NEW TOOLS FOR CORRELATIVE LIGHT AND ELECTRON MICROSCOPY

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Combining information from light and electron microscopy adds significant value to biological imaging. The contextual information at the ultrastructural level as provided by electron microscopy perfectly complements the specificity, sensitivity and most of all live-cell-imaging capabilities of fluorescence microscopy. However, correlating information from both modalities still remains an experimental challenge. Due to the necessary sample preparation steps between (live cell) fluorescence imaging and electron microscopy, quick relocation to the area of interest, optimal contrast in both modalities and precise correlation between the two modalities is often hard to achieve.

FEI has recently introduced new solutions to overcome these experimental hurdles: CorrSight, a dedicated light microscopy system offering CLEM-specific functionality and automation of important workflow steps; MAPS, a software tool bridging the modalities to increase ease of use; and iCorr, a light microscope module integrated into the Tecnai family of transmission electron microscopes. These tools address different correlative workflows helping to optimize efficiency and data quality across the full range of CLEM experiments.