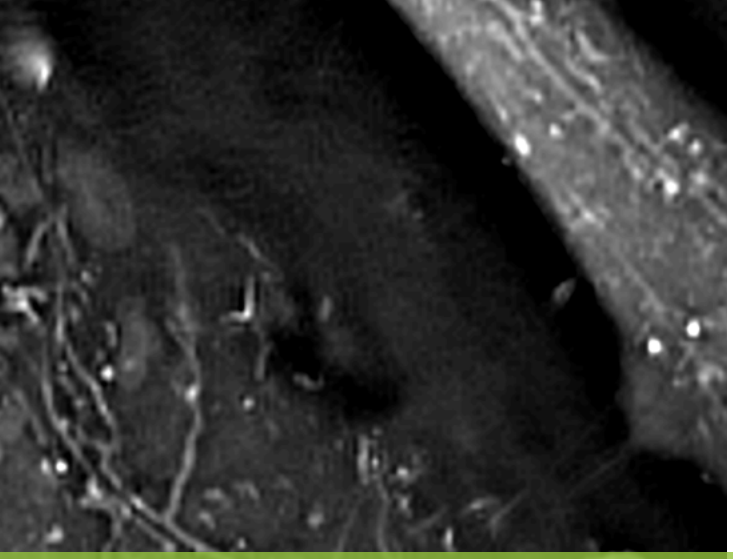
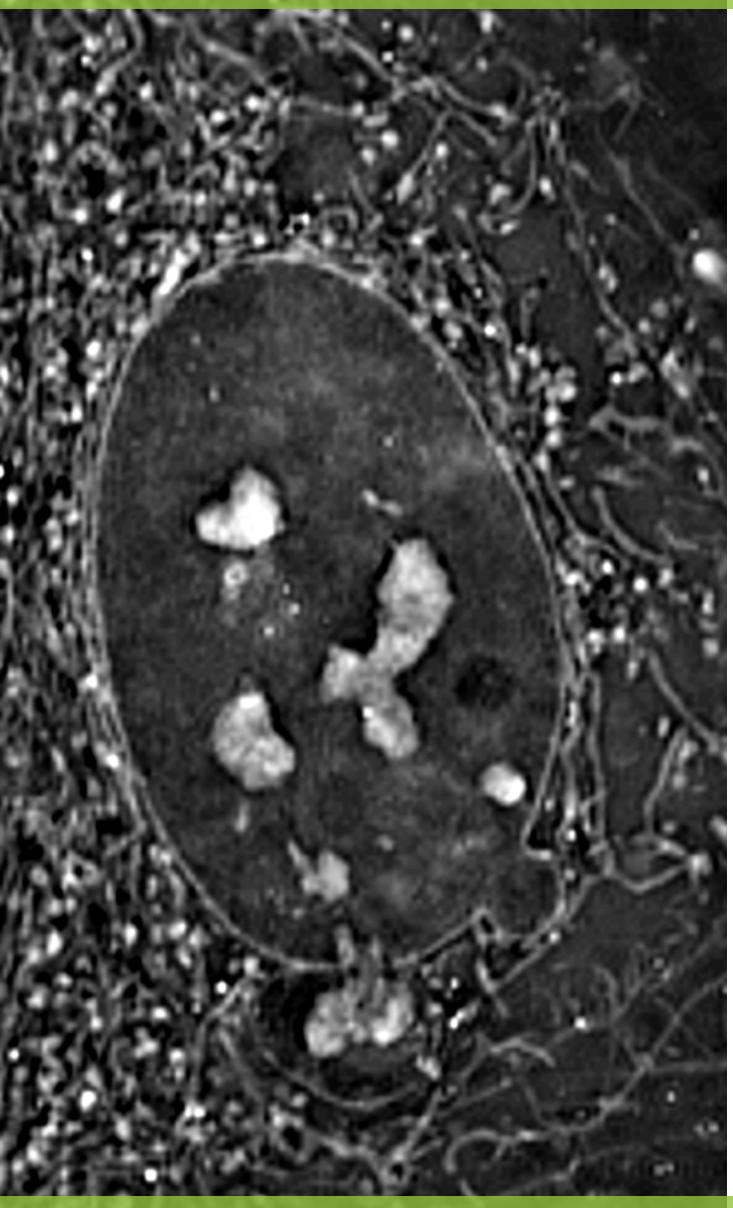


NANOLIVE
Looking inside life

3D CELL EXPLORER



TAKE YOUR CELL RESEARCH TO THE NEXT DIMENSION

NON-INVASIVE 3D CHARACTERIZATION

Live cell imaging in physiological conditions without any bleaching or phototoxicity

