

# **Multi-purpose usage of FIB-SEM, especially for correlated light and electron microscopy**

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A dual-beam scanning electron microscope offers the unique capability of obtaining 3D ultrastructure of a whole cell with down to 5 nm isotropic resolution. In the lecture a brief overview of various usage of our FIB-SEM instrument (Helios NanoLab 660 G3 UC) will be given, with a focus on CLEM projects. Also will be presented different kinds of sample preparation.

At Biocev we had started to combine cutting-edge optical microscopy with electron microscopy techniques to merge both approaches (real time and label specific observation with light and fluorescence microscopy and the high structural resolution of Electron Microscopy) to understand biological mechanisms in unprecedented details. In the lecture will be show some user projects in correlative microscopy which were realized in Imaging Methods Core Facility at BIOCEV.