We invite you to workshop

3D&Label – free, a new paradigm in live cell imaging?

(**HPST s.r.o.** presents Nanolive Imaging - the ultimate solution for non-invasive live cell imaging based on holography)

organized by

Institute of Physiology of the CAS and in the Framework

of the **Czech-BioImaging project**

presented by

Michaela Pluskalová

Date

Presentation: November 12th, 10 am

Free Hands On: November 12th –15th, reservation needed

Location

Institute of Physiology of the Czech Academy of Sciences

Vídeňská 1083, Praha 4, 142 20, CZ

Building DAI, ground floor

Department of Biomatematics, Meeting room

Main features of Nanolive Imaging (www.nanolive.ch)

- No phototoxicity
- No photobleaching
- Rapid acquisition speed
- Intuitive design and software
- A brand-new way to observe your cells

No registration fee. For registration, please, contact **michaela.pluskalova@hpst.cz**

MINISTERSTVO ŠKOLSTVÍ, MLÁDEŽE A TĚLOVÝCHOVY

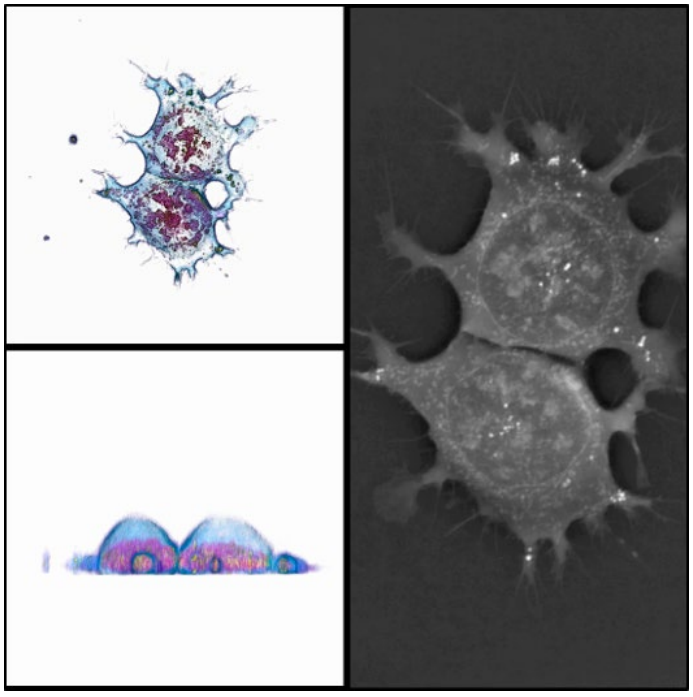
Projekt Národní infrastruktura pro biologické a medicínské zobrazování Czech-BioImaging je podpořen z účelové podpory MŠMT pro výzkumné infrastruktury (LM2015062).

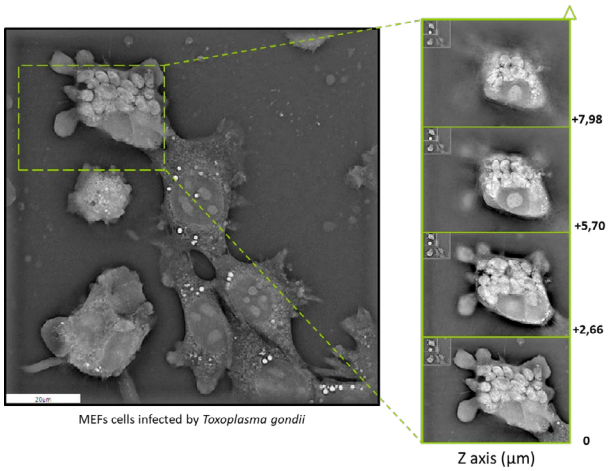
Abstract

By combining holography with tomography, Nanolive technology (www.nanolive.ch) is an example of emerging smart nanoscopic technique. The 3D Cell Explorer microscope guarantees three-dimensional high spatio-temporal resolution imaging of Transparent unlabelled specimens, with the advantage over fluorescence techniques of not requiring sample labelling, thus reducing potential damages to living cells. Thanks to the absence of photo-toxicity and the incubated controlled environment, cells can be indeed cultured and monitored in continuous time-lapse for days. Moreover, based on the high sensitivity in refractive index measurements, the system enables for high resolution visualization of intracellular compartments (i.e. mitochondria, lipid droplets, lysosomes). Offering an optimal combination between sample health, spatiotemporal resolution and signal to noise ratio, holotomography represents nowadays one of the best slutions for long term live cell imaging applications.

Keywords

Mitochondria dynamics, 3D label-free imaging, Lipid droplets and metabolism, Immuno-Oncology, Stem cells, Live cell imaging, Stunning movies





MEFs cells infected by *Toxoplasma gondii*

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