LABEL-FREE 4D CONTINUOUS OBSERVATION

Measurement of cell processes from seconds to weeks

MULTIPLEXING

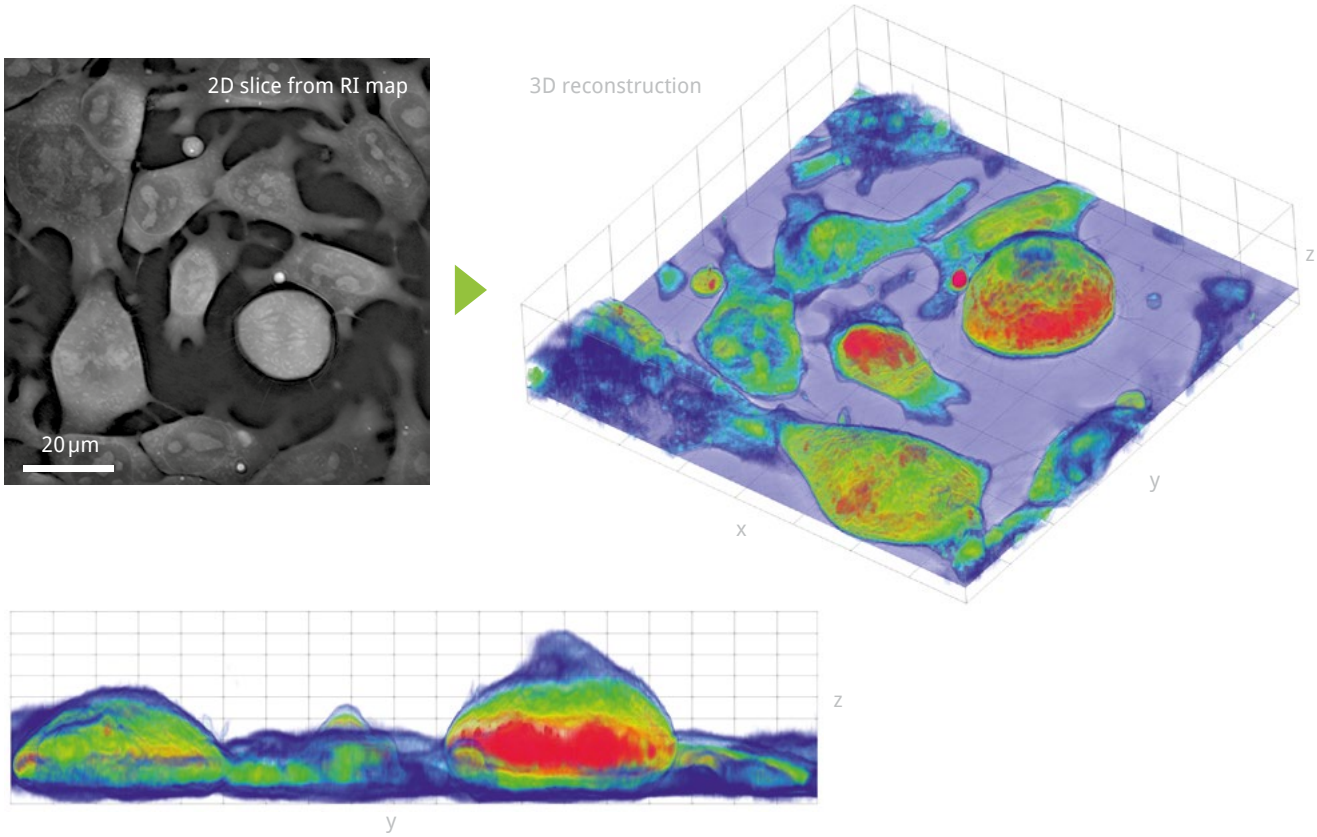
High resolution and high sensitivity characterization of multiple cell organelles based on their refractive index

THE HOLOTOMOGRAPHIC MICROSCOPE

LOOK DEEPER

NON-INVASIVE 3D CHARACTERIZATION OF LIVE CELLS IN PHYSIOLOGICAL CONDITIONS

The 3D Cell Explorer measures the quantitative refractive index of cell organelles in seconds. Hence, it is possible to do non-invasive *in vitro* imaging of almost any kind of cells with up to 30 µm depth of reconstruction. This allows for biological features to be segmented based on their physical characteristics.



