

LiveCodim - super-resolution solution for every lab

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Abstract

Superresolution Microscopy allows us to break the diffraction barrier and to better visualize and quantify biological events.

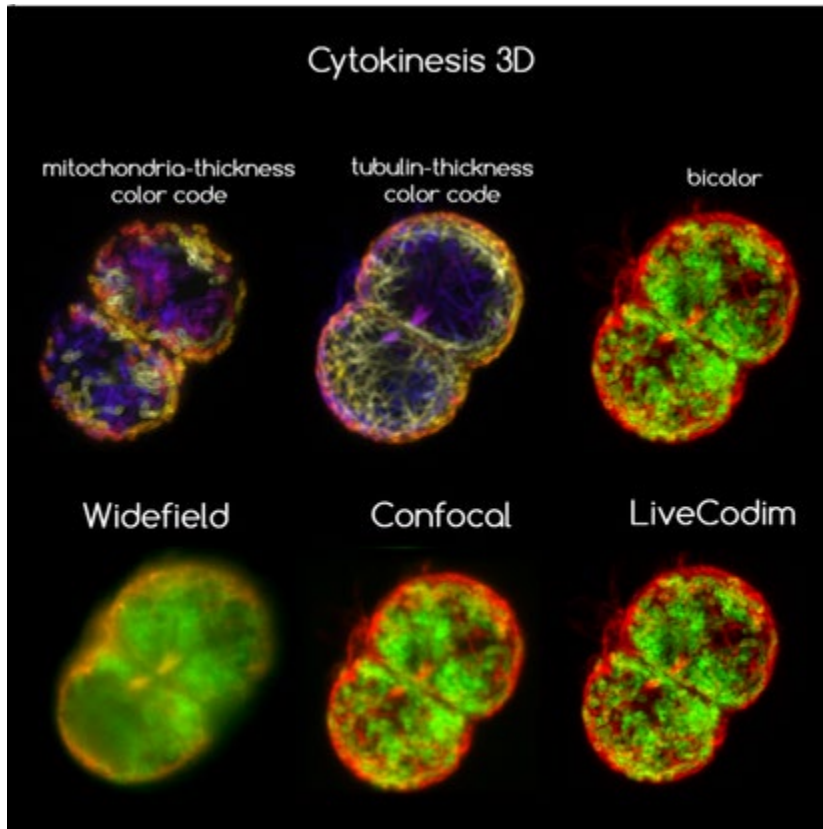
The patented CONical Diffraction Microscopy, - CODIM – has been invented, developed, and commercialized as an innovative superresolution modality. It allows the realization of simple, affordable, universal, low phototoxicity superresolution systems, specially fitted for live sample imaging.

The LiveCodim, developed under an EC grant, is an add-on device, able to be mounted on to all main brands of commercially available widefield microscopes, without requiring a confocal module. For super-resolution, it features a patented optical module acting as a powerful beam shaper, associated with proprietary algorithms for data processing. The LiveCodim includes also widefield and confocal modalities, four wavelengths, and an intuitive, user-centric workflow.

LiveCodim preserves all the benefits of previous-generation CODIM systems, namely low photo-toxicity (preservation of the photon budget), high resolution, immunity to motion artifacts, ability to seamlessly switch to any of up to 4 colors, and compatibility with conventional fluorescence microscopy fluorophores and protocols.

Finally, LiveCodim is a fast, flexible imaging system with three different imaging modalities, including multidimensional and multimodal acquisitions, all controlled with its own intuitive operating system,

Additionally, LiveCodim is a much faster image system than previous versions and provides the flexibility of a complete three different modalities imaging system, including multidimensional and multimodal acquisitions, with its own intuitive operating system.



Images of COS-7 cells during cytokinesis (final step of daughter-cell separation during cell division). Images show maximum intensity projection of 12 Z-stack with a Z-step of 800nm.



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