HT time-lapse   4D HT + Epifluorescence time-lapse
<b><sup>2</sup> Sample holder</b>	Nanolive's 96 well plates, designed for high precision imaging with optical quality glass bottom and lid
<b><sup>1,3</sup> Autofocus</b>	High precision label-free autofocus for stable long-term observations in all imaging modalities
<b><sup>5</sup> Incubator stage-top</b>	Tokaihit stage top incubator: CO <sub>2</sub> concentration range: 5% - 20% ( $\pm 0.1\%$ ); Humidity: ~ 95%; Sample temperature: 30-40°C ( $\pm 0.3^\circ$ C)
<b><sup>1,3</sup> Camera</b>	USB 3.0 CMOS Sony IMX174 sensor / Quantum Efficiency (typical) 70 % (at 545 nm) / Dark Noise (typical) 6,6 e <sup>-</sup> / Dynamic Range (typical) 73,7 dB
<b><sup>1,3</sup> Microscope Objective</b>	Dry objective / 60x magnification / NA 0.8
<b><sup>1-5</sup> Weight</b>	~30kg