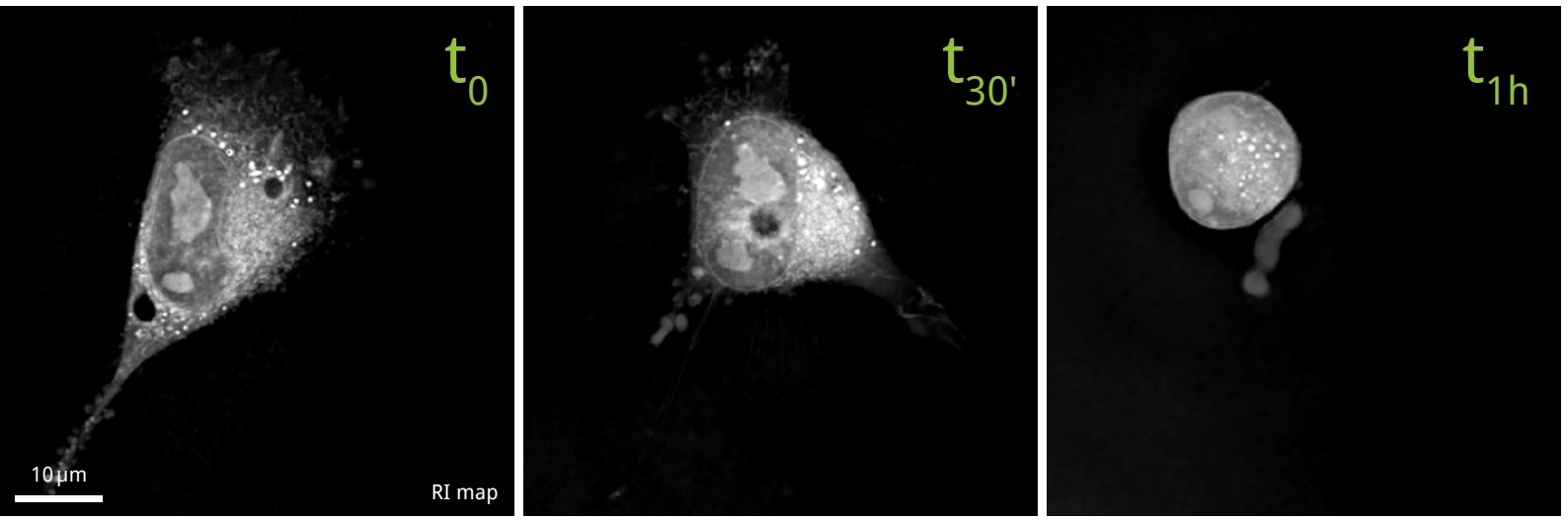
Mouse embryonic stem cells (mESCs) undergoing cell division visualized in 3D

> THE 3D CELL EXPLORER IS ABSOLUTELY FANTASTIC! ITS EASE OF OPERATION, INTUITIVE NATURE, COMPACT SIZE, RAPID IMAGING AND NO NEED FOR STAINS MAKE THIS A SYSTEM I WOULD CERTAINLY RECOMMEND.

Wojtek Chrzanowski, MSc, PhD, DSc
Senior Lecturer, Faculty of Pharmacy and the Australian Institute for Nanoscale Science and Technology at the University of Sydney, Australia

LABEL-FREE 4D CONTINUOUS OBSERVATION OF CELL PROCESSES FROM SECONDS TO WEEKS

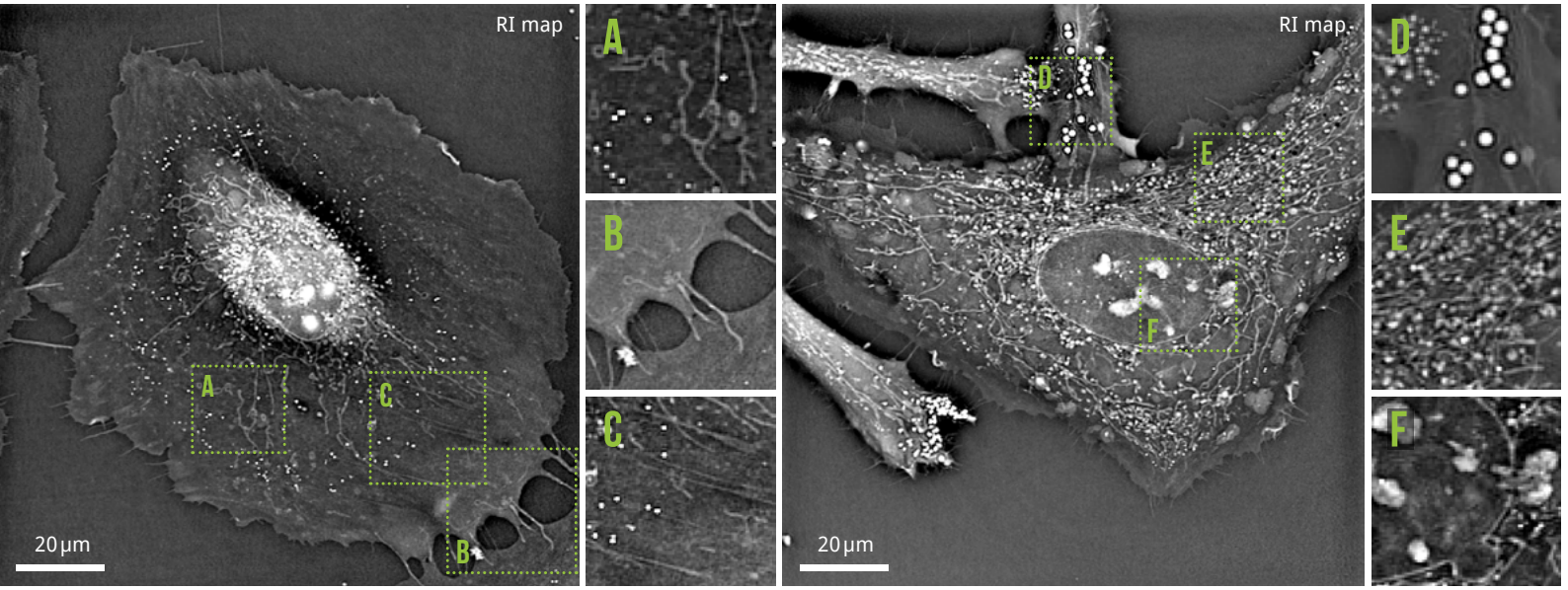
Study cell life cycle processes of growth, division & death in 3D and 4D. Thanks to a dedicated top-stage incubator you can monitor cell compartments and their kinetics and dynamics in real-time without interfering with their natural physiology.



