

Inštitut za biologijo celice, Medicinska fakulteta, Univerza v Ljubljani,
vabi na predavanje z naslovom

**Correlative Light-Electron Microscopy:
from live cell dynamics to ultrastructure of organelles**

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Vljudno vabljeni!

Povzetek predavanja

Correlative light-electron microscopy (CLEM) is a very effective technique that combines video imaging of live cells with immuno-electron microscopy. This can thus provide detailed, high-resolution characterisation of dynamic intracellular organelles. The use of fluorescent protein (FP)-tagged chimeras allows the movements and/or behaviour of intracellular structures in a live cell to be followed, which can then be fixed at the moment of interest. The subsequent immuno-electron microscopy analysis reveals the three-dimensional architecture of the same structure, together with the precise identification of the FP-labelled protein pattern. The process resembles taking a high-resolution snapshot of an interesting and/or rare live event. Conceptually, it consists of a switch of wavelengths, from that of photons to that of electrons, with the associated huge gain in resolution. In this respect, CLEM can be considered as the first, and probably one of the most powerful, super-resolution, microscopy techniques applicable to live cells. Although CLEM is technically demanding, its potential was explored in wide range of fundamental and translational studies, while discovery of new microscopy methods paves a way for further development and potentiation of CLEM technology.

Predavanje bo v angleščini.