T685A human melanoma cell undergoing apoptosis

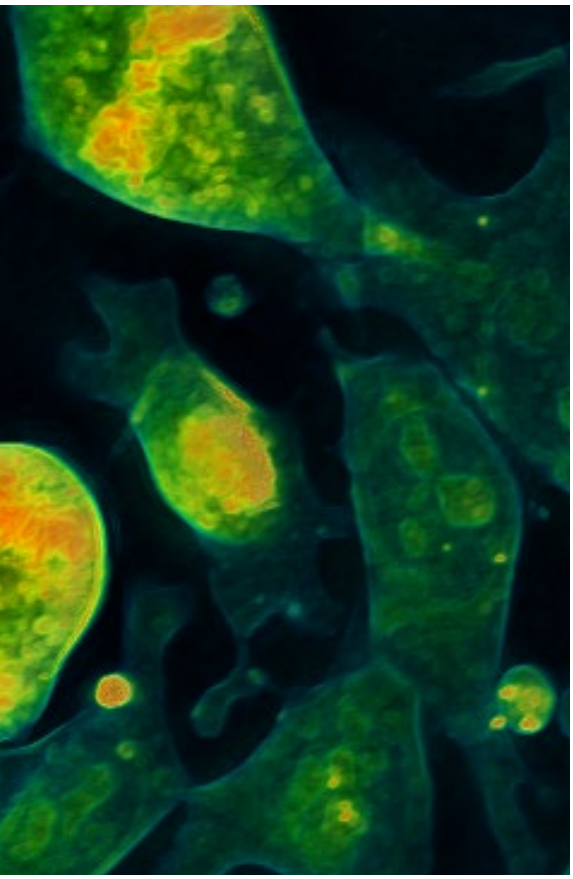
MULTIPLEXING

High resolution and high sensitivity characterization of multiple cell organelles based on their refractive index. Explore and measure different cell compartments with unprecedented detail and resolution, marker-free and preparation-free based on their own physical density.



Mouse fibroblasts and their internal compartments: a. mitochondria; b. plasma membrane; c. actin fibers; d. lipid droplets; e. lysosomes; f. nuclear envelope, nucleus & nucleoli.

DISCOVER MORE



EXPLORE A NEW VISION

Label-free unstained 3D cells
Long observation time
New space for discoveries

3D DATA SETS

Multiplexing, unique organelle segmentation
Quantitative data analysis

SAVE EXPERIMENTAL TIME

No sample preparation
Short setup time
Fast & easy acquisition

COMPATIBLE SAMPLE STAGE

Top-stage incubator, pipettors, microfluidic devices, ...

TECHNICAL SPECIFICATIONS

Resolution	$\Delta x,y = 200\,nm$; $\Delta z = 400\,nm$
Field-of-view	85 × 85 × 30 µm
Tomography frame rate	0.5 fps 3D image rate with full self-adjustement
Objective	Dry objective / 60× magnification / NA 0.8
Laser	Class 1 low power laser ($\lambda = 520\,nm$, sample exposure 0.2 mW/mm^2)
Accessible sample stage	60 mm of free access to the sample stage for sample manipulation

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